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Examining the Association between Aboriginal Language Skills and Well-Being in First Nations Communities

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Introduction

While citizenship holds multiple meanings, the notion of nationality and belonging is thought to be an intrinsic aspect. Moreover, the concept of citizenship has expanded over time to include cultural rights or the notion of cultural citizenship. Defined as the right of minority groups to preserve their own culture without jeopardizing their political or civil entitlements (Glenn 2002), *cultural citizenship* is a particularly significant concept in culturally plural societies. More specifically, the right to preserve traditional languages is a highly important aspect of cultural citizenship, as traditional language retention can arguably be considered a fundamental element of cultural preservation and continuity (Chandler and Lalonde 1998; Hallet, Chandler, and Lalonde 2007).

Across Canada, a number of Indigenous languages are spoken by many Aboriginal groups, with each language thought to represent an integral facet of cultural identity and distinction. Considering the cultural significance of language retention, threats to linguistic continuity are also thought to be threats to cultural continuity. Due to a combination of factors, including the forces of modernization and the history of colonialism, many Aboriginal languages are en route to disappearing, while many others have been lost almost entirely (Norris 2006; Norris and MacCon 2003). Unlike many other ethnic groups in Canada, Aboriginal people have been subjected to policies of forced assimilation, and, as a result, have experienced an even greater disruption to the intergenerational transmission of language.

In addition to serving as important symbols of cultural and ethnic identity, Aboriginal languages are also thought to positively influence levels of community well-being, primarily by improving cohesion and solidarity among community members. Yet despite evidence favouring the maintenance of traditional languages, considerable research illustrates community drawbacks of language retention. Scholars opposed to language retention often argue that minority languages interfere with the ability to successfully participate in the dominant cultural, social, and economic spheres, thereby reducing a community's socio-economic status.

The aim of this study is to examine the correlation between Aboriginal language skills and well-being in ninety-five First Nations or reserve communities across Canada. Drawing on data from the 2001 Aboriginal Peoples Survey (APS), a community language skills score is provided for each reserve by calculating the proportion of community members who understand or speak an Aboriginal language. In addition, this study relies on existing data of well-being scores for each of the ninety-five reserve communities; these existing scores have been calculated using the Community Well-Being (CWB) Index. As an amalgam of census data on income, education, housing, and labour-force conditions, the CWB serves as a highly valuable tool in measuring well-being at the community level. A Pearson Product-Moment Correlation was run to assess the relationship between community language skills and the CWB Index and its components, revealing a negative association.

It is hoped that the findings of this study will spark future empirical research aimed at examining this complex issue in greater depth. Although this paper provides insight into the issue of Aboriginal language retention and community well-being, it is important to recognize that this study tests only for an association; further research is required to determine whether Aboriginal language skills and community well-being are causally related. In addition, it is important to consider other variables when exploring this issue. We know language retention cannot create the socio-economic conditions within First Nations communities. Moreover, future studies done to further this research may be able to utilize more complex variables and better data which could lead to finding a positive correlation. This might trigger policy analysts to consider the possibility of implementing programs aimed at maintaining or even revitalizing traditional languages within First Nations communities. This study does not look at language revitalization. Some past work indicates that this can be very positively correlated with development (O'Sullivan 2003). It appeared to some that where traditional languages have been able to maintain themselves, there may be other disadvantages such as isolation. Where languages were being revitalized, there may have been advantages such as more available resources reflected in improved schools and interest in cultural preservation (White 2005).

Further research may spur analysts and policy-makers to look at related issues. Firstly, is it possible to successfully revitalize endangered or extinct languages, and if so, what kinds of programs are effective in reintroducing languages? Secondly, will the nature of revitalization programs need to vary depending on the state of each community's language, as well as their available resources? In addition, it is important to consider that language revitalization programs may not be successful for languages in all states of vitality, especially those classified as endangered or nearing extinction. More broadly, this research will also enhance our understanding of the ways in which language retention shapes the cultural citizenship of Aboriginal peoples in Canada.

In closing this introduction we wish to stress that we are **not** saying language retention is a bad thing. We are saying that we must leave simplistic notions behind, including the idea that language retention is bad because it impairs labour-force participation or that everyone should know a particular language simply because it is seen as a good thing. The problem is that we face the challenge of losing the languages. In a world with finite resources, we may have to make decisions; it may be that successfully revitalizing some languages is more feasible and important in the long run than trying to save them all.

