

**Northern Exposure: A Comparison Study of Alaska  
and Yukon Models of Measuring Community  
Wellbeing.**

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*“A dream for my community would be to have a holistically healthy community; where people are laughing and smiling because they feel good and where peoples basic needs are met and our people don’t have to struggle with past issues of abuse or addictions. Where there is an open forum for them to discuss those things.” – Diyet van Lisehout*

## **Abstract**

The main objective of this study is to examine models of measuring community wellbeing in Alaska and Yukon to determine if they were developed with the input of residents and if these models reflect local living conditions. Research suggests communities that establish an agreed upon model of measuring community wellbeing will benefit by having an increase in public involvement in local decision-making, and larger capture of material wealth and empowerment over resource management (Varghese et al. 2006). A core problem is that while many communities have started to develop ways to evaluate wellbeing, there is a lack of research on the various models in the Arctic. There are several unique challenges to developing a model in Arctic communities such as the clash between mainstream and Indigenous definitions of wellbeing, the lack of data and small population sizes (Taylor 2008 & Bobbitt et al. 2005).

For this study I conducted an in-depth search for publically available models in Alaska and Yukon and conducted semi-structured interviews with experts. Part one of the analysis was searching through records of each model to document community outreach methods, part two was an experimental content analysis to identify themes across models in both regions, and part three was a content analysis of the interviews.

I did not find any significant difference in the design frame, content or consultation with local residents between the models in Alaska and Yukon.

Key words: Wellbeing, Community, Models, Measures, Methods and Indicators.

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## **Chapter One: Context & Introduction**

Despite the increased interest in studying notions of community wellbeing there has been no evaluation of models of measuring community wellbeing across Alaska and Yukon (Diener and Suh 2000 and Dodge et al. 2012). It is important to study community wellbeing because there is a growing body of evidence that suggests the wellbeing of a community is strongly linked to determinants of health, community capacity, increased economic activities and higher educational outcomes (Syme and Ritterman 2014 and Drabsch 2012). This thesis provides an assessment of models of measuring community wellbeing in Alaska and Yukon by carrying out an investigation of residents' involvement in the construction of the model, a content analysis and interviews with specialists. Within the recent discussion around the notion of wellbeing there have been increasing calls for the development of a more inclusive framework that contains community residents' input (Drabsch 2012; Cox et al. 2010; Varghese et al. 2006 and Hooghe & Vanhoutte 2011). Australia has been at the forefront of developing models of measuring wellbeing at the national, state and community level (Drabsch 2012). The Australia government has set out that one of the primary guidelines for creating a model of wellbeing is for work to be done in consultation with residents so that they agree upon the indicators selected (Drabsch 2012). Even though community input has been widely documented as a necessity within the discourse of wellbeing research it appears that models in Alaska and Yukon have limited local input.

## *Wellbeing and the North*

Wellbeing is a multifaceted construct that is difficult to define as it encompasses multiple concepts, perspectives, disciplines and measures (Drabsch 2012 and Ryan and Deci 2001). In recent years there has been a growing interest in wellbeing, particularly in how it can be define and measured (Dodge et al. 2012). One of central issues with a definition of wellbeing is that most previous research has focused on “dimensions and descriptions (Dodge et al. 2012). The recent work of Dodge et al has produced a definition that states, “stable wellbeing is when individuals have the psychological, social and physical resources they need to meet a particular psychological, social and/or physical challenge”(2012; 230). This definition is important when thinking about communities in the North.

It is essential to establish what it is meant by the North. According to Heininen and Southcott, “... it is known as the Arctic; to others it is a combination of the Arctic and Subarctic and is referred to as the circumpolar north” (2010; 1). Defining the North is problematic as it encompasses eight different countries, spans more than 30 million kilometers and is home to about four million people; including 30 different Indigenous peoples and dozens of languages (Russian Geographical Society 2014). The North has always played a vital role in the global economy with regards to fishing, whaling, the fur trade and the mining of natural resources. Recently, the North has gained international attention because of the prediction that it will be the epicenter of anthropocentric climate change (Andrachuck and Smith 2012; Parkinson 2013; Pearce, Ford, Caron and Kudlak

2012). It is predicted that the melting of sea ice will open up opportunities for further resource development, as well as potentially changing the ecosystem and ways of life for the people who call this region home (DiFrancesco and Anderson 1999). This has sparked the attention from a range of countries, organizations, political actors, researchers, corporations and concerned citizens. Most of this attention can be divided between the interest of sovereignty, natural resource extraction, the effects of climate change and finding ways to preserve the traditional ways of life for inhabitants. It is interesting to see that several of the world's superpowers such as Russia, the United States, Canada and even China are interested in staking claim to the natural resources in the North. This has raised concerns and questions about sovereignty. Preserving and protecting the ways of life for residents in the North has been a priority for political actors, concerned citizens, researchers and the inhabitants themselves; they want to understand how climate change will affect traditional ways of life (Kapyla and Mikkola 2013).

People living in northern communities face many hardships living in small isolated communities; many have limited access to education and health care, high costs for food, high levels of unemployment, overcrowded housing, epidemic rates of suicide and high rates of substance and alcohol abuse (Kral, Idlout, Minor, Dyck, Kirmayar 2011; Gerlach and Loring 2013). Yet, in 2007 the Survey of Living Conditions in the Arctic (SLiCA) reported that when the residents across the North were asked about the living conditions in their communities, they indicated they were largely satisfied with them (Martin, Hanna, Killorin, Kruse, Poppel 2007). There is a separation between the reported hardships in northern communities and residents' opinions about the living

conditions in their communities. One of the ways to better understand the separation between hardships and residents' opinions is to look into the construct of community wellbeing. We can better understand this separation by looking at the concept of wellbeing from its history and multidimensional perspectives.

### *This Study*

The purpose of this thesis is to examine models of measuring community wellbeing in the State of Alaska and Yukon Territory. The discussion around community wellbeing begins with a literature review. The review of the literature starts with the historical conception of wellbeing and how it has evolved over time. The next component is how the measurement of wellbeing has changed over time, narrowing in on the current discussion that wellbeing must include local resident's input. Finally, a synthesis of how wellbeing is understood in the North in regards to indigenous peoples conception of wellbeing, barriers to wellbeing research and how creating inclusive models of community wellbeing are seen as the avenue to addressing local issues.

For this study I define community wellbeing as “the combination of social, economic, environmental, cultural and political conditions identified by individuals and their communities as essential for them to flourish and fulfill their potential” (Center for Spirituality & Healing and Charlson Meadows 2013).

The central argument of this thesis is that community wellbeing varies according to local conditions. Yet in the North existing models relating to community wellbeing do

not adequately achieve this. Discussions of the models show that local input is limited. This is also reflected in the expert interviews. Surprisingly, there appears to be no significant difference in this between Alaska and Yukon.

I started by reviewing models of measuring wellbeing in order to investigate whether residents' opinions were included in its construction. Second, I conducted a content analysis of models of community wellbeing in Alaska and Yukon; since this is the first study of its kind there are limitations to this analysis but it holds value for some insight and future research. This analysis shows that while there is some slight variability between models in Alaska and Yukon, overall there is no significant difference between the regions. In order to get a better understanding of concepts of wellbeing in Alaska and Yukon and to get a more in-depth perspective into models in these two regions, I conducted a series of expert interviews with people familiar with the notion of wellbeing in Alaska and Yukon.

### *State of Alaska and Yukon Territory*

I am comparing the State of Alaska and Yukon Territory because both regions are included in all definitions of the North, which is central to this study. Second, the two regions are physically and economically connected with the Alaska Canada Highway being a conduit for trade. Since both regions are somewhat interdependent on each other it is interesting to discern how conceptions of community wellbeing are similar or different. It is worth pointing out that in Alaska there are 735,132 people living in 371 communities across 1,717,854 square kilometers (State of Alaska 2013).

And, in Yukon there are only approximately 35,000 people who inhabit 16 communities stretching across 483,450 square kilometers (AANDC 2012).

## Chapter Two: Literature Review

### Wellbeing its History, Measurement and Northern Considerations

#### *History of Wellbeing*

In order to understand the current conceptions of wellbeing it is important to look at the historical roots of this concept (Dodge et al. 2012). The concept of wellbeing has a longstanding history, although it is only within the last 40 and 50 years that comprehensive research has taken place to conceptualize and operationalize this notion (King 2007; Dodge et al. 2012). The origin of the concept of wellbeing is derived from two philosophical perspectives: the hedonic and eudaimonic approaches (Ryan and Deci 2001). The hedonic approach is traced back to the fourth century B.C., writings of the Greek philosopher Aristippus; who argued that the goal in ones life is to “experience the maximum amount of pleasure” (Ryan and Deci 2001; 143). Other philosophers such as, Hobbes, DeSade and Bentham further articulated the hedonic approach as the pursuit of the human appetites, maximizing sensation and pleasure and argued that a good society is built on these actions (Ryan and Deci 2001). Ryan and Deci state that the history of “hedonism, as a view of well-being, has been expressed in many forms and has varied from a relatively narrow focus on bodily pleasures to a broad focus on appetites and self-interests” (2001; 144).

The Greek philosopher Aristotle conceptualized the eudaimonic perspective as leading a virtuous life (Shin and Johnson 1978; Diener 1984; Gasper 2004; and Dodge et

al. 2012). Ryan and Deci contend that Aristotle developed this perspective because he, “considered hedonic happiness to be a vulgar ideal, making humans slavish followers of desires. He posited, instead, that true happiness is found in the expression of virtue—that is, in doing what is worth doing” (2001; 145). Thus suggesting that wellbeing is linked to human potentials (Waterman 1993). Fromm further explains eudemonia as distinct from hedonism by being:

“Between those needs (desires) that are only subjectively felt and whose satisfaction leads to momentary pleasure and those needs that are rooted in human nature and whose realization is conducive to human growth and produces eudemonia, i.e. “well-being.” In other words... the distinction between purely subjectively felt needs and objectively valid needs—part of the former being harmful to human growth and the latter being in accordance with the requirements of human nature” (1981; 4).

This is an important understanding when conceptualizing notions of wellbeing as it points out that pursuing hedonic activities based solely on pleasure are not always good for a person (Ryan and Deci 2001). Veenhoven summarized both the hedonic and eudaimonic perspectives by stating: “The hedonic approach focuses upon revealed subjective experience of pleasure or satisfaction, while the eudaimonic approach ranges more broadly to consider either resources, such as income and wealth, or things that people are able to do with the social, economic and material resources available to them” (2004; 431).

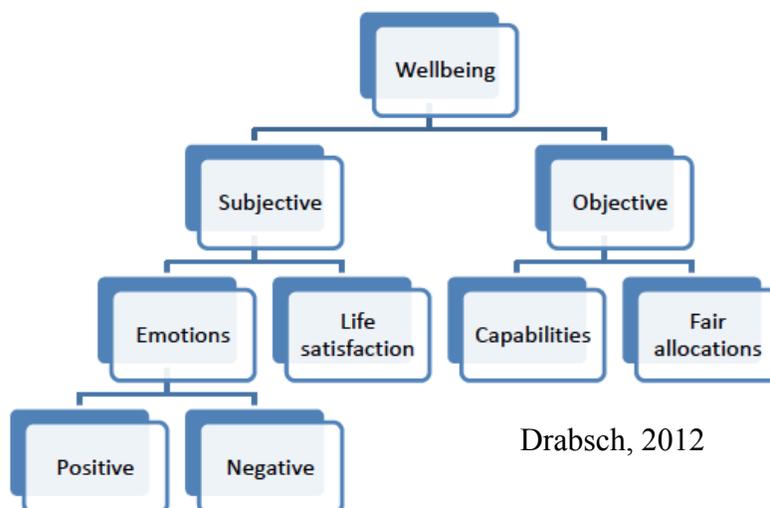
### *Wellbeing as Subjective and Objective Perspectives*

Subjective wellbeing is further understood as the feelings and level of satisfaction that people experience (Diener and Suh 1997). For example, subjective

wellbeing is concerned with people's emotional wellbeing and life evaluation.

Emotional wellbeing is understood as the emotional context in which people experience everyday life (Kahenman and Deaton 2010) and whether people are experiencing positive or negative emotions (Stiglitz et al. 2009), whereas life evaluation is more abstract construct that investigates people's reflective opinions about their life (Kahenman and Deaton 2010).

Objective wellbeing can be broken down into two classifications, capability and fair allocations. Capability is understood as "an individual's ability to pursue and realize the goals that he or she values. It involves questions of whether society is doing well and whether people are living well" (Stiglitz et al. 2009; 8). Fair allocations are "various non-monetary dimensions of quality of life in a way that respects people's preferences and thus determining whether people have the quality of life they want" (Stiglitz et al. 2009; 145). The following figure was developed by Drabsch to illustrate how the concept of wellbeing can be broken down (2012).



## *The Evolution of Wellbeing*

Wellbeing evolved from the early demarcations of the hedonic and eudaimonic perspectives to a state of quantification, which began with Alfredo Niceforo in 1921 (Noll 2002). Niceforo's book "Les indices numérique de la civilisation et du progress" attempted to measure living conditions in order to monitor aspects of peoples lives" (Noll 2002; 5). Starting in the 1930's in the United States, wellbeing was beginning to be understood as a measurement of economic output such as income distribution, growth and productivity (Forgeard et al. 2011). The decision to measure wellbeing based solely on objective measures of economic performance began with the Hoover administrations creation of the President's Committee on Social Trends in 1929 (National Research Council 2001). It wasn't until 1969 when the Department of Health, Education, and Welfare published the document "Toward a Social Report" that the expansion of measuring wellbeing was to include: "health and illness, social mobility, physical environment, income and property, public order and safety, learning and science and art and participation and alienation" (National Research Council 2001; 1).

The late 1960's and early 1970's marked the beginning of the social indicators movement, which was an international effort calling for the development of measures of both economic and non-economic dimensions of wellbeing (King 2007 and National Research Council 2001). Diener summarizes the movement by stating, "The growth of the social indicators movement coincided with the questioning of economic growth in terms of whether more was always better" (1997; 191). The term social indicators was coined by Raymond Bauer, who defined it as "statistics, statistical series and all other

forms of evidence that enable us to assess where we stand and are going with respect to our values and goals” (Bauer 1966; 1). Interestingly, in the United States the National Aeronautics and Space Administration (NASA) was largely responsible for bringing attention to the need for a greater understanding of social indicators as it wanted to understand the impact that the space program would have on society (Noll 2002).

In 1972 the King of Bhutan developed the concept of Gross National Happiness. This includes measures of time use; living standards; good governance; psychological wellbeing; community vitality; cultural diversity and resilience; health; education; and ecological diversity and resilience (Johns and Ormerod 2007). Other international organizations such as the World Health Organization (WHO) began work to “demedicalize health and encourage governments to consider a wider range of factors which contributed to poor health beyond disease or its absence” (Statham and Chase 2010; 5).

Psychology was considerably impacted by the social indicators movement to re-think and expand its understanding of wellbeing with the introduction of the concept of emotional wellbeing, specifically happiness (Shin and Johnson 1977; Dodge et al. 2012). “In 1973 *Psychological Abstracts International* began listing happiness as an index term” (Diner 1984; 26). According to Diner, “Psychologists largely ignored positive subjective well-being, although human unhappiness was explored in depth. In the last decade behavioral and social scientists have corrected the situation and theoretical and empirical work is emerging at an increasingly faster pace” (1984; 95). Shin and Johnson wrote that after the introduction of happiness in the psychological index, “Most of the empirical works have failed to present systematic accounts of happiness, because for the

most part, they are confined to the individual impact of a limited number of arbitrarily selected variables upon self-reports of happiness without considering their mutual interactions” (1977; 475). Part of the problem with conceptualizing happiness is that it is rooted in the hedonic tradition that focused on people’s mental and physical preferences and pleasures (Bradburn 1969 and Kubovy 1999). Diener et al writes that, “The predominant view among hedonic psychologists is that well-being consists of subjective happiness and concerns the experience of pleasure versus displeasure broadly construed to include all judgments about the good/bad elements of life” (1998; 4). The shift in psychology to understanding happiness has moved away from framing only in the hedonic tradition of pleasure seeking to the eudaimonic that includes meaning and reasoning (Gasper 2004). According to Headey et al,

“People's sense of well-being may be derived from many sources. It may come, for example, from personal or family relationships, or from doing one's religious duty, or from achieving material or career success, or from personal self-fulfillment arising from developing one's skills and abilities” (1983; 1).

