

Community Experiences of Mining in Baker Lake, Nunavut

by
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ABSTRACT

COMMUNITY EXPERIENCES OF MINING IN BAKER LAKE, NUNAVUT

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Professor Ben Bradshaw

With recent increases in mineral prices, the Canadian Arctic has experienced a dramatic upswing in mining development. With the development of the Meadowbank gold mine, the nearby Hamlet of Baker Lake, Nunavut is experiencing these changes firsthand. In response to an invitation from the Hamlet of Baker Lake, this research document residents' experiences with the Meadowbank mine. These experiences are not felt homogeneously across the community; indeed, residents' experiences with mining have been mixed. Beyond this core finding, the research suggests four further notable insights: employment has provided the opportunity for people to elevate themselves out of welfare/social assistance; education has become more common, but some students are leaving high school to pursue mine work; and local businesses are benefiting from mining contracts, but this is limited to those companies pre-existing the mine. Finally, varied individual experiences are in part generated by an individual's context including personal context and choices.

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CHAPTER 1 – INTRODUCTION

1.1 The Research Problem

With high mineral prices, mining companies are exploring in remote, greenfield areas with little or no experience with mining or, in some cases, any type of industrial development. The Canadian Arctic is at the forefront of these developments. The Hamlet of Baker Lake, Nunavut is experiencing unprecedented development with the construction and opening of the Meadowbank gold mine, 100km away by all-weather road. In addition, there is a proposal in the works for a uranium mine even closer to town (Anonymous 2011). Numerous exploration companies are scouring the hills around this small, remote community for mineral deposits to exploit. Since the early 2000s, these exploration camps and developments have brought innumerable Southern workers and the town of 1800 residents has had to cope with a torrent of workers, supplies and money flowing through the community to the mine. Businesses are booming and the service industry is being stretched to capacity during much of the year (Anonymous 2011).

As Meadowbank is the second mine to be established in Nunavut since the creation of the territory in 1999 and the only one currently operating, the community of Baker Lake serves as a test case for the rest of the territory, both for modern industrial development and Nunavut's new government arrangements. There are potential mining projects being planned and developed all over Nunavut as Baker Lake continues to sort out the effects that mining is having on their community. The Hamlet Mayor and his Council have expressed a need for independent research that documents the experiences of Hamlet residents with mining development. The Hamlet Council is made up of

community leaders that range in age, gender, employment status. As such, it should be acknowledged that this mandate came from a privileged group of Baker Lake residents. Such research could contribute to the knowledge foundation upon which governance decisions will be made by the Hamlet Council in Baker Lake, both with respect to mitigating emerging negative impacts of existing projects and the permitting of proposed projects.

Mirroring this practical rationale, an apparent gap in existing scholarly knowledge suggests a need for research to better understand individual experiences with mining within communities. The scholarship on mining's impact on local communities is seemingly partial in its portrayal of community experiences, as many studies focus on majority experience and opinion, or aggregate, and thereby conflate, individuals' experiences to a community-level experience (e.g. Bowes-Lyon 2009; Gibson and Klinck 2005; Tsetta et al 2005; Brubacher and Associates 2002). Some studies even aggregate further up-scale to regional or national impacts, and focus almost entirely on statistical measures of impact and change (e.g. Filer and MacIntyre 2006; Stedman et al 2004; Hipwell et al 2002). These studies are useful for understanding the dominant experience of a community, region or nation with mining and provide an opportunity for the study of particular aspects of the mining experience (e.g. the effects of closure and remediation at Nanisivik mine as documented by Bowes-Lyon 2009 and Brubacher and Associates 2002); that said, there is space for more research that considers the individual as part of an aggregated whole without losing the diversity of individual experiences.

Researchers have taken varied approaches, and used several different lenses, to explain communities' experiences with mining. In rural locations in Australia, Papua

New Guinea, Greenland and elsewhere in Canada, researchers have studied the impact of mining on communities from economic or social perspectives, but often focus on community-level methods of aggregation and measurement. One approach judges impact through the lens of community expectations of economic diversification and growth, focusing on whole community development metrics by using generalized statistical data to make community-scale evaluations (e.g. Lockie et al 2009; Petkova et al 2009; Rasmussen et al 2009; Rolfe et al 2007; Frickel and Freudenburg 1996). Another approach looks at smaller-scale monetary issues by focusing on the impact that new income has had or can have on individuals and communities (NRC 2007; Imbun 2006; Gibson and Klinck 2005; O’Faircheallaigh 1998; Anonymous 1994).

While the previous groups evaluate impact through economic mechanisms and variables, other researchers have approached mining’s impacts through more social perspectives. One group has taken a more sociological or psychological perspective by examining mine workers’ lived experiences, usually related to the impact of mining-related working conditions, such as working schedules, stressful conditions and high injury rates, on the individuals and families directly involved in the mining process (Gibson and Klinck 2005; Tsetta et al 2005; Hunter and Deasley 2002; North Slave Metis Association 2002). Another group of researchers have adopted a more anthropological approach and measured impact through changes in traditional food procurement practices and the associated changes in community well-being, autonomy, and self-respect (Rasmussen et al 2009; Lambden et al 2007; Gibson and Klinck 2005; Tsetta et al 2005; Collings et al 1998). However, both approaches focus on particular aspects of experience and use individual cases because the individual is the focus of the study. The contribution

of individual experience is great when seeking to understanding individuals but there is an opportunity for individual experiences to constitute the detail, diversity and nuance in a community-scale experience study. Instead of relying on statistical or survey-style measurement of community-level experience and individuals only for understanding inter-individual dynamics (e.g. households, workplaces, or classrooms) and biographical experience, individual experiences could be combined to create a nuanced picture of a heterogeneous community. In this sense, the experiences of individuals could be aggregated to a more usable complete picture than case-specific individual studies or homogenizing statistical measurements.

When documenting the overall experience of a community with mining development, focusing on individual experiences can add information to the picture that is lost when data are aggregated. Given the healthy range of community-level documentations of the impacts of mining in Canada and Australia (e.g. Bowes-Lyon 2009; Gibson and Klinck 2005; Tsetta et al 2005; Sosa and Keenan 2001), the foundation has been set for documenting and understanding how different members of a community experience mining development in different ways. Generalized community-level experience is useful in large-scale policy decision-making and comparing between communities, but it has the potential to eliminate variation in community opinions and needs. As a result, many opportunities to use research to identify niches for small-scale programs, support and change that could make a dramatic difference to a subset of a community might be overlooked. By paying attention to the different opinions and experiences in a community, these groups' needs are retained and program opportunities like improvements to single-parent support and expansion of the daycare, better

utilization of cooking skills facilities in the high school, or specific wish-list items for a youth centre, like computers and game tables, are more evident. For example, speaking with individuals yields suggestions or need for things like a soapstone shipping co-op for carvers or the use of the high school kitchen for cooking classes for interested students. Through the simple act of maintaining information about community subgroups, can we improve the applicability and utility of mining impact research for those being impacted?

In addition to community improvement potential, recognizing diversity in a community's experience with mining could provide a new perspective on mine-community relationships. Extensive research has been conducted on the interactions and relationships between communities and mining companies, but the "community" is typically conceived as a homogeneous, static unit. In this field, researchers have examined the various benefit-capture mechanisms that have been employed by aboriginal communities and groups (such as Impact and Benefit Agreements (IBAs))(Fidler 2009; O'Faircheallaigh 2008; O'Faircheallaigh 2005). These confidential, negotiated agreements are signed between Aboriginal communities and mining companies, provisioning capture of certain benefits for the Aboriginal signatories and protection from certain negative impacts. Mining companies expect that, in exchange for these provisions, communities will support mining development (IBA Research Network 2010). In many cases, the benefits assured to communities are outside the purview of traditional regulatory systems, thereby allowing communities to gain from mining development and not simply experience negative impacts (Fidler and Hitch 2007). The scholarship on negotiated agreements seeks to understand the relationship between mining companies and local communities, and the ability of local groups to capture benefits from their

participation in agreements (Fidler and Hitch 2007; O’Faircheallaigh 2008; O’Faircheallaigh 2007; O’Faircheallaigh 2005; O’Faircheallaigh 2004; Baker 2003; Hipwell et al 2002; Sosa and Keenan 2001; O’Faircheallaigh 1999).

Despite this attention from researchers, the relationship between mining firms and Aboriginal communities often focuses on company decision-making and practice, leaving the community as the unmarked, static, impacted party. A community’s efforts to proactively engage with industry through, for example, the development of their own mineral policies, are often overlooked in favour of Corporate Social Responsibility (CSR) and corporate best practices. Taking the perspective of a community of aggregate subgroups could break down the assumption of a homogeneous “community”. Could this provide more insight into why communities are affected by mining differently? By recognizing the heterogeneity not just between cases, but within each case as well, there may be an opportunity to better understand why communities may react differently to CSR initiatives. More thorough understanding of the diversity of the individuals that make up a community could open doors to a more nuanced understanding of the mine-community dynamic and has potential to influence how CSR is developed and implemented at a given site.

Finally, previous scholarship has also highlighted a need for increased participation in mining-related processes like Social Impact Assessment and Environmental Assessment (Angell and Parkins 2011; O’Faircheallaigh 2007; Baker 2003; Mulvihill and Baker 2001; Paci et al 2001; O’Reilly 1996; Wismer 1996). Retaining the individual-level detail of the mining experience when evaluating the social and environmental impacts could help address some of this need. Is it possible that

assessing and preserving the diversity of understanding and nuance of experience when documenting community mining experience could improve local participation? When an individual knows that their views will be carefully considered and included in final assessments of social impact (even as a member of an identified subgroup), that individual may be more motivated to participate in the study. Logically, that individual would be more supportive of the assessment process and would encourage community participation. In addition, focusing on the individual experience and retaining diversity in a community could be a straightforward way of developing locally-relevant measurements of impact, as the priorities of a wide diversity of individuals could be maintained.

In light of both the practical information need of the Hamlet of Baker Lake and the need to address gaps in a number of bodies of scholarship, there is considerable justification for research that documents and seeks to understand the diversity of individual experiences within a community experiencing mining.

1.2 Research Aims and Objectives

This research aims to describe and explain the experience of Baker Lake, NU with the Meadowbank Gold Mine, with particular emphasis on maintaining the individuality and detail of experiences. This will be accomplished through the accomplishment of three objectives.

Objective 1: Develop a conceptual model of the determinants of individual experiences with mining in Baker Lake through review of scholarly context.

Objective 2: Empirically assess the diversity of experiences with mining in Baker Lake by collecting individual and group understandings of how mining has changed their community, for better or worse,.

Objective 3: Translate the results into usable information for the community.

These objectives will be explained in more detail in chapter 4 of this thesis.

1.3 Thesis Outline

This thesis follows in five further chapters. Chapter 2 reviews the relevant scholarship pertaining to mining and remote communities, aboriginal change with development in Canada, and the social determinants of health. Chapter 3 provides a background to the study site, briefly describing the geography of Nunavut, mining development in the Canadian North, the history of, and current conditions in, Baker Lake, and the recent development of mining there. Chapter 4 describes the research methods employed to achieve the research aim described above. Chapter 5 presents the results of this study. Finally, chapter 6 offers a concluding summary and discusses potential future research. The deliverables to fulfill Objective 3 (above) are external to the body of this thesis and will be included as appendices.

CHAPTER 2 – SCHOLARLY CONTEXT

Given the need to identify and explain the experience of a remote, indigenous community with mining, what existing scholarship might be helpful? The scholarly context consists of three main bodies of scholarship: mining and remote communities, impact of settler state development on Aboriginal communities and social determinants of aboriginal health. First, existing scholarship on mining and remote communities is a foundational body of work on which this research is based. Work in this area has been conducted all over the globe but has significant concentrations in Australia and Canada (Rolfe et al 2007; O’Faircheallaigh 1999; Gibson and Klinck 2005). Second, existing scholarship on the impact of a settler state on aboriginal communities also frames the context of this research (Alfred and Corntassel 2005; Nadasdy 2002; Asch 2001). In addition, the third body of scholarship, Social Determinants of Health, provides a unifying group of scholarship investigating the connection between social, economic, historical, and political factors and individual and community well-being (e.g. King et al 2009; Richmond and Ross 2009; Adelson 2005). This helps to connect the experiences of individuals with mining to the overall well-being and health of those individuals and the community.

Looking first at mining and remote communities and the impact of the settler state on aboriginal communities, the scholarship includes numerous case studies of both mining’s impact on communities (e.g. Rolfe et al 2007; Gibson and Klinck 2005; Tsetta et al 2005) and changing aboriginal communities with settler state influence (e.g. Alfred and Corntassel 2005; Whiteman 2004; Nadasdy 2002). This research makes use of both of these fields in order to make sense of the case of Baker Lake, which sits at the

intersection between them. The Hamlet of Baker Lake is the location of a new mining development and has a majority Inuit population under the influence of the settler state of Canada, placing it at the intersection of these two bodies of scholarship. As such, examining the impact of mining on the Hamlet of Baker Lake requires an examination of previous scholarship on both the impact of mining on remote communities and on the settler state economic development of aboriginal communities.

In addition to those two areas, the scholarship on social determinants of aboriginal health brings attention to some of the potential outcomes related to the contextual variables identified but not explored thoroughly in the previous two bodies of scholarship. The broadly-defined health outcomes of aboriginal communities are impacted by social, economic, historical and political conditions, including the introduction of mining development. Utilizing this field of scholarship provides insight into the potential secondary effects of mining development on a remote, aboriginal community through their social, physical and mental health outcomes.

2.1 Mining and Remote Communities

There is considerable and still growing scholarship on mining and remote communities. Within this field, two scales of impact and change are evident: the individual; and the community. On the individual scale, two aspects of mine development are highlighted: income; and employment. Income is identified as an important catalyst for individual, family and community change. This income may come from direct employment on the mine site or from employment in a mine-related or mine-contracted industry. Employment is considered separately from income, as the direct employment in

a mine development has specific schedule and working-condition impacts that employment in a mine-related secondary industry may not. On the community-scale, three phenomena are identified: the trickle-up of individual income to the community; economic diversification and development; and demographic change. Organizing the impacts of mining on remote communities in this way highlights the importance of the individual decision-maker and the relationship between individual and community changes.

Looking first at the experience of the individual with mining development, much of the scholarship focuses on the impacts of increased income, but often in different ways. Income has been studied in terms of wage statistics and other census data, painting a picture of a community as the average or conglomeration of individual incomes. Resource-centric communities often have higher wages per capita than surrounding or regionally-similar communities, because mine wages are often extremely high to compensate for working conditions, remoteness and difficulty of the work (NRC 2007; Gibson and Klinck 2005; Anonymous 1994). In Canada, for example, the average wage for a metal ore mine worker in 2008 was \$1428.19 per week (NRC 2008). Wages from mining work have often been stressed as having a significant impact on local communities, especially considering the high wages in the mining sector and the high levels of unemployment in remote communities where mining development has most recently been taking place (Gibson and Klinck 2005; Sosa and Keenan 2001). The nature of mining development of a non-renewable resource means that communities can become dependent on these new, high incomes that cannot be maintained (Brody 1975). However, on the positive side, increased income increases purchasing power of mining

employees, increases the tax base for local governments and makes cash available for investment in local businesses (Gibson and Klinck 2005; Sosa and Keenan 2001).

Therefore, it is hoped that the income will cycle through the community to establish long-lasting economic stability through development of a diverse local economy (Brody 1975).

Even when a large number of community members have a sudden increase in income, individual decision-making determines how that income increase impacts a person and their family. For some, the money goes towards bettering their lives and their family's lives through the purchase of new vehicles, hunting and fishing equipment or securing better housing (Gibson and Klinck 2005; Hunter and Deasley 2002; North Slave Metis Association 2002). The issue of effective income management becomes extremely important because some individuals do not choose to spend their money in this way, or they do not have the skills to manage their income in a responsible way (Tsetta et al 2005). As a result, in some cases the new income has been seen to feed a new or increasing alcohol or drug dependence (Gibson and Klinck 2005).

Shifting from income to employment, apart from the financial gain with mine development, the individual is impacted by the day-to-day working conditions and lifestyle of working at a mine site. Many modern mines utilize a non-traditional work schedule, such as 12-hour shifts and the two-week fly-in, fly-out system (Petkova et al 2009; Gibson and Klinck 2005). Extended periods off from work can spark increased incidences of alcohol and drug consumption, especially when those periods coincide with a staggeringly large paycheck (Gibson and Klinck 2005; Hunter and Desley 2002; North Slave Metis Association 2002). Individuals are also directly impacted by mental stress from hazardous work, repetitive tasks, sleep deprivation and long shifts, which ripples

through from the individual to the (extended) family unit (Tsetta et al 2005; Hipwell et al 2002; North Slave Metis Association 2002). These working conditions have been shown to increase the incidence of alcoholism and, when paired with long periods at home and a sudden jump in income, the trend can be exacerbated (Hunter and Desley 2002). As a result, incidences of abuse have been seen to rise, along with rates of divorce and child neglect (Nancarrow et al 2009; Gibson and Klinck 2005). The role modeling of abusive relationships can then have a long-lasting effect into the next generation, as the children of abusive households grow up and have families of their own.

Mining work can also have a varying impact on traditional food procurement in remote communities (Rasmussen et al 2009; Lambden et al 2007; Gibson and Klinck 2005; Tsetta et al 2005; Collings et al 1998). The increased income provides opportunities to invest more into hunting and fishing equipment, which then can increase efficiency and increase yield (Gibson and Klinck 2005). However, structured work, even with two weeks on-two weeks off schedules, can limit the ability for hunters to engage in long-term hunting trips and limit the transmission of knowledge between generations, and can force people out of town during community events (Tsetta et al 2005; Collings et al 1998). In another example, as seen around Yellowknife, NWT, the consolidation of population from the land to the city to enter mining work has had a negative impact on the availability of game in the immediate area (Tsetta et al 2005). As a result, individuals and families may become more dependent on imported foods that they either order or purchase at the grocery store. In many cases, these foods are considered less desirable and less nutritious than their country food counterparts (Tsetta et al 2005). These

individuals are then more dependent on their mine income, reducing individual resiliency to changes in their employment or the closure of the mine.

The choices that each worker makes concerning their reinvestment in traditional and community activities has the potential to have an enormous impact on the benefits of mining felt in a given community. Even when looking at just the more responsible uses of mining income, the decision to work and utilize mining wages depends on individual agency and ranges from community/traditional activities and economies-focused to upwardly mobile and committed to wage work income (Imbun 2006). The “tribal strategist” works in order to enable traditional activities only, while the “worker strategist” works in wage income to improve his or her economic life and move away from traditional economies (Imbun 2006). When more individuals in a community choose to be “tribal strategists”, more money and time are invested in supporting traditional activities, ranging from harvesting activities to community gatherings, but less time and money may be spent on non-traditional education (e.g. western-style schools) or on developing other sectors in a community’s economy. If a community has more “worker strategists”, the focus shifts from traditional activities to personal advancement through training and embracement of the regional, national or global economic system (Imbun 2006). These two represent the endpoints of a spectrum and many people sit somewhere in between.

Even with these disparate individual strategies, communities typically expect dramatic local economic development and diversification to come with mining development (Lockie et al 2009; Petkova et al 2009; Rasmussen et al 2009; Ivanova et al 2007; Rolfe et al 2007; Frickel and Freudenburg 1996). For example, it has been

assumed that mining development will always result in higher employment in both direct mine employment and in the development of secondary industry in the area. However, technological developments and the decreasing cost of transportation mean this is often no longer the case (Frickel and Freudenburg 1996). Change in the mining industry over time has tended to push the development impacts farther from local or regional (Frickel and Freudenburg 1996). These changes have included improvements in resource-extraction capabilities, increased pre-existing competition, linkage specialization, and improvements in transportation. As a result, the mining sector has changed from the mining boom-town image from the late 19th and early 20th centuries, and modern developments cannot be seen through the same lens as historical ones (Frickel and Freudenburg 1996).

Communities are differently affected by modern developments than they may have been by historical ones. Because of improvements in transportation and increases in mineral prices, the development of remote mines has become more financially viable, but expectations for employment and income are drawn from old mining developments (Gibson and Klinck 2005). For example, as with historical developments, modern mines have caused community demographic changes as workers come in from other communities or regions to take advantage of mining work (Petkova et al 2009). However, with the increasing reliance on fly-in, fly-out systems, this phenomenon is becoming less significant than it was in the days of company towns and permanent mining settlements (Petkova et al 2009). As a result, the expectations for local prosperity have become less and less accurate. In many cases, economic development and investment in economic diversification occurs farther afield from the mine site (Rasmussen et al 2009; Ivanova et

al 2007; Lockie et al 2009; Rolfe et al 2007). Therefore, as communities still bear the brunt of the negative impacts from mining, they are now reaping fewer of the benefits, making the net impact more negative than during previous mining booms in the 19th and earlier 20th centuries (Frickel and Freudenburg 1996).

Due to this new disconnect between local communities and economic benefits, this “multiplier effect” is not as great as in previous eras (Petkova et al 2009). As mines require fewer manual labourers and many of those labourers have to come in with specialized skills, the fewer mine workers come from local communities. When high levels of unemployment are coupled with mining income that only benefits this more limited number of workers in the community, there is the potential for an increase in social stratification (Gibson and Klinck 2005; O’Faircheallaigh 1998).

Mining developments have the potential to dramatically impact the lives of individuals and their families, through the procurement of steady mine employment and increased income. The ways in which those impacts are felt vary greatly from individual to individual based on strategic choice and individual priorities. Communities can also be affected in a variety of ways, depending on the choices of individual community members, and on the context of the community and the mining development. Different factors are important now than have been in the past, as technological advances, improvements in transportation and rising mineral prices have changed how, when and where mines are sited and developed. Therefore, the specific individual backgrounds and the contextual variables of the community as a whole have the potential to condition the experiences of individuals and communities in extremely different ways.

2. 2. Aboriginal Community Change with Development in Canada

Over the 20th and 21st centuries, many rural and remote communities around the world have faced varied and increasing pressures and rapid change, largely brought in from the outside world. This section seeks to integrate some of the varied literature that covers this phenomenon under the rubric of Aboriginal community change with development. Focusing on settler society-aboriginal society interactions in Canada, Aboriginal Community Change with Development encompasses the importance of the imposition of colonial Euro-Canadian political structures and property rights regimes, the role of traditional foods in the face of change, and the specific community structures that may contribute to how a community adapts. Although these phenomena are loosely connected, they are each important to mining's impacts on remote indigenous communities. Each of these phenomena contribute to a community's reaction and adaptation to change, and positions a given community in a certain way relative to the external changes it experiences, reflecting the importance of specific context.

Starting in the 16th century, an influx of French and English explorers made first contact with the resident Aboriginal societies of Canada, which was quickly followed by a flow of traders and missionaries. As these first encounters grew into the modern "settler state" of Canada, European settlers brought in their concepts of governance, land use, property, and religion, often imposing them on the local Aboriginal groups (Alfred and Corntassel 2005; Nadasdy 2002). Despite the historical nature of these encounters and the popular perception that the issues of the colonial encounter were resolved long ago, the impression left by the original colonization still remains culturally and politically salient

for the Aboriginal peoples of Canada today (Alfred and Corntassel 2005; Nadasdy 2002). The imposition of new governance systems, religions and lifestyles formed the basis of the modern issues of dispossession, loss of cultural and spiritual heritage and archaic land treaty rights disputes (Alfred and Corntassel 2005; Nadasdy 2002; Asch 2001; Whiteman 2004). Therefore, the colonization of Canada remains an important piece of historical context for modern Aboriginal communities across the country. As such, this historical (and arguably ongoing) process of colonization is a contextual factor that requires more explicit discussion and understanding in the case of a modern, remote, Aboriginal Canadian community.