Some Brief Background Information

Aboriginal groups have a large number of different languages, each diverse in character and with different degrees of vitality. With a total of eleven linguistic families, Canada has nearly fifty distinct Indigenous languages (Ball and Bernhardt 2008). Despite this abundant number, 2001 census data reveals that less than a quarter of Aboriginal-identified people reported possessing the knowledge of an Indigenous language, in which “knowledge” is defined as the linguistic ability to engage in conversation (Norris 2006). Although general trends underscore a threat to the continuity of several Aboriginal languages, it is important to acknowledge the varying degrees of language vitality; while some languages are classified as endangered and nearing extinction, others are characterized as more viable and robust.

Of the approximately fifty Aboriginal languages spoken in Canada, a mere three are believed to have the potential to survive over time, with their promising outlook primarily due to their substantial number of speakers (Norris 1998). Cree, Inuktitut, and Ojibway are among the most viable of Aboriginal languages, as each has a significant number of speakers, as well as a large mother tongue population¹ (Norris and MacCon 2003). In contrast, several of the Aboriginal languages with a small number of speakers are considered endangered or nearing extinction. According to Norris and MacCon, languages with less than a thousand speakers often have a bleak outlook in terms of continuity.

While nearly half of all the Aboriginal languages in Canada are spoken in the province of British Columbia, most of the languages spoken there are smaller in numbers and therefore considered endangered (Ball and Bernhardt 2008). However, it is important to recognize that not all of the smaller languages are experiencing a threat to their continuity; in fact, some are flourishing, especially those with large mother tongue populations and those spoken in remote and well-organized communities (Norris and MacCon 2003).

Moreover, census data reveals considerable heterogeneity among the conditions of First Nations, Inuit, and Métis languages. According to the 2001 census, 66% of the Inuit population reported learning an Aboriginal language as their mother tongue, while the same is true for 26% of First Nations and only 4% of Métis. In addition, recent data indicates that the overall mother tongue population

is decreasing, which, in turn, severely impacts the likelihood of language survival (Norris 2006).

Research by Mary Jane Norris serves as a foundation for understanding the conditions of Aboriginal languages in Canada. In addition to providing a thorough overview of language trends, Norris (2006) discusses the significance of geographical location in influencing the degree of language vitality: “Aboriginal communities, including First Nations reserves and northern Inuit communities, can serve as enclaves for the maintenance and survival of their languages ... Yet, language situations of communities can differ significantly in their outlook depending on their location, degree of remoteness, or urbanization (even among the same language)” (202–203). Norris explains that Aboriginal languages spoken in large urban areas are less likely to thrive than those languages spoken in “isolated and/or well-organized Aboriginal communities” (203). Unlike individuals living in remote and rural communities, those residing in urban centres are more likely to encounter the dominant language and less likely to encounter other Aboriginal-speaking people, thereby hindering their chances of language retention. Moreover, Norris explains that in contrast to Aboriginal speakers residing in isolated communities, those living in urban areas are “less likely to use their language as the major language spoken in the home, and are more likely to learn their language as a second language” (203). The extent to which language is spoken daily within the home can serve as a significant indicator of language health, as it exposes young children to traditional languages. Considering that language continuity relies heavily on the transmission to future generations, children are vital in ensuring language continuity and survival.

Although census data suggests that Aboriginal communities serve as valuable avenues for the continuity of Indigenous languages, not all communities share a promising outlook for language survival; substantial variation in the degree of Aboriginal language knowledge exists across First Nations reserves. In addition to variations in language conditions, reserve communities also vary significantly in terms of their social and economic conditions. Furthermore, although a large quantity of research contrasts the well-being of Indigenous Canadians to non-Indigenous Canadians, often discovering remarkable disparities between the two, fewer studies address the variations of well-being among Aboriginal communities. Chantelle, Ross, and Bernier (2007) emphasize the heterogeneity within the Aboriginal population itself, and therefore recognize the importance of studying Aboriginals, not as a single collective population, but rather as multiple and diverse communities. This study explores the relationship between Aboriginal language retention and community well-being *across* First Nations reserve communities.