Psychological research has led to a description of wellbeing that has moved beyond feelings of happiness to people’s sense of fulfillment by being actively engaged with the community (Shah and Marks 2004).

The first International Conference on Primary Health Care was held in Alma-Ata, Kazakhstan in 1978. Representative from around the world joined together in a commitment to improve the health of everyone around the world by the year 2000 (Tejada de Rivero 2003). The declaration of Alma-Ata conceptualized health as an important component to wellbeing by stating that it goes beyond the absence of disease to also including physical, mental and social wellbeing (Statham and Chase 2010). The

last major event during the 1970's was the publication of Richard Easterlin's study on economic growth and happiness, which found that an increase in income did not have any effect on reported levels of happiness (Drabsch 2012).

There were no publications or events related to wellbeing during the 1980's; it wasn't until 1990 that the United Nations Development Programme produced the first Human Development Report that included the Human Development Index (Drabsch 2012). In 1996 the UK established a set of sustainable development indicators (UK Office for National Statistics 2011). Also in 1996 the Australian Senate Legal and Constitutional References Committees released a report that recommended the implementation of a set of national wellbeing indicators be implemented (Drabsch 2012).

In 2001 Australia distributed its "Household, Income and Labor Dynamics" survey that asked about life satisfactions and then in 2002 published its first edition of "Measuring Australia's Progress" (Drabsch 2012). 2007 saw a major development for wellbeing with the Organization for Economic Co-operation and Development (OECD) calling for "a commitment to measuring and fostering the progress of societies in all dimension, with the ultimate goal of improving policy making, democracy and citizens wellbeing" (OECD 2007; 1). In 2009 there were three major historical events. The first was in Australia at the 2009 summit that called for the development of the Australian National Development Index in order further explore issues around wellbeing (Australia 2009). Second, The French Commission on the Measurement of Economic Performance and Social Progress released a report that advocates for a focus on subjective wellbeing instead of objective measures (Drabsch 2012). The third was

another meeting of the OECD, which focused on “what does progress mean for our societies? What are the new paradigms to measure progress? And how can there be better policies within these new paradigms to foster the progress of our societies?” (Drabsch 2012; 8) The United States began work on measuring wellbeing in 2010 with the establishment of the key national indicator system (Drabsch 2012). At the same time the UK launched their “Measuring National Well-being Programme” (Drabsch 2012). In 2011 the OECD began its program “Better Life Index” and later that year published, “How’s Life?” (Drabsch 2012) The Australian Center for Excellence in Local Government published “Options for a Local Government Framework for Measuring Livability” which was a framework for local government to develop community level indicators of wellbeing” (Drabsch 2012).

### *Current Discourse on Wellbeing*

The conceptualization and measurement of wellbeing in the Western world has historically focused on economic output as an indicator of wellbeing, however, this single indicator approach has now largely been rejected (Foregard et al. 2011) There have been calls to expand the understanding of wellbeing, in fact the former President of France Nicolas Sarkozy said, “the time is ripe for our measurement system to shift in emphasis from measuring economic production to measuring people’s wellbeing” (Forgeard et al. 2011; 80). It is now believed that wellbeing has evolved to the point where it is conceptualized as a multi-dimensional construct that is rooted within both the hedonic and eudaimonic traditions (Dodge et al. 2012). Wellbeing has evolved as an

overarching concept, which is generally held to describe the quality of people's lives. There are calls to further shift the notion of wellbeing to include changes in the taxation system in order to understand and ultimately decrease economic inequalities (Layard 2005). Environmentalists have been urging that ecological impacts and the recognition of the "value of non-traded commodities, such as domestic labour and caring work" are included in the discourse of wellbeing (Sustainable Development Research Network 2014; 1).

### *Concepts Related to Wellbeing and Main Proponents*

Another outcome of the social indicators movement and recent development concerning wellbeing was the conceptualization of the term quality of life. Quality of life is described as an assessment of social and community level factors that include objective and subjective indicators beyond material prosperity (Felce and Perry 1995 and Noll 2002). Other terms that came out of the social indicators movement that are included in the discourse of wellbeing are community capacity and resiliency and life satisfaction (Goodman et al. 1998; Statham and Chase 2010; Headey et al. 1996; Matarrita-Cascante 2010 and Wearing 1983). Community capacity is the understanding of the potential a community has to address local issues and its ability to mobilize into action (Goodman et al. 1998). The term community resiliency is associated with a community's ability to recover or bounce back from a major event such as a natural disaster or sudden changes to the local ways of life (Brown and Kulig 1996). Whereas the term community satisfaction is connected with resident's levels of satisfaction with

services that are available in a community, this term is associated with a general or multidisciplinary approach to understanding the state of human life in a community (Matarrita-Cascante 2010). Some argue that not keeping these terms separate makes the task of defining each convoluted (Dodge et al. 2012). A review of the literature did not yield an extensive list of the main proponents of wellbeing. However, Ed Diener, David Kahneman, William Freudenburg and Martin Seligman have appeared multiple times within the literature search on the topic of subjective wellbeing.

Ed Diener is a psychology professor at the University of Utah who has written a number of articles and books related to subjective wellbeing. He has developed a number of wellbeing scales such as the Satisfaction With Life Scale and Psychological Flourishing Scale; both have had widespread use (Michaela Chan 2009).

David Kahneman is a professor at the Woodrow Wilson School of Public and International Affairs. He won the Nobel Prize in Economic in 2002 and has written a number of publications on subjective wellbeing (Plous 2014).

William Freudenburg was an environmental sociologist known for his work on rural sociology with an emphasis on subjective indicators. (Stedman, Patrquin, Parkins 2011 and Santa Barbara Independent 2010) According to Stedman, Patrquin and Parkins his work on boomtowns “led to a program of research on the social impacts of change and the study of well-being of resource-dependent communities” (2011).

Martin Seligman is the Director of the Penn Positive Psychology Center and Zellerbach Family Professor of Psychology in the Penn Department of Psychology. He has written a number of books on subjective wellbeing that have been translated into more than twenty languages (University of Pennsylvania 2007).

## *Observations*

Central to this thesis is that the notion of wellbeing is related to specific social conditions and as such it is important for communities themselves to describe what they mean to be experiencing wellbeing. According to Diener “wellbeing is primarily concerned with the respondents’ own internal judgment of wellbeing, rather than what policymakers, academics, or others consider important” (1997; 201). Others such as Forgeard et al. stress that it is important to have local input when understanding the concept of wellbeing (2011). When developing a definition of wellbeing Noll believes there are three issues on which societal and political agreement are needed: “First, about the dimensions that is relevant for welfare considerations; second, about good and bad conditions; third, about the direction in which society should move” (2002; 8).

## Measuring Wellbeing

### *Dialogue on how wellbeing is measured*

There are concerns about the way in which agencies have defined and measured wellbeing, particularly when single economic indicators such as Gross Domestic Product (GDP) are used to describe people’s welfare (Foregard et al. 2011). Diener and Seligman state there has been a “distressingly large, measurable slippages between economic indicators and wellbeing” (2004; 19). They describe one of these slippages, as “even though GDP has tripled over the past 50 years in the United States, life

satisfaction has remained unchanged” (2004; 10). The core rationale behind this movement is the fact that wellbeing is seen as a “multifaceted construct” not limited to indicators from one standpoint (Foregard et al. 2011). As Thomas states, “Wellbeing is intangible, difficult to define and even harder to measure” (2009; 11). This section of the literature review will provide an overview of how objective and subjective wellbeing have been historically measured and touch on not only how these measurements have evolved but also how they are currently being measured today.

### *History of Measuring Objective Wellbeing*

Objective indicators of wellbeing such as GDP have been regarded as useful but their effectiveness at measuring wellbeing is being continually challenged by political, economic and social organizations (Ryff 1989; Foregard et al. 2011 and Drabsch 2012). The first objective measure of wellbeing to be developed was GDP; it is calculated by the “reference to the total market value of goods and services produced less the cost of goods and services used in the process of production (Drabsch 2012; 9). The Great Depression of the 1930’s and the wake of WW II challenged the US government to develop this measure in order to provide insight into the productive capability of the nation and work to prevent other economic downturns (Drabsch 2012). Using this measure of wellbeing has been regarded as useful, particularly during times of economic strain where many basic needs are not met (Deiner and Seligman 2004 and Drabsch 2012).

Economic indicators are seen as valuable but it has been argued that they do not provide a broad enough perspective of the wellbeing (Drabsch 2012). The problem with GDP is that it does not take into account environmental sustainability or damage and its focus on national production does not account for all aspects of goods and services produced (Drabsch 2012). There has been growing attention to develop more inclusive measure of wellbeing, Drabsch argues that worldwide events such as the Global Financial Crisis accelerate this need (2012). In fact international organizations like the Organization for Economic Co-operation and Development (OECD) have stated:

“In recent years, concerns have emerged regards the fact that macro-economic statistics such as GDP, did not portray the right image of what ordinary people perceived about the state of their own socioeconomic conditions. While these concerns were already evident during the years of strong growth and 'good' economic performance that characterized the early part of the decade, the financial and economic crisis of the past few years has further amplified them. Addressing such perceptions of the citizens is of crucial importance for the credibility and accountability of public policies but also for the very functioning of democracy” (2013; 2).

The change in measuring wellbeing is not to abandon economic indicators but to use them a compliment to broader model that uses a mix of objective and subjective accounts (Drabsch 2012). Diener and Seligman state that subjective indicators:

“Can capture aspects of quality of life that add to the portrait drawn by economic indicators. Nevertheless, these social [objective] indicators fail to fully capture the well-being of nations because they do not reflect people's actual experiences – the quality of their relationships, the regulation of their emotions, whether they experience work as engaging and whether feelings of isolation and depression permeate their daily living. In other words, the social indicators are important, but they do not fully capture well-being” (2004; 21).

The challenge is in finding an appropriate way to compliment both objective and subjective measures of wellbeing into a framework that is inclusive to all (Drabsch 2012).

### *History of Measuring Subjective Wellbeing*

As noted earlier, there has been great interest in using subjective indicators to measure wellbeing such as levels of satisfaction and emotional quality for quite some time (Drabsch 2012). The initial use of subjective indicators to measure wellbeing began with the research of Easterlin in the 1970's; that investigated the link between GDP and wellbeing (Drabsch 2012). He found that "the lack of a strong link between GDP per capita and wellbeing when countries are compared, yet when restricted to a particular country, the wealthy reported greater wellbeing than those less fortunate" (Drabsch 2012; 12). Building on the research of Easterlin Layard investigated the intersection between income and happiness (Drabsch 2012). He found that "in countries with incomes over US \$20,000 per capita, additional income was not linked to greater happiness, that is, the richer countries were no happier than the poorer. Layard found that wellbeing rises with income to a point, after which any increase in wellbeing is minimal" (Drabsch 2012; 12).

Building on the issue of measuring happiness Fordyce developed the "Fordyce's Happiness Measure" in the 1980's (Foregard et al. 2011). Using an 11-point Likert scale the measure asks respondents questions about how happy or unhappy they are as well as the percentage of times they feel happy, unhappy, neutral neither happy or

unhappy (Foregard et al. 2011). In the late 1990's the work of Lyubomirsky and Lepper lead to the development of the "Lyubomirsky and Lepper's Subjective Happiness Scale (SHS)" (Foregard et al. 2011). The SHS, similar to the Fordyce Happiness Measure uses a 7-point Likert scale that asks respondents to rate their happiness compared to others (Foregard, et al. 2011).

One of the most heavily researched areas of measuring subjective wellbeing is positive emotion (Foregard et al. 2011). Positive emotion research is highly correlated with the philosophy of hedonism, which according to Bentham is "that pleasure is the only thing good for us, where as pain is only thing that is bad" (1996; 18). In the late 1980's Watson et al. developed the Positive and Negative Affect Schedule (PANAS), which asks respondents to rate how much they feeling 10 positive and negative moods (Foregard et al. 2011). It could be argues that the PANAS was influenced by Bradburn who developed the Bradburn's Affect Balance Scale in 1969 that asks respondents to count the number of times they experience positive or negative moods in the previous week (Foregard et al. 2011). Building on this research Diener designed the "Scale of Positive and Negative Experience (SPANE), which was used to further build on measures of positive and negative moods (Foregard et al. 2011). This research was based on self-reported measured of positive and negative moods, which lead to the development of other methods such as the Day Reconstruction Method (DRM) (Foregard et al. 2011). The DRM asks respondents to list the activities that they performed during a 24-hour period and then to list the emotion they felt during those activities (Foregard et al. 2011). Subjective happiness can be measured in a number of different ways, however modern assessments consist of "life satisfaction, presence of

positive mood and absence of a negative mood, together summarizing happiness” (Diener et al. 1999; 189). Despite there being a lot of development in the area of positive a negative mood research it still remains unclear how this can be incorporated into measures of wellbeing (Foregard et al. 2011).

Engagement is another area of subjective wellbeing that has been researched but few measures exist to gage it (Foregard et al. 2011). According to Foregard et al. engagement refers to “a psychological state in which individuals report being absorbed by and focused on what they are doing” (2011; 82). Csikszentmihalyi developed an 11-item self-reported measure that asks respondents to rate their relationship to specific situations in order to understand their level of engagement with specific events (Foregard et al. 2011). This identifies a gap in research of wellbeing, specific to levels of engagement.

Another area of research of subjective wellbeing is that of “meaning and purpose” (Foregard et al. 2011). Crumbaugh and Maholick define meaning and purpose as “the ontological significance of life from the point of view of the experienced individual” (1964; 201). Due to a lack of empirical evidence the research on meaning has been largely ignored over the past 50 years (Foregard et al. 2011). However, there has been a renewed interest in this area through the development of positive psychology (Foregard et al. 2011). Meaning and purpose is seen as a contributor to overall wellbeing that is separate but also connect with multiple understandings of wellbeing (Chamberlain and Zika 1992; King, et al 2006; Locke and Latham 2002 and Seligman 2002). As this interest has been recently renewed there are few measures in place to capture it, except for the Meaning in Life Questionnaire developed by Steger et al.

(2006). The Meaning in Life Questionnaire uses a 7-point Likert scale that asks people to reflect on their purpose and engagement (Foregard et al. 2011).

A widely used alternative to measure wellbeing is life satisfaction, in which respondents answer questions related to how satisfied they feel with their life (Foregard et al. 2011). Historically questionnaires related to life satisfaction have been limited to one question, which has drawn considerable criticism as it allows for a greater error (Foregard et al. 2011). Some measures such as the National Accounts of Well-Being use four items related to life satisfaction in order to reduce errors (Michaelson et al 2009). Even though this area of wellbeing research is highly used it has been critiqued as it can be “biased by respondent’s social desirability” (Carstense and Cone 1983; 173). However, Diener argues that by not including measures of life satisfaction there will be vital information not captured (Diener et al. 1991).