The level of integration between European ideologies and indigenous belief and governance systems has varied across the Canadian North. European ideas of property rights and governance became particularly influential as the relationship between native communities and the new settler government became framed only in terms of those European ideas (Nadasdy 2002). With the first influx of outside goods came the beginnings of the imposition of a capitalist economic system. This overlay of European structures had significant impacts on the governance structures of indigenous peoples. For example, the establishment of Hudson's Bay Company Beaver Preserves among the Cree of eastern James Bay in the 1930s and 1940s undermined the political power of women and conflicted with the existing trap-line management system (Whiteman 2004). In a more modern example, during the recent shift towards empowering indigenous groups in the face of neo-colonialist structures, some indigenous groups have structured their power dynamics and bureaucracy through neo-traditionalist rhetoric, with individual members of a group looking to the past for political legitimacy through performance of

neo-traditional cultural and political ritual (Schröder 2003). With the imposition of European modes of thought, economic systems and land use, the overlapping understandings of property and governance set up the dramatic clash between indigenous lifeways and the influence of a foreign lifestyle system.

The ability of a modern aboriginal community to cope with changes brought by the continuing imposition of Euro-Canadian neo-colonialist structures has been examined from several angles. One of the more notable aspects of traditional life that is changing with integration and active economic development and should be included in discussions of community coping is the importance of traditional subsistence activities to community life and food security (Lambden et al 2007; Pars et al 2001; Collings et al 1998). Investigating these activities is critical to differentiating between indigenous and non-indigenous societies, and between different generations within indigenous groups (Collings et al 1998). Through the lens of food security studies, the importance of traditional food procurement to Aboriginal groups has been seen as critical to both correct food security estimations and to understand the changing role of traditional foods in modern lifestyles (Lambden 2007). The incorporation of traditional foods into the informal barter economy has been cited as critical for the survival of community structures in rural aboriginal communities (Collings et al 1998). Maintaining access to “country foods” has been emphasized by members of the Yellowknives Dene community in Northwest Territories as a critical concern surrounding mining development and increasing population density, reinforcing the importance of traditional food procurement in the collective consciousness of aboriginal groups (Tsetta et al 2005).

Scholarship around changing income structures and hunting has also outlined the impact of changing economic landscape of Arctic communities (Rasmussen et al 2009; Lambden 2007; Tsetta et al 2005). With increasing mechanization of resource industries (for example, commercial fishing), fewer employees are needed for the same return and as a result many men become suddenly unemployed (Rasmussen et al 2009). When new jobs emerge in the government, service and health sectors, women are better positioned to take the jobs, shifting familial income sources from men to women. Women are then in a position to support men's hunting and fishing activities, which can cause familial strife due to men's reactions to their disempowerment, and the increase in single men who cannot afford to support their own hunting (Rasmussen et al 2009). However, increased familial income does allow for more involvement in hunting activities, as more money to purchase supplies, vehicles and ammunition enables a higher level of participation in subsistence activities. In this way, changes in the economic landscape of a community can affect both traditional harvesting activities and gender relationships in complicated and sometimes unexpected ways.

Intrinsic community attributes have also been discussed in the literature as key to understanding community response to change. Examining the community structure attributes that may contribute to well-being and resilience should be used to understand how well a community might adapt to both social and environmental change. For example, Chapin et al (2004) describe community attributes that contribute to resilience in the face of social and environmental change in the Canadian north. Similarly, Duhaime et al (2004) identify "social cohesion" as one of these resilience attributes, and offer a procedure for measuring it. Despite these discussions of community structures, traditional

foods, shifts in political structures and property rights regimes, the scholarship on community change with development is understudied.

2. 3. Social Determinants of Health

Following from the discussion of Aboriginal Community Change, it is helpful to address the impact of the imposition of new political and economic systems, food procurement practices, and political organization on personal and community health outcomes. Looking at health as both mental and physical, and as influenced by a wide range of environmental, social, political and economic factors, the Social Determinants of Health (SDH) scholarship allows for a broader perspective to be taken both on health outcomes and the determinants of those outcomes in community context (Richmond and Ross 2009; Adelson 2005; Paci and Villebrun 2005; Kunitz 2000). While a relatively new and broad field, scholarship in the social determinants of health is opening new lines of inquiry into the factors that influence the health of human populations in varying social and economic environments. When looking at aboriginal people in relation to their non-aboriginal countrymen, differences in life expectancy at birth, child and maternal mortality, rates of diabetes, alcoholism and substance abuse are significant and have been connected to SDH differences (Gracey and King 2009; King et al 2009; McMahon et al 2004). For example, using an accepted cross-cultural and international metric for lifetime health outcomes, life expectancy at birth is five to seven years less for Aboriginal Canadians than Canadians as a whole (Gracey and King 2009; Waldram et al 2008). In Australia, the rate of diabetes in children under 17 is 18 times higher among Aboriginal youth than non-Aboriginal youth (Gracey and King 2009; McMahon et al 2004). In Canada, similar susceptibility to diabetes has been documented with the introduction of

new food sources to a traditional food diet in cultural transition, although Inuit have the lowest rates among the native peoples of Canada (Young 1993; Young et al 1990; Szathmary 1987).

Of particular relevance to the research herein is the social determinants of health research that focuses on the differential health outcomes of aboriginal people, including the influence of a long history of social and economic inequalities, the impact of the displacement of governing systems and associated political dispossession (McCalman 2010; de Leeuw et al 2009; King et al 2009; Richmond and Ross 2009; Adelson 2005; Bartlett 2003; Kunitz 2000). Health disparities are directly and indirectly associated with social, economic, cultural, political inequalities, and Aboriginal Canadians suffer a disproportionate burden of ill health (King et al 2009; Richmond 2009; Adelson 2005; Paci and Villebrun 2005; Kunitz 2000). Finally, the necessity of construction of meaningful social health indicators is highlighted, so health data are useful to local communities (Marks et al 2007; Paci and Villebrun 2005; Tsetta et al 2005). This scholarship calls for a need to put the health of aboriginal peoples in the context of the social and historical determinants of health and health-impacting phenomena in order to adequately provide necessary social and health services.

Three components of the social determinants of aboriginal health field apply directly to the impact of mining development: environmental and political dispossession; development-related externalities impacting community life; and directly mining-related issues. In the first group, the historical political context of aboriginal communities becomes the central issue, especially for aboriginal groups living in settler states like Australia and Canada. Examining aboriginal health through this lens, it becomes

important to frame the social inequalities, economic inequalities and associated health disparities in terms of the colonialist, paternalist discourse surrounding the state-aboriginal group relationship (de Leeuw et al 2009; Adelson 2005). The loss of control over a community's environment also has health implications, as many aboriginal cultures and traditional lifestyles are connected to their landscape in inextricable ways (Richmond and Ross 2009). Environmental dispossession that comes from the same loss of political power in the face of the nation-state has an indirect effect on mental and physical health as it strains material resources, changes education patterns, and disconnects people from their heritage and tradition (Richmond and Ross 2009).

In the second set of scholarship, the emphasis shifts from the broadest level of determinants that create social and economic inequalities to the impact of those inequalities themselves. In attempts to explain the differing health outcomes of aboriginal peoples as compared to non-aboriginal residents of the same countries, this scholarship focuses on the impacts of social and economic inequalities on the community and the individual (McCalman 2010; Gracey and King 2009; King et al 2009; Adelson 2005; Paci and Villebrun 2005; Bartlett 2003). This body of scholarship directs attention to living conditions (such as overcrowding in housing or inadequate quality of housing), economic opportunities (for empowerment and hope), discrimination (both racism and sexism), disregard for non-biomedical health interventions, inadequate counselling and addiction services, and immobility (especially for remote communities) as potential for explanations for health disparities (Adelson 2005). For many scholars, the burden of these issues falls squarely on the shoulders of the state, the policies that frame government intervention programs, the lack of funding to carry out adequate

programming, and a general ignorance of how the needs of aboriginal communities differ from non-aboriginal ones (McCalman 2010; King et al 2009; Kunitz 2000).

In a third subgroup of body of social determinants of health scholarship, the impacts of mining development on local aboriginal communities are examined in terms of the potential direct and indirect impacts on community and individual health. Discussed in this category are changes in community and social structure that come with changing income status (Rasmussen 2009), changing population dynamics (Petkova et al 2009), or the impact of direct historical trauma (Markstrom and Charley 2003). The stereotypes and assumptions around mining development and its impact on communities are also aired and challenged, as Nancarrow et al (2009) discuss the lack of statistical evidence supporting an increase in domestic abuse with mining development. Discussion of the impact of mining on social relations and the direct connection between mining and ill-health or poor well-being has not been made via social and economic variables. The inequalities are framed in terms of very broad governance issues, and other literature speaks to the impact of mining on those inequalities, but the social determinants of health field appears to dismiss the connection between localized externalities like mining on aboriginal health.

2.4. Summary and Conceptual Model

Section Summary

The potential for economic and social influence of mining development on northern communities has been well-established, as have some of the potential impacts of

any economic development on aboriginal communities in Canada and elsewhere. For this research, the importance of bringing those bodies of scholarship into dialogue with the social determinants of health literature becomes apparent. To describe the experiences that community members in Baker Lake have had with mining accurately and adequately, the broader historical, political, economic, social and environmental context in which the study site is situated become critical. Because these factors are many of the same that are considered Social Determinants of Health, and the experience of mining should be included as a determinant of an individual's broadly-defined health, this research sits at the intersection between mining impact, Aboriginal community development and social determinants of health scholarship.

Developing a conceptual model from the insights gleaned from previous scholarship, the importance of individual experiences and choice. Without consideration of the diversity of the experience on mining in communities, the community appears to be a static, uniform, passive entity. For this research, the experience of mining among community members in Baker Lake, NU is conceptualized as varying with the influence that community- and individual-level factors have on individuals in different ways. Documenting the diversity of experiences that people within communities can and have had with mining development records a more complete picture of mining experiences and allows for more nuanced understanding of community experience and reaction to mining.

Conceptual Model

The individual experience of a mining development is dependent on many factors, including personal and community context. Importantly, the influence of those variables

varies from individual to individual and manifests itself in varying ways in different people. As such, prediction of the experiences that community members will have with the mining development is nearly impossible. However, understanding that communities are heterogeneous and made up of individuals with diverse experiences pushes up to understand that there is variability of experience, not only between communities, but within them. Therefore, the context in which a community or a specific individual in a community is situated has the potential to condition the experiences that community or individual may have with the mining development. For example, if context did not matter, the influence of a mining development would be modeled as straightforward and unchanging from case to case and as if the community and the individual were the same, as in figure 2.1.

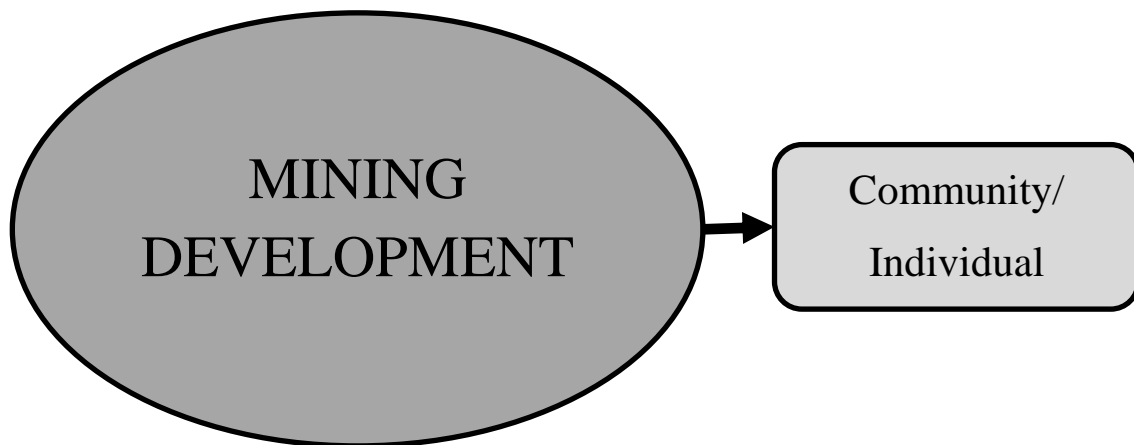


Figure 2.1 – Mining Development has the same impact on any community, because the only factor that conditions a community’s experience of mining development is the choices that the mining company itself makes. There is a standard set of impacts and a standard mitigation strategy that will work in all situations. The community is homogeneous, so every individual has the same experiences of mining as the community as a whole.

This model breaks down very quickly when you recognize that communities are heterogeneous and each individual’s experience is conditioned differently by community

and person context, including factors like existing economic conditions, climate, remoteness, health disparities, traditional harvesting activities, historical and modern political dispossession, family life and social structure of a community and region. Once we acknowledge the potential conditioning influence of these (and other) factors, the model must be changed to be more like figure 2.2.

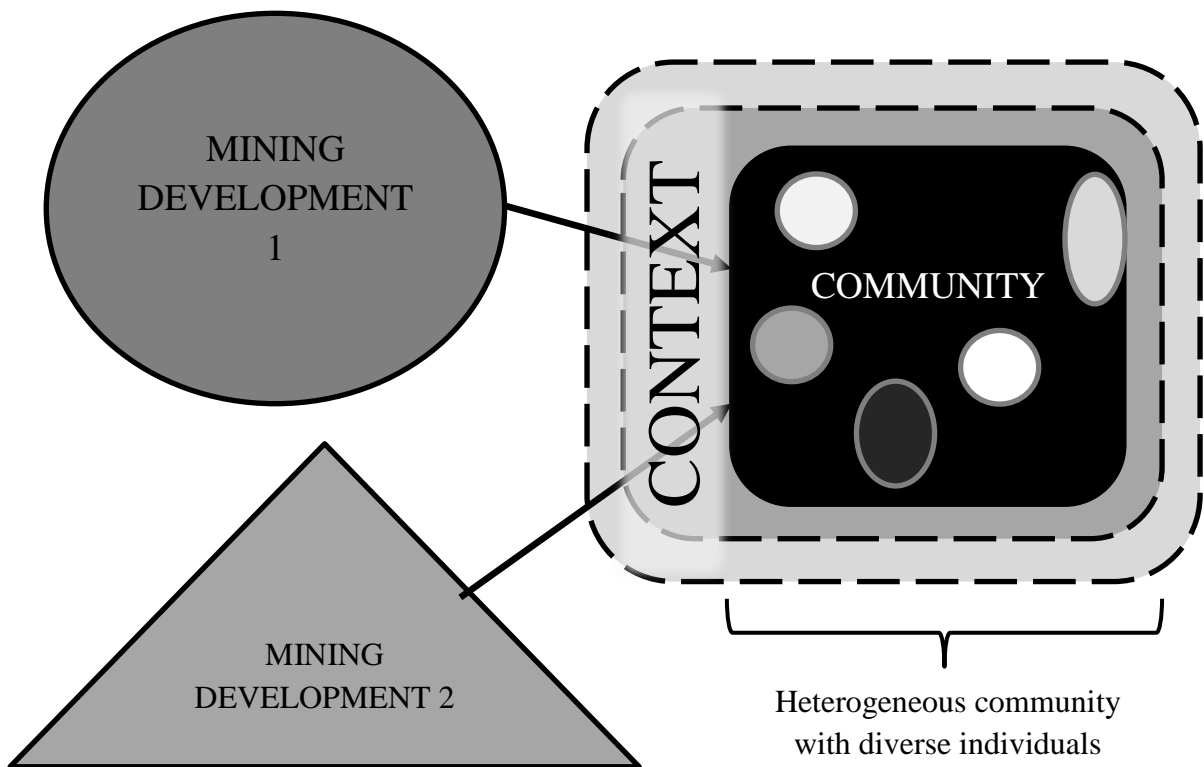


Figure 2.2 – The contextual variables condition the experience of the community with mining development. Different contextual variables are more or less important, depending on the community and the individual within the community.

Contextual variables should not be limited to community-scale: individuals are affected by contextual variables (including community-level variables as well as personal histories and socio-economic conditions) in different ways. Differences in experience with the mine could be at least partially the result of the conditioning of contextual variables on individuals. These may include community contextual variables like political

history, current institutional arrangements, economic diversity and status, community demographics, degree of remoteness, engagement with traditional practices, and climate. Mining companies interact with this context in different ways, depending on their characteristics, so one mining company could have a completely different impact on a community than another purely because of those interactions with community contextual variables. In this model, a community's experiences with mining are conditioned by the interaction between community contextual variables and mining company characteristics and choices. Additionally, individuals make up the community and are recognized as parts of a heterogeneous whole. They are affected by the contextual variables in different ways, depending on individual agency and personal life experiences, creating a diverse set of experiences that vary across the community.

In the next section, the contextual background of Baker Lake, NU (the study site) is described to situate the research in space and to expand on the historical, political and economic background that is critical to this research.

CHAPTER 3 – BACKGROUND TO THE STUDY SITE

This chapter serves to introduce the geographic, demographic, historical, social and economic context of the study site of Baker Lake, NU. First, the geographic location, climate, demographics and political foundation of the Territory of Nunavut will be discussed. Second, the current mining climate and mining history of the territory will be outlined. Then the focus narrows to Baker Lake, NU, touching on its location, demographics and history. Finally, the specific details of the mining developments around Baker Lake complete the picture of the practical context in which this research takes place.

3.1. Nunavut

Nunavut is located in Northern Canada, bordered by the Northwest Territories to the west and Manitoba to the south, encircling Hudson’s Bay. The territory consists of Baffin Island to the east, the mainland west of Hudson’s Bay and the Arctic Archipelago, as seen in figure 3.1, right.

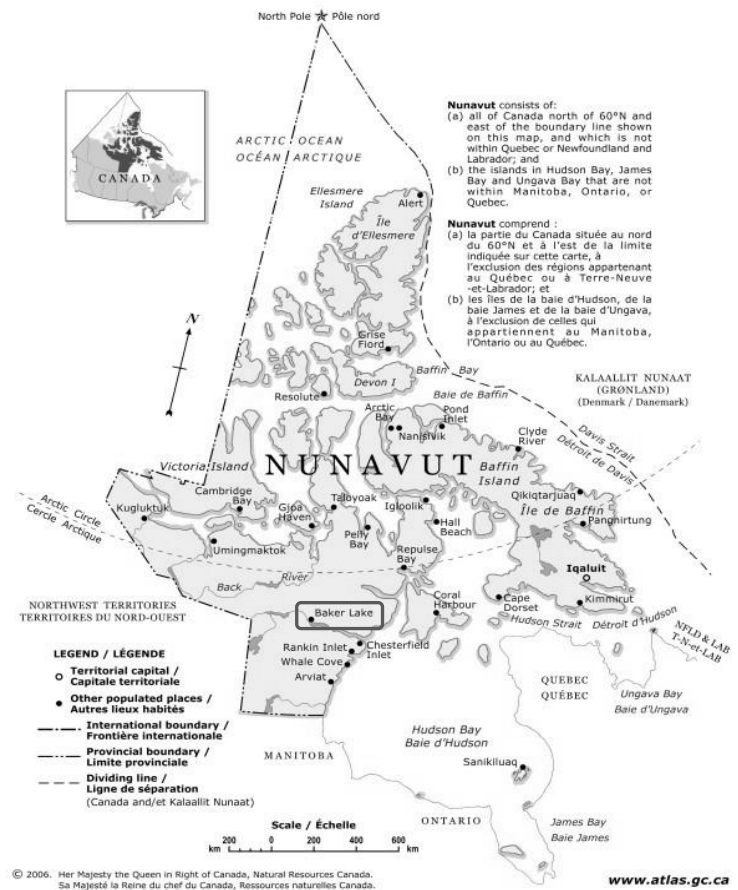


Figure 3.1 – Territory of Nunavut, its location in Canada and the location of Baker Lake, NU (grey box).

The entire territory is underlain by continuous permafrost and overlain by tundra with patches of shrubland (Atlas of Canada 2009). Nunavut has a population of 33,413 (as of April 1, 2011) spread out over a land area of 1,932,255 square kilometers, making its population density less than 0.018 people/square kilometer (Nunavut Bureau of Statistics 2011). Economically, the unemployment rate was 16.6% overall and 22.5% for Inuit as of June 2011, compared with 7.5% for Canada as a whole.

3.2. Nunavut Land Claims Agreement (NLCA)

After a process of research and negotiations starting in 1973, NLCA was made law in 1993 with Canadian Parliament approval. The territory separated from the Northwest Territories on April 1, 1999 with the enactment of the Nunavut Land Claims Agreement. As a result of this agreement, Inuit land claims beneficiaries have a parallel government called Nunavut Tunngavik Inc. (NTI) that deals with the enforcement of the land claims agreement and the provision of services to land claims beneficiaries. With NLCA, approximated 18% of land in Nunavut is owned by Nunavut Land Claims Beneficiaries, with 2% including subsurface (mineral) rights (NTI 2004).

Through this government, the territory is divided into three regional authorities: Kitikmeot (Northwest), Kivalliq (Southeast) and Qitiktani (Baffin Island) (NTI 2011). NTI provides funding to land claims beneficiaries for traditional harvesting support, bereavement travel, elders support and higher education (NTI 2011). The presence of this parallel government is important to note, as the negotiations with mining companies on behalf of the Inuit of Nunavut are conducted by NTI and its regional authorities. Baker Lake is located in the Kivalliq region and as such is part of the Kivalliq Inuit Association

(KIA) regional authority. The KIA main offices are located in Rankin Inlet, the largest community in the Kivalliq, with offices for the community representatives in each community (KIA 2011).

According to Article 26 of the Nunavut Land Claims Agreement, any development that would impact the water or resources on Inuit land requires the negotiation of an Inuit Impact-Benefit Agreement (IIBA) (Nunavut Land Claims Agreement 2009). These IIBAs are to be negotiated between the developer and a Designated Inuit Organization (DIO), which can be Nunavut Tunngavik Inc (NTI), a group within NTI, or another group designated by NTI to operate on behalf of Nunavut's Inuit (Nunavut Land Claims Agreement 2009). In the Kivalliq region, the DIO is the Kivalliq Inuit Association, the regional subsection of Nunavut Tunngavik Inc (NTI). As such, all IIBAs in the region have been and will be negotiated between the developer and KIA, unless NTI designates another group as a DIO. This structure determines the power relationships in mining negotiations; Baker Lake cannot be party to an IIBA without being designated by NTI as a DIO. There appears to be no signs of such a move, so Baker Lake will not be party to any IIBA any time soon. Additionally, while the IIBA final agreement must be shared with the Government of Nunavut (GN), there is no government involvement in the agreement itself (Nunavut Land Claims Agreement 2009).

3.3. Mining Development in the Canadian North

Mining exploration and development has accelerated dramatically in the Canadian North over recent decades. As mineral prices within the global market have risen dramatically and mining technology has become more efficient, the world mining sector

has turned its attention to remote regions like the Canadian Arctic for new mineral resources. For example, the price of gold reached \$973 per ounce in 2009, an increase of 138% from prices in 2004 (Mining Association of Canada 2010). Driven by higher prices, the number of mining establishments has increased from 757 in 2004 to 961 in 2009 (Mining Association of Canada 2010). With this sector-wide expansion, the focus on the Canadian North has become more pronounced as mineral companies look for unexploited lands. Expenditures on exploration appraisal in the Inuit land claims territory of Nunavut have ranged between 9.6% and 13.7% of total expenditures in Canada between 2005 and 2010, ranging in absolute dollars from \$178.7 million to \$432.6 million (NRC 2010). These investments reflect the increasing investment in new projects in the North and are especially significant after considering the territories relative remoteness. The attraction of the North is not limited to Canadian firms; potential mineral deposits in the Canadian Arctic are attracting prospectors from outside of Canada: foreign direct investment in Canadian mining has increased from \$20.9 billion in 2004 to \$74.1 billion in 2009 (Mining Association of Canada 2010).

The economic impact of mining development on Nunavut, as captured by GDP growth, has been significant for the territory's GDP. In 2009, mining and oil and gas extraction provided 1.72% of the territory's GDP. In 2010, this percentage jumped to 16.1% as the sector gained \$178.7 million while all industry combined gained only \$157.6 million (Nunavut Bureau of Statistics 2011). Significantly, March 2010 marked the official beginning of gold production at the Meadowbank Gold Mine north of Baker Lake, the only operating mine in the new territory (Agnico-Eagle 2010).