Despite substantial research examining the relationship between traditional language retention and well-being, many findings appear to be inconsistent from one study to the next. Moreover, many scholars propose conflicting arguments with regards to the community benefits of language retention. Those in favour of language retention frequently understand language as enhancing a community’s

socioeconomic status by promoting a sense of ethnic identity and developing cohesion and solidarity among its members. In contrast, scholars opposed to language retention often argue that minority languages interfere with the ability to successfully participate in the dominant cultural, social and economic spheres, thereby reducing a community's socio-economic status. O'Sullivan (2003) provides a coherent summary of arguments both in favour of and in opposition to Aboriginal language maintenance, ultimately emphasizing the sharp divide between the two viewpoints. The following pages are dedicated to reviewing the existing literature and briefly exploring the opposing arguments regarding Aboriginal language retention and community well-being.

Languages are thought to benefit a society by serving two primary functions, a symbolic function and a communicative function (O'Sullivan 2003). Beginning with the latter, Indigenous languages can be considered a useful tool in transmitting traditional Aboriginal knowledge from one generation to the next; as a result, languages can be thought of as a fundamental element of cultural continuity. In addition, languages are thought to be particularly vital for the preservation of a culture, as translation is an exceptionally challenging task. O'Sullivan emphasizes the complexity of languages as well as the process of translation: "Lacking as they [Canadian Aboriginals] do a literary tradition, they also lack sufficient time to conduct translations. Every day their languages change, leaving little evidence of their origins" (141). Furthermore, Fettes (1998) explains that a variety of Indigenous terms and concepts are tremendously difficult to translate into English and as a result, language destruction may hinder the continuity of Aboriginal culture. Such arguments highlight the importance of language maintenance in preserving culture.

In addition to serving a communicative function, a language also serves as an important symbol of ethnic and cultural identity. Scholars have argued that a strong ethnic identity provides individuals with a sense of nationalism and pride in one's culture, thereby establishing "a cohesion that allows collective growth" (White 2003, 132). Similarly, participating in a common culture, and more specifically, sharing a language, improves social capital within a collective. As a result, "cohesion would likely increase due to the ties to older generations, the passage of myths and norms of the group, and increased symbolic and communicative interaction" (133). Moreover, the symbolic function of language is thought to enhance the socio-economic development of a community, thereby implying that the loss of a traditional language may be exceptionally detrimental to a community's social and economic well-being. Crawford (1998) highlights the dangers associated with the loss of a traditional culture and language specifically in relation to the well-being of a community: "Along with the accompanying loss of a culture, language loss can destroy a sense of self-worth, limiting human potential and complicating efforts to solve other problems such as poverty, family breakdown, school failure, and substance abuse" (163).

As previously discussed, the preservation of traditional culture is often thought to provide individuals with a sense of meaning and ethnic identity, while simultaneously fostering community cohesion and solidarity. Chandler and Lalonde (1998) discuss the notions of cultural continuity and discontinuity and their significance in analyzing the rates of youth suicide in Aboriginal communities. Although studies reveal that First Nations youth commit suicide at significantly higher rates than their non-Aboriginal counterparts, additional research indicates that rates vary considerably across Aboriginal communities. Chandler and Lalonde empirically demonstrate that various indicators of cultural continuity serve as protectors against youth suicide. According to the authors, the presence of cultural factors enables community members to demonstrate “care and concern for our own well-being precisely because we feel a commitment to the future self” (13). More specifically, Hallett et al.’s study (2007) suggests that Aboriginal language use, as a marker of cultural continuity, is a highly significant predictor of youth suicide in British Columbia’s band communities. The authors found that bands with high levels of language knowledge (more than 50% of members report having knowledge of an Aboriginal language) have dramatically lower youth suicide rates than bands with lower levels of language knowledge (less than 50% of members report having knowledge of an Aboriginal language). Perhaps consistent with classical Durkheimian theory, Aboriginal language use may relate to a decrease in youth suicide rates by strengthening social ties and fostering a sense of community cohesion and solidarity.

Although a number of scholars understand language as an important symbol of ethnic and cultural identity, O’Sullivan (2003) notes a general lack of empirical evidence supporting this idea. Moreover, several scholars dispute this notion entirely. For example, Edwards (1984), Eastman (1985), and Drapeau (1995), argue that language is not always fundamental in maintaining a sense of cultural identity, as it is possible for one to experience the loss of their traditional language without losing their cultural or ethnic identity. In other words, it is possible for language to maintain its symbolic function without maintaining its communicative one. Moreover, Edwards highlights the danger of understanding language as *the* fundamental element of cultural identity, as such an interpretation prevents the acknowledgement of additional aspects of cultural identity, such as religion and group customs.