One of the most important considerations related to the wellbeing of people from all ages and cultures is that of relationships and social support (Reis and Gable 2003). International organizations such as the WHO conduct research on relationships and social support because of its grave importance (Foregard et al. 2011). One of the most extensive questionnaires related to relationships and social support is the Inventory of Socially Supportive Behaviors (ISSB), which is a 40-item measure that asks respondents to indicate levels of social support (Foregard et al. 2011). One of the concerns related to this measure of wellbeing is if these subjective indicators can complement objective measures of wellbeing (Foregard et al. 2011).

The last measure of subjective wellbeing to be covered is accomplishment and competence. According to Heckhausen et al. “At the individual level, accomplishment

can be defined in terms of reaching a desired state and progress toward pre-stated goals” (2010; 33). While competence can be defined as “a sense of efficacy individuals have regarding their internal and external environments” (Ryan et al. 2008; 84). This area of wellbeing research has seen little attention but it has been incorporated into some surveys such as the Oxford Poverty and Human Development Initiative (Samman 2007). Questions have been incorporated into surveys that ask respondents to answer if they feel accomplished and capable in their daily lives (Foregard et al. 2011).

Measuring wellbeing can be accomplished by either objective, subjective or a combination of these perspectives (Ryff 1989 and Gasper 2004). Most historic examinations of wellbeing focus on single indicators such as GDP (Stedman et al. 2011 and Banfield & Jardine 2013). The current trend is to incorporate a mix of both objective and subjective indicators into a model of wellbeing (Statham and Chase 2010 and Drabsch 2012). A model of wellbeing can take many forms such as a set of measurable indicators put together to illustrate the living conditions of a community or something as simple as a statement about the way community life ought to be (Campion and Nurse 2007; Abdallah et al. 2011; Smith 2014 and Association of Ontario Health Centre 2014). One of the more recent ways to incorporate indicators of wellbeing in a model is to use the dashboard approach (Drabsch 2012). A dashboard approach simply presents indicators of wellbeing side by side without reducing them into an index (Drabsch 2012). To illustrate the usefulness of a dashboard approach the French Commission on the Measurement of Economic Performance and Social Progress (CMEPSP) uses the analogy of driving a car: “both the speed of the vehicle and the remaining amount of fuel

are important pieces of information. To combine them into a single number would result in the loss of vital information” (Drabsch 2012; 41).

### *Observations*

Measuring wellbeing has evolved considerable over the last few decades. The most notable change is going from single to multiple indicators. The current debate is on how to select and use the appropriate indicators that reflect how a community is viewed. It can be argued that the input from residents is one of the most important factors that must to be used when selecting indicators. One of the large-scale measures of wellbeing is Community Indicators Victoria, which clearly states in its guidelines that and indicator of wellbeing that reflects a community has been supported by consultation (2010). Furthermore, the US Government Accountability Office states:

“Indicator systems and their reports have been used to highlight instances when progress is not being made and to encourage interested parties and stakeholders to take action. In addition, by ensuring that relevant, reliable information is made more accessible and usable by many different members of our society, indicator systems help establish accountability and increase the probability that pressing problems are understood and that decisions are well informed” (2011; 12).

Community wellbeing data is seen as vital and necessary to empower local citizens as well as influence policy makers and governments (Varghese, et al 2006 and Drabsch 2012).

## From Aristotle to the Arctic, Notions of Wellbeing in the North

### *Community Wellbeing and the North*

The concept and understanding of community wellbeing has taken many forms over the years. In fact, historically it wasn't until the International Geophysical Year (IGY) of 1957-1958 that there was a call to start understanding aspects of community wellbeing within the discourse of northern research. Most historic examinations of community wellbeing focus on single indicators such as human health (Stedman, Patriquin and Parkins 2011; Banfield and Jardine 2013). Health outcomes continue to be one of the most researched aspects of community wellbeing in the North. During the 4<sup>th</sup> International Polar Year (IPY) from 2007-2008 the Arctic Council strongly promoted the cooperation and coordination of Arctic health research. One of the projects out of the 4<sup>th</sup> IPY was the creation of The Arctic Human Health Initiative (AHHI) which goal is “to increase awareness and visibility of human health concerns of Arctic peoples, foster human health research and promote health strategies that will improve health and wellbeing of all Arctic residents” (Parkinson 2013; 1). Even though there is growing investment in health research in the North as well as international commitments such as the Declaration of Alma-Ata (1978) residents across the North continue to have disproportionately poorer health than those in other regions (Banfield and Jardine 2013; Parkinson 2013). It could be argued that health was the first indicator used to assess community wellbeing. Overtime there has been a greater number of indicators such as, food security, employment and culture to define and measure community wellbeing in

northern communities. It is important to stress that the inclusion of other measures was not only inevitable but also vital to understanding notions of community wellbeing in the North especially when factoring in the role of traditional knowledge. As noted before, focusing on a single indicator of wellbeing as a measure of a community has been challenged as insufficient because of the narrow scope. According to Dewees et al. “ a community’s economic infrastructure alone cannot fully explain its well-being” (2003; 184). Community wellbeing in regards to this thesis is defined as “...the combination of social, economic, environmental, cultural and political conditions identified by individuals and their communities as essential for them to flourish and fulfill their potential” (Center for Spirituality & Healing and Charlson Meadows 2013; 1).

One of the legacies left from historic notions of community wellbeing is that the data used in reports or models strictly used quantitative methods to count or measure wellbeing. This is problematic in the North because of the reliance on secondary data for analysis and the inability to account for changes within structures of a community. There is a movement towards incorporating qualitative measures to models of measuring wellbeing that include subjective measures (Edouard and Duhaim 2013; Stedman, et al. 2011). One of the founders of a mixed methods approach to understanding community wellbeing was William Freudenburg. His work in the early 1980’s around the intricacies of boomtowns pioneered the incorporation of measures of subjective meaning; he proclaims “the particulars matter” (Stedman et al. 2011; 29).

Communities in the North are feeling the call to action to become more self-reliant (Deweese et al. 2003). There are projects underway across the North to work with communities to develop adaptation plans. Some of these plans include ways to adapt to changing weather patterns, food security, increasing costs for medical care and more reliance on the wage economy (Andrachuk and Smit 2012; Pearce et al. 2012). One of the primary concerns in the wake of increased devolution is community agency across the North. There is increasing pressure for communities to explore issues such as economic diversification in order to supply jobs to its residents. The problem is that in order to design programs and invest in economic infrastructure at the community level it is essential that there are residents who are economic development specialists as well as grant writers. It is not always the case that people with this training live in all-northern communities (Deweese et al. 2003). One of the assumptions for developing a community adaptation plan is that there is already a high level of community agency, however in the North this is not always the case. The key to building community agency and developing an adaptation plan is to involve community members in every step of the process and only have outside research step in for facilitation and technical assistance when needed (Pearce et al. 2012).

Cultural wellbeing is seen as another important aspect to community wellbeing for northern indigenous people. However, according to Arctic Centre the cultural wellbeing of northern indigenous people is under threat because of the “globalization of the western way of life, state policies, modern transport and the introduction of a mixed economy” (2014; 1). Moreover, according to Pearce et al., climate change is another

threat to cultural wellbeing (2012). The wellbeing of the Inuit for example, is strongly tied their connection with the land to engage in traditional activities such as subsistence hunting and fishing (Pearce et al. 2012). As stated by Pearce et al., “Inuit hunters are experiencing restricted access to travel routes and hunting grounds on the land and ice, increased travel risks and changes in the health and availability of some species of wildlife important for subsistence, with implications for food security, health and cultural well-being” (2012; 1). Furthermore, climate change is also seen as a threat to other sectors of community wellbeing like the economy, education, health, harvesting, transportation and infrastructure (Pearce et al. 2012).

Contemporary communities in the North were established because of resource development; the difference between historical development and recent is that the type of resources and methods of extraction have changed. However, it is still valid to say that most of these communities require resource development in order to survive (DiFrancesco and Anderson 1999). In the Canadian North one of the barriers that resource development companies face is that many prospective projects are located on or surrounding Indigenous land which requires specific mitigation and consultation in the form of an Impact Benefit Agreement (IBA) before they can be established. According to the Government of Canada, the creation of Impact Benefit Agreements (IBAs) has given First Nations groups the opportunity to work in partnership with resource development companies to voice concerns and state conditions that share the benefits and reduce the risks associated with a given project (2013). The purpose of an IBA is to ensure that Inuit’s benefit from mining projects by: providing compensation for negative impacts of the mine on the community land and traditional way of life, for the losses that

cannot be prevented or reduced; building opportunities to identify land that needs to be protected or excluded from mining activity; and providing equitable access to employment, contracting opportunities and training and scholarship opportunities (Knotsch et al. 2010).

Since my study focuses on the State of Alaska and Yukon Territory it is important to understand some of the basic legislation and procedures that are in place in both these regions. Another layer of complexity for development in Yukon Territory is that all projects must seek approval from Yukon Environmental and Socio-economic Assessment Board (YESAB). The purpose of YESAB is “to protect the environment and the social integrity of Yukon, while fostering responsible development in the territory that reflects the values of Yukoners and respects the contributions of First Nations” (2014; 1). Specifically YESAB is “an independent arms-length body, responsible for the assessment responsibilities of Yukon *Environmental and Socio-economic Assessment Act* (YESAA) legislation and regulations. YESAA was established as a way to protect the environment and socio-economic effects of a proposed project. Under YESAA a project can be allowed to go forward, proceed with terms and conditions, or not be allowed to go forward (YESAB 2014).

The State of Alaska is governed differently than Yukon in many regards but most significantly within natural resource development. There are several issues to understand with Alaska’s resource development such as issues related to land ownership, Indigenous rights and the overall impact of resource development on the economy. The Federal Government controls 59% of the land in the state of Alaska. 40% of this land is included in the Federal conservation system, which limits and even

forbids resource development in some areas. The State controls 28% or 100 million acres of land, followed by 12% by Native Corporations and 1% by others (Knapp 2012). Over 80 million acres of Federal land in Alaska is set aside for public use with the remaining being controlled by the military and set aside as protected lands (Department of Natural Resources 2000). In order to propose development on federally protected land in Alaska a proposal must go to the U.S. Department of the Interior Bureau of Land Management. Depending on the nature and level of risk of the proposal further assessments might be required before permission is granted (U.S. Department of the Interior Bureau of Land Management 2014). Development on State controlled land goes to the Department of Natural Resources (DNR) in conjunction with the Division of Mining, which assesses proposals (Department of Natural Resources 2013). Since Alaska Native Corporations control 12% of land designated to them through Alaska Native Settlements Claims Act (ANSCA) a proposal for development must go to the corresponding Native Corporation. In fact under section 7 (i) of ANSCA it specifically states that when resources are developed on Alaska Native Corporation Land all of the shareholders must benefit from it (Resource Development Council 2014).

Oil development in Alaska's North Slope has been responsible for tremendous job growth and a relatively stable economy for Alaska (Goldsmith 2011). One of the unique pieces of legislation that has set Alaska apart from other regions in the world is the Alaska Native Settlements Claims Act (ANSCA) of 1971. With the passing of ANSCA over 300 million acres Alaska Native land was given to the US government. In exchange Alaska Natives kept 16% of the land, were given \$462 million and promised a

2% royalty from resource development. ANSCA created 12 Alaska Native Corporations that are engaged in various enterprises across the State and around the world.

Lastly, it is important to understand that Alaska's economy is highly dependent on one industry, oil. It is often assumed that fishing and tourism make up a majority of economic growth in the form of jobs but according to Scott Goldsmith that is not true. Goldsmith has estimated that half of all the jobs in Alaska can be directly or indirectly attributed to the oil industry. While there are a small number of people employed directly by oil companies there are thousands more that work in construction, oil field services and other related fields (Goldsmith 2011).

There are several flaws in the research on community wellbeing and needs of communities in the Arctic. First is that a majority of research projects are done at national and international scales, which is problematic for rural communities as findings from these large projects are not always translatable in rural settings (Bobbitt, et al. 2005). Second, most of the research on community wellbeing comes from the US, which is not always translatable to the Canadian North (Stedman, et al 2004). Third, research that is conducted in northern communities is not always shared with the community or it is done in a way that is not understood by its residents (Pearce, et al 2012). Fourth, according to Graham and Bonneville, this lack of northern research is directly related to a deficit in the education system of the North (2004), as there is inadequate funding or infrastructure to promote stronger curriculums. Fifth, there is a lack of integration of traditional knowledge in carrying out of research projects, which often creates tension and misunderstanding with Indigenous groups (Denielsen et al. 2010). Sixth, there is little research on the impacts and ramifications of rapid and

immediate economic development (Knotsch, et al 2010) in the North. Finally there remains a gap in the research about the role that government policies have on local ownership, the effects that investment has on social policies and the links between local ownership and community resilience (Varghese et al. 2006). The gaps and flaws in the research are very serious when trying to build the research capacity of communities in the North. However, with the growing interest in the North it is likely that these issues will be addressed over time.

### *Creating a Model of Measuring Community Wellbeing*

A model of measuring community wellbeing is a statistical tool for translating broad community goals into clear, tangible and commonly understood outcomes and for assessing and communicating progress in achieving these goals” (Cox, et al 2010; 72). The goal of a model of measuring community wellbeing is to support “evidence based policy making” and foster “the expansion of citizen engagement” (Cox, et al 2010; 73). Varghese et al., suggest that developing a model for measuring community wellbeing will benefit a community by increasing local ownership of public affairs, such as greater decision-making, a larger capture of material wealth and empowerment over resource management” (2006). One of the difficulties in constructing a model of measuring community wellbeing is that there can be clashes between community residents and outside actors (Taylor 2008). This is especially true when resource development companies want to open a new development site around a northern community. Taylor argues that mainstream measures of wellbeing (employment in mining) may have

negative consequences for an Indigenous measure of wellbeing (carrying on traditional cultural ways) (2008). Moreover, this clash does not always happen between outside investors and the community, it can occur within the community as well (Taylor 2008). For example, businesses such as the chamber of commerce and realtors might want to highlight measures that show a great quality of life while other agencies such as human service providers want to highlight problems in order to emphasize the importance of their services (Bobbitt et al. 2005). These examples show how models of wellbeing can be manipulated to display limited data on aspects of a community and therefore this exemplifies the difficulty in defining community wellbeing. Hooghe and Vanhoutte claim that many researchers argue that the best practice to develop a model of measuring community wellbeing is to first understand the current living and social conditions; then establish measurable and agreed upon indicators that illustrate the reality of the communities (2011).

One way to create a model of measuring community wellbeing that shows a well-rounded and inclusive picture of a community is to develop a framework that evaluates many aspects of a community. Cox et al., state that before establishing a set of community wellbeing indicators it is important that the system includes:

“Agreement on governance and partnership agreements; adequate and sustainable resources; development of an agreed indicator framework; design and implementation of relevant data collection and analysis strategies; design and implementation of strategies which build capacity and skills in the use of community indicators for citizen engagement, community planning and policy making; fostering effective images between community wellbeing indicators, data and relevant policy making processes; and support for an ongoing research program to test the effectiveness and usefulness of community indicator system and methodologies” (2010; 80).

In order to decide on a set of indicators for a model of measuring community well-being community members should determine the scope of the index, identify which indicators to include, score the indicators, develop presentations and aggregation of indicators and validate the indicators and conclusions drawn by the index (Bobbitt et al., 2005). Once a list of indicators have been selected it is important to evaluate each of them in order to ensure that they will: contribute logically to the index concept; be understandable and interpretable by the general public; not be identified as a poor indicators by theory; have local data available now and in the future; come from credible sources; have agreement about general direction of indicators (e.g., up is good, down is bad for non-descriptive indicators); have the same measurement methodology across site/years; and show variability and frequency adequate to be reflective of change at the local level (Bobbitt et al., 2005).