When discussing mining and its impacts in Nunavut, the conversation cannot be limited to recent investments and rising mineral prices. Nunavut, when it was still part of the Northwest Territories (NWT), experienced several mining developments that set the stage for today's developments. During the late 1960s and early 1970s, the discovery of oil and gas in the area of Melville Island and the Mackenzie River (now part of the NWT) sparked great interest for both private enterprise and government officials in the development of the Arctic. One prominent example of some parallels between the previous resource boom and the one being experienced today is the case of Panarctic Oils Ltd. While the project was being developed in the 1970s, workers for Panarctic were hired out of Edmonton and brought to the drill site near Pond Inlet and Arctic Bay (northern Baffin Island) on twenty days on-ten days off rotations (similar in style if not duration to today's two weeks in-two weeks out schedules). Given pressure from the government to hire locals in 1974, twenty-four men from Pond Inlet and Arctic Bay started working for the company at the same rate of pay as southern workers, thereby generating significant income for the two tiny communities without regard for its impact (Brody 1975). Some of these actions have been cycling back to some degree through with the development of new mining in the territory, reflecting the continuing issues that the people of Nunavut are dealing with when they accept mining developments on their land.

3.4. Baker Lake

The Hamlet of Baker Lake is located near the mouth of the Thelon River into Baker Lake. The Kazan River empties into the lake from the south, on the opposite coast from the community. Baker Lake is the only inland community in Nunavut and is located

close to the geographic center of Canada at 62°18'41"N 96°04'08"W (see Figure 1) (Baker Lake: Qamani'tuaq 2011). Ecologically, Baker Lake sits at the southern edge of the Northern Arctic ecozone, well north and east of the treeline (Atlas of Canada 2009). Apart from the mine road, transportation is limited to air service to Rankin Inlet, Nunavut, shipping service between August and September each year and small vehicle transportation (ATV, snowmobile, small watercraft, etc) (Peterson 2010).

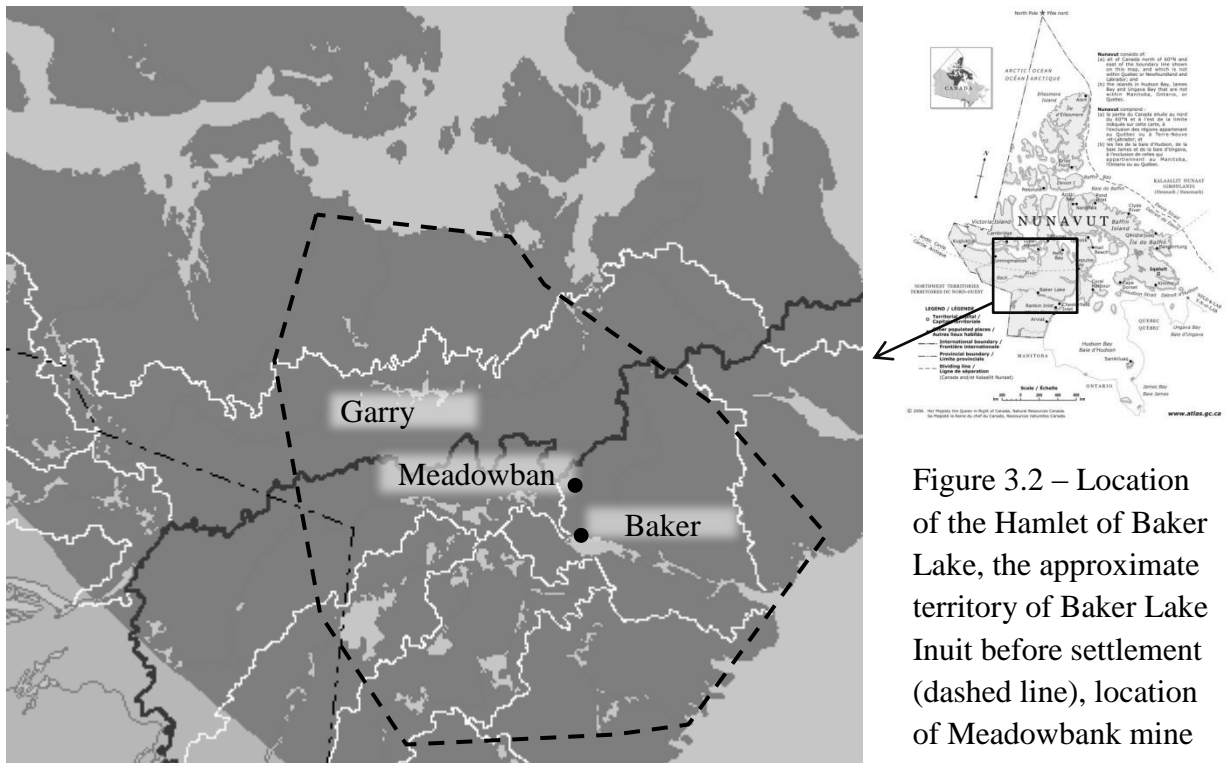


Figure 3.2 – Location of the Hamlet of Baker Lake, the approximate territory of Baker Lake Inuit before settlement (dashed line), location of Meadowbank mine

Nine major Inuit cultural groups lived in the region around the community of Baker Lake before settlement, according to Baker Lake oral history (Webster 1999). Seven of these groups lived to the north and northeast of Baker Lake: the Iluiliqmiut, Qairnirmiut, Hanningayuqmiut, Kihlirnirmiut, Hauniqturmiut, Ukkuhiksalingmiut, and Akilinirmiut. Two other groups, the Harvaqtuurmiut and Paalirmiut, came from south of Baker Lake, centered on the Kazan River. These groups ranged from near present-day

Cambridge Bay to the northwest to west of Arviat, on Hudson Bay, a distance of more than 1000km (630 miles). The cultural, lingual and lifestyle traditions of these nine groups were amalgamated into the settlement, where they now intermix and are called Qamani'tuarmitut after Qamani'tuaq, the Inuit name for Baker Lake (Webster 1999).

The area was first visited by Europeans when a Hudson's Bay Company (HBC) exploratory trip reached the lake in 1762 (History of Baker Lake 2011). The HBC set up a trading post at the east end of the lake in 1914 (Damas 2002). In 1924, Revellion Frères established a permanent trading post on Ookpik Island at the mouth of the Thelon River (Webster 1999). By 1926, the HBC had established a permanent trading post on the current town site and in 1927 both Catholic and Anglican missions were established nearby (History of Baker Lake 2011; Webster 1999). As demand for furs escalated, the people of the Baker Lake area began trapping fox as part of their harvesting activities in order to trade with the posts (Damas 2002; Webster 1999; Brody 1975).

During the next few decades, Inuit living on the land around the lake began to move in to the town, but the settlement escalated during the 1950s "famine times" (History of Baker Lake 2011; Webster 1999; Mowat 1959). Fluctuations in the caribou herd, unexpectedly harsh winters, and low fish runs led to numerous supply drops and RCMP sled patrols to support struggling Inuit camps, and some families filtered into the town to be closer to government supply sources (McPherson 2003; Damas 2002; Mowat 1959). Fox trapping was collapsing, with catches at Baker Lake dropping from 3,500 in 1947-48 to 900 in 1949-50, decreasing the trading power of Inuit living and trapping from land camps and increasing reliance on government relief (McPherson 2003; Vallee 1962). However, when Inuit settled closer to Baker Lake and the Garry Lake mission (to

the northwest of Baker Lake, see figure 2), their lifestyles became semi-sedentary and their hunting ranges restricted, further decreasing their harvesting abilities (Damas 2002; Tester and Kulchyski 1994). As a result, they became more dependent on government relief, despite government pressures to disperse into smaller hunting parties at least in the summer months (Tester and Kulchyski 1994). In 1956, the Federal School was founded in Baker Lake, and as children aged 6-16 were brought in to attend the school, their families often followed to keep the family together (Webster 1999). In 1958, a poor caribou harvest, little fishing success and a fire in a government supply house and poorly coordinated relief efforts from Baker Lake lead to a desperate famine and many Inuit deaths around Garry Lake (Tester and Kulchyski 1994). By 1962, reports show that 80% of the area's 467 residents lived in the town and, in 1969, the last year-round nomadic man moves to Baker Lake (Damas 2002).

The move to settlement brought with it a dramatic upswing in disease among the Inuit of the Baker Lake area (McPherson 2003; Brody 1975). In the early 1960s, half the children of Baker Lake had contracted tuberculosis and 55% of households had at least one case (Brody 1975; Moore 1964). Thirty years previous, little to no disease was noted among the "Caribou Eskimo", as the people of this area were called (Brody 1975; Rasmussen 1930). Region-wide, the rate of TB among Inuit soared to twenty times the rate of the Canadian population, reaching almost 20% (McPherson 2003; Brody 1975). With settlement, people accustomed to living in groups of no more than 50 people faced life in close proximity to hundreds of residents and previously unknown diseases (Damas 2002; Brody 1975; Birket-Smith 1929). Therefore, it was inevitable that Inuit moving into towns experienced high levels of disease. These types of health inequalities have not

been overcome, with many Inuit communities experiencing much higher levels of ill-health than their southern counterparts, including life expectancy, obesity, diabetes and substance addiction (Adelson 2005).

With the timing of these developments, it is easy to see how the people of Baker Lake have been, and continue to be, affected by the transition from a nomadic subsistence economy to a sedentary mixed economy today. Many of today's elders of Baker Lake lived on the land well into young adulthood. Many residents above the age of 50 were born in land camps (Anonymous 2011). The spread of tuberculosis sparked the relocation of many people (including very young children) to sanatoriums in places like Churchill, MB and Yellowknife, NWT, totalling around 600 Inuit region-wide in 1954 (Anonymous 2011; Tester and Kulchyski 1994). The increased population density around settlements made the wage economy a vital supplement to subsistence harvesting and reliance on government relief supplies grew (Damas 2002; Tester and Kulchyski 1994). Today's mixed wage-subsistence economy is a direct descendant of shift in economy that started occurring over fifty years ago. The people of Baker Lake today continue to walk the line between maintaining waged employment to pay for commercial goods and services, and traditional harvesting activities to feed their families in the way they prefer (Anonymous 2011).

A political shift paralleled these economic and settlement changes as the Inuit became more closely linked to Canadian institutions like the RCMP and government welfare programs (McPherson 2003). As addressed previously, the influence of Europe and then the Canadian state came to the Inuit on the backs of a variety of entities and institutions. Many early missionaries and traders came from Europe, bringing their

countries' influence with them. Later, these missionaries and traders were Canadian, but, Brody (1975) cites the establishment of RCMP posts as the most prominent presence of the emerging Canadian state.

On the local level, the police put an official seal on the other Whites' determination to change Eskimo life; on a higher level, they represented the fact that one nation was determined to include the vast Arctic hinterland, not only within its geographical frontiers, but within its moral and legal boundaries as well. The missionaries may have been French or English, the traders may have been Scots; but the police, whatever their origins, were deeply Canadian.

This reflects the beginning of the ongoing cultural, political and economic interaction between an aboriginal society in Canada and the settler state. Other institutions have been cited for this kind of cultural hegemony (including the school system, civil administration and health programs) but supply relief programs were often run by the RCMP (McPherson 2003; Tester and Kulchyski 1994; Brody 1975; Hepburn 1963). Internal conflict between the RCMP, other government agencies and competing missions projected conflicting messages to the Inuit and set the foundation of an atmosphere of mixed messages, misunderstanding and confusing institutional arrangements today (Tester and Kulchyski 1994). The relationship between Inuit and *Qallunaat* (white people) today finds its foundation in these early interactions with the Canadian state (Brody 1975).

Today, the Hamlet of Baker Lake, Nunavut is estimated to have 1,950 permanent residents, making it the third largest community in the territory (Nunavut Bureau of Statistics 2010). According to 2006 Census data, almost 90% of those residents self-identify as Inuit (Nunavut Bureau of Statistics 2006). More than 65% of the population reports that their mother tongue is neither English nor French, which is lower than the territory-wide rate of 72% (StatsCan 2007). The median age is around 22 years, making it

an extremely young community, and even slightly younger than the median age of 23 in Nunavut as a whole (StatsCan 2007). The community is governed by a locally-elected Hamlet Council and mayor. The community also elects a Member of Legislative Assembly (MLA) to the Government of Nunavut (GN) and has a Kivalliq Inuit Association (KIA) Community Liaison Officer (CLO), KIA Lands Inspector and KIA Inuit Impact Benefit Agreement (IIBA) Coordinator (Legislative Assembly of Nunavut 2011; KIA 2011). The interests of harvesters in the community are represented by the local Hunters and Trappers Organization (HTO) (Anonymous 2011).

The community is serviced by a Northern Store (grocery, household goods, electronics, CanadaPost office and a KFC-Pizza Hut) and a Co-op Store (similar to Northern Store). Four hotels in town cater to visiting government officials, business, mining workers and occasional tourists: Baker Lake Lodge, Nunamiut Lodge, BLCS Guesthouse and Iglu Hotel (part of the InnsNorth group). The last three have restaurants catering to local residents as well as their guests. There are two schools, a daycare and a branch of the Nunavut Arctic College. The Rachel Arngnammaktig Elementary School serves K-grade 6 and the Jonah Amitnaaq Secondary School holds grades 7-12 (Baker Lake: Qamani'tuaq 2011). The daycare is government-funded and currently has 17 places for Baker Lake children, but only operates during the school year (Anonymous 2011). The community branch of the Nunavut Arctic College specializes in “upgrading” for students who did not finish traditional high school seeking employment (some at the mine) and also currently hosts a Nunavut Teachers Education Program (NTEP) course (Anonymous 2011).

Economically, the “Big Three” companies of Baker Lake Construction and Supply (BLCS), Arctic Fuel, and Peter’s Expediting Ltd (and their smaller subsidiaries) comprise most of the economic activity in town (Anonymous 2011). These three companies have garnered most of the contracts for expediting supplies for the Meadowbank mine and the mining exploration camps, as well as most of the government contracts for public housing construction (Anonymous 2011). The percentage of local workers in their workforce varies widely between these businesses, depending on the skills required and the availability of local and Southern workers. Most employment comes from these “Big Three” companies, government jobs (administration, school, and health centre), the two large stores and, over the last 5 years, the Meadowbank mine and mining exploration (Anonymous 2011). Out of the 631 total employees at Meadowbank, 231 are from Nunavut (37%) and 128 of those are from Baker Lake (Anonymous 2011). Baker Lake takes home 55% of the income made by Nunavut workers, with all other communities together making up the other 45% (Anonymous 2011).

3.5. Mining around Baker Lake

Mineral exploration in the area around Baker Lake has occurred since at least the 1970s. Despite this exploration and even the development of a few mining proposals, there had been no major mining development in the area until 2003. After receiving approval from the Nunavut Impact Review Board in 2006, development of the Meadowbank project began and, by 2008, the all-weather road between Baker Lake and the mine was completed (Agnico-Eagle 2010). Commercial production of gold began in March 2010 (Agnico-Eagle 2010). Meadowbank is projected to operate from 2010-2019

(Agnico-Eagle 2010; KIA 2011). It is currently the only operating mine in Nunavut and one of only five in the entire Northwest Territories-Nunavut region (NWT & Nunavut Chamber of Mines 2011). Several other mineral developments are under various stages of review, including another Agnico-Eagle gold mine near Rankin Inlet (called the Meliadine project) and a uranium mine near Baker Lake called Kiggavik (NWT & Nunavut Chamber of Mines 2011).

During the exploration and development of a proposal for the Kiggavik project, Baker Lake has been home to the field office for AREVA, the largest uranium producer in the world, accounting for 25% of global production in 2008 (Areva 2009). In 2007, AREVA began research for a Feasibility Study and Environmental Assessment of the Kiggavik site, 80 kilometers west of Baker Lake (AREVA 2010). Public consultations and review by the Government of Nunavut (GN) and NIRB are ongoing, with numerous public-relations events and public forums being held in the community of Baker Lake by both AREVA and the GN (AREVA 2011; NIRB 2009). The project is expected to require \$1.5 billion in initial capital and have an annual operating budget of \$200 million during the 20-year production life, producing between 2,000 and 4,000 tons of “yellowcake” uranium concentrate from approximately 44,000 tons of uranium ore (AREVA Construction 2011).

3.6. Socio-Economic Monitoring Committee Indicators

The Socio-Economic Monitoring Committee (SEMC) has been collecting information about the conditions in the Kivalliq region at least since 2009. This committee is made up of community leaders from the Kivalliq communities who are

interested in social issues and community improvement in these areas. In the 2009 Annual Report, the committee identified several indicators to be followed as measurements of socio-economic conditions: population, income, education, home ownership, crime and small business (SEMC 2009). The SEMC reports from both 2009 and 2010 place significant emphasis on employment (which is related to income, education, home ownership and small business). Most of the employment information is provided by the resource development companies (Agnico-Eagle Ltd and AREVA Resources). Other indicators can be considered as measurements of the Social Determinants of Health. For example, home ownership could be considered a contributor to self-determination and empowerment, a widely-recognized contributor to social health outcomes (Richmond and Ross 2009; Adelson 2005). If extrapolated from the narrow “home ownership” indicator to a broader “self-determination/empowerment”, the social determinants of health category can also include experiences with politics, including community consultation, mine-community relations and larger political structures.

While the SEMC reports are a significant step forward in monitoring change in the Kivalliq during the lives of the ongoing mining developments, their focus remains on the regional- and community-level. Much of the information gathered is in the form of statistics, including employment numbers, education graduation rates and business contracts. The data from these reports paint a numerical picture of the changes occurring in the Kivalliq region. However, much of the nuance and diversity of individual experience is lost if the only information gleaned comes from statistical measures. At the least, community-level statistics generalize across a population that may be experiencing mining and community change in a wide variety of ways. Each individual is affected by

community conditions (context) and personal history which creates an individual experience of mining development. Statistical measures of community and regional change can provide a foundation upon which a more detailed description can be built. In this case, the categorical foci of the SEMC reports will be used to provide broad background to the experience of mining in Baker Lake as documented through interviews and focus groups in town.

3.6.1. Employment

The most prominent feature of the SEMC reports is the information about employment and ongoing mining development. This information contributes to the SEMC identified indicators of income and small business most prominently and has indirect connections to education and home ownership data. For the purposes of this research, the umbrella term “Employment” will be broken down into the following categories: Mining Employment, Small Business Development and Household Income.

Mining employment consists the employment data from the operating Meadowbank (AEM) mine, as well as the two major exploration camps at Kiggavik (AREVA) and Meliadine (AEM). As expected, Meadowbank employs the largest workforce (476) at this time, while Kiggavik and Meliadine are predicted to have an equivalent production workforce once they have been constructed and begin producing uranium and gold, respectively (SEMC 2010; SEMC 2009). According to AEM’s report to the 2011 meeting of the SEMC, as of August 31, 2011 there were a total of 1235 workers on the mine site, including both AEM employees and contractors’ employees, up from 1172 at the end of 2010. Of the 601 AEM employees, 289 are Inuit Land Claims

Beneficiaries, which is also up from 232 in 2010. However, because of an overall increase in employees, the percentage of Inuit employees dropped slightly from 38.6% to 37.2% (AEM 2011).

The Inuit employees at Meadowbank are broken down further by home community and by skill level. Baker Lake is home to the highest number of Meadowbank employees by far. In 2010, 132 Baker Lake residents worked at Meadowbank and by August 31, 2011, there were 152 (AEM 2011). Baker Lake is home to 52.6% of the Inuit employed at Meadowbank. Arviat and Rankin Inlet have the next two highest numbers of employees, with 59 and 47, respectively. The four other Kivalliq communities each have fewer than 12 (AEM 2011). Interestingly, while the percentage of Inuit workers in “skilled” jobs (as opposed to “unskilled”) was 75% in Baker Lake, it was only 66.8% overall (AEM 2011). This could indicate that Baker Lake residents are taking advantage of more training or come to mine jobs with more pre-existing skills, but it is difficult to say for sure. Baker Lake is also the only community with any employees working in “management”, although it remains very low at only 2% (AEM 2011). It should also be noted that the number of Baker Lake residents employed at the mine is seen as maximum capacity by AEM management. There are not many more Baker Lake residents that want to be employed at the mine and have the skills to do so, according to AEM (AEM 2011).

In addition to pure employee counts, Agnico-Eagle also supplies data on the wages and turnover rates for mine employees. According to the 2010 SEMC report, Nunavut workers received 25% of the total wages for 33% of the person-days worked, narrowing slightly from 2009 report numbers of 23.6% of wages for 40% of person-days

(SEMC 2010; SEMC 2009). This reflects the general skew of the Inuit workforce into the lower-skilled, lower-paying jobs as compared to their non-Inuit counterparts.

Turnover rate has been identified as a major concern for Agnico-Eagle management. In 2010, the average tenure of a local worker was 124 days, which is up from 93.3 days in 2009 (SEMC 2010; SEMC 2009). However, it should be noted that this is an average and there are a number of local workers who have been working at Meadowbank for much longer, even up to several years. During 2011, the turnover rate (represented by the number of employees that terminated their employment divided by total employees) decreased from the 2010 rate of 37% to 27% up until August 31, 2011. Of the terminated employees, 79% were male and 37% were Nunavummiut. Both are fairly consistent with the proportion of those groups in the employee population at large. However, 57% were over 50 years old, which is not representative of the number of those workers overall (AEM 2011).

The two major exploration camps in the region, Kiggavik and Meliadine, both currently have significant employee numbers. In 2010, AREVA Resources employed 64 workers at the Kiggavik site and 25 of them were local Inuit (SEMC 2010). Agnico-Eagle employed 30 drilling staff at their Meliadine site (SEMC 2010). It appears that the provenance of these employees is unrecorded. Both sites forecast that they will employ around 600 during the construction years (2015-2020 for Kiggavik, 2013-2015 for Meliadine) and employ production staff similar to Meadowbank's current numbers (460 for Kiggavik, 250-250 for Meliadine). However, these developments have not begun construction yet and all employment statistics are predictions only.

3.6.1.1. Income

The SEMC reports offer little in terms of income statistics. The 2009 report uses data from 1996. In that report, Baker Lake had a median household income around \$40,000, while Rankin Inlet had \$72,000. The Kivalliq average was approximately \$50,000, but this was skewed by the high number from Rankin Inlet. All other communities ranged between around \$35,000 and around \$50,000. The Nunavut average is \$62,000, but this is probably skewed by relatively high numbers in Rankin Inlet and possibly Iqaluit.

3.6.2. Small Business

In the 2009 SEMC Report, small business growth is measured by the number of businesses filing GST, which only applies when a business earns over \$30,000. This data is only listed at a Nunavut-wide level and only up to 2007. Territory-wide, there was a peak at around 650 businesses in 2003 and 2004, with a drop to around 560 in 2007.

Information is also reported in terms of the mining-related contracts going to local businesses and to NTI-Registered (Inuit-Owned) businesses. As of the 2009 report, \$17 million (2.3%) of the contracts for Meadowbank went to Baker Lake businesses and \$273.1 million (36.4%) went to NTI-Registered companies. In the 2010 report, the contracts awarded between the second quarter of 2007 and the second quarter of 2010 totaled \$62.8 million (6.5%) to Baker Lake and 23% to NTI-Registered companies. In

Baker Lake, Peter's Expediting Ltd, Arctic Fuel and Baker Lake Construction and Supply were listed as top contract awardees. AREVA reported that \$8.7 million in contracts went to Inuit-owned and Northern-based companies between 2007 and 2009, but does not break that number down by community or even into Inuit and Non-Inuit.