Another argument that broadens the understanding of language retention for purposes beyond communication involves the notion that cultural and linguistic differences produce a more interesting and colourful world in which to live. More broadly, diversity itself is often understood as “intrinsically good and worthy of preserving” (O’Sullivan 2003, 141), an idea strongly supported by both popular culture and postmodernism. Although this notion seems reasonable, the evidence supporting this idea appears to be insufficient (Crawford 1998). In fact, O’Sullivan poses a provocative question: “What is intrinsically wrong with the whole world speaking the same language?” (141). Despite this criticism, a number of scholars

have argued that linguistic diversity offers more than mere fascination and appeal in differences. According to Crawford,

Others have argued that the loss of linguistic diversity represents a loss of intellectual diversity. Each language is a unique tool for analyzing and synthesizing the world, incorporating the knowledge and values of a speech community... to lose a tool is to 'forget' a way of constructing reality, to blot out a perspective evolved over many generations. The less variety in language, the less variety in ideas. (162)

Clearly, linguistic diversity can be considered advantageous for various reasons; however, it is important for scholars to consider whether the benefits of minority language retention are undermined by its potential drawbacks.

An abundance of literature illustrates the limitations and drawbacks of minority language retention, especially in relation to socio-economic status. According to the ghettoization perspective, both language retention and bilingualism hinder the ability to competently participate in the dominant language, and, as a result, also interfere with the community's ability to successfully participate in the dominant social and economic spheres (O'Sullivan 2003). In this sense, both bilingualism and language retention can potentially isolate and separate communities from the larger society. Moreover, the link between proficiency in the dominant language and socio-economic status has been well documented (Balakrishnan and Gyimah 2000; Boyd 1999; Rumberger and Larson 1998). Proficiency in the dominant language is vital in ensuring high levels of socio-economic development. According to integrationists, many ethnic minorities opt to abandon their traditional language in hope of benefiting from the proliferated social and economic opportunities available to speakers of the dominant language (Crawford 1998).

Similar to the ghettoization perspective, the modernization theory suggests that the preservation of traditional language and culture can be highly detrimental to a community's socio-economic status, primarily due to the contradictory nature between "the culture of an underdeveloped area" and the modern global economy (White, Maxim, and Gyimah 2003, 395). For example, the cultural frame of reference belonging to Aboriginals is traditionally modeled after the philosophies of equal distribution and respect for Mother Nature (Neegan 2005), while the dominant American culture is more closely associated with the ideals of competition and capitalism. In addition, many scholars argue that minority languages, and Aboriginal languages in particular, are "incompatible with capitalist enterprise" as they simply lack the concepts necessary to succeed in a capitalistic society (O'Sullivan 2003, 145). The modernization theory argues that the cultural frames of reference of many ethnic minorities are simply "not synchronized" with the modern dominant economy, making it very difficult for those ethnic minorities who display high levels of traditional linguistic and cultural preservation to successfully participate in the mainstream labour market (White et al. 2003, 395).

Despite the arguments put forth by integrationists regarding language and cultural retention and their impact on socio-economic development, it is important to note that considerable research exists that is inconsistent with both the ghettoization perspective and the modernization theory. For example, Robinson's (1985) study demonstrates that the relationship between minority language retention and labour-force participation is largely insignificant; although an association exists between the two variables, there is no evidence of a *causal* relationship. In fact, according to the Harvard Project on American Indian Economic Development, "sovereignty and the maintenance of traditional culture are important in facilitating economic development" (White et al. 2003, 395).

O'Sullivan (2003) highlights the complexity and intricacy of examining the community benefits and drawbacks of Aboriginal language retention. Although her findings indicate a negative relationship between Aboriginal language saturation and indicators of socio-economic status within First Nations communities, O'Sullivan "hesitate[s] to conclude that Aboriginal language use is a ghettoizing force" (159). O'Sullivan finds that Aboriginal language use appears to be more closely related to participation in the dominant labour force, than with success upon the involvement in the labour force. In her own words: "Once in the labour force, Aboriginal and dominant language speakers have relatively similar levels of success" (156). As a result, O'Sullivan suggests that it may not be "Aboriginal language use per se that is negatively associated with socio-economic status. Rather, it may be that ineptitude in English or French is the real culprit. Aboriginal language use may decrease dominant language proficiency knowledge in a community, thereby decreasing the motivation of community members to master or maintain it" (156). O'Sullivan concludes by emphasizing that Aboriginal language use and its relation to community well-being is a highly complex issue.