Another approach in creating an agreed-upon structure is to design a quality-of-life-framework (Parkins et al. 2001). The idea behind the construction of a quality-of-life-framework is that it is seen as an attempt to ease the tensions between subjective and objective measures of wellbeing (Andrews and Withney, 1976; Campbell, 1981; Moum 1988). This approach takes into consideration “religious, economic and cultural principals that include helping those in need or increasing return on investment” (Parkins et al. 2001). There are also several assumptions within this approach that are problematic. One perspective, which comes from economic theory is, “People select the best quality of life for themselves that is commensurate with their resources and their individual desires” (Diener and Suh 1997). While this could be true for a lot of people, it is questionable if this statement holds true in rural communities in the North that have

limited choices, regardless of their resources to improve their quality of life. The next assumption is, “If a person experiences her life as good or desirable, it is assumed to be so” (Diener et al. 1997; 190). The argument with this contention is that social indicator research has focused on more objective measures of human progress and quality of life research than on more subjective indicators (Parkins, et al., 2001). Moreover, it is important to note that the criteria for selecting indicators for the quality-of-life-framework are similar to other community well-being indicator principles. Parkins addresses the following criteria for selecting effective indicators: understandability (do we know what the measure is telling us?); relevance (does the measure speak directly to the indicators?); accessibility of data (does the data exist and is it retrievable?); reliability of data (is the source of data trustworthy and scientifically valid?); cost of obtaining data (will the ongoing costs be high or low?); temporal comparability of data (is tracking this data over time meaningful?); sensitivity (how responsive is the measure to change?); and cause and effect (is there a link between the indicator and the underlying causal forces?) (2001).

It is clear that there is no one perfect way to develop a model of measuring community wellbeing. However, there has been enough research to indicate that models of measuring community wellbeing must have a goal, be inclusive and involve the input of residents’ in all decisions related to the model.

## *Observations*

Understanding the current economic and social conditions as well as future goals of a community is vital in constructing a model of wellbeing. Resource development in these communities can bring a lot of economic and social wealth to its residents. The utilization of a process that brings together community members to design a wellbeing model that is inclusive of a wide range of indicators can help build community resiliency as well as promote governance. Having a model of wellbeing in place prior to a resource development project can help in the distribution of benefits as well as mitigate issues that can occur. However, creating a model at any point for a community is beneficial in that it provides an understanding of how the community is doing and how it can prosper. Future research is needed on specific communities in the Canadian north in order to set forward a framework to be shared. This study provides a starting point for a closer examination of models of measuring community wellbeing in the North. It examines the level of local input used in existing models, explores the content of models in Alaska and Yukon and illustrates the views of experts familiar with models of wellbeing in the North.

## Chapter Three: Research Methods

This study has two primary research questions: What are the similarities and difference in models of community wellbeing in Alaska and Yukon? And, to what extent was local input from residents used in the construction of models for measuring community wellbeing? To answer these questions I first had to identify models of measuring community wellbeing in Alaska and Yukon and then seek out information about the amount of local input that was used in the process of constructing these models. It is important to point out that none of these selections are formally titled a “model”. I define a model as a published document that describes or details the social impacts of development, policy changes, or initiatives and includes a type of measurement to illustrate current conditions, such as indicators. I then applied an experimental content analysis in order to highlight similarities and differences between the two regions’ models. It is necessary to stress that there were limitations to this specific analysis. First, there are an extremely low number of publically available models of measuring community wellbeing in Alaska and Yukon. Due to this limitation it was not possible to find models that are directly comparable between the two regions. Second, a traditional content analysis requires that the objects being compared are similar in many aspects such as word count, community type, geographic location, economic development level and living standard. Despite these limitations this quantitative method yielded interesting results and it should be used in future research when more models become publically available. The last analysis used in-depth semi-

structured interviews with experts that have worked with models of measuring community wellbeing.

This study applies a mixed methods approach in order to examine models of measuring community wellbeing. Using a mixed methods research design provides a more holistic and in-depth understanding of the research phenomenon being examined (Grey 2009). The practice of using a mixed-methods research design aligns with what some researchers are calling a “third methodological movement” that puts focus on the quality of knowing rather than the “right” method (Reson and Torbert 2001; Tashakkori and Teddlie 2003). This study is unique because of the combination of research approaches and because no other project similar to this has been done in the North. The findings from this study have provided an illustrated account of the complexity of the notion of community wellbeing while focusing on a critical analysis of models for measuring community wellbeing.

### *Research Design and Data Collection*

The first part of my study involved an examination of the level of local input that was used in the construction of each model for measuring community wellbeing. I started with an investigation of each of the models, six in total, three from Alaska and three from Yukon, where I explored the level of community engagement that was used in the construction of the models.

The second part was an experimental content (quantitative) analysis of each of the models. This analysis does have limitations, however because this study is the first

of its kind to compare models of measuring wellbeing across regions it was included as it is a framework for future research. According to Grey, “content analysis involves the making of inferences about data (usually text) by systematically and objectively identifying special characteristics (classes or categories) within them. Carrying out a quantitative content analysis involves looking over the data (i.e. models) to discover themes (Silverman 2011). Those themes can then be grouped into larger units i.e. categories. The construction of themes and categories allowed me to point out similarities and differences between models of measuring community wellbeing in Alaska and Yukon. I used the themes from the quantitative analysis to direct the last part of my (qualitative) investigation, which were in-depth interviews with people familiar with notions and models of measuring community wellbeing (Grey 2009).

For the third piece of my study, I also applied a content analysis to the interview transcripts but with a qualitative approach. According to Wilkinson, “content analysis simply entails inspection of the data for recurrent instances of some kind” (2013). Data collection of qualitative content analyses can include semi-structured interviews, field observations, or document analysis (Grey 2009). I carried out eight in-depth interviews with people familiar with notions of community wellbeing in Alaska and Yukon. I used a criterion sampling strategy to select the people to be interviewed; they had to be people who have first hand experience with the notion and or models of measuring community wellbeing in Alaska or Yukon (Creswell 2013). Once the interviews were complete I transcribed them and began the process of “open coding”. According to Strauss and Corbin “open coding is defined as the naming and categorizing of

phenomena through close examination of the data.” (1998; 62) More specifically, according to Grey, “two analytical procedures are involved in the open coding process: the making of comparisons and the asking of questions, both of which help towards the labeling of phenomena in terms of concepts or categories” (2009; 331). Combining a quantitative and qualitative research approach allowed me to explore the similarities and differences between models of measuring community wellbeing and help understand its complex nature. Furthermore, starting with quantitative analysis help me develop interview questions to get a more in-depth perspective from people familiar with community wellbeing. It was important for me to develop a roadmap for my interview collection in order to be able to answer my research questions (Kvale and Brinkmann 2009). Combining the themes from the quantitative and qualitative research approaches allowed me to see the similarities drawn out from both methods.

### *Ethical considerations*

Since the third piece of my study involved human subjects I was required to seek approval from the Lakehead University Research Ethics Board. In May of 2014, I was granted approval and was able to begin the process of recruiting participants for my study (Appendix A). Interviews were carried out from May to October of 2014. As part of my recruitment strategy I gave potential participants an information letter (Appendix B) that outlined the aim of my project, how their participation would benefit the study and stated that their participation would be anonymous and confidential. After an agreed upon time was arranged I handed the participant a consent form (Appendix C).

The consent form explained that there was no known risk to participating in the study, responses would be anonymous and confidential and that all files related to the interview would be securely stored. Participants were required to sign to consent to the study as well as to having the interview audio recorded. If they did not wish to have the interview recorded I would have only taken notes but no one was opposed to this.

Confidentiality was ensured by removing all identifying information from the transcriptions and keeping the consent forms and audio recordings in separate and secured files. Anonymity was protected by assigning a number to each respondent and giving them a pseudonym. Table 1 provides a breakdown of the respondents to the survey, their pseudonym, gender, region of study and occupational background. Current location of residents was not recorded to ensure anonymity and to protect the respondents from any controversial comments or statements.

Table 1. Interview Respondents

<b>Pseudonym</b>	<b>Gender</b>	<b>Region of Study</b>	<b>Occupational background</b>
<b>John</b>	Male	Alaska	Environmental Anthropologist
<b>Patsy</b>	Female	Alaska	Biologist
<b>Estelle</b>	Female	Alaska	Economist
<b>Rose</b>	Female	Yukon	Community Capacity Consultant
<b>Dennis</b>	Male	Alaska	Resource Development Consultant
<b>Betty</b>	Female	Alaska	Anthropologist
<b>Eddie</b>	Female	Yukon	Community Development Specialist
<b>Dorothy</b>	Female	Alaska	Educator

## *Participant Recruitment*

The first group of participants was recruited at the International Congress of Arctic Social Sciences (ICASS) VII that was held at the University of Northern British Columbia in Prince George British Columbia from May 22-26<sup>th</sup> 2014. I attended this conference and was selected to give a poster presentation about this study. Being at the conference gave me an opportunity to engage with academics and researchers who were or had investigating similar research topics. As I engaged with people in discussions I would talk about my study and if they were someone who had worked with notions of wellbeing of models of measuring community wellbeing then I would ask them to participate. This worked extremely well and a total of five participants were identified and interviewed. During my first round of Interviews at ICASS a number of my participants mentioned other academics, researchers and concerned community members in Alaska and Yukon that might be interested in this study, this is referred to as snowball sampling. I asked my participant, who mentioned other potential participants; if they would introduce me in order to assist in my recruitment for more interviews. This worked really well to establish first contact and assess if the participant was interested and if they fit my criteria. However, due to the summer months being a time when people are out of their offices either spending time on vacation, conducting research or other various outdoor activities it was difficult to get participants to commit to a time for an interview. My recruitment calendar was extended months beyond my original deadline but in the end the diversity of backgrounds of the participants who I did interview provided me with a lot of insight and a rich source of data. Due to two

technological failures with the audio recorder two of the interviews were not recorded, however I took detailed notes as well as followed up via email with the two respondents to clarify some responses. Since all of the interviews were done in private settings, either meeting rooms or offices, there was no disruption from noise or interruptions.

### *Data analysis*

I identified models by searching for various reports or initiatives that included an analysis of impacts by a particular development, strategy or plan. Several of the experts I interviewed suggest that I include the “Live. Work. Play”, “Shareholder Employment at Red Dog Mine” and “Destination 2020” efforts in this study. Table 2 includes the name of the project, region where it is located, the organization responsible for its development, the type of indicators (subjective or objective) and the website or location where I accessed these models. I used Microsoft Excel to organize my data and carryout my content analysis.

Table 2. Models of Measuring Community Wellbeing

<b>Name</b>	<b>Region</b>	<b>Organization</b>	<b>Indicators</b>	<b>Location</b>
<b>Eagle Gold Project</b>	Central Yukon	Victoria Gold Corp.	Subjective & Objective	<a href="http://www.yesab.tzo.com/wfm/lamps/yesab/lampslaunch.jsp;jsessionid=D6FC3D7EE1E1F3F782B13F82A8C0A5D9;time=1416599779317">http://www.yesab.tzo.com/wfm/lamps/yesab/lampslaunch.jsp;jsessionid=D6FC3D7EE1E1F3F782B13F82A8C0A5D9;time=1416599779317</a> (Project # 2010-0267)
<b>Yukon Social Inclusion and Poverty Reduction Strategy</b>	Yukon Territory	Government of Yukon. Department of Health and Social Services	Subjective & Objective	<a href="http://www.abetter yukon.ca/files/social_inclusion_strategy.pdf">http://www.abetter yukon.ca/files/social_inclusion_strategy.pdf</a>
<b>Community Wellbeing Index</b>	Canada – focus on Yukon findings for this study.	Aboriginal Affairs and Northern Development Canada	Objective	<a href="https://www.aadnc-aandc.gc.ca/DAM/DAM-INTER-HQ-AI/STAGING/texte-text/rs_pubs_cwb_mwbfnnac_1343833917297_eng.pdf">https://www.aadnc-aandc.gc.ca/DAM/DAM-INTER-HQ-AI/STAGING/texte-text/rs_pubs_cwb_mwbfnnac_1343833917297_eng.pdf</a>
<b>Shareholder Employment at Red Dog Mine</b>	North West Arctic Borough, Alaska	Institute of Social and Economic Research	Objective	<a href="http://www.iser.uaa.alaska.edu/Publications/2012_04-reddogworkingpaper2012-2.pdf">http://www.iser.uaa.alaska.edu/Publications/2012_04-reddogworkingpaper2012-2.pdf</a>
<b>Live. Work. Play.</b>	Municipality of Anchorage	Anchorage Economic Development Corporation	Objective	<a href="http://www.aedcweb.com/phocadownload/2014_lwp_metrics_from_adn.pdf">http://www.aedcweb.com/phocadownload/2014_lwp_metrics_from_adn.pdf</a>
<b>Destination 2020</b>	Municipality of Anchorage	Anchorage School District	Objective	<a href="http://www.asdk12.org/forms/uploads/Destination2020_Overview.pdf">http://www.asdk12.org/forms/uploads/Destination2020_Overview.pdf</a>

The first step in my analysis was to investigate the degree to which residents' input was used in the construction of each model. To assess this, I reviewed all publically available documents about each model to see if there was mention about stakeholder engagement. In the summary of each of the models I document what the level of stakeholder engagement was and outline it in the project description in chapter four. It is possible that not all of the methods used in the construction of these models were made publically available, which is a limitation of this part of the analysis.

The second part of my analysis was a quantitative investigation of models of measuring community wellbeing. I started by identifying keywords from the literature review that were related to notions and measurement of community wellbeing. It is necessary to stress that there were limitations to this specific analysis. Not all of the models had the same word count, when running a keyword search and comparing it from one model to the next it is necessary to have a similar word count in order to be comparable. Despite this limitation this quantitative method yielded interesting results. However, future research that is able to identify models with equivalent word counts should use a similar approach to categorize similarities and differences. A total of 57 keywords (Appendix E) were identified from the literature. I then began the process of identifying the number of times each keyword appeared within each model of community wellbeing. Once the totals were added up I then began the process of condensing the keywords into categories or themes. The themes include: Culture, Community Wellbeing, Aboriginal Peoples, Research, Health, Community Services, Education, Employment, Natural Resources, Sustainability & Resiliency, Social Ills and Community and Government Strategies. After these codes were established I went back

to the models and created a frequency chart (Table 3), documenting the number of times the keywords were mentioned within each category.

To analyze the data from my interviews, I first took the transcribed interviews and organized the data, as recommended by Stringer (2013). All of the transcribed interviews were kept in separate Word documents; they were then imported into Nvivo software for analysis. The next step in this analysis was to read and write notes from each of the transcribed interviews; this is seen as an important first step before breaking the interviews into pieces (Agar 1980). The following step, which is similar to the first step in my quantitative analysis, was to form codes. According to Creswell it is at this stage “the researchers build detailed descriptions, develop themes or dimensions and provide an interpretation in light of their own views or views of perspectives in the literature” (2013). I developed a total of seven themes from the interviews that provide a greater understanding of notions of community wellbeing and perspectives on models of measuring community wellbeing. Those themes are Understanding Notions of Community Wellbeing, Indicators to Measure Community Wellbeing, Social Ills, Culture, Aboriginal People, Education and Employment.

## **Chapter Four: Results of Quantitative Analysis**

This chapter will start with an overview of each model of measuring community wellbeing in Alaska and Yukon and provide an account of any documented community participation in its construction. There were a total of six models of measuring community wellbeing that were analyzed in this section: three models from Alaska and two from Yukon with one that is Canada wide. This overview will start with a project description, identify stakeholders, discuss the methodology behind each model and illustrate the extent to which residents were involved. Following the overview this section will be the results of the quantitative analysis carried out across these models.