3.6.3. Formal Education

Several metrics of educational improvement have been used in SEMC reports. First, in 2009, education was reported as the proportion of people aged 25-64 with "Less than High School" educational attainment. Using 2006 numbers, they reported that in the Kivalliq region the percentage of people 25-64 who had not finished high school ranged from 42% (Rankin Inlet) to 68% (Repulse Bay). Baker Lake is in the low-middle with approximately 52%. In 2010, the metric switches to attendance (for all grade levels) and number of graduates. In Baker Lake, during the 2008/2009 school year, the attendance rate for K-6 is reported at 84.8%, while for 7-12 it drops to 61.4%. It was also noted that attendance for grades 7-12 had dropped from 71.9% in 2005/2006 (SEMC 2010). Interestingly, this high point coincides with the approximate beginning of the construction phase at Meadowbank. For 2010/2011, both attendance rates (K-6 and 7-12) dropped again to 80.9% and 59.2% respectively. Looking at the other metric of educational attainment (number of graduates), the number of graduates in 2010 exceeded the number of graduates of any year in the past decade with 17 (Department of Education 2011).

The involvement of the mining companies in education is also highlighted through their community engagement practices. For example, both Agnico-Eagle and

AREVA list their support of the Kivalliq Science Camp in the 2009 report. Agnico-Eagle highlights their career-oriented training contributions through the summer GEMS program for local high school students and their on-site training options, including the purchase of a simulator for haul truck operator training and the development of a Rosetta Stone program for language education. In the 2009 report, AEM expressed concern that the Nunavut Arctic College programs currently offered are not sufficiently mine-related to train employable local people (SEMC 2009).

3.6.4. Social Determinants of Health

Apart from the detailed employment and education statistics, the SEMC identified population, home ownership and crime as important indicators of socio-economic well-being and change in the Kivalliq region. In order to deal with these issues effectively, for this research home-ownership is considered under the broader umbrella of self-control/empowerment, which will also include political empowerment and financial well-being (as measured by the number of families on income support). In addition to these three indicators, the reports implicitly identify cultural and land-related issues, which we gather under the title of self-identity. Each of these categories, along with employment and education, has been seen to contribute to an individual's overall well-being.

3.6.4.1. Population

Population is only listed in the 2009 SEMC Report. In that report, Arviat was the largest community in the Kivalliq region with 2513 residents in 2007, followed by

Rankin Inlet with 2433 and Baker Lake with 1744 (SEMC 2009). Baker Lake has grown at a steady rate since 1991, growing from 1241 to 1744. However, across the territory there is a considerable skew toward the under-25 demographic. While there are large numbers of middle-aged and older in the rest of Canada, Nunavut has a heavy concentration in the under-25s and very few elders (SEMC 2009).

3.6.4.2. Crime

Crime statistics are described most in depth in the 2009 SEMC Report. Between 1999 and 2007, only Rankin Inlet followed similar per capita crime trends as Nunavut at large, with approximately Police-reported incidents per 1000 residents in 2007. All other Nunavut communities are lower than territory average. Baker Lake, for example, had around 180 (SEMC 2009). According to the 2010 SEMC Report, crime statistics across the Kivalliq remained at approximately the same levels as in the 2009 report.

3.6.4.3. Land, Language and Youth

While little concerning self-identity, including cultural and land issues, is discussed in the SEMC reports, there are several issues and concerns that were raised. First, the convergence of three languages at the mine has created some social issues, even to the point of being cited as a contributing reason for an employee terminating their employment. English is used in workplace situations for safety reasons, but there are instances of social exclusion through language use (either Inuktitut or French) (SEMC 2009). Second, the SEMC expressed a desire to get information on harvest yields, time

spent on the land and community rates of participation in harvesting activities from the local Hunters and Trappers Organization (HTO). This does indicate a desire to more closely monitor changes in harvesting participation and in harvested animal counts as part of the broader socio-economic monitoring project.

3.6.4.4. Self-Control/Empowerment

Three key contributors to self-control/empowerment of individuals were discussed briefly in the SEMC reports: home-ownership, community consultations and income support. First, home ownership was discussed briefly in the 2009 report. Using 2007 statistics, the report noted that more than 70% of homes in the Kivalliq region are public housing. In Baker Lake, approximated 430 homes are public housing, 85 are private and 30 house Government of Nunavut staff (SEMC 2009). Public housing rent is determined on a sliding scale; if a person rises above the income threshold, their rent could skyrocket from under \$50 per month to more than \$800. This was noted as a disincentive for mine employment and as a possible reason for the mines not being able to attract and keep as many local workers as they would want (SEMC 2009).

Community consultation on mining development also can contribute to an individual's sense of self-control and empowerment because they may feel like they have more say in their community's future. According to the 2010 SEMC report, both Agnico-Eagle and AREVA have created Community Liaison Committees in Baker Lake to hear the opinions of local residents. It also noted that AREVA convened 7 public meetings in 2009 and planned to repeat those meetings in 2010 (SEMC 2010).

The percentage of families receiving income support can be seen as an indicator of financial stability and well-being in a community. According to the 2010 SEMC Report, the percentage of families on income support is rising in all Kivalliq communities but Baker Lake. In 2010, Baker Lake had 44% on income support and in 2011 that number dropped to 28% (128 people out of a total 1950) (Department of Education 2011 (?); SEMC 2010).

3.6.5. Conclusions

The majority of the information contained in the SEMC reports comes from governmental monitoring of statistical socio-economic data. While this establishes a foundation for socio-economic monitoring, it is important that the description of changing conditions is not limited to numerical data. There are several shortcomings in relying mostly (or solely) on statistics. First, in some cases data is collected on multiyear intervals, missing much of the detail required to document the rapid change that the abrupt introduction of mining into the region can bring. Second, the aggregation of statistical measures generalizes conditions to an entire community. Even in a town the size of Baker Lake, there is nuance and diversity of opinion and experience that is being lost when data is averaged out at the community-level. In some cases, the statistics are taken at the regional or even territorial level, which further exacerbates the problem. Fourth, the statistics may not measure the pieces of individual lives that are most important to those people. For example, while statistical data tends to consist of employment, education and crime statistics, people in Baker Lake (or anywhere else) may be more concerned with Inuktitut language use, the rate of alcoholism or the

experiences of their community members working at the mine. Finally, the experience of a person with mining development and community change cannot be distilled to their income, employment status, or education level. While these factors (among others measured) contribute to an individual's experience, there is much more to a person's narrative. Community conditions contribute, but an individual's position within that community also contributes, as do personal history, family relations and many other factors. There is no way to document experience through statistics alone and come out with a meaningful record of how an individual is living their everyday life.

It is for these reasons that this research has been conducted. Working from the established set of indicators borrowed from the SEMC reports and organized into Employment, Education and Social Determinants of Health, the following results attempts to add dimension and nuance to the statistics. When people are given the opportunity to talk about their experiences, hopes and concerns, the diversity of experience comes back into the picture. This multifaceted understanding of mining experience will hopefully prove to paint a more complete picture of Baker Lake through the lives of community members.

3.7. Chapter Summary

Baker Lake, Nunavut is a small, majority Inuit community located in Canada's newest territory and is experiencing rapid and unprecedented growth in mineral sector activities. The land around the community is host to numerous exploration companies, including one project currently under review (AREVA's Kiggavik project) and one operating gold mine (Agnico-Eagle's Meadowbank mine). With the town's relatively

recent settlement and Nunavut's extremely young age, the experience of the people of Baker Lake with this mining sector explosion is conditioned by myriad contextual political and historical factors.

CHAPTER 4 – RESEARCH APPROACH AND METHODS

4.1. Research Aim and Objectives

As described in the introduction to this thesis, the aim of this research is “to describe and explain the experience of Baker Lake, NU with the Meadowbank Gold Mine, with particular emphasis on assessing the diversity of experience among individuals. Instead of generalizing to the community as a whole, this research strives to preserve as much information about the variety of experiences of Baker Lake residents.” In order to accomplish this aim, three objectives were identified.

Objective 1: Develop a conceptual hypothesis of the individual experiences with mining in Baker Lake through review of scholarly context.

Objective 2: Empirically assess the diversity of experience with mining in Baker Lake by collecting individual and group understandings of how mining has changed their community, for better or worse, in order to understand the experiences that community members have had with mining development.

Objective 3: Translate the results into usable information for the community.

In this section, the methods used to accomplish these three objectives are described.

4.2. Objective 1

Objective 1: Develop a conceptual hypothesis of the individual experiences with mining in Baker Lake through review of scholarly context.

Before the research season began, the researcher reviewed the existing scholarly context to look for identified experiences of mining in different contexts. The results of this review are discussed in Chapter 2: Scholarly Context. Through this review, a wide range of community experiences were found.

Following the explicit mandate in the research aim to assess the diversity of experience in Baker Lake, the results of this study are framed in terms of the generalized measures of community social and economic well-being found in the Socio-Economic Monitoring Committee Annual Reports in 2009 and 2010, as well as in presentations to the 2011 Annual Meeting by resource developers and government departments. Framing diversity of experience in this way presents individual experiences in terms of the detail they add to existing measures of well-being, as identified by SEMC. This also allows the information gathered to be framed in terms of regionally-identified indicators, instead of in terms of the researcher's perceptions of relevance and importance. In this way, looking at diversity of individual experience through the lens of community- and regional-level indicators highlights the importance of lower-level study of those locally-defined indicators.

4.3. Objective 2

Objective 2: Empirically assess the diversity of experience with mining in Baker Lake by collecting individual and group understandings of how mining has changed their community, for better or worse, in order to understand the experiences that community members have had with mining development.

In order to complete this objective, the researcher completed a two-month field season in Baker Lake, NU speaking with community members about their experiences with mining to date. During the summer preceding the field season, the researcher visited Baker Lake in order to speak with key community members to elicit research needs. As a result, the Hamlet and the researcher formed a research partnership, with the information need of the community directing the focus of the researcher's future field work. This has been identified as one way to remedy the power dynamics in the researcher-participant relationship and as a way to attempt to balance out the control of knowledge production in aboriginal studies (Brant-Castellano 2004). While there is a strong body of critical indigenous methodology, it is not explicitly used here. However, this thesis attempts to, wherever possible, be sensitive to the issues of colonialism, post-colonialism, power and control raised by that body of scholarship.

When the researcher returned to Baker Lake in May 2011, the relationship with the Hamlet had already been initiated, making entry into the community much easier. In addition, with the catalyst for the research question coming from the community itself, many participants were very willing to participate knowing that the information would be of use to the community and would come back to the community at the end of the research project. Access to information has also been identified as a key to ethical

research in aboriginal communities (Ellerby 2005; TCPS 2005; Schnarch 2004).

Information dissemination will be discussed more in-depth in Objective 3.

Prior to the field season, ethics approval was obtained from Nunavut Research Institute (NRI) and the University of Guelph, as per research ethics requirements from both institutions. NRI approval is required of any researcher working in Nunavut and University of Guelph approval is required for any researcher from the university. To obtain approval, consent forms and research summaries were produced in English and translated into Kivalliq dialect of Inuktitut.

During the field season, one method of sampling and three methods of data collection were used. Sampling was accomplished through “snowball sampling” and data collection consisted of Key Informant Interviews, Focus Groups, and Participant Observation. An additional method, Photovoice, was attempted but deemed unnecessary due to participant openness and willingness to participate in either a one-on-one key informant interview or a small focus group.

4. 2. 1. Sampling method

The sample size for social research depends on the diversity of the population being studied (Angrosino 2007). In order to extrapolate results to the population, different members of the population that represent the diverse groups within the population should be included for the study to be called representative (Angrosino 2007). After determining the approximate number and subsets of the population to be reached, the researcher must decide on how to recruit participants for the study. One method is the “snowball” sample.

After an initial informant or small group of informants is identified, they are asked to suggest others within the community who would have something to share on the subject of the research study, whether they agree with the current informant or not (Yin 2011; Browne 2005; Wasserman et al 2005). Snowball sampling helps to foster trust between the potential participants and the researcher, as they were connected to each other through mutual acquaintance, instead of being identified out of the blue. This sampling method acts as a method of introduction between new participants and the researcher through previous participants (Sader et al 2010). It is also useful when researchers are looking for a diverse group of participants with different types of experiences and knowledge. In a community, especially when it is small and interconnected enough, people know enough about other community members that they can recommend new participants who have certain characteristics or perspectives that would be impossible to ascertain by a researcher on their own (Sadler et al 2010; Browne 2005).

During this study, participants for key informant interviews and focus groups will be selected through the “snowball sampling” method. After the initial identification of participants through the research partnership with the Hamlet office, participants will be asked to suggest other community members that they feel would be appropriate for the researcher to talk to and/or include in a focus group (Yin 2011). This will allow focused sampling of Baker Lake with particular focus on the variety and diversity of experiences, opinions and position relative to the mine. In other studies, this method has been deemed culturally relevant and appropriate for work with Inuit in Canada (Dressler 2001). The community’s close ties, tight personal networks and small size are all conducive to snowball sampling. Using snowball sampling will also help the researcher to develop

relationships with members of the community, which is especially helpful because of the insider-outsider dynamic inherent in this research. Through this method, participants with different experiences, different backgrounds and different opinions are identified, fulfilling the research's mandate to document the different experiences with mining in the community.

4. 2. 2. Data Collection methods

Key Informant Interviews

In order to develop a general understanding of community dynamics, a researcher would conduct one-on-one interviews with key informants in the community to gain a broad overview of community structure, dynamics and the overall picture. These interviews can range from completely unstructured to completely structured. In semi-structured interviews, the interviewer often will use an interview guide to direct the interview as it progresses (Rossman and Rallis 2003; Kitchin and Tate 2000). The researcher will present topics, often in the form of questions, to guide participant reflection and discussion, using short redirecting questions to keep interviews within the scope of the interview (Louis 2007; Hodge and Lester 2006; Rossman and Rallis 2003). Keeping interviews more open-ended allows for some of the power in the hands of the researcher to be shifted to the interviewee (Louis 2007; Hodge and Lester 2006). Instead of being restricted to answering the questions that the interviewer wants answered, the participant has more leeway to discuss topics of relevance and importance to them (Valentine 2005). Key informant interviews have been used previously in research focusing on aboriginal community opinions of, and experience with, mining (Ali 2006).

It has also been used and analyzed explicitly in the Canadian aboriginal context (Lanting et al 2011).

For this project, the researcher conducted 27 key informant interviews. After presenting the research aim and the basic nature of the conversation to be had, the interviewer asked the participant to review the consent form and ask any clarifying questions they wanted. Each participant had the option of being confidential or non-confidential and to be tape-recorded or not. All were ensured that the tapes would remain in the researcher's possession and that the researcher would be the only person to hear them. Most participants chose to remain confidential, but the tape-recording was split.

During these interviews, two questions were used to structure the interview. First, the participant was asked to describe their background and life history as it defines them personally. This question was designed to elicit both background information on each participant (e.g. age, occupation, family situation, etc.) and to gather a rough measurement of how important each part of an individual's background and personal history is most relevant and influential to them. This helps to insure against the researcher assigning relevance and meaning to personal attributes that an individual does not identify as important or influential in their lives.

Second, the participant was asked about their experience(s) of living in Baker Lake with the mine. For some participants, this meant describing their direct interactions with the mine and mine personnel. For others, this elicited more broad descriptions of the changes that have been occurring in Baker Lake or changes in the economic outlook in general (including small business and other mining developments). Others brought up political issues, the traditional life of Baker Lake residents and the longer-range history of

the town and the region. While individual participants dictated the topical direction of the interview from this point on, guiding questions were used to pull out more in-depth descriptions of experience when necessary and to redirect back to mining issues if the conversation started to get too far off track. Each interview ended when the participant had run out of topics they wanted to raise. At that point, the interviewer asked each to look 5-10 years into the future and describe what they think Baker Lake will be and what they hope it will be. This question was used to draw out any hopes or concerns not raised in the body of the interview and to determine an overall pessimism or optimism for the future.

In all, key informant interviews lasted between twenty minutes and two hours, depending on the interest, availability and desire of the participant.

Focus Groups:

This method brings together small groups of participants with shared experience, history, or background to talk with each other and the researcher about the research topic. The selection of focus group participants will be structured through common experience, as outlined by Yin (2011), Flick (2007), Puchta and Potter (2004), Rapley (2007) and Barbour (2007). Focus groups are considered to be one “case” for the purposes of analysis and discussion, because of the shared characteristics of group members. This also facilitates confidentiality and anonymity for participants who are not comfortable in an interview setting. Focus groups are also used in order to make participants more comfortable and to reduce the impact of the researcher-participant dynamic and instead

shift focus to participant-participant interaction (Flick 2007; Barbour 2007; Cameron 2005).

For this study, the researcher conducted 11 focus groups ranging in size from 3 to 6 participants drawn from subgroups of Baker Lake residents (e.g. young mothers, youth, teachers, small business employees, etc.) to talk about their experiences with mining and the changes that they have seen occurring in their community. The interactions between focus group members and with the researcher were used to gauge participants' experiences with mining and their general opinions of mining development. As with the interviews, focus groups were given the options to be confidential or non-confidential and to be recorded or not recorded. Each participant was given time to review the consent document and ask any questions. The focus groups were structured in a similar way to the key informant interviews, with two questions and follow-up questions, but much of the insight came from interactions between the participants instead of between researcher and participant. Because of this shift, there was often less need for the researcher to redirect conversation or ask follow-up questions to stimulate discussion, although this varied from group to group.

Focus groups lasted between thirty minutes to two hours, depending on group consensus on how long they were available and how much they wanted to share.

Participant Observation:

As the researcher lived in the community of Baker Lake for two months, everyday interactions with local residents were inevitable and provided the foundation for

understanding community dynamics, interactions and structure. For example, the movements of people around Baker Lake, the gathering points for community members and the interactions between people were all observed as part of trying to understand the community as a whole. These interactions included, but are not limited to, conversations at the two grocery stores, meeting young people on the roads, speaking with hospitality employees, and observing where people tend to congregate in the community. Overall, participant observation provided background and context in which the discussions in interviews and focus groups could be grounded. The specific information used to write this thesis came from the interviews and focus groups.

Photovoice:

During Photovoice, the researcher provides digital cameras to community volunteers tasked with documenting their community successes and their concerns for the community, along with photos of the objects or activities that are important to them personally. After collecting these photos, each participant has the option of sitting down with the researcher to discuss the what, where, and why of the pictures they took. Alternatively, participants will have the option to submit their labelled photos to the researcher without a discussion. This method is modeled after Castleden et al 2008, Wang et al 1998 and Wang & Burris 1997. The exercise is designed for those who feel more comfortable doing this semi-independent photo exercise than participating in a small focus group. Part of the justification for using this method in this project is to gain access to as broad a cross-section of a community, especially to include those who may feel marginalized.

In this study, Photovoice was attempted, but was deemed unnecessary.

Participants were very open about speaking to the researcher and those who were less comfortable agreed to participate in a focus group. When photovoice was attempted with two young people in the community, those two young people much preferred speaking with the researcher in the form of an interview or focus group. It was more difficult to recruit participants to photovoice than to interviews or focus groups, which defeats at least part of the purpose of the exercise. The photo-documentation process was too time-consuming to justify its use. With that said, if the researcher had encountered issues of uncomfortable participants or was using photovoice as a primary research method (instead of tertiary, in this case), it may have been used more extensively and to greater result. In this case, basing the use of photovoice on the need to reach a diverse group of community members resulted in the decision that interviews and focus groups reached a wide range of participants without the time-consuming, multi-step photovoice process.

4.3. Objective 3

Objective 3: Translate the results into usable information for the community.

There is an ethical responsibility for researchers to return the information they collect to the community in which they conduct their research. In the past, research made use of the knowledge of local people and may never have returned to share the results of the project, with little repercussion. Today, it is imperative that researchers bring their results back to the community from which it was collected so it may be used by those from whom the information came in the first place. This is consistent with publications by both the National Aboriginal Health Organization (NAHO) and Inuit Tapiriit

Kanatami (ITK), the national organization for Inuit. NAHO has produced a series of fact sheets on ethical research in aboriginal settings (including specific information for First Nation, Metis and Inuit communities) and ITK has created a guide for ethical research and effective relationship-building in Inuit settings (NAHO 2009; ITK 2007).

Researchers are urged to make several efforts to bring the information make to the community in culturally-relevant and accessible ways, including making presentations of their findings to the community and producing written documents (e.g. fact sheets, reports) in both English and the local language (NAHO 2009; ITK 2007).

As this research resulted from an information need in the community of Baker Lake, it becomes even more imperative to bring the information back to the community. The Hamlet of Baker Lake requested this documentation be done for the purposes of understanding the town's residents' experiences at this time and to potentially identify areas of action for the Hamlet Council and/or future negotiations with mining developments. As a result, this information dissemination process is included here as a key objective in meeting the research aim. To accomplish this, at least four methods will be used. First, the researcher will be returning to Baker Lake in spring 2012 to present project results to the community, including to the Hamlet Council (NAHO 2009). Second, the researcher will try to appear on community radio in Baker Lake both to publicize any public meetings about the study results and to reach those who may not want to attend a meeting but do listen to the radio. Third, a condensed, report-style document will be produced from the full-length thesis presenting the results of the study in a more accessible, digestible format, to be distributed to participants with the consent of the Hamlet Council. Fourth, a fact sheet will be created for community use outlining

the major findings of the study. Using multiple formats and media for information dissemination is critical for reaching the largest number of community members as possible (ITK 2007).

CHAPTER 5 – RESULTS

5.1. Experiences with Mining

The experience with mining in Baker Lake has been varied but widespread across the community. In order to try and capture some of this diversity of experience, this section documents the experiences of individual community members interviewed individually and in groups over a two-month field season in 2011. It was not possible to interview all community members, but the distribution of respondents by age, gender, economic status, highest education completed, etc. presents a diverse cross-section of the community. Not all experiences are recorded here, but much more community heterogeneity is covered than in the SEMC statistics or other community-level aggregations.

During this section, the key variables identified by the SEMC reports are examined through the eyes of community members in order to give more depth to the SEMC data and to help triangulate the trends seen in those statistics. These indicators were chosen as important by community leaders from the communities in the Kivalliq region, including Baker Lake. In addition, while some of the SEMC indicators are delayed by infrequent data collection or the 5-year census cycle, these responses reflect

community members' experiences of mining current to July 2011. As with the previous section, this section contains the three main headings of Employment, Education and Social Determinants of Health.

5.1.1. Employment

While there are many ways that Baker Lake residents experience the mine, the most influential seems to be direct employment at the mine site itself. Looking at statistics first, direct employment has dramatically decreased the perceived unemployment rate and has provided training for Baker Lake residents. This experience with employment, whether directly or indirectly (i.e. through a family member) has not been felt evenly across the population. Differences in age, training, family situation, work ethic, and personal priorities have meant that each individual who works at the mine or has family working at the mine has experienced this new employment slightly differently. In addition, direct mine employment and employment at businesses in town have led to different experiences.

The number of people out of work in Baker Lake has decreased dramatically. Some informants estimated that the unemployment rate before the mine construction began ranged from 75% to 80%. Many working-age people noted that they had not been able to find work of any kind for years, even if they had a high school diploma. With the opening of the mine, "there's more hopefulness about employment" and fewer people depend on welfare. The unemployment rate dropped very quickly and "people want to

work, which can only be good for the community”, according to a few informants. In addition, those who have never held jobs have been given a chance at the mine, regardless of their previous unemployability. One respondent noted, “There are people in their thirties who have never held a job. They have somewhere to go now and it’s good for the community”. In fact, out of the 631 mine employees, 231 come from Nunavut (37%) and 128 of those come from Baker Lake (KIA-IIBA Coordinator), which coordinates with the numbers listed in AEM’s presentation to the 2011 Annual Meeting of the SEMC (AEM 2011). Importantly, this dramatic increase in the availability of work impacts those who were out of work much more than those holding skilled employment in local business management, the schools, the stores, health centre or the government.