While a major argument against language retention suggests that minority language use is highly detrimental to the socio-economic development of a community, an additional argument opposing minority language retention involves Darwinian logic, which assumes a natural and inevitable evolutionary process in which minority languages eventually adopt the dominant language (Crawford 1998). "Linguistic Darwinists" and other advocates of this notion understand this evolutionary process as both necessary and positive (O'Sullivan 2003, 143). However, in addition to being criticized for its highly essentialist nature, this Darwinian notion is also problematic in that it assumes a linguistic hierarchy in which minority languages are deemed inferior and less developed in comparison to the dominant one(s).

A brief examination of the existing literature on minority language retention and its relation to community well-being has certainly shed light on the complexity and intricacy of this issue. While a major argument in favour of minority language retention suggests that language improves the socio-economic status of a community by fostering cohesion and a sense of ethnic and cultural identity, one of the strongest arguments against language retention suggests that minority

language use reduces proficiency in the dominant language, which in turn, reduces socio-economic development within communities. Partially due to the lack of consensus among scholars in regards to the community benefits and drawbacks of Aboriginal language retention, the purpose of this study is to examine the correlation between Aboriginal language skills and community well-being.

Data and Methodology

The Community Well-Being Index/Aboriginal Peoples Survey

This study is based on data from the 2001 CWB and the 2001 APS. On-reserve communities were matched between the two sources of data given the characteristics of interest, yielding a dataset with ninety-five communities.

The CWB Index was previously constructed from the 2001 census by the Strategic Research and Analysis Directorate of Indian Affairs Canada. Details are provided with the dependent variable below.

With respect to the APS, data was collected in the fall of 2001 through the spring of 2002. Conducted by Statistics Canada and in collaboration with a number of Aboriginal organizations, the APS provides valuable information on the social and economic conditions of Canada's Aboriginal population. In addition to collecting data on Aboriginal identity, education, health, employment, income, housing, and mobility, the APS also collects data pertaining to Aboriginal languages (Statistics Canada 2008). The APS is a post-censal sample survey with a cross-sectional design. The target population includes adults and children residing in private dwellings throughout the country who are North American Indian, Métis, or Inuit, and/or are Treaty Indian or a Registered Indian as defined by the *Indian Act of Canada*, and/or are members of an Indian Band or First Nation and/or who have Aboriginal ancestry (Statistics Canada 2008). For additional information regarding the 2001 APS, see *Aboriginal Peoples Survey 2001: Concepts and Methods Guide* (Statistics Canada 2009a).

This study will examine ninety-five First Nations or reserve communities across Canada, where communities are defined in terms of Census subdivisions (CSDs). According to Statistics Canada, CSDs are "municipalities (as determined by provincial legislation) or areas treated as municipal equivalents for statistical purposes (for example, Indian reserves, Indian settlements and unorganized territories" (Statistics Canada 2009b); therefore, CSDs will serve as this study's unit of analysis. In an attempt to enable the publication of all community data, as well as maintain the confidentiality of respondents and the data quality standards of Statistics Canada, the APS sampling strategy involved focusing primarily on the First Nations reserves with *larger* populations. In addition, administering the APS primarily to reserves with large populations helps reduce expenses, as surveying small communities can be quite costly. Moreover, some reserve communities chose not to participate in the APS. As a result, the data collected from reserve

communities is not representative of the entire on-reserve population. Despite these limitations, both the census and the APS offer rich and valuable data that helps enhance our understanding of the social and economic conditions in First Nations reserve communities and of the needs of Aboriginal peoples.

Independent Variable: Community Language Skills

Drawing on data from the 2001 APS, community language skills are examined for ninety-five First Nations or reserve communities across Canada. A community language skills score is provided for each reserve by calculating the percentage of community members who understand or speak an Aboriginal language, with higher scores signifying a greater proportion. This information is retrieved from the language section in the APS and the question of interest is as follows: “Do you understand or speak an Aboriginal language?” Respondents answered either “yes” or “no.”