### *Eagle Gold Mine Project*

The Eagle Gold Mine Project is a resource development operation located in Yukon Territory. It was suggested that I include this project in my study because it specifically addresses aspects of community wellbeing in relation to resource development in Yukon. This project was required to submit a proposal for development to Yukon Environmental and Socio-economic Assessment Board (YESAB). Victoria Gold Corporation (VIT) has been given permission to begin the extraction and refinement process of gold by YESAB as it has met the requirements for development under the YESAB model. It is estimated that this project will produce 200,000 ounces of gold annually for an estimated production life of 7 to 8 years (Victoria Gold Corp 2014). All resource development proposals in Yukon must go through a series of assessments to identify the current conditions of a region and document the likely

impacts that the project will have. This study focuses on the Scope of Assessment for the Socio-economic Environment (SEEA) of the Eagle Gold Mine project as it directly addresses community wellbeing for the town of Mayo, which is the closest community to the mine site. I accessed the SEEA by searching the YESAB database ([http://www.yesab.ca/registry/project ID #2010-0267](http://www.yesab.ca/registry/project%20ID%20#2010-0267)), which includes all documentation related to project proposals. A SEEA is defined as “the systematic analysis of the likely effects a proposed project will have on the day-to-day life of individuals, families, communities, businesses and/or governments whose reality may be affected by a proposed project” (YESAB 2006). The SEEA for the Eagle Gold Mine is a very detailed account of the possible negative and positive affects the mine might have on the community of Mayo and surrounding area. The assessment of effects is not limited to mine production; it includes the “planning, construction, operation, closure and reclamation and post-closure phases” (Stantec 2010). This assessment is very in-depth and covers a broad range of areas.

Stakeholders have been identified as the First Nation of Na-Cho Nyak Dun and residents of the community of Mayo. As is required under YESAB regulation the project must seek consultation with First Nations and communities that could be impacted by the project.

The methods used to construct this assessment utilized a mix of quantitative, (Census data) and qualitative data (interviews with local people and organizations).

There were several problems identified with the data sources for this assessment,

“Data sources are extremely varied and little data is consolidated across data sources; trend data are not readily available on most of the cited indicators, existing data from custom surveys for select communities, indicators or relevant subject areas are not readily available or publicized

and indicators and supporting data to document the form, function and trends of Yukon First Nation's traditional economies are woefully inadequate" (Stantec 2010; 358).

The 28 indicators (see Table 3) included in the SEEA for the Eagle Gold Project are grouped into the following categories: Employment and Economic opportunities; Traditional Activities and Culture; Community Vitality; Human Health and Wellbeing; and Infrastructure and Services. Each of these indicators in this assessment provide an outline of the mitigation, monitoring, adaptive management and commitments that Victoria Gold Corporation recognizes with the development of this project.

Table 3. List of Indicators for Eagle Gold Mine Project

<b>Category</b>	<b>Indicators</b>
<b>Employment and Economic Opportunities</b>	Employment Opportunities
	Contracting Opportunities
	Royalties and Taxes
	Effects from Expenditures
	Effects on Other Local and Regional Economic Activities
	Potential Cumulative Effects on Employment and Economic Opportunities
<b>Traditional Activities and Culture</b>	Subsistence Harvesting
	Language Preservation and Revitalization
	Other Cultural Activities
	Heritage Sites and Special Places
	Potential Cumulative Effects on Traditional Activities and Culture
<b>Community Vitality</b>	Population and Demographics
	Local Educational Facilities and Services
	Crime
	Community Involvement
	Potential Cumulative Effects on Community Vitality
<b>Human Health and Well-Being</b>	Local Health and Social Facilities and Services

	Mental Health and Addictions
	Potential Cumulative Effects on Human Health and Well-being
<b>Infrastructure and Services</b>	Housing
	Emergency Services
	Landfill
	Lagoons
	Child Care
	Roads
	Mayo Airport
	Electrical Power Supply
	Potential Cumulative Effects Infrastructure Services

It is clear that there were several opportunities for community members to get involved in the SEEA for the project. According to the SEEA for the Eagle Gold Mine Project they conducted “socio-economic assessment interviews from June 7 -11<sup>th</sup> 2010” as well as “interviews with Mayo businesses” and held a number of “community open houses and workshops” (2010). It is also important to point out that there was consultation done with the First Nation of Na-Cho Nyäk Dun (NND) as they have “lived and trapped throughout the northeast Yukon and Mayo area for generation” (SEEA 2010). Since the NND signed the Final Agreement and Self-Government Agreements (FNNND) in 1993 it was necessary for VIT to agree to a Cooperation and Benefits Agreement (CBA), which it did in 2010 (SEEA 2010). Community and stakeholder engagement is clearly identified in the SEEA for the Eagle Gold Mine Project. It appears that residents were given opportunities to voice their concerns with the development so that VIT could create a mitigation plan that benefits the communities and their residents. Concerns were related to the disruption to subsistence activities, strain on local services such as the towns’ health clinic and anxieties around increased alcohol and drug abuse due. The project has been granted approval to begin production yet it is not clear that there has been any mitigation strategy to address the concerns that the residents stated beyond documenting it in the SEEA.

## *Yukon Social Inclusion And Poverty Reduction Strategy*

The Government of Yukon Division of Health and Human Services developed Yukon Social Inclusion and Poverty Reduction Strategy ([http://www.abetteryukon.ca/files/social\\_inclusion\\_strategy.pdf](http://www.abetteryukon.ca/files/social_inclusion_strategy.pdf)) as a guide to align government programs and influence decision-making with the goal of creating more inclusive communities and reducing poverty. I chose to include Yukon Social Inclusion and Poverty Reduction Strategy into this study because of the depth and diversity of indicators that are included in its methodology. I also wanted to include this in my examination of models of measuring wellbeing because it is a territorial wide initiative that attempts to deal with social exclusion and poverty. As stated in the strategy, it is targeting, “vulnerable people who experience, or who are at-risk of experiencing, poverty or social exclusion” (Yukon Department of Health and Human Services 2012). This strategy was informed and shaped by research findings from three reports published by Yukon Bureau of Statistics. Those reports were the “2010 Whitehorse Housing Adequacy Study”; “Dimensions of Social Inclusion and Social Exclusion in Yukon 2010”; and “Bridges and Barriers 2010: Yukon Experiences with poverty, social exclusion and inclusion.” The overall goals of the strategy are to improve access to services, reduce inequality and strengthen community vitality. A number of indicators were used to educate and inform government departments, policy makers and concerned citizens. The key stakeholders identified in this strategy are “government and NGO’s that represent people living in poverty or experiencing social inclusion” (Yukon Department of Health and Human Services 2012). Moreover, this strategy outlines a

series of specific goals and objectives to meet the goals. The goals listed in the report are “Improve access to services”, “Reduce inequalities” and “Strengthen community vitality.” This is an in-depth report that includes both qualitative and quantitative indicators. The indicators are divided into themes and subthemes; under those subthemes are the series of indicators with measurable data. The following table (4) is a list of the themes, subthemes and indicators included in Yukon Social Inclusion and Poverty Reduction Strategy.

Table 4. List of Indicators in the Yukon Social Inclusion and Poverty Reduction Strategy

<b>Theme</b>	<b>Sub Theme</b>	<b>Indicators</b>
<b>Personal Assets</b>	Money	Income distribution
		Sources of income
		Low income households
	Education	High School completion / graduation rates
		Participation in continuing education
		Barriers to continuing education
	Transportation	Main form of transportation used
		Transportation difficulties
		Reduced work hours to care for child
	Child care	Methods of child care used
		Difficulties regarding child care
		Health & wellbeing
	Deaths due to unintentional injury	
	Self-reported physical health	
	Self-reported mental health	
	Prevalence of obesity	
	Physical activity levels	
	Rates of activity limiting disability	
	Smoking rate	

		Patterns of alcohol use
		Emergency care for drug and alcohol related health issues
		Satisfaction with life
<b>Participation in Society</b>	Employment	Labour force participation rate
		Unemployment rate
		Barriers to employment
		Volunteerism
	Participation in arts, cultural, activities, sports and recreation	Participation in arts and cultural activities
		Participation in sports and recreation activities
		Membership in clubs and associations
		Voter participation
		Membership on boards and councils
		Advocacy and participation in public consultations
		What happens when people speak up?
<b>Community Assets</b>	Proximity and remoteness	Distance to work
		Distance to an urban centre

		Distance to basic services
		Accessibility of health care
		Has regular health care provider
		Barriers to accessing health care
		Difficulty obtaining immediate care
		Satisfaction with the health care system
		Availability of mental health and addiction services
		Knowing how to access mental health and addiction services
		Barriers to seeking mental health and addiction services
	Community safety	Crime rate
		Crime Severity Index
		Victims of violent crimes
		Perceptions of community safety
	Freedom from discrimination and prejudice	Feeling out of place
		Experiences of discrimination
	Social support and community belonging	Sense of community belonging

		Size of social networks
		Trust in community
		Confidence in service agencies and institutions
<b>Access to Necessities</b>	Food and material goods	Cost and affordability
		Material deprivation
		Food security
	Housing	Population in housing below standards
		Population in core housing need
		Housing affordability
		Housing safety
		Population without housing
		Having a choice in where one lives

In total the Yukon Social Inclusion and Poverty Reduction Strategy is made up of 64 indicators that are housed in 15 sub-themes. This is a very in-depth model of community wellbeing that utilizes both quantitative and qualitative methods.

The development of this strategy included a collaborative process with a steering committee that was made up of government departments and consultation with community organizations that represent vulnerable populations (Yukon Department of Health and Human Services 2012). What is interesting about this approach is that there is no clear evidence that the community-at-large was consulted. The organizations that serve vulnerable populations were supposed to “engage the community, ensure public input and strengthen the relationship between the government and non-governmental organizations (Yukon Department of Health and Human Services 2012). However, there is no evidence of the extent to which this was carried out. Also, there is documentation about the extent of consultation with rural community in this strategy, despite there being a number of issues raised in relation to rural communities.

Since we know that wellbeing varies according to local conditions it can be stated that this strategy does have a large number of indicators to illustrate difference; however since this is territory wide it cannot capture specific nuances from each community.

## *Community Well-being Index*

The Community Well-being Index was originally developed by Indian and Northern Affairs Canada (INAC) to create a systematic method for measuring the wellbeing of Aboriginal and non-aboriginal communities. It is important to note that INAC has been renamed and is now called Aboriginal Affairs and Northern Development Canada (AANDC). Including the Community Well-being Index (<https://www.aadnc-aandc.gc.ca/eng/1100100016579/1100100016580>) was done because it is a countrywide initiative that is unique to Canada (AANDC 2010). The primary purpose of this model is to highlight and understand the poorer socio-economic conditions that exist in First Nations and Inuit communities. According to the AANDC website the four main objectives of the Community Well-being index are:

“To provide a systematic, reliable summary measure of socio-economic well-being for nearly all Canadian communities; to illustrate variations in well-being across First Nations and Inuit communities and how it compares to that of other Canadian communities; to allow for well-being to be tracked over time; and to be able to be combined with other data to facilitate a wide variety of research on the factors associated with well-being.” (AANDC 2014; 1)

The stakeholders for this model of community wellbeing are First Nation and Inuit populations.

The Community Well-being Index is made up of 4 indicators: income, education, housing and labor force activity. Income is total income per capita not per individual or household. Education is divided into two variables “high school plus”, which is the proportion of a community’s population that has obtained at least a high school diploma. And “university”, which is the proportion of a community’s population that has a

university degree at the bachelor's level or higher. Housing is understood by quantity and quality. Quantity is measured by taking the number of persons per household and dividing them by the number of rooms; more than one person per room negatively reflects quantity. Quality is understood by the proportion of the population not living in a dwelling that needs major repairs such as structural repairs to walls, floors and ceilings. The last indicator that makes up the Community Well-being Index is labor force activity. The two variables that make up this indicator are labor force participation and employment. Labor force participation is understood as those between the ages of 20 to 65 that are involved in the labor force. Thus employment is understood as the percentage of the labor force between the ages of 20 to 65 that are employed.

The Community Well-being Index is strictly a quantitative measurement of community wellbeing that uses the Canadian census to calculate the scores. While this measure of community wellbeing may be seen as limited it is important to highlight that AANDC recognizes the limitations of this model even as it provides an understanding of the various definitions of community wellbeing and justification for its choice in indicators. According to the AANDC website:

“Well-being” means different things to different people. For some, well-being includes health, wealth and happiness. For many First Nations and Inuit communities, well-being includes culture and language. Some of these indicators are easier to measure than others and, over the years, a lot of data have been collected. Only the Census of Canada, however, provides data that can be used to fulfill the four main objectives listed above. Because the Census contains only a limited number of variables related to well-being, the CWB cannot capture all aspects of well-being.” (2014; 1).

There is no mention of any outreach or consultation with communities in the creation of the Community Well-being Index. The Community Well-being Index is

limited in its scope and understanding of the various notions of community wellbeing; however, it does provide a starting point to various socio-economic factors that affect First Nations and Inuit Communities.

### *Shareholder Employment at Red Dog Mine*

The Shareholder Employment at Red Dog Mine is a model of community wellbeing as it illustrates how the income, employment and education of the residents in the area of the mine, have been impacted. Including this model of measuring wellbeing was suggested to me by one of my participants that I interviewed, as it explores the effects of resource development on a specific region in Alaska. I accessed this report at [http://www.iser.uaa.alaska.edu/Publications/2012\\_04-reddogworkingpaper2012-2.pdf](http://www.iser.uaa.alaska.edu/Publications/2012_04-reddogworkingpaper2012-2.pdf). Red Dog mine, one of the largest Zinc and Lead mining operations, is located in the Northwest Arctic Borough of Alaska. Red Dog is a joint venture between Teck Cominco mining company and NANA, which is one of the Alaska Native regional corporations (Red Dog Alaska 2014). Sharman Haley is a professor of Public Policy at the University of Alaska Anchorage and has spent a considerable amount of her career studying the effects of Red Dog mine on Alaska, especially the effects it has had on Alaska Natives in the region. Her paper, "Shareholder Employment at Red Dog Mine" outlines some of these effects with a special focus on the impact on employment of Alaska Natives. Another reason why I chose this model of measuring community wellbeing is because Red Dog has often been hailed as a champion in terms of

Aboriginal hire and retention, environmental stewardship and the overall positive impacts on many indicators of wellbeing.

Haley's paper uses quantitative measures to describe the impact Red Dog has had in the region such as, income, employment and education.

Her paper starts off by recognizing that communities in the area of the mine were concerned that the mine would further degrade the Inupiaq language, culture and values. However elders weighed in the discussion to say that employment and the creation of jobs was vital. One of the goals agreed upon by Teck and NANA was to have 100% shareholder hire by 2001. (A shareholder is an Alaskan Native who belongs to one of the regional corporations). Unfortunately, the shareholder hire has only reached a peak of 53%, but this only trails behind by one percent of the Voisey's Bay mine that has the world highest percentage of Aboriginal hire at 54%.

The socioeconomic benefits to the region are substantial with an annual payroll of \$24 million as well as \$146 million in royalty payments to NANA. With the increase in royalty payments communities in the area have been able to make improvements to local infrastructure, public services, schools, emergency response and economic development and planning (Haley 2012). Educational attainment in the region has always been a struggle but with Red Dog providing incentives to complete high school and offering educational programs there has been a steady increase in education rates.

Another achievement of the Red Dog mine is that it has had a negligible effect on the environment. An environmental assessment in 2009 of water quality in the region did not show any effects caused by the mine. There has been some concern from residents in the areas about the impact on substance hunting with effects on caribou

herds, beluga whales and berry harvest but overall a strong support for the mine continues. This paper outlines several indicators for measuring community wellbeing: percentage of shareholder higher, income, environmental effects, educational attainment and improvements in local infrastructure.

The stakeholders in this model of measuring community wellbeing are the residents of the communities of Noatak, Noorvik, Buckland, Kivalina, Kiana, Selawik, Shungnak, Ambler, Deering, Kotzebue and Kobuk.