Though a variety of informants spoke well of the opportunity for employment, many complained about the types of jobs that local Inuit are being hired to do. They noted that many of the jobs are entry-level and unskilled, including janitors, housekeepers, cook’s helpers, or labourers. According to the KIA-IIBA Coordinator in July 2011, 194 of the 231 mine-employed Nunavummiut were working in “unskilled” or “semiskilled” jobs. Out of the remaining 37, few are working in any type of supervisory or management role, as clerical work and some technicians are included in the “skilled” and “management” categories. In addition, many people are working in jobs that are outside their field of expertise or skill (e.g. one young man with computer experience is working as a labourer). Several male and female participants did note that there is little to no division of jobs on the basis of a worker’s sex. There are several women driving haul trucks and working as labourers while numerous men work in the kitchen and as janitorial staff. One male informant highlighted this as a sign of social development of

Baker Lake and the empowerment of women with the arrival of the mine, which may be a reach but is notable nonetheless. In addition, there seems to be little age discrimination in hiring. If you are able to do the work (and much of it is very physical), you have the opportunity to be hired. One informant even mentioned that one of the elders worked as a truck driver during the construction phase.

Some of these new employees did not finish high school and have little to no work training or experience. The mine has been offering training for those who need it to become employed and stress the upward mobility of their workforce. Several participants offered examples of the on-the-job training and promotion of friends and family. For example, one woman hired as a secretary elected to train to be a heavy equipment operator and now works in that job full-time. However, others questioned some hiring and training decisions. One teacher noted that there are several high school graduates who were hired as chambermaids instead of being trained to be office assistants or secretaries, and questioned the management of Meadowbank because of those decisions. Another participant placed some of the responsibility on the Inuit employees themselves. Promotions require employees to be assertive and to highlight their work record and skills to those in charge of their departments. This participant, a government employee, noted that “Inuit are generally not going to boast, be assertive or appear career-oriented”, for fear that it makes them seem prideful or arrogant, which makes it more difficult for them to ask for promotions and new training. As a result, personal character becomes important to identifying those who may take the most advantage of their new employment; those with more self-confidence or a more assertive personality may benefit more than those who are naturally more passive or timid.

The impact of mine employment on individuals' social and mental health appears to be a mixed bag. On the positive side, for some individuals, employment at the mine is the first time in their lives that they have had discipline and structure in their lives and it gives them a sense of purpose and a sense of a contribution. Others noted that the even footing given to all employees has been hugely helpful in getting off to a new start. One man said, "What I've been seeing with the Meadowbank mine is that there is no favouritism. You go up and if you can get up in the morning and go to work, they'll take you. It's a matter of getting up every morning and being able to work." Several family members of employees mentioned the regular meals and access to quiet sleeping areas as benefits. From a mental health perspective, some people have now had their mental illnesses diagnosed because "it's much harder to be depressed and working than depressed and sitting in your house." The mine makes an effort to take care of their workers with diagnosed mental illness during their shifts on the site, including monitoring their medications and referring people with alcohol abuse issues or potential mental illness to the social services provided back in Baker Lake.

Despite these positive experiences, there have also been social and mental challenges with working at the mine. Numerous informants (including both mine workers and non-mine workers) described culture clashes between the Inuit, French Canadians, Newfoundlanders and assorted others working at the mine. Mine policy requires that all workers speak English on the job site, but some workers reported incidents where they were reprimanded by management for speaking Inuktitut, even though French-speaking workers were speaking their native language. Language and culture issues were cited as a reason why people occasionally leave work at Meadowbank for work back in town, often

for one of the “Big Three” companies (Baker Lake Construction and Supply (BLCS), Arctic Fuel and Peter’s Expediting). A group of younger people (<30) described assorted issues related to rumours, gossips and infidelity. When an employee lives at the mine for two week stretches, rumours of infidelity can filter back to their partner or spouse in town and cause domestic issues. Several former employees cited these rumours as a main reason for their decision to leave their job at the mine. However, others have had no issues with such rumours and have several members of their families working at the mine on different shifts without issue.

5.1.1.1. Schedule

Looking more deeply into the particular aspects of being employed by the mine, the impact of the two week in-two week out schedule varies from barely noticeable to a major obstacle for someone seeking mine employment or employed by the mine. The coincidence of having a long break from work (especially after an employee has become accustomed to the demanding schedule of 12-hour shifts) with the arrival of a large paycheck can lead to issues with reckless spending. The grueling two weeks at the mine site can leave people exhausted and unable to take advantage of their time at home to socialize, help their families or participate in harvesting activities. These impacts all vary with individual priorities and responsibilities that pre-exist their mine employment, including family obligations, existing drug and alcohol abuse issues, and dedication to harvesting activities.

First, leaving the community for two weeks at a time can cause huge issues for childcare and other family obligations. There are families where both parents work at the

mine either on the same or on opposite shifts, leaving children in the care of one parent or with other people. Several teachers and education administrators noted that they can often tell how many parents are home, or which parent is home, from how a child comes to school dressed and prepared. There are often issues of finding adequate childcare when parents are at the mine, so the childcare ends up falling to the hands of grandparents or teenage children, which is “not fair to anyone involved”, according to one older, female informant. Adult children with families of their own are tasked with taking care of their younger siblings when their parents are out at the mine. In addition, the community daycare takes a very limited number of children each year (less than 20), is closed during the summer months, and has a long waiting list.

Juggling childcare has been cited as a reason for quitting work at the mine, or at least for keeping one parent home at all times. This limits the viability of having a two-income household, which then limits their potential for homeownership and upward mobility. These impacts are felt differently by families in different childcare situations. Obviously, those with young children have a different experience than a single young adult. However, individual and family support systems also become important. Those parents with adult children, relatively health parents of their own or unemployed friends have an easier time finding child care. In addition, when both parents work at the mine, it matters whether they are on concurrent or opposite shifts. Finally, because of its limited capacity and schedule, there are few families who have access to community daycare. When there are around 130 mine employees living in Baker Lake and the daycare can only accommodate around 20 children, the demand far outweighs the supply.

Second, arriving home for two weeks with a large paycheck has provided the opportunity for reckless spending of hard-earned income. While this includes the purchase of consumer goods both at the stores in town and online, it has also been highlighted as a contributing factor for an apparent rise in alcohol and drug use in the community. When someone is just getting used to having a job and a schedule, the two weeks off without structure can lead to abuse of alcohol or drugs. However, the extent of this issue cannot be known definitively, because most of this abuse occurs in private homes. Alcohol and drug abuse will be discussed more extensively in the next section on income and spending.

Third, several current and former mine employees (and their families) described their two weeks in town as a recovery period from the grueling work schedule at the mine. While many who have not worked at the mine looked at the schedule as a potential perk of the job, those who had worked there said that the two weeks at the mine were so exhausting that when they returned home they were virtually comatose for several days. Some of the benefits they may have been gaining from not working were lost because they were too tired to participate in community events, visit relatives, play with their children or harvest caribou and fish. Conversely, however, one mine worker said that he chose to work at the mine (as opposed to in town) because he would have two weeks off to spend hunting or fishing as he pleased, and seemed genuinely happy about his arrangement.

With these different reactions to the two week in, two week out mining schedule, the experience of an individual with mining employment varies with their obligations at home, their potential for reckless spending (include substance abuse), and their recovery

time from mine work. Each of these conditions requires a support system in town, whether it is for childcare, addictions counseling or simply an understanding family, and the access to these support systems dramatically affects the experience that an individual has with mining employment.

5.1.1 2. Income and Spending

With the advent of mine employment, the amount of money cycling around Baker Lake has notably increased. According to the 2001 census, 215 of the 605 residents (35%) over age 15 were working full-time and had an average salary of \$39,703. By 2006, the rate of full-time employment rose to 40% (280 out of 700) and the average salary was \$53,824, an increase of \$14,121 and 35% (StatsCan 2007). As of this research, the statistics from the 2011 census are unavailable. With high mine wages and the high number of Baker Lake residents working at the mine, the KIA-IIBA coordinator estimated that \$7 million in disposable income was coming into Baker Lake each year. Participants noted difference in wages between in-town jobs and mine jobs; Northern Store employees might make \$10 to \$12 per hour and mine jobs appear to range from \$20 to \$40, depending on the type of work and the employee's experience.. For some informants, this increase in wages helps make up for some of the high price of consumer goods (e.g. groceries, clothing, household items) in the North. Individuals and families are now faced with the decisions that come along with having income that they are not accustomed to having. According to one female informant.

"It's a boom and I think, well, one day you go and you're not used to having supper every night; well now you have money and the rest of your life now you don't have to worry about it. But all this money, what you spend it on, I don't think it's been taught or institutionalized in the community. "

For many people, the new income has increased their quality of life by providing a reliable source of food, consumer goods and hunting equipment. For some others, problems have arisen with alcohol and drug use and abuse. As community members adjust to this income, individual choices on what to purchase are largely determining the degree of betterment from new wealth.

Many informants from a variety of age, gender and employment groups spoke of how this new money has enabled families and individuals to buy the goods they need and were not able to procure before. Families with mine employees visibly have more income, and families who may have been struggling before are not anymore. One male participant said, "I know people have money now. I've gained weight too and I've seen lots of people are plumper now", emphasizing how the new money has increased the amount of food that Baker Lake residents can buy. Several explained that the Northern Store used to be virtually empty except on the days when the welfare checks came in and now it is busy every day. This new access to consumer goods is seen as a great benefit to community members. One teacher explained, "Especially when the paychecks come in, you can go down to the Northern and see shopping carts full with whatever they want to buy. They have an opportunity to provide for their families and that's a really good part [of having the mine]." People have been purchasing furniture, eyeglasses, new winter clothing and other essential goods. Others also mentioned that the money is being used for hunting equipment, including weapons, ammunition and fuel, making it easier for people to provide for their families with harvested meat.

Due to this increase in demand, the stores in town have been able to stock more food and a greater variety of food and consumer goods. With the greater turnover of food and goods, the Northern has been stocking more fresh fruit, vegetables, meat and bread and has dramatically increased their frozen food and dairy sections. The Co-op moved into a brand new building on a scale that rivals the established Northern (which is right next door) and offers quality goods at competitive prices, increasing the potential for retail competition in town. The hope is that these changes will allow Baker Lake residents to eat healthier by including more fresh and nutritious food in their diets. Several participants said that while there are still some families who ask for food over local radio, the number of people waiting in line for the monthly food bank has decreased. Within the past 10 years, the food bank line would have stretched out of the community hall in the arena and around the side of the building, while today the line never reaches more than a quarter of that length.

The increase in income has also led to an increase in the purchase of personal vehicles, for both hunting and in-town use. During the annual sealift (supply barge) season in 2010, 65 vehicles came off the barge for commercial and personal use when in pre-mine years the town would be lucky to see one or two. Lunchtime traffic has reached the level of “traffic jam” in some parts of town, and some people have begun strategically scheduling their refueling stops to avoid the worst rushes at the gas station. According to several participants, the demand for gas has escalated more than 60% since the mine construction began. People are buying cars and trucks for town use, but also snowmobiles and “Hondas” (local slang for any make of ATV) for land travel. Many residents who did not have the money to purchase and maintain a vehicle (or several) now have the

resources to do so. Because of this, there are many families who can now afford to hunt more often and harvest more meat, so they have to buy less meat from the stores in town.

Apart from consumer spending, some Baker Lake residents have been putting their new income towards creating a more stable financial foundation for themselves and their families. Several respondents (including community workers, government employees and older youth) mentioned that while there might not be a dramatic growth in savings, there have been major efforts made towards paying down personal debt. During the years before the mine started, many residents took on a lot of debt to the power corporation, the Northern, or on credit cards, and are now trying to pay that debt back. Only when the debt from the pre-mine years is repaid can those individuals start saving money, which may be several years down the road. For those who do not have too much debt, homeownership has become a reachable goal financially. However, access to information about mortgages, legal and financial advice, and information about the land lease process in Nunavut has been hard to come by. The community lacks the bank and permanent legal advice that would make it much easier to get the information necessary for making the leap to buying a home. Additionally, one employed woman said that they were required to get a co-signer for their mortgage because the mortgage term outlasts the projected life of the mine, making it even more difficult to secure that loan.

Some respondents (from varied groups) noted the negative impacts of increased income in the community. Alcohol and drug consumption appears to be on the rise, although respondents could not differentiate between increases in incidents connected to population growth and any over and above that growth. There is little doubt that more alcohol is being purchased in the community, both legally and illegally (although the first

is much easier to track), but the experiences of that increased consumption vary widely. This consumption will be discussed further in depth in the Crime and Social Issues section later.

In addition to substance abuse, Baker Lake has been experiencing a pronounced upswing in the number and size of bingo jackpots. Bingo is played over the community radio and, while it did pre-exist the Meadowbank mine, it has become increasingly popular in town. Cards cost between \$40 and \$60 and prizes can be as much as \$5000 or \$10000. While many of these bingo games are fundraisers, some informants are staunchly anti-bingo because of the potential for gambling addiction. Some people will buy several cards per game and the number of games has increased rapidly since the mine started, as more people have the disposable income required to participate. However, like with substances, instances of overspending on bingo and under-spending on family needs have been witnessed. Again, the decisions on how to spend extra income come down to the individual. One female community member put this decision-making on a combination of individual choice and rapid community change.

"For every upside, there's an equal downside. It's like a double-edged sword. It's very frustrating too. People need to learn to control their own urges. I don't know how to really combat... Everything has to be done in moderation basically. You have to understand that for this community to have had nothing for so long and then to have so much all at once, it's a big change."

The responsibility to make appropriate choices about how to spend mining income is left up to the individual, but it is important to acknowledge the rapid and dramatic changes that have been occurring community-wide. Making the adjustment to responsible financial choices may take time, but the community is seen as "settling down" after the shakeup caused by the new mining income.

It is important to appreciate that not everyone in town has direct access to the large mining paychecks. When much of the town was on welfare or working in minimum-wage jobs, the distance between those with jobs and those unemployed was not as drastic as it is today between unemployed or minimum-wage earners and mine employees. Several informants described a widening of the gap between the haves and the have-nots, to the point of increased social tension with the economic stratification. In some cases, friends and relatives of mine workers have expected financial support, even when the mine workers already have large financial obligations to their immediate family. According to one middle-aged community member:

"I understand that there's around 127 people working at the mine from Baker Lake. That's creating situations too. It's setting up a real have/have-not thing. They get good money at the mine. You get the people here [indicates high] and the people here [indicates low] and it's creating a big gap. It's not just in the community, but it's among families too. Expecting the people who work to contribute to their well-being. For things they need or they don't need. Or there are families who work at the mine and those who don't and there's a different standard of living."

Many mine workers use their mine income to help support family members when in need, but the pressure to do so has caused familial conflict in some cases. Some informants noted that several mine workers they know personally make it a priority to help support their elders with food, clothing or other essentials, but that they give less of their money to younger relatives who could be working themselves.

5.1.2. Small Business

In addition to the impacts of direct mining employment, the indirect influence of mining contracts and the increase in traffic through Baker Lake has infused new money

into the town economy. Baker Lake businesses have experienced rapid growth and are competing with the mine for workers. However, as with the individual impacts of direct employment, these benefits have been felt unevenly across the community. The existing economic makeup of the town has largely continued, with three major companies and the two stores dominating much of this growth. As a result, community members from different points of view highlight different pieces of the economic puzzle as positive and negative for the town as a whole.

When the mine was first approved and the contracts for the construction, expediting and services were tendered and awarded, three major companies dominated the economic landscape of Baker Lake. Baker Lake Construction and Supply (BLCS) has existed since 1984 and mainly does residential and commercial construction in town. They also own and operate a guesthouse, small restaurant, and a supply store. Arctic Fuel provides fuel services in town (among other endeavours). Peter's Expediting Ltd (PELtd) has contracts with Meadowbank for offloading their supply barges in the summer and with AREVA for supply transport to their exploration camp, among others. According to many community members, these three businesses constitute much of the economy in Baker Lake, even to the point where they are known colloquially as the "Big Three". The majority of mining contracts have been awarded to these three businesses, so much of the growth has been felt by these three. In addition, the population growth with the mine has also contributed to this growth. For example, BLCS is tied in with the growth in population and the early growth in the number of people who can afford to commission their own home to be built.

Apart from the Big Three, several smaller scale businesses have been benefiting tremendously from the mine presence. The hotels (Baker Lake Lodge, Nunammiut Lodge and Iglu Hotel) are often completely booked with government officials, businesspeople, off-duty mine workers and researchers. The Northern Store has supply contracts with some of the approximately ten exploration camps in the area. The rest of the employment opportunities in town come from other smaller expediting companies (e.g. Ookpik Aviation), Qulliq Power Corporation, the numerous small exploration camps in the area, the schools, the health centre, the Hamlet and the Government of Nunavut. Some of the local artisans have reported an increase in the demand for their work, as Meadowbank has commissioned bulk orders of carvings and the number of Southerners coming through town has increased the demand for locally-made souvenirs. The Jessie Oonark Center (the arts cooperative) also reports growth in recent years, although much of their business relies on sales to southern arts galleries which depend much more on the national and global economic picture than the local economy in Baker Lake.

Adding the growth of the Big Three, the smaller companies and government jobs to the direct employment brought by Meadowbank, many Baker Lake residents are optimistic about their job options in and around town. With the demand for skilled workers at the mine, private companies and the Hamlet have had to compete for workers. The roles have been reversed. When a person looks for a job in Baker Lake, they have options to choose from, instead of having to be selected from dozens of applicants to one or two jobs. Workers can make personal choices about where they want to work and why. For example, a truck driver could choose between working at the mine for high wages but a grueling schedule and foreign atmosphere versus working for the Hamlet or BLCS

because they can live full-time in town, but for less money. Some lower-paying jobs, like part-time daycare during the Prenatal Nutrition Program, have suffered because their historical employee pool has other options, or may choose to live on one mine employee's salary instead of requiring two incomes. Overall, the job outlook in Baker Lake is seen as very positive. However, it remains to be seen what will happen after Meadowbank closes (possibly anywhere from 8-12 years out, or more if they expand their operation) or if Kiggavik (AREVA's Uranium project) does not get approved. These jobs mostly rely on the mine, mine-sourced contracts, or the population growth that the mine has brought.

In order to deal with some of this uncertainty in the future, many informants hope that Baker Lake's economy will not only grow, but become more diverse. Several noted that while any growth is a good thing, the real opportunities will come when there are more options for businesses and employment in town. However, it seems extremely difficult to start a small business related to mining at this time. The contracts for Meadowbank have already been awarded (for the most part) and being competitive in future mining contracts would require a huge input of capital for the machinery necessary to run an expediting or construction business. Many participants discussed the numerous opportunities for appropriate small businesses, ranging from sport-hunting and tourism to a bookstore or a hairdresser, noting how many of these viable opportunities are community-centric and not directly related to the mine itself.

In order for local people to take advantage of the opportunities that are coming with the growth of Baker Lake, they need to be equipped financially and through education. Several participants highlighted the need for more coordination and

information about the resources available to them to start a small business. The Hamlet employs a Community Economic Development Officer (CEDO) who is tasked with finding funding available through various sources and assisting individuals in applying for that funding. Currently, the CEDO is relatively new to the position and is working to find the funding and to start organizing local residents' applications. The issue at present is that the money can come from such a wide variety of sources from federal and provincial government to NTI to the Kivalliq Mine Training Society to non-profit organizations, such that working through the various systems to find it all is a daunting task. Hopefully within the next year or so, the CEDO and Baker Lake residents will have better access to more funds, making starting a small business a more viable option. The Hamlet has put its resources into the CEDO position and appears to be making the development and expansion of small business a priority.

Even with the potential for increased funding to the community, a number of respondents from varied backgrounds noted the lack of business education available to community members, especially those who are out of the school system. As with anywhere, it will be difficult to run a successful small business in Baker Lake and those who are going to attempt it need to have more education about how to proceed. Several respondents highlighted the need for a small business management course in town to teach people the practical skills needed to run a business, including making a business plan, basic accounting, and marketing. If people are empowered to run small businesses, the pride in self-employment, business ownership and the value of work will grow. Many varied respondents were hopeful that having more small, local, Inuit-owned businesses in

town will have the trickle-down effect of encouraging young people to finish school and do well in order to have a successful business of their own down the road.

5.1.3. Formal Education

The arrival of the mine has impacted both the K-12 and post-secondary school systems in Baker Lake. Both systems have been working to implement curriculum and programs to help students take advantage of the new opportunities at the mine and in the mining sector in general. However, some of the changes that have been made to adjust to changes in the community should not be attributed completely to the mine. Some adjustments have been made over time as the community continues to adapt to community-centric life from the nomadic life of previous generations. According to a number of teachers, administrators, government workers and parents, overall, both school systems have been making a huge number of dramatic changes with respect to both already occurring community change and the introduction of mining, especially relative to the number of students they service.

5.1.3.1. Public School System

After the opening of the Meadowbank mine, many informants have observed decreasing dropout rates and higher graduation rates; there are several explanations of this change. First, some parents said that students now are more focused on graduating because they have something concrete to have as a goal. The students graduating now were in middle and high school when the mine began construction and they have, as a

result, been thinking about their futures right as the mine started to be a viable option. Others (including youth) cited the direct incentive programs initiated by the mine, including a summer work and career program for students, and the donation of a laptop to any student who finishes grade 12. Several other respondents believe that the increase in graduates has little to nothing to do with the mine at all and instead should be attributed to Nunavut “becoming more modern and similar to the South”. Regardless of the cause, the number of graduates appears to be increasing, which is encouraging for the future of Baker Lake.

Along with improvements in the dropout and graduation rates, the schools have been making significant efforts to improve student experiences in school and to tailor the curriculum to the future needs of Baker Lake. For example, the school has instituted an Energy and Mine course at the grade 9-10 level. The course covers basic geology, exploration and prospecting, mining processes, camp construction, environmental impact review, cultural issues and the mine decommissioning process. In past years the course has included tours of Meadowbank and the active uranium mine at McClean Lake in Saskatchewan. During spring 2011, all grade 9 students were enrolled in the course. There is an acknowledged need to educate the youth of Baker Lake about the processes that are now occurring and could continue to occur into the future on the land around their town, and the school is addressing that need with this course.

With the number of jobs in the trades now available, the school is also reportedly implementing a work experience or co-op program with local businesses and possibly the mining companies. When the majority of students will find their best opportunities for work in local business and in trades, it makes sense that the school should be offering the

opportunity for kids to get educated in those areas as part of a complete high school education. However, some community members feel that more could be done to enhance students' practical education. Despite having a carpentry shop and full kitchen in the school, students only have access to them during scheduled class time, which is often limited to a few hours per week. Expanding access to the school would allow students more time to work in these specialized areas and also give them somewhere to go after school and during the summer, partially addressing the issue of the lack of youth programming.

The school system has also been working to improve cultural learning opportunities in school. There's a push in the schools to hire more teachers who are fluent in Inuktitut and to incorporate Inuktitut into more aspects of students' days. Inuktitut shares space with English on the walls of the Rachel Arngnamaktig School (RA School – grades K-6) on everything from posters to alphabet banners around the ceiling of classrooms. There are also occasional cultural life skills courses in the school taught by local hunters and elders. Elders have also been invited into the Jonah Amitnaaq School (JA School – grades 7-12) to socialize and work on traditional arts and crafts. The goal is to have all students who graduate from grade 12 to be functionally fluent in both Inuktitut and English. Hopefully, these efforts will greatly reduce the disconnect between the youth and their elders, and the youth and their heritage and culture, in the future.

When discussing the education system in Baker Lake today, a variety of respondents noted that the high numbers of dropouts and underachieving graduates could not be blamed solely on the education system, but on the parents, families and the attitudes of the community towards education. In some cases, the priorities of parents are

not centered on education; instead, young people are expected to help with the household or get a job to help support the family. In other cases, mine employment makes it difficult to maintain a household routine, especially when both parents are working at the mine. Whatever the cause, high school age kids are sometimes not pushed to go to school, because education is not a high priority. Some informants have linked this priority system back to more traditional views of teaching and learning. In a community with a relatively recent history with formalized, European-style education, it is not surprising to some participants that some families have not made a shift to valuing education. Parental support is critical for students to both attend and to succeed in school, by providing time at home to do homework and the encouragement necessary to keep students going through tough classes. Without that support, the school system is seen as “only able to do so much”, by some informants.