Dependent Variable: Community Well-Being

Since the onset of the 1990s, the United Nations Human Development Index (HDI) has served as one of the most widely used methods for measuring well-being (Cooke 2007). Commonly used as a means to assess well-being in both developed and developing nations, the HDI is also used to measure the well-being of Canada’s Aboriginal population. In addition, the Community Capacity Index (CCI), developed at the University of Western Ontario, also aims to assess the development and capacity of Indigenous populations (Maxim and White 2003). Influenced by both the HDI and CCI and with the support of Statistics Canada, the Strategic Research and Analysis Directorate of Indian and Northern Affairs has recently constructed the CWB, which serves as an appropriate methodology for the purpose of this study. Unlike the HDI, which measures well-being at national and regional levels, the CWB was developed specifically to measure well-being at the *community* level (O’Sullivan and McHardy 2007). As a result, the CWB enables a comparison between well-being in First Nations communities and well-being in other Aboriginal and non-Aboriginal communities in Canada. Intra-Aboriginal comparisons are of particular importance considering that well-being varies considerably across First Nations reserve communities (McHardy and O’Sullivan 2004).

The CWB is operationalized by examining education, labour force, income, and housing conditions as provided by census data. These four indicators of well-being are equally weighted and are used to develop a number between 0 and 1.0, which serves as a community well-being score, with higher scores signifying greater well-being. This study relies on existing data of CWB scores for each of the ninety-five reserve communities. The existing scores were generated using data from the 2001 census.

The education variable is determined by assessing “high school plus” and “university plus.” “High school plus” is operationalized as the proportion of a

community's population, twenty years of age and older, who have at minimum completed high school. It accounts for two-thirds of the education score. The remaining one-third of the education score is composed of "university plus," which is measured as the proportion of a community's population, twenty-five years of age and older, who have at least a bachelor's degree.

The labour force component of community well-being is determined by labour-force participation and employment rate. Labour-force participation is defined as the proportion of the community's population, aged twenty to sixty-five, that is involved in the labour force, while the employment rate is defined by the employed proportion of the total labour force, who are aged twenty to sixty-five.

The income component of the CWB is determined by calculating the income per capita of a community; this is generated by dividing the total income by the total population (McHardy and O'Sullivan 2004).

Finally, the housing component of community well-being involves assessing both housing quantity and quality. Housing quantity is operationalized as the proportion of the population living in dwellings that contain no more than one person per room, whereas housing quality is operationalized as the proportion of the population that reported living in dwellings that are not in need of major repairs.

Limitations of the Community Well-Being Index

Aboriginal language retention and its relation to community well-being appears to be a very complex area of study. Moreover, the development of a clearly defined methodology for measuring well-being within Aboriginal communities seems to be an equally complex and controversial task. Although the CWB appears to be an appropriate index for the purpose of this study, it is important to recognize some of its limitations and constraints. Despite aims to de-emphasize economic dimensions of well-being, the CWB assesses well-being largely on the basis of economic aspects, which may be deemed problematic and potentially Eurocentric, as Aboriginals' notion of well-being is less likely to involve a strong emphasis on material wealth. However, O'Sullivan and McHardy (2007) explain that the choices associated with the operationalization of well-being are minimal due to the relatively limited availability of data. Therefore, the index's inclusion of predominantly economic factors as indicators of well-being was primarily determined by the fact that only such data was available.

Physical, spiritual, and psychological health may more accurately capture the essence of Aboriginal well-being. The inclusion of life expectancy, infant mortality, and rates of suicide may be useful in measuring well-being within First Nations communities. Similarly, rates of crime and violence, as well as drug and alcohol abuse may be important indicators of Aboriginal well-being. Environmental conditions, such as water and air quality, may also be important to consider. However, the CWB's exclusion of these variables reflects a lack of data. Even in instances where data is available, it is important to recognize that part of

the challenge of constructing indices or models is to incorporate as few items as possible, yet maintain the greatest measurement potential, which makes it quite difficult for indices to include multiple elements of well-being.

Despite these limitations, the CWB serves as a remarkably useful tool in assessing well-being within Aboriginal communities. The examination of education, labour force, income, and housing conditions provides valuable insight into the social and economic well-being of First Nations communities. Although the CWB does not exhaust all elements of well-being, it certainly does capture highly important indicators of socio-economic development, perhaps enhancing our understanding of other important markers of well-being. Empirical support indicating an inverse relationship between socio-economic status and health is both abundant and highly consistent. Substantial evidence reveals that low socio-economic status has grave implications on health trajectories, significantly increasing the risk of experiencing disease, disability, and death (Mulatu and Schooler 2002). In addition, both cross-sectional and longitudinal research reveals that individuals of lower socio-economic status experience higher rates of psychological distress, including anxiety and depression (Fiscella and Franks 1997; Lewis et al. 1998). Moreover, socio-economic status is empirically shown to impact health by influencing specific health-related behaviours, such as sleep, exercise, diet, smoking, and substance abuse (Mulatu and Schooler 2002). Furthermore, considerable research has indicated that the negative relationship between socio-economic status and health is evident in both developed and developing nations (Adler and Ostrove 1999; Marmot 1999; Marmot, Ruff, Bumpass, Shipley, and Marks 1997; Robert and House 2000), as well as when studied at both the individual and community levels (Kawachi 1999; Kennedy, Kawachi, Glass, and Prothrow-Stith 1998).