Haley's paper is structured as a review of literature on development within Aboriginal communities, an analysis of employment, which is carried about by statistical analysis and a review of specific initiatives such as the incentive for high school students to obtain their diploma. Therefore, a logical next step to build on this paper would include outreach activities to obtain the opinions of residents in the area about the mine. The Red Dog mine is an isolated project with "no communities or residence in the vicinity" (Haley 2012). Haley does point out that the "relationship between the village of Kivalina and the Red Dog Mine has been complex" (2012). Residents of this community were concerned about water pollution and changes in the migration patters of Caribou, effects of the port on beluga whales and dust on barriers (Haley 2012). It is not clear how Red Dog addressed these concerned except that a water quality study showed that there was no increase in contaminants since the mine opened.

Overall the discussion that Haley provides on the effects of Red Dog mine in the Northwest Arctic Borough indicates that there has been a mostly positive impact on the regions wellbeing in relation to employment and educational outcomes.

### *Live. Work. Play.*

Live. Work. Play (LWP) is a recent initiative by the Anchorage Economic Development Corporation (AEDC) to make the city of Anchorage the number 1 city to live in across the United States. The website <http://aedcweb.com/live-work-play/> provides an overview of the LWP program that includes information about the history, metrics, areas of focus and steering committee. In order to reach its goal of Anchorage being the number one city to live AEDC has developed a series of quantitative indicators that it produces annually. The LWP initiative started in 2011 and has since produced three reports that include the results of its analysis by metric. 11 community members from resource development companies, charities and health care providers make up the LWP steering committee. They meet on a monthly basis to discuss ideas for greater community engagement and think of ways to increase all the indicators in the LWP model.

The LWP model includes indicators under each title of “Live,” “Work,” and “Play.” The following is an outline of the latest indicators used in the May 2014 LWP report. Under the “Live” theme there are a total of 13 indicators. They are: violent crimes per 1,000 residents, property crimes per 1,000 residents, 8th grade reading proficiency, 8<sup>th</sup> grade math proficiency, high school reading proficiency, high school math proficiency, share of homes affordable for median income households, percentage of population reporting health status as “good” or “better”, percentage of respondents with any kind of health coverage, cost of living composite index, 2BR, 1 Bath 900 sq. ft. rental cost, diversity index and tolerance index.

The “Work” theme lists 14 indicators starting with the average monthly earnings, median household income, percentage of population high school graduates or higher, percentage of population with bachelor’s degree or higher, percentage of commuters that use public transportation to get to work, mean travel time to work, average new hire earnings, per capita personal income, taxes as a percentage of income (for 50,000), percentage of population above the poverty level, unemployment rate, net job flows, technology index and talent index.

The last theme “Play” uses 12 indicators starting with library visits per capita, acres of parkland per 1,000 residents, number of playgrounds per 10,000 residents, whether residents exercise regularly, number of performing arts establishments per 100,000 residents, full service restaurants per 100,00 residents, number of museums and historical sites per 100,000 residents, the percentage of the population neither overweight nor obese, number of healthy days for being active outdoors, number of related businesses per 1,000 residents and number of arts related jobs per 1,000 residents.

In total there are 39 indicators in the LWP model that come from a variety of sources across the United States. As previously discussed community wellbeing models generally show limited local input in their construction, which is true for LWP. In February of 2011 there was an online survey launched which asked respondents to answer, “Why do you live here and why would you leave?” The limitation with this method is that respondents must have access to the Internet and a computer, which is problematic for residents living in poverty and therefore not inclusive to all populations. Another concern is that it is not clear what their methods for obtain residents input were

or to whom they spoke with. Also in relation to concerns about LWP not being guided by local resident input is that it is not clear that there are representatives on the steering committee that represent the diversity of Anchorage. It appears that all of the members of the steering committee work for large organizations or corporations within the city, which can be problematic when representing a diversity city like Anchorage.

The LWP initiative is well intentioned with a clear goal of improving the city overall. However, limitations such as a lack of local input and a narrow representation of diverse population of Anchorage within the program should be reexamined in order to provide a more holistic understanding and measurement of wellbeing. In addition, expanding the scope of indicators to include subjective indicators would fit within the current guidelines of creating an accepted model of measuring community wellbeing.

### *Destination 2020*

Destination 2020 was included because it deals with policy changes across the Anchorage School District (ASD), which is the largest district in the state of Alaska in order to improve academic performance and outcomes. The ASD has set out a strategic plan to increase student achievement in six main areas by the year 2020:

- 90 percent of students be at least at a proficient level in reading, writing and math;
- 90 percent of students' graduate high school;
- Have every student attend class at least 90 percent of the time;
- 90 percent of parents recommend their child's school to others;

- Have all staff and students feel safe at school.
- Have all departments rank in the top quartile of operational efficiency.

This was the third model of measuring wellbeing that was suggested to me by one of my interview participants. A website <http://www.asdk12.org/destination2020/> has been dedicated to the Destination 2020 initiative that outlines its mission, vision, core values, goals and strategies and areas of focus. It is also important to note that the community impact project “90 by 2020” is also underway with the goal of understanding community factors that impact student success. This project also has a dedicate website (<http://www.90by2020.org>) which outlines its goals, objectives and community partners.

The primary stakeholders of this plan are the current and future students in the Anchorage School District and staff. This model of wellbeing focuses on educational outcomes by looking at a series of quantitative data that are collected and analyzed each year. It is clearly stated that the “Anchorage School Board and district leadership worked together to develop this” plan (ASD 2014). There is no mention of community input or outreach done in the construction of this model, which could be problematic when trying to establish buy-in from parents or guardians of children in ASD. However, the goal of Destination 2020 is to improve educational outcomes for all children, which wouldn’t be a contested issue. Establishing how these goals will be achieved is the challenge that might require residents’ feedback. One of the major components that is be missing from Destination 2020 is the role of Traditional Knowledge for Alaska Native students. However, the Anchorage Realizing Indigenous Excellence (ARISE) is

another project under way that is working to address the role of Traditional Knowledge in the curriculum. Since Alaska Native students make up nine percent of the student population and tend to rank on the lower spectrum of performance measures it could be problematic within this framework that that is not being addressed (ASD 2014).

Destination 2020 is a model of measuring wellbeing as well a strategy that is attempting to increase educational outcomes for all students.

### *Finding of Similarities and Differences Of Models of Measuring*

#### *Community Wellbeing*

The purpose of my quantitative analysis was to establish the level of local input that was used in the creation of models of measuring community wellbeing in Alaska and Yukon and to identify similarities and difference between models in these two regions. Since the second part of my central thesis states, “there is little difference between the situation in Alaska and Yukon,” it was necessary to quantify similarities and differences through a qualitative analysis of keywords. In this section I took keywords from the literature and ran a frequency analysis within each model.

Comparing and contrasting models of measuring community wellbeing has never been done before in any formal study. Despite there being limitations to this particular analysis I thought it was important to included it for future research. The limitations are in relation to the differences in page lengths for each model, some had very few while others were comprehensive. Moreover, the models are not directly comparable because of the differences in community type, geographic location, economic development level

and living standard. Future research should use a similar approach with a greater number of samples of comparable page lengths. This type of analysis is useful as it clearly points out how many times specific keywords related to community wellbeing are used within each model. Table 4 compares Yukon and Alaska models by showing the percentage of total word count. The 57 keywords hold analytic value for these analyses because they were derived from the literature review specific to notions of community wellbeing and the establishment of a model of community wellbeing.

Table 5. Percentages of total word count in Alaska and Yukon models.

<b>Key Words</b>	<b>Alaska %</b>	<b>Yukon %</b>
<b>Culture</b>	15	85
<b>Community Wellbeing</b>	8	92
<b>Aboriginal Peoples</b>	29	71
<b>Research</b>	90	10
<b>Health</b>	3	97
<b>Community Services</b>	4	96
<b>Education</b>	57	43
<b>Employment</b>	27	73
<b>Development of Natural Resources</b>	12	88
<b>Sustainability &amp; Resiliency</b>	3	97
<b>Social Ills</b>	13	87
<b>Community or Government Strategy</b>	18	82

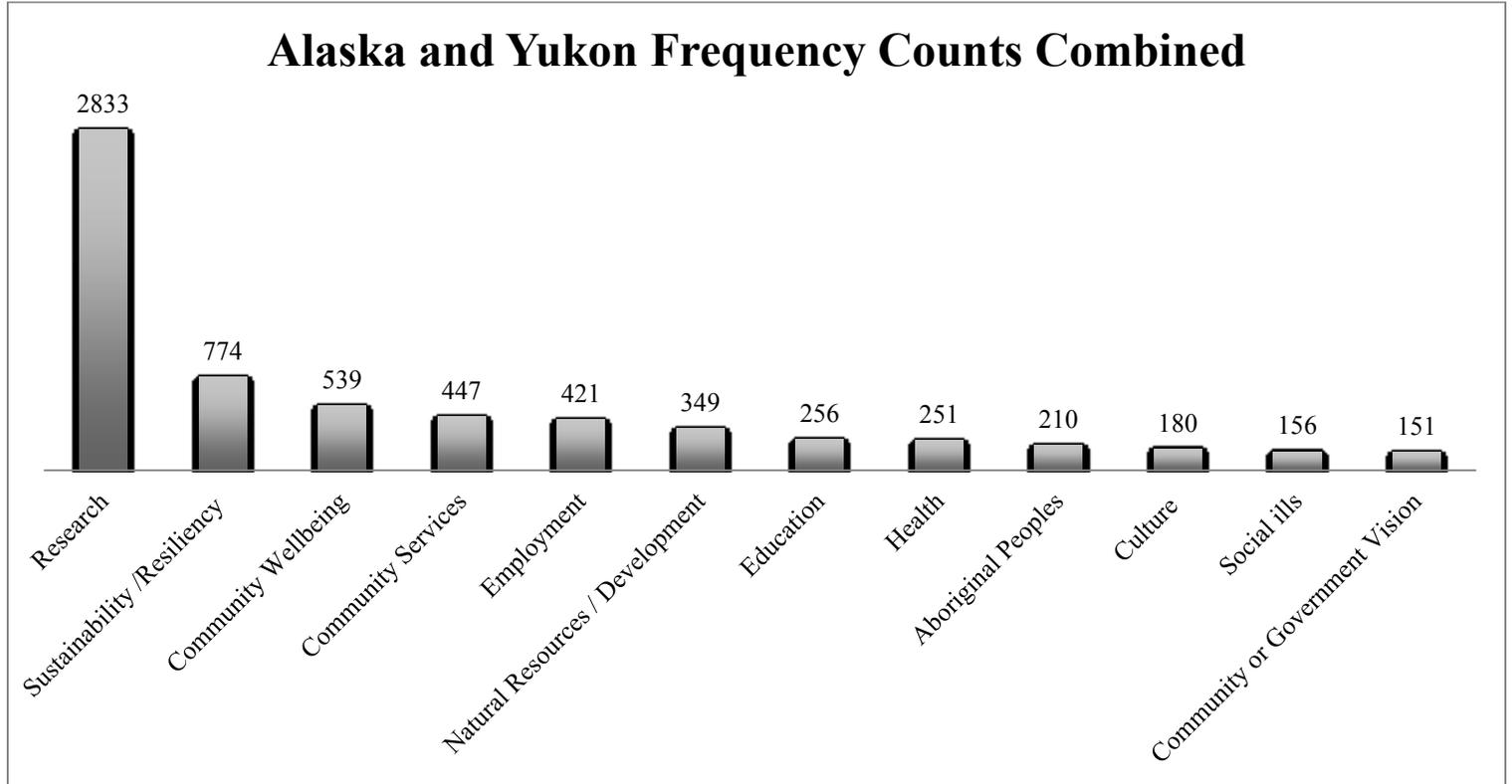
It is clear that Health (97%) and Sustainability & Resiliency (97%) represent the highest word counts in Yukon. The keywords that are included within the Health category are: Food Security, Health and Mental Health. For the category of Sustainability & Resiliency the keywords are: Adapt, Change, Sustainability, Resiliency, Positive, Negative and Capacity. The second largest percentage was Community Services (96%), which included the keywords: Local Services and Local Businesses. The third largest category was Community Wellbeing (92%), which included the keywords: Community vitality and Wellbeing. It was interesting to see that notions of sustainability, health, community services and community wellbeing were the top three categories in this analysis. Since Yukon Social Inclusion and Poverty Reduction Strategy and Index of Community Wellbeing are centered on ideas of reducing inequality and further understanding social disparities this could account for this outcome. The categories of Aboriginal Peoples (71%), Education (43%) and Research (10%) were at the bottom of the chart for Yukon.

The top three categories that emerged by word count are Research, Education and Aboriginal Peoples. Research had a remarkable frequency percentage of 90%. The category of Education (57%) includes the keywords: Trades, Education, Skills and School. Aboriginal Peoples includes the keywords: Alaska Native, First Nations, Aboriginal, Inuit and Elders. Since two of the Alaska models of community wellbeing were education and employment that explains the high frequency counts. It is important to note that Alaska Native Corporations represent a large number of economic ventures

across the state, which could account for this occurrence. The bottom three categories were Community Services (4%), Health (3%) and Sustainability & Resiliency (3%).

It is interesting to see that Research was within the top frequency counts for both Alaska models of measuring community wellbeing. This could be explained by the fact that all of these models were based on either conducting research or using secondary research sources to support the indicators within each model. It is important to note that none of the keywords came up with a zero count within each region. Both Yukon and Alaska models of measuring community wellbeing touch on similar notions. To get a sense of how many times keywords were mentioned across both regions I combined the frequency counts into Figure 2

Figure 2. Frequency counts by theme across Alaska and Yukon models.



Overall both Alaska and Yukon models of measuring community wellbeing seek to understand similar aspects of community life. The major differences come out when you examine the specific models within the regions to identify its scope and goal. For example, Yukon Social Inclusion and Poverty Reduction Strategy is a model that has a wide scope that addresses multiple facets of community wellbeing, which would account for its large number of indicators and use of mixed research methods. If we look at the Destination 2020 model produced by the Anchorage School Board we can see that its focus is on improving educational outcomes for its students by targeting performance indicators. By carefully examining the scope and intended purpose of models of measuring community wellbeing it stands to reason that measurement can be seen as being related to different perceptions of wellbeing.

### *Observations*

Via a quantitative content analysis of models of measuring community wellbeing I was able to create a series of categories that illustrate the varying perceptions of community wellbeing. By doing a keyword search on Alaska and Yukon models of measuring community wellbeing I did not notice any significant difference between the two regions, except for the exponential number of times “research” was mentioned in Alaska models. There were slight variations but overall there was no major differentiation. What was interesting about this analysis is that the content analysis did not appear to reveal much about the local conditions of the communities. Future research in this area should try to obtain more models of measuring community

wellbeing in both regions and carry out a similar content analysis. Looking a greater number of models will help to identify other differences and similarities that are not present in this analysis. In the next section I discuss the results from the semi-structured interviews I conducted with experts who have worked with models of measuring community wellbeing.

## **Chapter Five: Analysis and Results of Interviews**

The literature review has shown that community wellbeing is related to specific local conditions; yet, when I explored the level of community outreach via content analysis of each of the models I found limited local input that reflects local conditions. In this chapter I will discuss the findings from interviews with local expert that provide a better understanding of this aspect of the models. All of the participants have or currently live in either Alaska or Yukon and have done work on various aspects of community wellbeing. Using some of themes from my quantitative analysis I present my qualitative analysis in a narrative separated by seven themes. The themes are: Understanding Notions of Community Wellbeing, Indicators to Measure Community Wellbeing, Social Ills, Culture, Aboriginal People, Education and Employment.