Other respondents acknowledge the impact of family values and priorities, but also look to the school system for part of the blame. Some younger respondents complained that even when a student graduates, they have not achieved the equivalent to a grade 12 diploma in many southern provinces. According to one, “There seems to be apathy in the education system. You just push the kids through,” which puts part of the blame on the tendency to age-track and keep kids of similar ages together regardless of academic achievement. When students reach grade 10 and have to be taking standardized tests to pass into the next grade, the number of failures begins to bottleneck the school system. There are significantly more students in grade 10 (many for the second or even third time) than in any other grade. This is also where students often drop out due to the frustration of failing grade 10 once, or multiple, times.

Today, there appears to be a subtle shift occurring in some community members' attitudes towards education. With the decreasing dropout rate, there has also been an increase in school-age youth returning to school after an early dropout. It matters less whether this is due to the new opportunities in the school system, the promise that comes with the mine or frustration with the limited options for non-graduates, and more that these students are coming back to school and are recognizing the value in education. Additionally, many parents spoke about how they dropped out of school and now want their children to go to school to have better opportunities. For some, education is slowly becoming a priority as students and families realize that they can greatly expand their options by finishing school or by earning a high school equivalency, which several community members see as an encouraging sign of an important shift in thinking.

5.1.3.2. Post-Secondary

While the opportunities for high school graduates outnumber those for non-graduates, students are looking to post-secondary education to improve their outlook even further. In town, the Nunavut Arctic College focuses on offering “upgrading” for students who did not finish high school and may need to improve their skills before applying for a job. In addition, the college is currently a site for the rotating Nunavut Teachers' Education Program (NTEP), which upgrades and then educates future teachers over a five year program ending with certification to teach in Nunavut schools. Other course offerings exist, but many are single classes (as opposed to a full program), or are offered sporadically. These courses have included business administration, arts and crafts, pre-trades upgrading and camp cook programs. Over recent years there has been a marked

shift in offerings away from cultural pursuits (i.e. arts and crafts) and towards mine-related job training. There is no full training in trades in Baker Lake, forcing those who want that training to travel to Rankin Inlet, Iqaluit or Southern Canada, despite the obvious need in Baker Lake.

In order for a high school graduate to gain post-secondary education in subjects other than those offered at NAC, they have to leave the community. For many, this is a significant hurdle, as they have spent their entire lives in Baker Lake among family and friends, and wish to remain there. Even if a student left Baker Lake for education and wanted to return, the lack of jobs sometimes gave them no choice but to go on welfare, according to several respondents in their 30s and 40s. With the mine, there are opportunities, but many of those positions do not require a degree. The abundance of unskilled and semiskilled jobs available to local Inuit at the mine, and the relative dearth of management and supervisory positions, discourage young people from pursuing higher education when they know they could get a high-paying (albeit low-skilled) job without it. One mother explained.

“The mine is not encouraging young people to finish high school. When you’re trying to get your children to finish high school and the mine comes in and hires people who only have a grade 2 or grade 5 and have been dealing drugs. It’s hard to tell your kids that they’re going to be more successful as high school and college graduates than those people who were deadbeats in town and now have such high-paying jobs.”

Even when a student decides to leave Baker Lake for post-secondary education, they often get homesick and return without completing their degree. Some cannot consider leaving the community because they have already started a family of their own. For others, the cultural differences are too much to manage on top of working to complete a program of study in the south. In some cases, the cultural differences and population

discrepancy between Iqaluit (Qikiqtani or Baffin Region) and Baker Lake (Kivalliq Region) prove to be too much and also promote homesickness.

Despite these challenges, Baker Lake residents have been able to access and are currently completing programs in various post-secondary endeavours. The most common is the Heavy Equipment Operator training in Morrisburg, ON. Supported by the Kivalliq Mine Training Society (KMTS) and the Government of Nunavut, students travel to Morrisburg, ON for five or six weeks to be trained on various types of heavy equipment in a gravel pit. The cost of the program, including per diem food and lodging costs, is covered by government funds. This promotes attendance, but also limits the number of people who can be trained. Much of the funding for this program comes directly from the Nunavut Trust, which collects royalties from Agnico-Eagle itself. Mining and exploration companies in the region report their hiring needs to KMTS and these requests dictate the number of spots available in the training program. Numerous Baker Lake residents have completed the program and are currently working at Meadowbank or for businesses in town. However, this program may become less necessary, as Agnico-Eagle has reported the purchase of a simulator that would enable them to conduct driver training on-site, saving money and allowing for more people to get trained.

Other community members have or are attending post-secondary education in both mining-related and unrelated fields. One student is currently studying geology in university and several others report wanting to be trained as diesel mechanics or machinists. Participants expressed dissatisfaction at the opportunities for trades training in Baker Lake, blaming much of this lack of mining-related formal training to this dearth. According to one, “There are students with a great work ethic who struggle with

academics but would be great in a trade, but can't get training in Baker Lake." While a few students have left Baker Lake for training to be mechanics or electricians (occasionally going as far away as Alberta), there are many individuals who would take advantage of trades training if it were in Baker Lake. Much of the training money allocated for mining trades has been distributed to Rankin Inlet for the construction of a trades training center. Several Baker Lake residents of all ages are frustrated that the training is in Rankin Inlet, despite the mine being located so close to Baker Lake and the high percentage of Inuit workers from Baker Lake at the mine. The geographic separation between the jobs and the training has prevented many with responsibilities in Baker Lake from taking advantage of both the education and then the skilled mine jobs they would have been able to access.

Apart from the selected few mentioned above, most students seem to be completing education in unrelated fields. Several young people have studied or are currently studying fields as diverse as psychology, recreation management, nursing, business skills, and anthropology, in college or university. Younger students have reported wanting to study engineering, the arts and criminal justice, but none reported wanting to work at the mine, except as a last resort or to save money for their education. Several community members working in government and community support positions expressed a hope that students will study business, political science and law in order to improve and advocate for Baker Lake in the future.

Despite the availability of mine work, there appears to be little desire on the part of young people to become educated in mining fields. This becomes an issue for benefit capture as well. Agnico-Eagle has set up a scholarship program for Kivalliq students, but

the amount of money is relatively small and limited to mining-related fields. While this rule could help the mine hire more local Inuit people into higher-level positions, it narrows the scope of young peoples' options and ultimately limits the educational potential of the population of Baker Lake. However, Agnico-Eagle is providing a scholarship for post-secondary education, but they are allowed to restrict its distribution however they see fit. Among a select group of young people, there appears to be a genuine desire to attend college or university in non-mining but still community-improving fields (e.g. nursing, teaching, psychology, business), but they have less financial support and opportunity to do so than they would have studying geology or engineering.

Much of the post-secondary education of Baker Lake residents comes in the form of on-the-job training at the mine or in the hamlet. BLCS offers an apprenticeship program in any of the trades that they employ (e.g. electrician, plumbing, carpentry, etc.), which is open to anyone who can pass the entrance exam. The number of participants in this program is limited by the low number of applicants who can pass the entrance exam due to limited schooling. They also have mandatory safety training for all their employees and have conducted workshops at the mine. Meadowbank also offers a great deal of on-the-job training, from skills training for an entry-level position to advanced training to position an employee for a promotion. According to some respondents, this training is too-little, too-late. If training had been started in the community in the years before the construction of the mine, more people would have been job-ready when the mine opened and would not be forced to be playing catch-up, either through this on-site job training or through leaving the community for trades training. They feel that the

community could have taken better advantage of the opportunities at the mine if everyone had thought ahead. Everyone would have benefited: Agnico-Eagle would have had a better trained workforce to begin operations and Baker Lake residents could have entered higher-level (and higher pay grade) positions from the outset.

5.1.4. Social Determinants of Health

Personal experience provides a lot of important insight into the effects of these identified “Social Determinants of Health” on individual lives. When using pure statistics, connections between different indicators and outcomes become obscured. By using the personal experiences of residents of Baker Lake, the connections between Population, Crime and Social Issues, Self-Identity and Self-Control/Empowerment become clearer. In many cases, these determinants overlap to contribute to an individual’s overall well-being. While this section is organized into sections and subsections for clarity, it is important to recognize the interconnectedness between these indicators.

5.1.4.1. Population

The population of Baker Lake is growing rapidly for two main reasons. First, the growth rate in Baker Lake was already high, as it is in the whole of Nunavut, which could be attributed to cultural change and the settlement into towns. Second, new people from around the region and the rest of Canada are moving into the community in search of jobs. Between 1996 and 2001, before the mine project began, the growth rate was 8.8%.

Then between 2001 and 2006, the population of Baker Lake grew 14.7%, from 1507 to 1728, which is significantly higher than the 10.2% growth in Nunavut as a whole (StatsCan 2007). The period coincides with the approval and construction of the Meadowbank mine. Between 2006 and 2011, the population grew to 1872, a growth rate dropped back to 8.3%, compared with a 7.3% growth rate for the aggregated Kivalliq Region (StatsCan 2012a). The growth of Baker Lake during 2006-2011 is especially significant in comparison with negative growth rates in Rankin Inlet (the regional seat of government) and Chesterfield Inlet (the hamlet closest geographically to Baker Lake), considering their close ties to Baker Lake (StatsCan 2012b; StatsCan 2012c). This added pressure has accelerated the need for improvements in Baker Lake's housing and infrastructure, as these issues are increasingly critical and population growth continues, and the potential for even more mining development looms.

With the permanent settlement into Baker Lake in the past sixty years, significantly more babies and young children have been surviving into adulthood. When the different clans from the Baker Lake region settled into town, they began intermarrying and having children at a rapid rate. During nomadic times it was imperative to have a large number of children in order to ensure that some would survive and care for the family in the future. With settlement, having large families has become less necessary but has remained common, with some women having children at a young age and continuing to have children for many years. Combined with decreasing infant and child mortality, and increasing life expectancy, the population has been growing since settlement.

The construction of the mine has brought many new families into Baker Lake looking for work. Community members have had two responses to this new influx: excitement; and concern. The excitement stems from a belief that new people may breathe new life into the sometimes repetitive and limited social life in Baker Lake. This opinion is held by a very small number of respondents. Those who are concerned described two major issues. First, many have moved in with relatives in already overcrowded housing situations, putting further pressure on stressed homes. Because many Inuit families have relations in many communities (due partially to division of extended families during settlement), many of the incoming Inuit have family in Baker Lake. Second, those new people moving to Baker Lake may not have had experience with controlled alcohol consumption. Many Nunavut communities are dry and moving into Baker Lake has the potential to allow an individual to overindulge in newly-legal alcohol consumption. Apparently, this is most common the case with people coming from Arviat. Several community members, including young mothers and health-related workers, expressed concern that there are too many people coming from Arviat, and too many of them have little experience with controlling their alcohol consumption. In fact, some respondents even attribute much of the increase in alcohol consumption and alcohol-related criminal activity to this select group of newcomers, although this is hard to substantiate.

Housing and Infrastructure

Existing population growth and the influx of new families has pushed the town into a critical housing shortage. There already existed a shortage of government

subsidized housing that, in some cases, forced multiple families or multiple generations to live in one house. According to the 2006 Census, 26.6% of homes have more than one resident per room and homes average 4.6 rooms, which is again higher than territory-wide rate of 22.7% (StatsCan 2007). Respondents even reported instances of ten or more people living in two-bedroom homes. In other cases, young adults are forced to continue living with their parents despite having the income and drive to live in their own homes. In addition, some reported that a significant quantity of the public housing in town has fallen into disarray over the years and is badly in need of repair. Both private and public housing continues to be built in town, but the demand continues to outpace the supply, leaving many families on the Housing Corporation waitlist for years.

This overcrowding puts pressure on families and on the ability for townspeople to hold social gatherings. Living in overcrowded situations can exacerbate existing family issues and spark more domestic abuse, child abuse and neglect, alcohol use, and family strife. This is compounded by the near darkness and bitter cold temperatures during the winter, keeping many people constrained to cramped living spaces for much of the day. In addition, overcrowded living makes it nearly impossible to hold family gatherings and social events in the home. It was reported that the hotels and the arena charge too much money for family social events to viably take place at an outside venue. This has the potential to restrict the number and size of social gatherings, deteriorating family social connections and community social life. With the current plans for a new community hall, this issue could be alleviated in the near future.

Many respondents also discussed the availability and condition of the daycare as a pressing social consequence of population growth in Baker Lake. The daycare has failed

to expand with the growing population and has not adapted to the changing needs of Baker Lake families. Before the mine and the new jobs, the daycare mainly catered to teachers' children and closed in the summer when the teachers could be home during the day or left town on vacation. Now that there are so many more job opportunities in town, there's a much greater need for year-round childcare, but the schedule of the daycare has not changed. The number of children that need to be in daycare is growing faster than the population, as families with work now need childcare that they never did before.

However, the number of spots for children in the daycare remains limited to a maximum of seventeen total (after half-day kindergarten lets out), with only eight in the morning.

As a result, there are long waiting lists for those spots. Those children are limited to ages one to six, leaving families with children under and over those limits essentially out of luck. Families are also limited on the number of children they can put into daycare. The size of the daycare limits the ability for parents to be employed and essentially prevents some families from having two incomes. Without non-working family members or friends willing to look after children, it is next to impossible to take full advantage of the new employment opportunities in town. This has been cited by mine employees as a major reason for missing work or even quitting their job.

5.1.4.2. Crime and Social Issues

Despite the positive impacts of the mine, there are a few negative sides to the increased income in town. The most discussed and most prevalent is an increase in alcohol and drugs. The vast majority of respondents said that the amounts of alcohol and drug consumption in town has been increasing, but there were many opinions about how

much, who has been doing it, and how it has been affecting the community. In addition, a few respondents felt that the alcohol and drug issues in town were already present before the mine, and the apparent increase is the result of population growth (and steady alcohol and drug use rates). Regardless of an individual's perceptions of the cause, trajectory, and impact of alcohol and drug use, it was one of the most common respondent-raised topics during this research, so it obviously is at the forefront of issues concerning community members.

Most respondents have noticed an increase in alcohol and drug consumption in Baker Lake since the beginning of the mine's construction. This increase was explained as the result of several phenomena: increased income; increased bootlegging; and trafficking through the mine. Many informants cited a combination of these factors. Importantly, the town of Baker Lake is a restricted community. Liquor orders must be cleared by a volunteer liquor control committee and are limited to once per week orders of 48 beers or two 40oz bottles of hard liquor. Therefore, increases in consumption are a result of new customers ordering through the legal system, more frequent ordering by existing customers or an increase in bootlegging activity.

The most straightforward identified cause of alcohol and drug use was increased income. It is perceived that when people get more income, they have more money and they will buy alcohol or drugs with it. The number and size of legal liquor orders (through the town's control board) appear to have increased over time. Some respondents extended this reasoning to then postulate that bootlegging has increased because people have the money to pay the exorbitant prices for alcohol. For example, bottles of hard liquor that would cost around \$80 legally (already marked up for Northern shipping) have

been selling for \$250-\$300. Without access to cash to pay those prices, bootlegging would not be as prevalent as it appears to be today. It was noted that Agnico-Eagle is lucky that the control committee was in place and the town became restricted before the beginning of the mine construction, or the issues would have been a lot worse. This statement makes it obvious that community members believe that the committee is doing the best job they can, and the bootlegging is not worse than open alcohol purchasing would have been.

Finally, some respondents blamed the mine and mine employees for bringing in alcohol and drugs from the South through their private airstrip and selling it in Baker Lake. One young respondent explained that this is how cocaine was recently introduced to the community. This access to substances through mine employees has become its own source of concern for community members. Several respondents mentioned that local women have been preyed on by southern men looking for a sexual relationship in exchange for access to alcohol and drugs trafficked from the south. In some cases, the families of these women accept this arrangement because of this guaranteed access, despite often having to feed and house these southern men. One mother believes that Baker Lake is less safe for young women now than it used to be because of the presence of these southern men and their substances.

Another diverse set of respondents did not believe that the consumption of alcohol and drugs had increased, or if it had, it had not increased significantly. Some cited the existence of the control board, saying that they have been doing a good job of controlling orders. They also noted that there is no reliable way to measure the amount of substances that are being bootlegged into the community. Others insisted that the increase in orders

is only the result of population growth and the issues with reckless consumption are not as bad as some people think that they are. They admit that there has been an impact, but that it is not big enough to worry about. Finally, a group of respondents highlighted that the reasons that people drink recklessly have always been there, are not increasing, and may actually be getting better with the mine. Issues like unemployment, hopelessness, restlessness and family stress are decreasing with the mine, so the alcohol consumption in town should logically be decreasing as well. For one respondent, the pre-existence of social issues is critical to understanding the use and abuse of alcohol and drugs in town:

"And I know that a lot of government people that worked at the government offices were telling us that Inuit will not be able to manage their money. They will spend their money on alcohol, drugs and blah blah blah. It appeared to me that they didn't want us to have money. But we...as I watch what's going on here, yes, the alcohol and drugs were already here because it follows the poor. You know, they're looking for something to do with their lives and they have nothing else to do, so they have all this time and nobody really understands. I can't even understand why people do it, but it seems like it just follows. People were into bingo, they were into alcohol, you know. They were here a long time before the mine. And everybody said that the mine has brought these onto us. I have a hard time believing it because I've seen that it was here already. "

According to some, the mine has given people something to look forward to and a job that they can lose if they miss work because of their drinking, so substance abuse is less worth the risk.

Regardless of whether the per capita substance use has increased or not, Baker Lake is facing social problems because of alcohol and drugs. Alcohol is more acceptable than it used to be and being drunk is, in general, considered less shaming or scandalous. Being drunk in the streets in the middle of the day does not carry the harsh stigma that it once did, if only because it is a more common occurrence now, according to one female respondent. While substance use may be at least partially caused by existing issues, it

also exacerbates them. Several respondents explained that increased alcohol and drug use fuels family issues, especially when many Baker Lake families are living in drastically overcrowded homes. These issues have included domestic violence, child abuse and neglect, food insecurity and infidelity. Some noted that while the increased income should have alleviated most of the child hunger and family food insecurity issues there are cases where the money has been going to alcohol and drugs instead of groceries. However, others asserted that over consumption of alcohol is an individual choice and seemingly fairly isolated issue, but this view was widely varied in the experiences and opinions of community members.

While not the only contributor to illegal activities in Baker Lake, many respondents cited alcohol and drug use as the catalyst for many of the altercations, assaults, vehicular accidents and abuse cases in the community. At this point it is difficult to position drug and alcohol use definitely relative to crime rates. It is possible that the same people who were getting into trouble before the mine continue to do so, or that those who did not before have started with their increased access to alcohol or drugs. It could also be coincidental that alcohol/drug consumption and crime rates have both been changing; these could be unrelated events or at least not completely overlapping phenomena.

5.1.4.3. Land, Language and Youth

The relationship between the residents of Baker Lake and the land around them has been changing since the arrival of missionaries and traders in the 18th and 19th centuries. In terms of the mine, three key areas of influence have become evident from

discussions with Baker Lake residents. First, the broad environmental impact of the mine has caused some concern, especially with regards to the land immediately around Meadowbank itself. Second, the current and potential impact on harvesting activities has become a concern for some, especially elders and active harvesters. Third, included under both umbrellas of environmental impact and harvesting impact is the impact of the 100-kilometer all-weather road connecting the mine to Baker Lake. Taken together, these three areas of impact incorporate the vast majority of concerns that respondents have with the mine's potential to change their land and cultural harvesting activities.

In addition to harvesting, many respondents highlighted language use and the current issues facing the youth as important indicators of self-identity. Many asserted that the use of language and the pride of the youth in their heritage and culture are critical for the continuation of healthy self-identity in Baker Lake. Respondents also noted that cultural activities, like harvesting and language, could improve the self-esteem of the youth and help alleviate issues like suicide and life dissatisfaction.

Land and Culture

Many community members have general concerns for the environmental health of the land with the development of mining. One of these respondents invoked the elders.

“The mines are destroying the land. If we went to the past and got twenty elders and brought them back to the present, they'd say, “What are you doing? You're destroying the land!” Elders today have the same issues, but middle-aged people don't seem to care so much.

Respondents reported issues with hazardous waste disposal and the inappropriate use of the municipal dump, along with fuel spills near town, along the road and at the mine site.

Others spoke of the overwintering of a barge in the lake, which potentially could have caused issues with drinking water contamination and fish health. Another complained about the lack of information given to Baker Lake about the environmental policies and procedures at Meadowbank. One respondent had asked a question about the tailings ponds and got little response from Meadowbank staff or Agnico-Eagle officials. Overall, there are general concerns about the environmental impact of mining but most feel that Agnico-Eagle is following the required procedures and “doing things by the book”.

Looking down the road to the end of the mine’s life, there are many people who are thinking about the process of reclaiming the mined land. With the Nunavut Land Claims Agreement and the Inuit Impact Benefit Agreement (IIBA) between Kivalliq Inuit Association (KIA) and Agnico-Eagle, there are assurances that the land will be reclaimed and not left as a dangerous, environmentally-damaging abandoned mine. Mining companies have to have insurance for reclamation in case of bankruptcy and they have to have a reclamation plan before they ever break ground. Some are still concerned that the tundra takes a lot longer to regenerate than southern ecosystems and the scar will exist on the land for much longer in Nunavut than it would in the south. There is significant skepticism that the mine will be able to do all that it is promising with land reclamation. One woman wondered, “How do they think they can put the land back together like a jigsaw puzzle? They seem to be telling people that they can just put all the pieces back in the hole and it will be the same as before the mine came in.” At this point, reclamation is not seen as a pressing issue, but some are concerned that there are unrealistic expectations for the land restoration that will be shattered when the mine is closed.

Mine impacts on harvesting activities were discussed much more frequently than general environmental impacts and seem to be the most important environmental concern of Baker Lake residents. This should not be surprising, considering that many residents estimate that approximately 90% of the community harvests on a semi-regular to regular basis (every few weeks to almost every day). Hunting and fishing are extremely important to many community members for cultural, economic and health reasons. Many respondents of all ages explained that harvesting is the most critical aspect of their Inuit heritage and their traditional activities, emphasizing that harvesting and survival activities continue to connect them to the lands of their grandparents and ancestors. Hunting caribou with snowmobiles and qamatiks (pull-behind, wooden sleds), using traditional tracking methods and land knowledge passed down through the community is incredibly important to maintaining personal and cultural identity.

In addition, despite the high price of fuel and snowmobiles, providing for a family with a caribou is cheaper and more healthful than buying the equivalent amount of meat from the Northern or Co-op. There is a widespread preference for caribou meat over purchased meat for these economic and health reasons, but also because of a developed taste preference for all parts of the caribou. These benefits are so prevalent and substantial that community hunts are promoted as effective tools to combat food insecurity in the community. These community hunts are generally conducted for the benefit of elders who can no longer go hunt for themselves and for families who cannot afford to hunt. Caribou distribution also occurs on the individual scale. Many hunters will distribute their “catch” to family members and friends who have been less successful at harvesting. Preference is often given to elders, allowing these respected community

members to continue consuming their preferred meat instead of having to resort to buying meat from the stores. Due to this preference for “country foods”, especially caribou, harvesting will undoubtedly continue to be important to Baker Lake residents into the future.

The impacts that mining development could have on caribou are given high priority in the minds of many Baker Lakers. However, because the knowledge of caribou migrations and herd locations depend largely on the reports of individual hunters, there have been diverse observations. Many report changes in the caribou migration because of location of the mine, but these changes range from a kilometer change in the herd’s crossing location on the mine road to several hundred kilometer shifts in the location of the core of the herd. Some report that there are more caribou closer to town and others report that they are much farther away. For some, the herd avoids crossing the road and is therefore remaining farther east, while others have seen large herds crossing the road without issue. The RCMP has investigated hunters’ reports that the caribou are being disturbed by low-flying exploration helicopters. Hunters have reported that blasting at the mine scares away caribou, while others say that the caribou have learned to stay close to the mine because of the no-hunting safety zone around the site (i.e. the caribou have learned that they will not get shot if they stay there). According to some hunters, it is likely that all of these reports are accurate, despite how dissimilar they appear. Caribou herds are extremely large and different groups within the herd can and do act differently from others.