More specifically, the social, economic, and health benefits of higher education are both profound and prolific. In addition to expanding employment opportunities and increasing individuals' ability to generate capital (Howe 2002; Maxim, White, Whitehead, and Beavon 2000), both functional literacy and higher education help develop necessary skills to effectively process information. Moreover, considerable research has indicated that individuals with higher levels of educational attainment are more likely to acquire important health information, as well as possess the essential skills and psychological control necessary to develop and maintain healthy behaviours and lifestyles (Seeman and Lewis 1995; Wickrama, Lorenz, and Conger 1997; Wickrama, Conger, Wallace, and Elder 1999). Examining income as a component of community well-being is also of immense importance, as income reflects the power to acquire basic and fundamental necessities, as well as access important resources with greater ease. In addition, examining housing quantity and quality is important in assessing community well-being, as poor housing conditions often reveal a lack of adequate community resources (McHardy and O'Sullivan 2004). Moreover, various scholars have argued that residing in overcrowded dwellings may poorly affect the health status of individuals (Gray 2001). Cumulatively, the components of the CWB serve as highly

Table 5.1: Descriptive Statistics

Description of Variable	<i>N</i>	Mean	SD
CWB Income	94	0.53	0.13
CWB Education	94	0.31	0.10
CWB Housing	94	0.69	0.13
CWB Labour Force	94	0.69	0.09
CWB Index	95	0.55	0.09
Community Language Skills	95	0.75	0.22

Table 5.2: Correlation Matrix of Community Language Skills and CWB and CWB Components

	CWB Income	CWB Education	CWB Housing	CWB Labour Force	CWB
Language	-0.32* (n = 94)	-0.57* (n = 94)	-0.54* (n = 94)	-0.33* (n = 94)	-0.53* (n = 95)

Correlation is significant at the 0.01 level (2-tailed)

important indicators of well-being, as education, income, labour force, and housing conditions reflect an overall expansion of choices, which in turn, has profound implications on the quality of life of individuals.

The aim of this study is to examine the correlation between Aboriginal language skills and well-being within ninety-five First Nations communities across Canada. A Pearson Product-Moment Correlation is run to assess the relationship between these two variables.

Results

Table 5.1 lists the descriptive statistics of the dataset used in this analysis. The CWB housing ($M = 0.69$; $SD = 0.13$) and CWB labour force ($M = 0.69$; $SD = 0.09$) component scores were higher than the CWB income ($M = 0.53$; $SD = 0.13$) and CWB education component scores ($M = 0.31$; $SD = 0.10$). As expected the average CWB score ($M = 0.55$; $SD = 0.09$) was between the two extreme sets of component scores. Across communities in the sample, the average proportion that could speak or understand an Aboriginal language was relatively high ($M = 0.75$; $SD = 0.22$). The variance across all variables was relatively similar with the exception of the community language skills variable, where the standard deviation was approximately double the others.

A Pearson Product-Moment Correlation was run to assess the relationship between community language skills and the CWB and its components. **Table 5.2** depicts the relationships in a correlation matrix form, and scatterplots have been provided to illustrate the relationships visually in **Figures 5.1 to 5.5** (pages 70-72). The results were as follows:

- Community language skills were negatively correlated with the CWB income component, with $r(92) = -0.32$, $p < 0.01$

Figure 5.1: Scatterplot of CWB Income Score and Community Language Skills Score, 2001, $r = -0.32$