### *Understanding Notions of Community Wellbeing*

I started off each of my interviews with the question, “how would you define community wellbeing?” The responses varied and provided insights into indicators and measurements used in models of measuring community wellbeing. As discussed earlier the notion of community wellbeing is dynamic with a range of diverse understandings of this concept. My participants also echoed this sentiment and spoke about how community wellbeing is “multidimensional” where a “one size fits all” definition does not exist. Patsy spoke about how community wellbeing can be seen as understanding “basic” needs for individuals. She said:

“When I think about community wellbeing, of course, I think, what is a healthy community? It is one where people, I think, there is... I guess there are multiple levels of wellbeing... So that one, that individuals are healthy in the broadest sense, housed, access to adequate ... all of the things that you think of for somebody to be well. Whether that’s enough food, a safe place to be, um sort of those basics” (Patsy).

Estelle also said “community wellbeing is a number of dimensions. It is jobs, income, subsistence harvesting education, health, culture, local decision making and fate control.” (Estelle) In following with this list of defining community wellbeing, John defined it as: “It’s [community wellbeing] food and water, energy and health are critical and of course food is linked to the feedback loops. All throughout food and health are part and parcel the same thing.” (John) He later discussed the importance with “access to schooling” in the context of community stability.

Rose spoke about a different understanding of community wellbeing she said:

“I would define it [community wellbeing] is that there are a lot of cultural activities, traditional harvesting. A lot of dialogue in language, visiting, talking with each other and celebrating together and having those ancient ceremonies going on and everybody’s healthy and there is hardly any chronic disease. No alcohol and no drug dependence that kind of thing um you know pretty much a community at point that I was born into. Everybody was happy and all of those things were going on in the community, there was basically no infiltration of the so call democratic politics that came in later when our children were taken away to residential schools” (Rose).

Others saw community wellbeing as having access to certain “infrastructure” or community services. For example, Patsy spoke about the importance of “public transportation” and living within close proximity of “health facilities” such as, a “Yoga studio and clinic” (Patsy).

Eddie spoke about her role in facilitating conversations with community members in a vision exercise about what a healthy community would look like. She said that one of the participants described their vision for their community as ‘people walking around the community engaging with each other and smiling just because they felt good.’ Eddie also spoke about wellbeing as a fluid concept that changes throughout the “life stage” of individuals.

Community wellbeing was also understood to be synonymous with community vitality for Estelle. She spoke about community vitality as a community’s ability to be “engaging in economic diversification and balancing in and out migration.” The issue of migration was also a concern for Rose who spoke about the need to bring back people who have left. She said, “Communities are dwindling away because everybody leaves for education and other purposes and no one comes back. Then the community is left with no resource, people.”

### *Indicators to Measure Community Wellbeing*

Throughout this project I tried to get an understanding of various indicators used to measure community wellbeing, to see how useful they were as well as how they are applied. All of my participants spoke about using indicators to measure community wellbeing by saying that it is a “challenging task” and some data sources are not “well developed. Indicators of wellbeing either use a quantitative or qualitative measure in describing community wellbeing. Some models of measuring community wellbeing rely on one or the other but some use both in a mixed methods approach. Most

participants took issue with using quantitative indicators to describe community wellbeing because they saw it as “reductionist”. Using qualitative indicators for understanding culture, aspects of health and education are useful because they are hard to capture quantitatively. There was the agreement that one of the primary issues with using quantitative measures in Arctic communities is related to population size. Eddie said:

“From a northern community point of view small numbers and small populations really hampers’ in my opinion, the relevance of many quantitative indicators. Because the numbers are so low, so um you know I think it’s hard to make claims that can be substantiated only with numbers. I think the qualitative component for interpreting the results and giving it context to understand the implications of the numbers and what small changes are, really are an important part of work in the North, especially when claims are being made about outcomes” (Eddie).

She further illustrated this point by stating:

“In a small community if one person dies of cancer one year and two people die the next year it is an epidemic. Where there is 4 or 5 knowledgeable Elders left in their late 80’s or early 90’s and two of them die then that’s a huge loss to the community, their cultural foundation, a lot of their wisdom for the whole community is gone. The magnitude of the loss is larger than what the 1 or 2 would represent” (Eddie).

Eddie’s participant also spoke about the widespread use of quantitative measures of wellbeing and why it is used in the majority of models of measuring community wellbeing. She said:

“I think that it [quantitative indicators] is what people are used to. It is way easier to collect the data, way easier to make claims about what the information means and it can be done without ever really leaving your desk. So, its suits the methodology of making these kinds of claims and representing work to be done. I am not dissing all quantitative measures they have a use too. I think only in scoping quantitative indicators do not really understand fully what is more understandable by including by qualitative approaches as well” (Eddie).

I asked some of my participants if it is possible to come up with a model of measuring community wellbeing that fully captures all aspects of a community. Most of them said that it is, but it has to “come from the community” by “engaging community members in the process.” Dennis said, “I think that there is a need, I think there is a role ... a somewhat consensus and I think there is a role for individual differences in developing it.” Eddie said:

“I think its possible but you know I think that the measures need to be developed in collaboration rather than without. I guess I mean economic indicators are really... I think really straightforward and easy to measure there. I think that there are you know as a sociologist there is a lot of social measures that you could that you can come up with pretty well” (Eddie).

I asked Eddie about what data sources should be used for the indicators in the creation of a model of community wellbeing. She said, “If the creation of the models doesn’t have enough input from diverse sources and perspectives then again it becomes reductionist and it becomes your interpretation of what these indicators should be.” In another interviews I asked Dennis what the point is for measuring community wellbeing and he said, “If you don’t measure it, you can’t manage it.”

### *Social Ills*

Social ills emerged as important in talking about social issues related to alcohol and drug abuse, domestic violence, low educational attainment, unemployment and access to health care. Eddie suggested that a much wider understanding of the causes related to this issue is needed to fix the problem. She said:

“Drugs and alcohol are a symptom of a much bigger issue. Certainly it is an issue that we need to look at resources for, it is a Band-Aid. We have this revolving door at the Emergency Department in Whitehorse of the same folks coming through all the time with alcohol toxicity and drug abuse. Why aren't there things in place, on the land to deal with these substantive issues instead of counting on what's not working” (Eddie).

Eddie also spoke about work that they had done with some community members around mental health, specifically around the issue of depression. They shared that one participant in their meeting stated, ‘I think that every single person in my community is depressed’. Further compounding this issue according to the participant is that “people [in these communities] wait years to see a psychologist”. The lack of community health infrastructure is concerning related to these issues.

When the social issues came up in my interview with Rose I asked “what would it take to deal with these issues in First Nations communities?” She said,

“Well first of all we need to have trained people to actually deal with some of the trauma that we are going through in the community that is hidden. We have suicide, alcohol, very risky health behaviors, chronic diseases everything that is so unrealistic at the community level. We need education, awareness and education and then start implementing our own ways our cultural ways um to address these issues” (Rose).

When I asked Betty why she thinks there is such rampant alcohol and drug abuse? She said, “People get into drugs and alcohol because they have nothing to do”. These issues are very concerning when trying to promote and develop community wellbeing.

An interesting finding with my interview with Rose was that she talked about the link between climate change and mental health. She stated:

“We are facing climate change. Climate change is unreal in Arctic communities and that is causing more depression, that's causing more anxiety and we are now becoming food insecure and that's another

compounding traumatic event that is coming up. We have to pay attention to it, we have to get together and do stuff and start paying attention to all of this because what future are we going to have” (Rose)?

Coming up with ways to mitigate health concerns in these communities will require creative solutions that need to include residents.

### *Culture*

All of my participants spoke about culture being an important competent to community life, there was a broad and diverse understanding of how culture plays out on people. Patsy stressed the importance of having a sense of connection and support within a community by saying: “It is important when you move to a community that you don’t feel culturally left out” and “What you say about your community that you like is the people. It is the cultural support that you get.” This sentiment was echoed by Rose who spoke about culture being important in order for communities to come together to effect change. Estelle said “Culture matters, it is a resource that allows for mobilization on the ground which results in decision making that is necessary for any form of government.”

Most of my participants focused on the importance of culture for Indigenous communities from language to education. Language for Dorothy was seen as being strongly connected to culture and they stated:

“The difference that I would really see for Indigenous communities is also the role that language plays. It is very strong and its not just Indigenous but I think it’s perhaps more threatened in Indigenous communities. I think that I can identify the absence of people that are healthy in terms of having that secure sense of culture, identity and that

perspective of wellbeing versus certainly White folk; who you know a lot of us have an identity that we wrap up in a little bundle and we throw over our shoulder, we take it wherever we go, it's not tied to the land its not. For English speakers there is no assumption that it's [culture] threatened" (Dorothy).

Maintaining and promoting culture was largely seen as being taught outside of the traditional Western classroom; being connected to the land and taught by Elders.

When I asked Rose, "What would it take to promote and secure culture within a community?" she said:

"I figure if we want to get there we need education from the very onset with pretty much everyone, with the youth with the adolescents, teenagers and a lot of it takes interpersonal skill development some are doing well in and some aren't. Then we need to implement academic education and all the way along simultaneously. Our culture needs to be at the forefront of our traditions.

We need to make sure that the wise elders can teach. And we start with the very young and implement good communication skills, life skills at the very onset with kids that are very young and then also make sure that our culture and language are a part of that" (Rose).

I followed up by asking: "What would it take in order for these sorts of changes to occur in communities?" She said, "It has to start with the leadership of the community. Everybody relies on role models since you're born. I think we look to older people as younger people and I think we need to have those role models in our system."

Since my project has looked at indicators of community wellbeing, I wanted to get the opinions of my participants on indicators of cultural wellbeing. Dorothy said, "when you're talking about cultural wellbeing in the sense of indicators there's no data and there is no easy way to measure it." However, there have been studies that use the engagement in traditional activities as a way to measure cultural wellbeing. Betty spoke specifically about this and said:

“Studies have looked at the number of Native language speakers or the involvement... they were operationalizing the participation in cultural activities such as, subsistence and crafts, that sort of thing. For me that is a really narrow definition of culture and I don’t know if you can get at cultural wellbeing that way, you know? It really depends if you’re talking of economic of social wellbeing or create a composite scale to measure all of those things, maybe, but you know people do it” (Betty).

Overall, culture is seen as an important aspect of community life for Indigenous peoples to promote their language and ways of life. However, it is complicated to find an appropriate way to measure cultural wellbeing in communities that is agreed upon because most of these studies come from outside researchers.

### *Aboriginal People*

Most of my participants spoke about the struggles that are faced within Aboriginal communities in Alaska and in Yukon in relation to representation, education and employment. One of the findings from these interviews was how important the perspective of research findings are for Aboriginal communities. There are multiple ways to present data in a research study and for Aboriginal communities the perspective from which they are represented is very important. Eddie spoke about the backlash faced by a First Nations Minister of Education in Yukon when his department released a report on graduation rates for First Nations students. She said:

“There was a lot of um backlash about that and even though it came from a First Nations Minister because the context of it was negative. A strength-based approach really reframes the issue. People would much rather talk about the increasing graduation rates of years gone by as opposed to low right now. Because it sets a stage for the construct of

disparities to be reinforced, so it keeps people in a situation of... um... less, as oppose to what is possible” (Eddie).

Representing people in a way that is accepted by community members is important in establishing and maintaining valuable relationships. I asked Eddie what could have been done in this situation or in future ones to avoid the backlash? She said, “Having people [Community members] involved in projects particularly in the interpretation and reporting of results is an invaluable way to put information into a bigger perspective.” One of the big calls to action across these communities is the reinvention and investment in education, specifically for youth.

### *Education*

The issue of improving educational experiences for Aboriginal people in Alaska and Yukon has been at the forefront of educators for many years. Currently, there are programs that target Aboriginal youth in Alaska and Yukon, such as ARISE. ARISE is the Anchorage Realizing Indigenous Student Excellence, which aims to improve education outcomes for Alaska Native students. Dorothy, who has been helping develop this program, spoke about the project and some of the questions they are trying to grapple with. She said the big question for this project is “how do we scaffold [support] young Indigenous people?” There are many dynamics to the program but the participant spoke specifically about the difficulty of trying to incorporate culturally relevant learning into the program. She said, “What we are adding for the Indigenous piece is

also the cultural goals and actually trying to talk about what it means to be a healthy person as an Indigenous youth in Anchorage.”

There has been an Indigenous-learning framework established in the North Slope Borough School District in Alaska that involved community input. Dorothy spoke about this and said:

“They created something called the Inupiat learning framework and the Inupiat learning framework was created over a period of a couple of years. The Inupiat education folk in the District went out into every village and had conversations with parents, community members, Elders about what does it mean to be a educated Inupiat person?” (Dorothy)

This is a “curriculum reform” for the North Slope School District that has allowed for the communities to shape what the education outcomes need to be for Alaska Native students in this region.

There are several obstacles in trying to create a culturally appropriate education model for Aboriginal people, including the skepticism that students have towards teacher retention in their communities. John, who spent years working in Alaska Native villages in Alaska, spoke directly with youth about their lack of attendance and interest in school. He said, “The turnover in the teacher rates gets kids really cynical. I talked to them the year I lived in Anaktuvuk Pass, ‘Why don’t you guys pay attention to the teachers?’ The students said, ‘Why should we, they’re not going to be here at Christmas or they are not going to be here next year, why do we care?’ Having a stable school system such as maintaining teacher retention is important in creating a sense of trust and engagement with students or else, “the kids get really cynical” and disengaged.

Another obstacle in creating and maintaining education programs is the continued decrease in funding and lack of investment from levels of Government. For

example, Rose spoke about the allocation of resources in some communities in Yukon.

She said,

“Some of those self governing community there are ways they can prioritize resources. In a small community however every dollar that has been allocated on land claims basis has been is allocated in particularly community development, in public works and housing and infrastructure and that kind of thing. So you’re left with very little for health and education at the community level” (Rose).

When I asked how widespread the elimination of funding was she said:

“In 2012, pretty much all of these national programs that came from the Federal Government all got cut. That was the National Aboriginal Health Organization and that was the National Aboriginal Health Initiative. All First Nations across the country got cut in health, health issues, health programming and so we are left with like nothing at the community level” (Rose).

In order to help improve educational outcomes for Aboriginal people it is important to frame data in an accepted way, seek community engagement in curriculum design, improve teacher retention and secure sources of funding. Part of the academic discourse from the Western perspective is that education leads to greater levels of employment.

### *Employment*

In Alaska there have been initiatives to promote Alaska Native hire within resource development project, like the Red Dog mine. Red Dog offers incentives for youth to go to school and get training in areas of mining. Dennis spoke about Alaska Native employment in Alaska and offered an explanation for the varying levels of

employment. For example, the Donlin Creek project seeks to extract gold within an area of Yukon Kuskokwim region of Alaska. Donlin Creek “ Employs 200 people, 91% Alaska Native and only has a 5% turnover rate”. I asked the Dennis why this development project has been able to have a high percentage of Alaska Native employment, opposed to places like the North Slope Oil, which is very minimal? He said, “Donlin Creek is an exploration project, that requires a specific set of skills like heavy equipment operation. In the North Slope [Oil] it is a different skill set with fewer entry level jobs.”

Not all Aboriginal communities in Alaska and Yukon have employment opportunities in resource development projects. Some communities such as King Cove Alaska have been trying to diversify the local economy but have experienced continuous setbacks. Betty who has spent time working in the community of King Cove talked about the bleak outlook residents feel they have for the future. She said:

“We’re [Residents of King Cove] going to be Anchorages next street people. They are being shut out from one fishery after another; because of large scale fishing boats depleting their stocks in open waters, they’re really struggling. So, they thought okay they are going to drill for oil in Bristol Bay, but now there is a moratorium on that. Whatever it is they try to do to diversify there economy, so they are not dependent on fishing anymore, the door is slammed in their face” (Betty).