The location of the caribou is only one subject that connects changes in hunting activities to the mine development. As noted previously, the income that the mine has

brought to Baker Lake has bolstered community members' ability to purchase harvesting supplies (e.g. vehicles, weapons, ammunition, etc.) and has increased participation in harvesting as more families can afford it. More young people have also been enabled to participate, increasing the potential for skills transfer and the continuation of effective and responsible harvesting into the future.

The patterns of hunting and harvesting across the landscape have also changed. The most important factor in changing these patterns is the construction and opening of the all-weather mine road. While the road is cited by some as a barrier to caribou migration (discussed above), others highlight its new importance as a hunting ground access road. The mine road is open to use by harvesters on Hondas (ATVs) and snowmobiles with buggy whips (tall, flexible flag poles with orange flags for the back of their vehicles) and radios, with mine security permission. This has enabled many hunters to cover enormous distance much more quickly than they could without the road. As a result, hunters essentially have a thoroughfare into the heart of the hunting grounds from which they can branch off and pursue caribou herds. Therefore, while caribou are reported by some to be farther from town, they are as easily accessed as before. Hunters have similar success rates as before the mine.

There are several environmental concerns associated with the mine road, despite the benefits for harvesters. Some have concerns about caribou crossings (as discussed). Many other respondents expressed concern about the amount of dust that is coming off the road, especially during the spring and summer. The heavy trucks travelling back and forth on the road kick up significant amounts of dust during their multiple trips each day. This dust settles on the snow or lands to the sides of the road causing concern for the

health of the tundra and bodies of water near the road. Whitehills Lake, a major fishing location, is close enough to the mine to potentially be affected by this dust. Dust is also a major concern for the town itself, as there are no paved roads and there has been a significant increase in vehicle traffic. Many townspeople are hoping for paved roads in the near future, especially on the lake-paralleling major “avenues”. In town the dust is also cited as a potential health hazard, as it affects respiratory health and can be devastating for asthma, emphysema and COPD sufferers.

The road has also been a point of contention between Inuit harvesters in Baker Lake and government regulators. When the road was being approved for construction, access to the road was originally to be restricted to mine and subcontractor vehicles. Baker Lake harvesters pushed for more open access and were met with significant resistance by government officials. Federal regulators believed that if access was opened to hunters the Inuit harvesters would overhunt and deplete the wildlife in the road area. This response was seen as very offensive by Baker Lake residents. Inuit follow the principles of Inuit Qaujimajatuqangit (IQ) (i.e. traditional ecological knowledge, including traditional values, principles and lifestyle), which dictate the healthy amount of harvesting and appropriate harvesting activities. For federal officials to believe that Inuit would harvest irresponsibly was offensive and untrue. Despite higher numbers of hunters enabled to participate in harvesting activities, the amount of meat harvested in the community has not increased significantly, reflecting their adherence to IQ principles.

The management of environmental risk and impact at the Meadowbank mine has attempted to incorporate some of this IQ knowledge. Agnico-Eagle has made efforts to take elders’ knowledge into consideration in their environmental assessment policies or

statements. They maintain open channels of communication to Baker Lake elders, especially those who lived in the area of Meadowbank, in order to learn from each other over time. The elders are also utilized as a path for information dissemination from Agnico-Eagle to the community. It appears that Agnico-Eagle has been working to cooperate with local people and local knowledge as a partnership in assessing environmental change. Many respondents hope that this cooperation will continue and, indeed, expand in the future.

Language

Hunting is a critical aspect of culture and IQ in Baker Lake, but language use is also often emphasized by Baker Lake residents. Harvesting and survival skills are central to Inuit identity and culture, but language use is seen as key to the continuation of Inuit culture into the future. Language use has been changing over the years since the settlement of Baker Lake and language use varies widely across generations. Many elders are unilingual Inuktitut speakers. Some middle-aged people who attended residential schools in Yellowknife, Churchill and Chesterfield Inlet lost their Inuktitut language when they went, but many relearned it when they returned to the community. Many of their children (approximately 20-40 years old) have weak language skills, or are only proficient at understanding spoken Inuktitut and not speaking, reading or writing the language. Today, a Language of Instruction (LOI) initiative is pushing more young people to learn Inuktitut in schools, creating a situation where some children now speak more Inuktitut than their parents. According to one respondent, Inuktitut is experiencing resurgence because of these initiatives.

Even the Inuit language was slowly dying. There've been efforts now, since Nunavut was formed to promote it. You need to know Inuktitut to graduate high school now. My son knows more Inuktitut than I do now. They didn't have those kinds of programs when I was growing up. My father, when he went to residential schools, he lost his language. When he came back he didn't remember one word of Inuktitut and had to learn it.

This language promotion has alleviated some of the concerns about losing the language completely with the gradual loss of the current generation of elders. However, many people are still concerned that traditional principles and values are being lost with the influx of Southern people and the decreased influence of elders. One woman expressed concern about Baker Lake's future saying, "I'm scared that we'll turn into Iqaluit. They've lost their culture. They don't go out to hunt for food. They don't live together as a community. There's Inuit art everywhere, but that's not Inuit culture."

Initiatives to promote Inuit language and culture are being developed in the schools (as discussed in the Education section), but some community members are skeptical about their efficacy and believe the issue runs deeper than occasional cultural education can correct. One student said that not many students his age have any interest in learning tradition songs, dances or practices, even though elders are invited into the Jonah Amitnaaq School. Only a few students are allowed to visit with these elders at a time, severely limiting the benefit of having those elders in school. One elder expressed similar sentiments; he believes that there are ways for people to learn the old ways, but kids aren't interested. In addition, there should be more support for people trying to teach others those traditional skills and performances before they disappear. While cultural programs are gaining some traction in Baker Lake, there's discontent with their limited nature and lack of financial support. The lack of interest by young people has been attributed to the influx of southern media. When young people watch TV and spend time

on the internet, they do not develop a sense of their heritage and their position in the North. They see and want to participate in the “southern” life, but are simultaneously not “southern” creating an issue for positive self-identity and pride in their heritage. Cultural programs are seen as critical to facilitating this pride and associated self-esteem. Knowing more about their ancestors’ culture and their “northern” skills could improve young people’s sense of place and belonging.

Youth

While their parents are taking advantage of mine and mine-related growth in employment and income, young people are now growing up in a community with a different outlook than the one that faced the older generation. The young people’s experience with mining should be considered separately from working-age people, especially because changes to their perspective on education and work now will affect how they take advantage of the new opportunities that will be available to them later. Their experiences with mining at a young age have the potential to dramatically affect their opinions of mining later, when they’re in a position to make major decisions about new mining development. Therefore, understanding the effects that mining has on the youth today is critical to understanding what may be in store for the future of Baker Lake and its budding mining industry.

Several issues face the youth of Baker Lake, as they do in many small, rural communities. First, participants bemoaned the lack of programming and entertainment

for young people after school, on weekends and during the summer. They want to see after-school programs, an improved youth drop-in centre and summer camps and educational opportunities to get their children off the streets. According to one, “They’re bored stiff in this community. There’s nothing for them.” Some attributed the drug and alcohol use by the youth at least partially to this lack of entertainment and a safe place to go. In addition, as discussed in the Income and Spending section, there are more “unsavoury characters” on the streets than there used to be, making it less safe for families to let their children, especially girls, out on the roads without supervision. One mother reported having to call around to other families to keep constant check on their group of daughters walking around town.

Another issue that many informants highlighted was the growing disconnect between young people and the elders. As years continue to pass between nomadic life and life in town, the disconnect between the youngest generation and the oldest is becoming more drastic as young people are learning less of the traditional skills and, up to recently, learned less of the Inuktitut language. Currently, there’s a significant language barrier between youth and elders, as the former speaks most (or only) English and the latter speaks most (or only) Inuktitut. The schools are now teaching Inuktitut and are aiming to have all high school graduates fluent in both languages, but as of summer 2011, only a limited number of young people can write, read and speak Inuktitut.

The generational division makes it difficult for elders to pass on their traditional values, principles and skills to young people. According to one respondent, while families used to have to rely on one another for survival and young people relied on elders to teach them survival skills, today those skills are not as necessary and families do not have

to be as interdependent to survive. This has weakened skills transmission and the connection between youth and elders. There are also young people who want to learn traditional skills but have no one to teach them because of the language barrier or the aging (and shrinking) elder population. While it is a priority of some in the community to encourage harvesting and the continuation of traditional skills, the money is not there to support these types of learning experiences. Harvesting equipment (e.g. ammunition, weapons, or fuel) is expensive, which limits individuals' capacity to volunteer to teach young people without significant financial hardship.

While there are many consequences of the two community issues outlined above, four were central to respondents' concerns for the future of Baker Lake. Many respondents explained that not having a strong sense of pride in the community (and therefore self-esteem and personal pride) can lead to these four negative outcomes. Community pride could be fostered by greater connection to their elders and a more positive social experience. First, there have been a significant number of teen pregnancies. This has impacted the education of young women in Baker Lake and contributes to both domestic and community issues of overcrowding and childhood food insecurity. Second, the number of suicides in recent years has alarmed some informants and is considered by some to be a symptom of greater community weaknesses. However, few respondents wished to talk about this issue more in depth, except to say they believed it was improving with the mine and the hopeful future that it brought. Third, the high school dropout rate concerns many community members, especially because of the implications for the future leadership and workforce of Baker Lake. Fourth, the use and abuse of drugs and alcohol among community young people is a source of concern and

becomes an even more complicated issue when coupled with the first three. By no means is this a comprehensive list of the issues faced by young people in Baker Lake, but these four are the most talked about and seemingly most concerning for informants across the generations.

Both teen pregnancy and high school dropouts were linked to the land-town transition by numerous respondents. One man explained the connection between pregnancies, education and the future of the town in terms of the loss of the nomadic lifestyle.

“Traditional, nomadic, that life is gone. I think Inuit have to realize that there’s a difference between what it was before and what it is now. What the necessities of life are. Today it’s so much different. With a nomadic life people had to rely on other people, so they’d have large families, extended families. But when you go into an economy that’s solely based on money, you don’t need a large family to earn money. You need an education to earn money. So that change from the nomadic life to a life where the economy is based on money, you don’t need a large family. But people still have large families. And it causes problems for overcrowding, for feeding and clothing your family.”

In order to make a successful shift from the nomadic lifestyle to a prosperous, mixed economy, a shift in thinking and priorities should be made. Several informants highlighted that these issues of teen pregnancy (and the resulting large families) and the high school dropout rate are symptoms of a dated priority system.

5.1.4.4. Self-Control/Empowerment

Another social determinant of overall health and well-being is self-control/empowerment. Having a feeling of control over one's future and the future of one's community contributes positively to well-being. As with self-identity, a loss of this sense of self-control can negatively affect a person's health outcomes. For this research, self-control/empowerment is considered in two ways. First, because of the new mining-centric nature of Baker Lake's economy, it is important that community members feel like they have control over the mining future around Baker Lake. This will be discussed in terms of community consultation, which encapsulates the current community-mine relationship, community-mine communication and regional political arrangements. Second, the community control over new mining developments and their ability to veto development because of concern over a commodity (in this case, uranium) affect their sense of self-control/empowerment. Finally, community members "wish list" and hopes are included to illustrate the optimistic and active view many community members are taking towards the future of Baker Lake.

During the review process for mining developments, the community has to be consulted for their questions, concerns and opinions, as per the Nunavut Land Claims Agreement (NLCA). During the construction and production phases, this consultation is supposed to be ongoing, with the renegotiation of the IIBA after a set period of time and continuous communication between the mine, the community and the regional Inuit authority (which is party to the IIBA). In Baker Lake, respondents discussed the relationship between the mine and the community, mostly focusing on the contributions and presence of Agnico-Eagle in Baker Lake. Informants also highlighted the need for

improved communication by both parties in order to maintain a positive community-mine relationship. Finally, many respondents commented on the influence that regional political arrangements have had on the experiences of Baker Lake residents with mining.

Community members had varying expectations of what Agnico-Eagle is obligated to provide to the community and varying opinions about whether they have met those obligations or not. Respondents appreciate the mining company allowing harvesters access to the mine road and their various charitable contributions in town. For example, one person responded “They give back, like they helped us out with our food drive this year, gave us a bunch of canned goods. They never hesitate to give back to the town.” Agnico-Eagle constructed a softball field in town and throws biannual community feasts, during which they give away thousands of dollars in consumer goods (ipods, computers, bikes, etc. reportedly valued up to \$25,000). They have also contributed to a significant community dump clean up. The mine has also supported the Baker Lake Search and Rescue, allowing them to drive a pickup truck on the mine road to use as an ambulance for harvesters in distress on the land. Agnico-Eagle has also supported the community group responsible for securing bereavement travel for community members to attend funerals in other Nunavut communities and around Canada. AREVA has also paid for elders to fly by helicopter to see their homelands. Some elders have not returned to their homelands since they settled in town up to sixty years ago.

Despite these contributions, many believe that the mining companies could and should do more. Some respondents believe that the compensation that Baker Lake is receiving directly from the current mine is not sufficient to compensate for the damage to their land and the social impacts on the town. Many list projects like paving the roads,

sponsoring youth groups and cultural programs, and improving the youth drop-in centre as feasible donations for Agnico-Eagle to make to the town with little impact on their business. They already have the heavy equipment necessary for paving roads and the money to support programming, and a youth centre would cost little and would mean a great deal to Baker Lake. Some informants countered that the mining company is not required to pay special attention to Baker Lake and any act of charity should be appreciated as an altruistic gift. However, the latter opinion appears to be in the minority which implies little understanding of the royalty schemes required by the Inuit Impact Benefit Agreement (IIBA).

In order to maintain a positive relationship and adapt to changing conditions on both sides, the communication between the community and Agnico-Eagle (or any mining company) needs to be clear and strong. The continuation and improvement of knowledge dissemination from the mine to the community requires increased engagement from both sides. Agnico-Eagle has an office in Baker Lake open to community members to address their questions and concerns. It also has held occasional information sessions, but these appear to have tapered off since the full opening of the mine. Respondents expressed a desire for more productive meetings addressing real concerns and ongoing issues, instead of a canned public-relations presentation. Only a select number of community members are interested in the mine, requiring Agnico-Eagle to incentivize their meetings with raffles and giveaways to get a significant turnout. Some community respondents lament this disinterest by the broader community and are trying to promote active participation in the community. It appears that both sides appreciate that this process is a new learning experience and the relationship can always be improved. One informant noted that

Agnico-Eagle is relatively new at community relations and definitely new at mining in an Inuit setting, so it should be expected that they may not be phenomenal at it at the beginning. They expect that Agnico-Eagle will continue to improve over time. One recent improvement is the establishment of the Community Liaison Committee, designed as an intermediary body between the local people and the mine. Locals can approach the committee or members of the committee to voice their concerns if they are not comfortable approaching Agnico-Eagle directly or speaking up in large, public meetings.

Improvement in communications between the mine and town is critical for improving the mine-community relationship. There are several barriers to communication described by research participants. First, the background knowledge necessary for complete comprehension of mining is not widespread. Translation of mining terminology from English to Inuktitut is difficult because there are no equivalent words for concepts, procedures and structures like “tailings pond” or “radiation”. The rapid transition “from igloos to internet” has left many people (elders especially) without the background in science and technology to be able to fully appreciate discussions of mining. Many respondents felt that people should have access to straightforward information geared to a low literacy, based on applications and examples, and written in terms specific to the Arctic and Inuktitut. On-site and hands-on explanations of mining were also mentioned as potential methods to improve communication. One informant explained it as a difference between Inuit and “the white man”.

While I’m an Inuk and I can relate to our elders, the white man is very committed to reading. They’re great at producing paper, lots of things to read. They put a lot of energy into those kinds of things. An aboriginal person looks at it...you show him the actual thing and OHHHH, that’s an excavator. Reading and giving a lot of stuff to an aboriginal person to read, and this is not to take away from the young ones who are going to university now, there’s two different ways. The older,

unilingual people will not be able to understand radon gas or yellowcake. They have to see it to believe it.

Diversifying the formats for information dissemination would improve the knowledge of mining in Baker Lake. For example, at the moment, it is difficult for non-employees to visit the mine or to directly engage with mine management. The distance between the mine and the town, while it tempers some of the social impacts, also has the effect of insulating the mine from the interests of the community. If visits were made easier to schedule or more hands-on information was brought from the mine, there is the potential to greatly increase some community members' interest in the mine and their engagement with future mining decisions.

Second, the majority of the information that the town receives about mining comes from mining and exploration companies themselves or from the government (regional, territorial or federal, which are widely regarded in town as staunchly pro-mine). There is a need for independent information on mining processes and potential impacts. Interestingly, the most reliable source of this information in town comes from the Energy and Mines class in the high school. Hopefully, this means that the upcoming generation of Baker Lake residents will have more than sufficient background in mining terminology, processes and impacts to be able to participate fully in the conversation about mining development.

The negotiation and establishment of the Meadowbank mine exposed several issues with Nunavut political arrangements, from the perspective of Baker Lake. First, communication between the multiple levels of governments has not met expectations and continues to prevent Baker Lake from benefiting from the Meadowbank mine like many community members feel that they should be benefiting. Second, while consultation with

Baker Lake did occur, some respondents feel like they were under consulted and negotiations proceeded largely without their input. Third, there is widespread discontent about the organization of the royalties. Taken together, the political organization of mine-related negotiations and institutional arrangements are seen as detrimental to Baker Lake's experience as a whole community with Meadowbank.

Significant communication gaps appear to exist between the various levels and types of government institutions at play in Baker Lake. Communication between the Hamlet of Baker Lake, the Kivalliq Inuit Association (KIA) and Agnico-Eagle is unreliable and infrequent, according to several respondents. Despite all having offices in the town of less than 2000 people, there is little coordination and communication between the offices, including between the Community Liaison Officers (CLOs) of Agnico-Eagle and KIA. Additionally, public consultations about mining held in Baker Lake are not consistently attended by KIA executives (instead they see KIA staff members), despite KIA's position as the negotiator of the Inuit Impact-Benefit Agreement (IIBA) between Agnico-Eagle and the Kivalliq region (including Baker Lake). Several Baker Lake informants are frustrated with the secretive and clouded nature of KIA proceedings and wish they got more information about how the money from the IIBA with Meadowbank is being used.

With the impact review process and the negotiation of the IIBA, several Baker Lake respondents are skeptical of the consultation process and their role in it. Despite being the community most directly affected by the development of Meadowbank, Baker Lake was not consulted enough for background information or for a community priority wish list. Some informants feel like the review process was too rushed and environmental

consultation with the elders should have been conducted over several seasons. More information about existing conditions on the land and in town would have brought to light the areas of highest need and priority and enabled Baker Lake to benefit more significantly. Instead of pushing the review process through in order to get jobs into the community as quickly as possible, some believe that a more in-depth and considered impact review could have identified issues and potential improvements to the great benefit of Baker Lake.

There is widespread confusion and frustration about the management and allocation of the royalties coming from Agnico-Eagle to Nunavut Tunngavik Inc. (NTI), the parent organization to the KIA. Many community members are aware that communities and individuals in Nunavik receive direct royalty cheques from the Voisey's Bay nickel mine relative to their distance from the mine. The IIBA dictates that an unknown amount of royalty money is directed to the Nunavut Trust. What happens to that money, who can access it and what it pays for is unknown by community members. This lack of transparency is enormously frustrating to Baker Lake residents who are trying to address issues that the town is having right now and could use money from the mine to improve Baker Lake today. Adding to this frustration is confusion about the management of KIA. Despite KIA reports of financial difficulties the year before, several informants reported seeing five new SUVs come off the sealift (summer barge) earmarked for the KIA in Rankin Inlet. The KIA has held annual general meetings in Winnipeg when they should be held in the region that the KIA represents. Many informants express disdain and frustration with the management of KIA, the lack of transparency, and the lack of information provided to Baker Lake about the IIBA. There is no way for Baker Lake to

verify that the IIBA is being adhered to, as the agreement is confidential between KIA and Agnico-Eagle. With the completion of a renegotiation of the IIBA in 2011, the entire document is now available in the public domain, except for monetary details.

It is hoped that any new impact review and IIBA negotiation will try to rectify some of these issues between the KIA and Baker Lake. Increased involvement for Baker Lake in consultation and negotiation of a new mining development IIBA is high on the priority list of many politically active Baker Lake residents. While today their involvement is limited by the language of the Nunavut Land Claims Agreement, there has been a recent political shift in NTI and the Government of Nunavut that bodes well for more community-centered action around future mining. It is believed that the new NTI president will be working to change the land claims agreement to enable communities to capture more benefits from mining, but this remains to be seen as it will inevitably be a long and complicated process.

With what Baker Lake has learned with the community experience with mining and mining negotiations, they are positioned well to advocate for themselves and to capture more benefits from the next mining development than they did from Meadowbank. There is a better understanding of what the community needs and how to get what is necessary from a mining company to make the experience of mining a positive one. While the political relationship between Baker Lake and KIA is marked with frustration, there is great potential for change as the town now knows what they need to push for to get included as much as possible in negotiations.

5.1.4.5. The Future of Baker Lake

The need for self-control can be thought of as a need to be in control of your (and your community's) future. In Baker Lake, the extensive mining exploration in the area has promoted reflection on the possibility for more mines and what that might mean for the community. The second mine to reach community consultation and environmental impact assessment stage is a uranium mine, provoking discussion in the community about importance of the type of commodity in making decisions about acceptable and unacceptable mining development. Many informants discussed the importance of this "uranium question" to the town. Most respondents also spoke about their hopes for the future of Baker Lake, considering the changes that have been occurring recently and the potential for continuing and new mining in the area.

Looking to the future for Baker Lake, the possibility of a uranium mine looms on the horizon. As of summer 2011, AREVA's Kiggavik project is currently under review with the Nunavut Impact Review Board (NIRB). There have been several community information meetings in Baker Lake, AREVA has set up an office in town and the company holds community outreach events relatively regularly (e.g. a traditional clothing fashion show in July 2011). It is quite evident that the most viable next development at this point is the Kiggavik uranium mine, although reactions in town have been mixed.

Community members' opinions run the gamut from completely opposed to completely supportive, with some simply "indifferent". Those who are supportive of the mine see it as another opportunity for people from Baker Lake to be employed and to be trained. They also see that the mine will attract more business and people to town, which they see as positive. Some are indifferent to the uranium development. These people are

mostly the same who were unconcerned with the Meadowbank mine, indicating a general disengagement with the mining debate, except when it affects their family's economic future through employment. Some respondents believe that the "for" and "against" camps are probably about equal, but those who are opposed are much more vocal and have more reasons for their opposition.

Opposition to the uranium development stems from a number of concerns. First, there are more environmental concerns with uranium than there were with gold. Many people are scared that the radiation will damage the land and water, affecting the caribou, fish and people living near Baker Lake. The Kiggavik site is located much closer to the Thelon River, which runs directly into Baker Lake, causing more concern for drinking water contamination. AREVA's inexperience with Arctic conditions makes people doubt their ability to work safely and to follow all the safety procedures that they have planned. The community noted that it took AEM twice as long to finish their road to Meadowbank as they planned. This planted a seed of skepticism in mining company projections for construction in the Arctic, and made AREVA's plans less reliable in the minds of community members than they might have been.

The rapid growth and overtaxing of community infrastructure and services with Meadowbank has caused some respondents to question the benefit of a new mine operating concurrently with the existing one. People who want jobs can find them now and housing is overcrowded already so there's little incentive for another mine from the perspective of Baker Lake. The new jobs would be taken by people from other communities, but the negative impacts would be felt by Baker Lake alone. Some believe that the town would be better off delaying the uranium mine until after Meadowbank

closes to spread out the life of mining in Baker Lake over more time. This would provide jobs to Baker Lakers over a longer period and make population growth more manageable. If managed well, the mining life of Baker Lake could sustain long term, healthy economic growth. If managed poorly, the boom-and-bust of two mines would be even more severe than with only one mine.