Rose spoke about First Nations in Yukon and how resource development is not always approached with the community at the right time. She said, “Resource developers come in and it’s the same old thing. They come into a community to develop a resource and the people are not ready. We do an IBA [Impact Benefit Agreement] with people but you know you have to be a very strong community to be able to make those

work.” If a community has a lack of “leadership” and its residents are not “engaged in the process of an IBA” then they are left with “the short end of the stick in terms of benefits from the development.”

Employment is not only for the obvious economic means it also allows for people to have a sense of purpose, which is important for a healthy community.

Dorothy spoke about how employment allows for people to be engaged in healthy relationships. She said:

“Engaging others gives people a sense of purpose. Employed...employed doesn't necessary mean fully in a cash economy. When I think about rural Indigenous communities it's Elders whose role it is to be the source of wisdom of the community that's as much an employment role for me as somebody that's doing a 9-5 job” (Dorothy).

All of my participants agreed that some form of employment was necessary for a healthy community. Whether it was for providing community infrastructure services, the means for residents to pay for goods and services or as an activity for people to engage with one another.

### *Observations*

Conducting semi-structured interviews with people who have worked with models of measuring community wellbeing proved to be useful, as it allowed for a more in-depth conversation about specific elements relevant to notions of community wellbeing. Overall, the key message that participants stressed was the importance of local input throughout the entire process of creating a model of measuring community wellbeing. The more involved community members are in the process of creating a

model the more likely it is to be accepted as an accurate description of that community. Moreover, large scale models of measuring wellbeing that span multiple communities were seen as extremely limited in their scope as they do not portray an accurate account of all communities, specifically rural villages.

The other key issues with current models of measuring community wellbeing were that community members need to agree on the specific indicators used in a model, indicators need to be subjective and objective and there is increasing frustration about the lack of action and funding to address local issues.

In regards to the need for community members to agree on specific indicators within a model, respondents stressed that without proper community consultation the choice of indicators can be interpreted as offensive; this was also supported by the literature. For example, when using an indicator to measure the level of access resident's have to community services such as healthcare providers there is drastic difference between urban and rural communities. Since many rural communities have little access to healthcare providers an indicator comparing that community to a more urban center is seen as offensive; the rural community likely does not have the means to improve access without action or funding. This is particular problematic for large-scale models that span many communities, which again emphasizes the importance of local input in the creation of a model. Respondents also noted that there is currently no indicator used in large-scale models for measuring community wellbeing that addresses the urban and rural issue of access to services.

Another key issue, also in the literature, with models of measuring community wellbeing is the need for subjective and objective indicators. According to respondents,

models that have one or the other are seen as limited and lacking substance and often portray an incorrect assumption about a community. For example, respondents spoke about measuring local GDP in rural communities. This objective indicator will show that local GDP is extremely low, which suggests that many community members live below poverty lines. However, GDP does not capture jobs that do not generate a wage such as subsistence hunting and gathering. An indicator that used a subjective indicator could show a more in depth picture of the economy in a rural community.

The last element that respondents talked about was the growing frustration around a lack of action and funding to address local issues. One of the primary issues that respondents talked about was the opinion that communities feel they are being “researched to death.” Community members want to see the benefit to research with the implementation of action plans. Respondents stressed that community members understand that the implementation of a plan takes research and education of their residents. Respondents noted that residents feel that the ways this can be carried out is by developing community capacity. The first step in developing community capacity, according to respondents, is leadership. Leadership was thought of in terms of having someone from the community take the lead in bringing people together and implementing an action plan. In addition to leadership, there is the need to develop and expand the level of education within a community. Respondents spoke about the role of outside researchers as being experts who can teach and train community members on how to collect data, carry out analysis and develop action plans. The last obstacle with developing community capacity is financial constraint. Many of the respondents talked about the lack of funding to implement action plans from the community level. In small

communities where the local economy is limited there is no foreseeable means to allocate funding to carryout any action plans. Respondents spoke of the need for funding to come from state, territorial or federal governments. However, over recent years funding has continued to decline with the scaling back or elimination of state, territorial and federal programs.

## Chapter Six: Conclusions

This study illustrated that community wellbeing varies according to local conditions, but existing models of community wellbeing don't adequately reflect the diversity of conditions in the North. My analysis of the models found that in both Alaska and Yukon, the existing models did not adequately incorporate local input. This same issue emerged in the expert interviews. Despite differences in the political, historical, and social structures, there appears to be little difference in the incorporation of local input between models developed in Alaska and Yukon.

I attempted to address my research questions in this study by first carrying out a literature review around the notion of wellbeing, specifically how it was conceptualized and has changed over time. I then explored the history around measuring wellbeing and how indicators have adopted based on current conditions. Finally, I explored the notion of community wellbeing in the North by addresses its short history along with current issues that are being researched. The second step in my study was to collect models of wellbeing in Alaska and Yukon; I found six that were publically available and easy to access. I then explored the models and researched methods that were provided on each models' website in order to revealed the level of local input that was used in their portrayal of communities. It is noted that most of the models used very little local input or none at all. In order to further explore this issue and to attempt to address similarities and differences between the two regions a quantitative content analysis was carried out. By generating a list of 57 keyword from the literature I carried out a content analysis in order to measure how many times the keyword related to local input and notions of

wellbeing were mentioned within each model, region and overall. This analysis has limitations specifically related to the varying ranges in the page numbers. The analysis did not reveal stark differences between the regions. However, it was interesting to see that the keyword “Research” was within the top three frequency counts for both Alaska and Yukon Models of measuring community wellbeing. This could be explained by the fact that all of these models were based on either conducting research or using secondary research sources to support the indicators within each model. The last analysis that was done in this study was semi-structured interviews with experts familiar with models of measuring community wellbeing in Alaska or Yukon. The eight interviews revealed that the key issues facing communities are the lack of local input in the creation of models, the choice in indicators can be interpreted as offensive, models need to include both subjective and objective indicators and there is growing tension around the lack of direct action and funding to improve living conditions.

It is clear that there is a lack of local input with the construction of models of measuring community wellbeing. The examination of the six models across Alaska and Yukon did not reveal that there has been much local input. The Eagle Gold Mine Project did appear to carry out the greatest outreach efforts in gather local input, but it wasn't clear that steps were being taken to mitigate concerns that residents raised. Furthermore, the expert interviews revealed that local input was extremely limited or non-existent in the construction of models, which has led to frustration related to how communities are portrayed. Moreover, community frustration around the lack of action and funding to address local issues is continuing to mount. The literature and this study

stress that local input is vital in creating enhanced models of measuring community wellbeing.

The notion of community wellbeing has changed dramatically over recent decades, most notable from single objective measures to a multidimensional construct. One possibly for breaking the ties to colonialism is to engage community residents in the creation of their own model of measuring community wellbeing. The process needs to involve relevant dimensions, good and bad conditions and goals that are agreed upon (Noll 2002). As communities in the North enter the age of devolution it is vital that they find the means to develop local resources in order to provide economic and social opportunities for their residents. The process is seen as a way to empower citizens and influence policy makers that benefit local communities (Varghese et al. 2006 and Drabsch 2012).

### *Limitations and Future Research*

The first limitation of this study is related to the sample size of models of measuring community wellbeing. Due to the small number of publically available models of measuring community wellbeing in Alaska and Yukon this study was only able to examine six models, one of which was written by a researcher and not the participants themselves. Future research should include a greater number of models, perhaps from other Arctic regions. The second limitation of this study is related to the content analysis of keywords. The page length of the six models varied greatly from one to the other. Results from the analysis are not comparable between the models because

of the vast difference in page length as it directly impacts the word count. However, since this study is the first of its kind to examine models of measuring wellbeing between two regions it was decided to include this analysis despite the limitations.

One of the largest limitations from the qualitative analysis of my thesis was the low response rate to requests for interviews. Since the most beneficial recruitment location was at an international Arctic research conference, future studies should include funding to attend more conferences. Another limitation of this section was that most interviews were conducted over the phone, whereas in-person allowed for a more in-depth conversation. Future studies should seek a greater number of interviews with not only people familiar with notions of community wellbeing, but also residents of communities where a model has been established. In concert with that, future studies should be conducted with residents in communities where there is no model in order to understand if there is a desire to create one and what they believe it would take.

Overall, since this project is the first one to compare models of measuring community wellbeing there are many avenues of future research to be explored. There is limited data available on models of measuring community wellbeing. An online atlas could be created that identifies models of measuring community wellbeing across northern communities, which could lead to more in-depth analysis.

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## Appendices

### Appendix A



Research Ethics Board  
t: (807) 343-8283  
research@lakeheadu.ca

May 7, 2014

**Principal Investigator:** Dr. Chris Southcott  
**Student Investigator:** Kent Spiers  
School of Sociology  
Lakehead University  
955 Oliver Road  
Thunder Bay, ON P7B 5E1

Dear Dr. Southcott and Mr. Spiers:

**Re: REB Project #: 138 13-14 / Romeo File No: 1463777**  
**Granting Agency: SSHRC**  
**Granting Agency Project #: 412-2011-1006**

On behalf of the Research Ethics Board, I am pleased to grant ethical approval to your research project titled, "Northern Exposure: A Comparison Study of Alaska and Yukon Models of Community Wellbeing".

You intend you collect data through a number of methods including seeking well-being models that are publically available, speaking to academics at a northern conference, and potentially, if participants are still needed, speaking to communities in which you have existing relationships. If speaking to communities is ultimately necessary, and the community is aboriginal in nature, please provide the REB with information about the relationship you have with the community as Chapter 9 of the TCPS2 deems community engagement/relationships necessary when conducting research projects with First Nation peoples.

Ethics approval is valid until May 7, 2015. Please submit a Request for Renewal form to the Office of Research Services by April 7, 2015 if your research involving human subjects will continue for longer than one year. A Final Report must be submitted promptly upon completion of the project. Research Ethics Board forms are available through the Romeo Research Portal at:

<http://romeo.lakeheadu.ca>

During the course of the study, any modifications to the protocol or forms must not be initiated without prior written approval from the REB. You must promptly notify the REB of any adverse events that may occur.

Best wishes for a successful research project.

Sincerely,

Dr. Richard Maundrell  
Chair, Research Ethics Board

## Appendix B

### Recruitment letter

Dear Potential Participant,

My name is Kent Spiers, I am a graduate student at Lakehead University who is conducting a study on various models of community wellbeing in the state of Alaska and territory of Yukon. I would like to interview people who have experience studying or working directly with different models of community wellbeing. I would like to understand the different types of models, the benefits and disadvantage that specific models have, how they have impacted a community and how they might be modified or improved. This research is being funded by Resources and Sustainable Development in the Arctic (ReSDA), which is a large social science project that you can learn more about by visiting the project website at: <http://yukonresearch.yukoncollege.yk.ca/resda/>

I would like to invite you to participate in this study because you have been identified as someone who either studies or works with models of community wellbeing in the state of Alaska or territory of Yukon. The interview will last between 45 minutes to 1 hour. Interviews can be conducted either via telephone, Skype, FaceTime, or other telephone or online conference service. If you choose to participate you can choose to answer questions or not. You may stop at any time and you may skip a question you don't want to answer. Nothing will happen to you if you choose not to answer any questions. The questions will be based on your opinions or experiences working on models of community wellbeing.

No names or identifying information about you will be used in presentation on this research (either written or verbal presentations). I would like to record the interview with a digital recorder to ensure that my notes are accurate. However, only I will have access to the complete interview, write-up, notes and recording. These files will be kept in a secure file cabinet in my office to which only I access. The recordings will be kept on a password-protected computer. All records will be shredded or deleted after 5 years. Data will be compiled in such a way that you cannot be identified. I will not attach your name, address, or any other identifiable information about you to any of your responses, or to any reports or presentation describing the results of this study.

Your participation in this study requires a commitment of time on your part. There is no direct benefit to you for participating in this survey. However, if you decide to participate, your willingness to share your opinion and knowledge may provide valuable insight for the understanding various models of community wellbeing.

Thank you for your consideration,  
Kent Spiers

Contact Information:  
Student Investigator: Kent Spiers  
E-mail: [kspiers@lakeheadu.ca](mailto:kspiers@lakeheadu.ca)  
Phone (807) 355-4682

Supervisor: Dr. Chris Southcott  
E-mail: [csouthco@lakeheadu.ca](mailto:csouthco@lakeheadu.ca)  
Phone: (807) 343-8349

This research study has been reviewed and approved by the Lakehead University Research Ethics Board. If you have any questions related to the ethics of the research and would like to speak to someone outside of the research team, please contact Sue Wright at the Research Ethics Board at [807-343-8283](tel:807-343-8283) or [research@lakeheadu.ca](mailto:research@lakeheadu.ca)

## Appendix C

### Consent form

#### **Northern Exposure: A Comparison Study of Alaska and Yukon Models of Measuring Community Wellbeing**

I have read and understand the information letter for this study. I agree to take part in this study.

I understand that there could be benefits to this study, such as a better understanding of the various models of community wellbeing in Alaska and Yukon. I also understand that the risks involved in taking part in this study are minimal.

I understand that I am volunteering to be in this study and at any point I may refuse to answer any questions or leave the study. I understand that records of the interview(s) I take part in will be stored at Lakehead University for 5 years and be destroyed after that time.

I understand that at the end of the study, the results will be available to me. By contacting Kent Spiers I can obtain a copy of the research results. I also understand that I will remain anonymous in any presentation or published version of the research results. If I wish to have my identity revealed, I must agree in writing with a third part present.

Name of Participant (Print): \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

I consent to have my interview(s) recorded on an audio recorder.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Contact information:

Student Investigator: Kent Spiers

E-mail: [kspiers@lakeheadu.ca](mailto:kspiers@lakeheadu.ca)

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Office: Ryan Building 2040

This research study has been reviewed and approved by the Lakehead University Research Ethics Board. If you have any questions related to the ethics of the research and would like to speak to someone outside of the research team, please contact Sue Wright at the Research Ethics Board at [807-343-8283](tel:807-343-8283) or [research@lakeheadu.ca](mailto:research@lakeheadu.ca)

## Appendix D

### Interview Questions

*Protocol: Introduce myself, go over consent form and have them sign it, describe the purpose of this research project and ask if they have any questions before starting.*

1. How would you define community wellbeing?
2. What is your experience with models of measuring community wellbeing in Alaska or Yukon?
3. Which community/model are you familiar with?
  - A) (If academic) why did you study this specific model?
  - B) (If member of the community) what was your role with the model of community wellbeing?
4. What was the purpose of this model of measuring community wellbeing?
5. What were the advantages and disadvantages with this model?
6. Can you describe the specific indicators (measures) used in the model? Were they qualitative, quantitative or a combination of both?
7. What has been the impact of this model of measuring wellbeing on the community?
8. Do you see this model being sustained into the future?
9. Does this model (or any other you have seen) reflect the conditions of communities in either Alaska or Yukon?
10. Is there other information that you think would be helpful for me to consider in my research?

## Appendix E

### Keyword for Quantitative Content Analysis

*In no particular order*

Traditional Activities	Quantitative	Consultation
Culture	Qualitative	CBA
Community Vitality	Risk	Vision
Wellbeing	Data	Income
Infrastructure	Adapt	Unemployment
Services	Change	Employment
Sustainability	Positive	Education
Families	Negative	Oil and gas
Communities	Individuals	Potential effects
Businesses	Interviews	Trades
Governments	Resources	Skills
Aboriginal	Lands	Inclusion
First Nations	Policy	Exclusion
Inuit	Well-being	
Poverty		
Mental health		
Alcohol		
Drugs		
Abuse		
School		
Violence		
Research		
Alaska Native		
Tradition		
Food Security		
Language		
Health		
Capacity		
Elders		
Strategy		