There is also a general fear of uranium and nuclear power. One informant cited her general opposition to the use of nuclear power around the world as a reason for her opposition of Kiggavik, which was an interesting perspective that only she mentioned. Several respondents cited the recent nuclear crisis in Japan as part of their reason for opposing the uranium development. There appears to be a lack of information about and understanding of the difference between a uranium mine and a nuclear reactor, as many spoke of their fear of a “break out” or “melt down” and the effect it would have on the environment. Many do not have access to information about how the mining will be taking place and what form the product will be in when it is shipped out to processing elsewhere. There is a lot of misunderstanding that needs to be rectified before community consultation could effectively elicit community members’ informed opinions.

For the most part, AREVA has been trying to reach out to the community to answer questions. They have held numerous public information meetings and have formed a Community Liaison Committee. This committee consists of community members including members of the Hunters’ and Trappers’ Organization (HTO) and elders from the area around the proposed site. Community members with questions or concerns can approach this committee instead of having to stand up during a public meeting. It is hoped that this committee will serve as a link between more reserved

community members and AREVA. Respondents hope that there will be an opportunity to get unbiased information about the health risks of uranium and the environmental impact. Currently, the information the community sees comes from the government or AREVA, presenting the same bias issues as there were with Meadowbank information.

Some community members assume that Kiggavik is going to go forward, regardless of the opinions of Baker Lake residents. Their experiences with the consultation process for Meadowbank have led them to believe that the government cares very little, if at all, about their concerns and opinions. With this mindset, there are some who are turning their attention to getting a bigger say in the negotiation of the new IIBA that would follow the development of a new mine. It is believed that a KIA-negotiated IIBA for Kiggavik would be similar to Meadowbank, but probably with more detailed instructions for environmental assessment and monitoring because of the nature of the commodity, but little new consideration for Baker Lake. As a result, Baker Lake is planning to “go hard after benefit and community concerns”. There has been more study of other cases around the world and there is hope that KIA will improve their negotiations simply because this is their second experience with an IIBA. From the perspective of Baker Lake, there is little that can be done to get a more prominent seat at the table short of renegotiating the land claims agreement. Therefore, the focus has been on pressuring the new NTI president to follow up on her campaign promise to negotiate an amendment that would change the rules for royalties so that Baker Lake sees more financial benefit. However, at this point, those changes are in the hands of NTI and there is little that Baker Lake can do apart from writing emails and making phone calls.

Hopes

With all that has happened and continues to happen in Baker Lake, it is not surprising that community members have a wide variety of outlooks on the future of Baker Lake. For some, the future looks bright. People are working who want to work and many fewer families are going without basic needs. Fewer people are on welfare and more people can afford to purchase vehicles, hunting equipment and consumer goods. Some families are considering buying homes. There's hope that the community will continue to benefit from the mine income and that it will help alleviate some of the social issues instead of exacerbate them. There is a general hope that Baker Lake youth will continue graduating from high school and pursuing higher education.

There is concern that Baker Lake is not looking ahead to life after the mine. The opportunity to create small business that will diversify and strengthen the local economy is now, and people are not taking all advantages. Some are worried that nobody is planning for the end of mining and are only thinking of the now. There are few ideas about how Baker Lake should be preparing, but some are frustrated that the future is not being discussed in order to come up with a plan for this future potentially devastating economic crisis. The mine is seen generally in positive terms, but the plan for the future is critical for these benefits to be lasting ones.

Apart from these generalized outlooks, Baker Lake residents have specific wish lists for infrastructure, programming and business in town in the future. The number one wish for infrastructure is more housing, more variety in housing construction, and improvements to existing housing. Many hope for paved roads, a new arena with an exercise center, an expanded day care, a fully-staffed hospital, and an utilidor system

(water and waste management). Others hope for an extended runway and expanded airport to accommodate jet service. On the programs wish-list are more youth program, money management courses, a trades program and a safe shelter with counselling services for victims of domestic abuse. Apart from a general call for more small businesses, there were specific hopes for more variety in accommodations and restaurants, a coffee shop, and a bakery. There is also room for hairdressing, traditional custom clothing, mechanics, a bookstore, massage services, a movie theatre and a tourism kiosk.

Finally, many community members are concerned about too much growth happening too fast. Population growth without management is seen as a road to more social problems, more addiction issues and crime. One young respondent hopes that Baker Lake never gets a bar because of the negative consequences of less restricted liquor regulations. Overall, it is hoped that growth will be kept in pace with the town's ability to support people with services and housing. The shift from a government-supported town to a mining-supported town has been abrupt, but the mine is seen as the only viable industry for such a small, remote community. The hope is that new mine developments will be managed effectively and patiently, spreading out growth over as many years as possible and allowing the town to remain a safe, secure and clean community.

5.2. Key Findings

Overall, the most important finding of this research is that mining is not felt by all members of Baker Lake in a homogeneous way. Many factors, including personal

history, current economic and educational status, and family structure, contribute to differences in the importance of certain mine impacts and the relative unimportance of others. Therefore, when looking to generalize across the community, it would be very easy to select one viewpoint and ignore the others, despite the dramatic differences between them. In order to attempt to pick out the most important findings while maintaining this diversity of experience, these “key findings” have been selected by both the number of respondents who brought them up and the relative importance assigned to them by those respondents. Relative importance has been determined by an issue’s dominance (or non-dominance) of the interview, and the order in which issues were raised by a respondent. In the list below, the findings are not in any particular order; the top issues are outlined without ranking.

Heterogeneous Experiences of Mining Development

While the town appears to be benefiting overall from the development of the mine and the exploration camps for future development, the benefits are not evenly distributed. In general, those who were in a position of relative economic advantage before the mine continue in that position since the mine began construction. This appears to be at least partially result from the fact that most contract opportunities with Meadowbank required significant initial capital, usually in the form of heavy equipment. As a result, the businesses that won these contracts were those that had established business in the community, which were mostly the “Big Three” (Peter’s Expediting, Arctic Fuel and BLCS). This has limited the business growth mainly to businesses that pre-existed the mine, including the Big Three, the stores and the hotels. There’s a widespread desire in

the community to see the mine income support small business development in some way or another, but the preferred method varies. Some hope that the increased income will automatically translate into more business investment in the community. Others see the arrival of a bank branch in town as critical to both small business investment and increasing the rate of home and business ownership. Another group is putting their faith in the Community Economic Development Officer (CEDO), a Hamlet employee, to find small pots of money in the government and non-profit sectors to provide grants and loans to Baker Lake businesses. Overall, many Baker Lakers see economic diversification as at least as important, if not more important, than business growth in the existing large businesses.

Opportunities for Financial Upward Mobility

Despite the dominance of Meadowbank contracts by large, existing businesses, the mine has provided an opportunity for those without ready access to those businesses to elevate themselves financially. Before the mine, there were few opportunities to work above minimum wage. Many of those jobs required higher levels of education (at least a high school diploma) than many community members had. In addition, the limited jobs would only open up when the existing employee retired, which could mean one turnover over 30 years. With the arrival of the mine, anyone who wanted to be employed could be. Many respondents noted that there is no nepotism or discrimination in mining hiring practices. If a person can show up to their shift and do the work, they could have a job. The economic turnaround for some of these new employees was huge. Many went from living on employment insurance to pulling huge biweekly checks. This is significant, as it

means that many without opportunity or education have had the chance to improve the lives of themselves and their families when there were few opportunities to do so before. However, there are still people living on employment insurance or working minimum wage jobs in town, meaning that there may actually be a widening economic gap with the increase in the number of high wage employees in town.

Emphasis on Education and Training

In order to take advantage of existing mine employment opportunities, as well as opportunities in town and future jobs with potential mines, training is very important to the continued economic and social growth in Baker Lake. The majority of respondents highlighted the importance of education at the K-12 level to the success of Baker Lake in the future. Many see raising the graduation rates in the high school as critical to getting more Baker Lake residents into better jobs and a more stable family situation.

Individuals' opportunities increase with higher educational achievement, leading to more choice in work and therefore more choice in working conditions, schedules and income that impact family life. Many respondents hope that the young people of Baker Lake will take advantage of post-secondary opportunities in town and elsewhere after graduating high school. It does not appear to matter whether this post-secondary education is at a college or university, or in trades through a course or an apprenticeship. The important thing is that young people get more education and open up more opportunities for themselves. There are a number of youth who are doing this, but many participants hope that the number will increase dramatically.

Role of Individual Agency in Decision-making and Experiences

The importance of individual agency cannot be underestimated. In all of the above findings, as well as the results in the full chapter, individual decision-making often determines outcomes for individuals and families. On one hand, these choices can be positive: people are choosing to take jobs at the mine, to pursue “upgrading” or post-secondary education or to spend their money on healthy foods for their families. On the other hand, unfortunately, some choices are more negative: some have chosen to spend income on alcohol or drugs, have dropped out of school or have engaged in domestic abuse or violence. The impact of human agency cannot be removed from the equation and will continue to determine how people experience mine development. This is not to say that existing conditions (e.g. family situation, education level, personal history or personal characteristics) do not contribute to mine experience. In fact, quite the opposite appears to be true. Existing conditions also influence the choices that a person makes. This highlights the importance of family and community attitudes towards education, community development, social change, and traditional activities (among others). Changing attitudes could be key to improving educational participation and advancement, reduction of some family issues and developing high self-esteem and culture-esteem among the community’s young people.

CHAPTER 6 –CONCLUSIONS

This final chapter serves to conclude this thesis. It includes a thesis summary, an outline of the thesis' scholarly and practical contributions, and directions for future research.

6. 1. Thesis Summary

With the continued expansion of mining into greenfield settings, especially in the circumpolar Arctic region, communities with little or no experience with mining or industrial development in any form are facing new choices, negotiations and potential change. The community of Baker Lake is in the midst of these choices and change surrounding the development of the Meadowbank gold mine. This thesis is driven by the practical need for information about the experiences that community members are having with the mine to date. In addition, there are a few key scholarly openings for this research. While governmental processes like Environmental Impact Assessment, required negotiation of Impact and Benefit Agreements, and ongoing community consultation have been implemented in the Canadian North, these tools often rely on statistics and community-scale metrics. In order to add nuance and increase participation in these processes, this thesis strives to preserve any existing diversity of experiences across a given community while completing a cross-community profile of experience with mining.

Working with the partnership of the Hamlet of Baker Lake, Nunavut, this thesis sought to maintain information about the experiences of community members with

different personal, economic and educational backgrounds. In this pursuit, a review of existing scholarship on communities and mining development is presented in Chapter 2. Knowledge gaps in Mining and Rural/Remote Communities, Aboriginal Community Change with Development, and Social Determinants of Health research revealed a need to more closely look at the diversity within a community, and not just the overarching trends in the community as a whole. As this study focused on the individuals within a community, Chapter 3 consisted of a background to the geology, history, politics and cultural makeup of Nunavut and, more specifically, Baker Lake. This illustrated the importance of specificity in community studies and community-mining relationships, as the sum of these contextual factors both creates a unique case for Baker Lake as a whole and for individuals within the community. Different community members experience community-level context differently, and therefore have different experiences with mining. Data from the Kivalliq Socio-Economic Monitoring Committee (SEMC) were also included in this background chapter, providing both a statistical foundation from which this research added diversity and depth, and a categorization scheme created by a regional committee, reflecting the priorities of local people in monitoring and research. In Chapter 4, the research aim and objectives were discussed alongside a description of the methods used to conduct this research in a respectful, collaborative and sensitive way. During the two month field season in Summer 2011, the two major methods used to gather data were key informant interviews and focus groups.

In Chapter 5, the results of this study were presented, following the categorization scheme developed by the Kivalliq SEMC, and several key findings were identified. The key findings were identified through a combination of the frequency with which a subject

was broached and the importance assigned to it by the individuals, assessed by the amount of time devoted to speaking about it and the order in which topics came up in the interview. The first critical finding is that, as hypothesized, the experiences of mining are not homogeneous across Hamlet of Baker Lake. From there, four further key findings were identified. First, the local businesses in town that benefited most from the mine were the businesses that already existed and had the required equipment and capital. This has led to the increasing success of the existing businesses, but relatively little diversification or small business development. Second, the mine provided opportunities to individuals previously unemployed and/or untrained to elevate themselves out of social assistance and poverty. Many have used this opportunity to their advantage; however, , as anywhere, there are individuals who are making alternative decisions about their new income. Third, education was highlighted by the vast majority of respondents as critical to the continuing economic growth, social improvement and future of Baker Lake. Ensuring students have the support they need to graduate high school and the opportunity to pursue post-secondary education of their choice is a high priority for many. Finally, while these three trends appear to be the most prevalent, the importance of individual agency should not be underestimated. While community contextual factors impact each individual differently, individual decision-making also differentiates between individuals' mining experiences. This is reflected in the choice of some to purchase alcohol/drugs, while others are paying off debt and saving towards homeownership. A combination of existing conditions and individual choice results in individual outcomes; it is impossible to consider either to dictate wholly the experience that an individual has with mining.

Furthermore, direct explanation of the experiences of community members with mining is tough, but the attempt to do so remains a worthwhile exercise.

6.2 Contributions of the Research

This thesis offers both practical and scholarly contributions.

6.2.1. Practical Contributions

This research was conducted in partnership with the Hamlet of Baker Lake, Nunavut. With the development of the Meadowbank gold mine and the potential for at least one other mining development in the immediate area, the hamlet needed more in-depth documentation of their citizens' experiences with mining. Along these lines, this research yielded the selected findings outlined above, but also a fuller overview of the variety of experiences being felt in the community, as presented in Chapter 5. This information has the potential to be used for decisions regarding funding of specific programs to support specific groups, community-wide initiatives and the relationships between Baker Lake and Agnico-Eagle and other mining companies. It also reinforced some of the decisions already taken by the hamlet, like the employment of a Community Economic Development Officer (CEDO) to provide information and grant application support to small businesses in the community.

The diversity of experience revealed through this in-depth study also revealed that there is value in community studies conducted in this manner for other communities experiencing or even facing development. The variability of experiences seen across the community shows that communities can be internally heterogeneous and that different

community members or groups of community members may experience mining in different ways. While the exact findings of this study cannot be extrapolated directly to other places, the practice of interview-based study can be applied elsewhere to reveal other communities specific needs, concerns, experiences and diversities. Along these lines, community consent processes, Social Impact Assessment, and Impact and Benefit Agreement negotiations could all benefit from this type of community study. The unique combination of characteristics, groups, and histories in any given community can be used to make a community snapshot a more comprehensive picture of current conditions and potential for change.

6.2.2. Scholarly Contributions

The major scholarly contribution of this research is the community-level approach to mining-impact research. Working from a community partnership and focusing on maintaining the individual-level mining experience, this research starts from an invitation from the Hamlet of Baker Lake to document mining experience in the community.. Instead of the decisions about the relative importance of specific research questions or the different experiences in a community sitting solely with the researcher, these decisions were made in collaboration with the community or were avoided as much as possible. The approach to research is designed to preserve the diversity of experience and as such does not privilege some views over others. In this way, this research contributes to knowledge about mining impacts on communities by not making selective decisions that, when attempting to paint a picture of a homogeneous community, eliminate minority opinions and experiences. In addition, while overarching conclusions are not drawn and

would be extremely difficult to draw meaningfully, there is value in the recognition of the bounds of experience. There are experiences that were not observed and those that were, contributing to the understanding of the range of possibilities in mine-impact research.

This research also contributes to the understanding of aboriginal community development in Canada. With ongoing change in aboriginal communities, the relationship between those communities and the Canadian state at large continues to be important context to understanding mining development. With the establishment of Nunavut in 1999, the political landscape changed in Arctic Canada. This change became another stage in the story of this relationship. Therefore, Meadowbank has become a test case for the territory's regulatory bodies and political arrangements in the new territory. This research has provided a more detailed study of the impact that a mining development negotiated and constructed totally under the governance of Nunavut. Meadowbank represents a new case in aboriginal society-settler state government interactions and regulation, and this research provides on-the-ground documentation of the effects of these interactions on individuals in Baker Lake.

6.3 Limitations and Future Research Needs

As this research provided a snapshot in time for the Hamlet Baker Lake, there is a clear need for ongoing monitoring and documentation of the experiences of the Hamlet with mining. With changes the community faced with the establishment of the current mine, the permitting process underway for a uranium mine, and the numerous potential

future mining developments in the exploration stage, it is impossible to predict the future of Baker Lake. In addition, while this study reached a wide variety of community members, it did not, nor could it, reach all residents of Baker Lake. In the future, larger community-wide meetings could be used to reach those who did not participate in this study. Additionally, I came into this research with a particular background and preconceived notions of the importance of different experiences and variables. I grew up in rural Vermont, so I have some insight on small-town politics and issues. However, I earned my bachelor's degree in geological sciences and anthropology, and am completing this master's degree thesis. As such, I have a particular view on education. I believe that this did not color my results in this thesis, but I do recognize that I have that perspective. Over my time in Baker Lake, I gained greater appreciation of different types of education and experience, like traditional knowledge of harvesting and the land, which highlights some of my shift in perspective and thinking as this thesis has progressed.

Apart from Baker Lake, there is a need for this kind of community-level documentation of the impacts of mining for cases all over the world. In Nunavut alone, there are communities facing mining development, such as Pond Inlet and Rankin Inlet, that would benefit from this type of minimally-aggregated study. Across Canada, there are numerous communities affected by mining that have had little to no documentation of their experiences with mining. The information that this research is providing to Baker Lake would be useful for other communities to have. The findings from Baker Lake cannot be extended to other communities, but the study approach can be, and the focus on individuals and community subgroups is a useful focus for other community studies.

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APPENDIX A: Participant Consent Form (English and Inuktitut)

Participant Consent Form

Project Title: Inuit Adaptive Strategies and Environmental Conditions

Project Description: This work aims to:

1. Learn from your experience how mining affects you in your everyday life
2. Learn about your perceptions of mining development
3. Identify the different experiences you may have of mining, through family, work, social life, etc.
4. Identify your feelings about how mining development should happen in the future

Contact Address: Kelsey Peterson, Dept. of Geography, University of Guelph, Guelph, Ontario, N1G 2W1, phone: (519) 824 4120 ext. 52560, email: kpeter01@uoguelph.ca

Medium of interview: face to face, digitally recorded (if permission granted),

Conditions of release of recorded information: The recorded information gathered will not be released.

Statement of informant rights: *I have been fully informed of the objectives of the project being conducted. I understand these objectives and consent to being interviewed for the project. I understand that steps will be undertaken to ensure that this interview will remain confidential unless I consent to being identified. I also understand that if I wish to withdraw from the study, I may do so without repercussions.*

_____ I give permission for digital recording

_____ I give permission for the audio tape to be deposited securely with the researcher

_____ I desire that my identity and the information I provide be confidential

OR

_____ I desire that my identity be non-confidential and that the information I provide be attributed to me

Name (please print): _____

Signature: _____ Date: _____

Signature of witness: _____ Date: _____

APPENDIX B: Report for the Hamlet of Baker Lake

Community Experiences with Mining in Baker Lake, Nunavut

A REPORT PREPARED BY GRADUATE
STUDENT KELSEY PETERSON FOR THE
HAMLET OF BAKER LAKE

Responding To Your Invitation

Following our first visit to the Hamlet in 2010, and in response to my letter of April 15, 2011, you invited us to document the experiences of Baker Lake residents with the development and operation of the Meadowbank mine

Our aim was not to establish the impacts of the mine, but rather your Hamlet's experience with the mine to date...

Baker Lake and the Meadowbank Gold Mine



Research Methods

- Pre-research visit – August 2010
- Field Season – May to July 2011
 - Interviews
 - * 27 community members
 - * Mixed age, male/female, employment status, etc.
 - Focus groups
 - * 11 focus groups
 - * Organized by place of employment, family situation, age/gender, etc.
 - Total: 67 respondents

Results

- Residents of Baker Lake have had varied experiences with the Meadowbank mine – No One Storyline
- 1. People with advantages before the mine generally continued to improve on that advantage
 - i.e. those with existing businesses and/or educational attainment
- 2. Some others without advantage have successfully used mine or mine-related employment to improve their financial status considerably
- 3. Still others have not improved their position for reasons such as limited education, family issues/responsibilities and personal preference


Results

1. Employment
2. Schedule
3. Income and Spending
4. Small Business
5. Formal Education
6. Population
7. Crime and Social Issues
8. Land, Language and Youth
9. Self-Control/Empowerment
10. The Future of Baker Lake




Employment

- Unemployment rates have dropped (actual and perceived)
- Many report improved access to jobs and better paying jobs
- However, there are clearly many barriers – e.g.:
 - Lack of training (highschool dropouts) and experience
 - Incompatible lifestyles
 - Family structure (ability to find child care)
 - English language skills




Schedule

- Mixed reactions to the 2 & 2 schedule:
 - Some enjoy having a completely unscheduled 2 weeks while others prefer to go home each night
 - Some of those who choose to work at the mine have reported mental health issues and issues with rumors, infidelity at home, etc.
 - Stress also arises for those with children or elderly parents that need care




Income and Spending

- More disposable income in town
 - Money for consumer goods
- Less food insecurity
 - Food bank line is shorter
 - Grocery store is well-stocked and busy
- More vehicles
 - Increase in Hondas, trucks, snowmobiles
 - Increase in demand for gas
 - Increase in dust from the roads
- Some people are paying down debt
- Increased gambling and alcohol/drug purchasing




Small Business

- Many hope for a diversified small business economy to develop
- Business growth is (at the moment) limited to businesses that pre-existed the mine
- CEDO position at the Hamlet is seen as a community asset
 - Being able to secure small business grants and loans is key to enabling people to start small businesses
- There are many niches for small businesses – e.g.
 - Hairdresser/salon, bookstore, tourism, movie theatre, etc.




Formal Education

- Increasing, but fluctuating, numbers of high school graduates
- Mining course in high school is making kids more mining-literate
 - Covers basic mining geology, environmental impacts, related political processes
- More people are getting "upgrading" at NAC or training in trades for mine jobs
- Not having full trades training in town is holding back some from taking advantage



Population

- Baker Lake is growing
 - Both due to natural growth and from new families moving in
- Some blame new people for increasing drug/alcohol sales
- Many residents are living in severely overcrowded homes
- Numerous homes require extensive repairs or replacement
- Construction in town is moving as fast as possible, given contracts and short construction season



Crime & Social Issues

- Legal alcohol purchases are increasing (general perception that illegal purchases have also risen)
- Some link the drug trade in town with the Southern workers at the mine
- Some feel that Baker Lake is less safe now



Land, Language and Youth

- + More time/money to go on extended harvesting trips
- - Some too exhausted to participate in community events
- + Money from mine supports cultural programs
- - Inuktitut is not allowed at the mine
- + Some youth see opportunity
- - Others focus on the negative social impacts or want to do non-mine-related work



Self-Control & Empowerment

- Control over the future of one's life and community is critical
- There is concern that Baker Lake does not have enough control over the mining developments
 - Regional IIIBA negotiation puts power in regional hands
- That said, people feel that they have more choices in employment now
 - They can choose where to work for their reasons, instead of having to take any job available
- Many feel like more communication between AEM and town residents is necessary
 - They feel left out and want information



The Future of Baker Lake

- Mixed opinions about the potential for new mining developments
- General feeling of hope and optimism about the town's future
- Many believe that traditional activities are not going to disappear as new money will help maintain them
- Long "wishlist" for town infrastructure – e.g.
 - Bigger community hall, bigger health centre, more shopping, new water pump house and/or a utilidor, a larger airport, etc.

What can be done with these results

- The report is yours to do with as you wish
- We have captured experiences, some of which you might judge to be problematic or a concern.
 - These could be the basis of mitigation efforts
- They can also serve as the basis of a longer term, more systematic community wellness monitoring program...

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