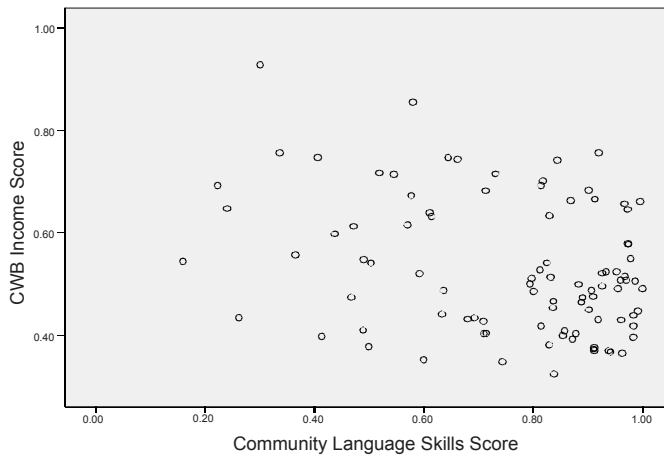
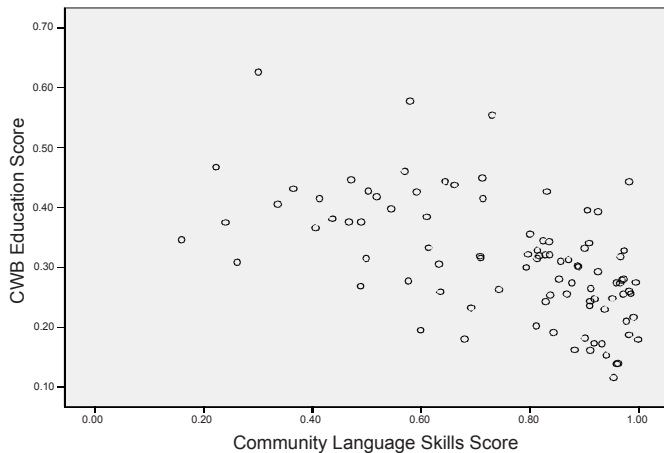


Figure 5.2: Scatterplot of CWB Education Score and Community Language Skills Scores, 2001, $r = 0.57$



- Community language skills were negatively correlated with the CWB education component, with $r(92) = -0.57, p < 0.01$
- Community language skills were negatively correlated with the CWB housing component, with $r(92) = -0.54, p < 0.01$
- Community language skills were negatively correlated with the CWB labour force component, with $r(92) = -0.33, p < 0.01$
- Community language skills were negatively correlated with the CWB, with $r(93) = -0.53, p < 0.01$

In summary, this analysis suggests that Aboriginal language is negatively associated with well-being at the community level. The relationships between

Figure 5.3: Scatterplot of CWB Housing Score and Community Language Skills Score, 2001, $r = -0.54$

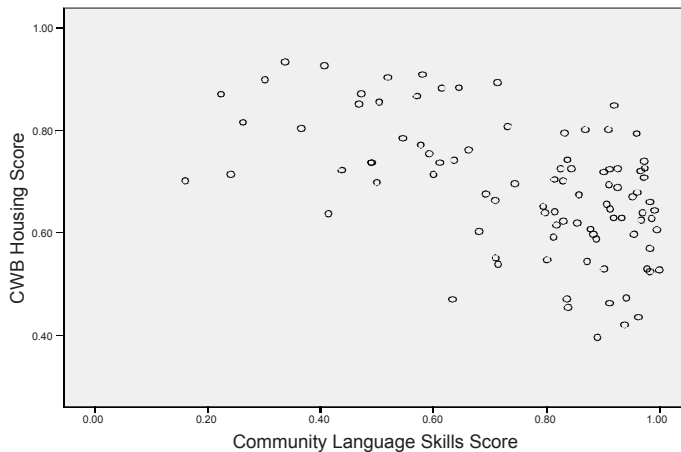
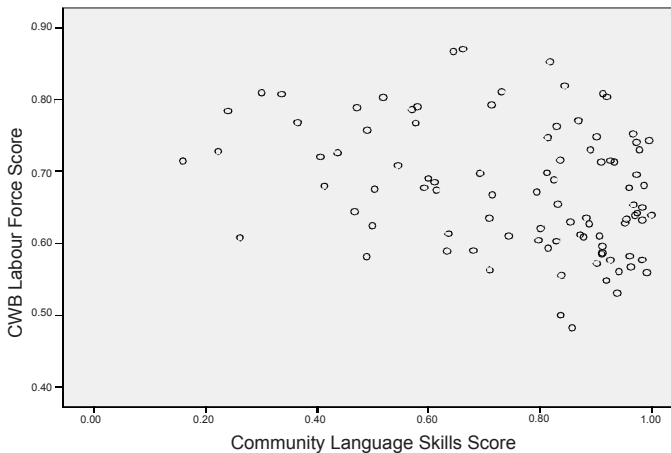


Figure 5.4: Scatterplot of CWB Labour Force Score and Community Language Skills Score, 2001, $r = -0.33$

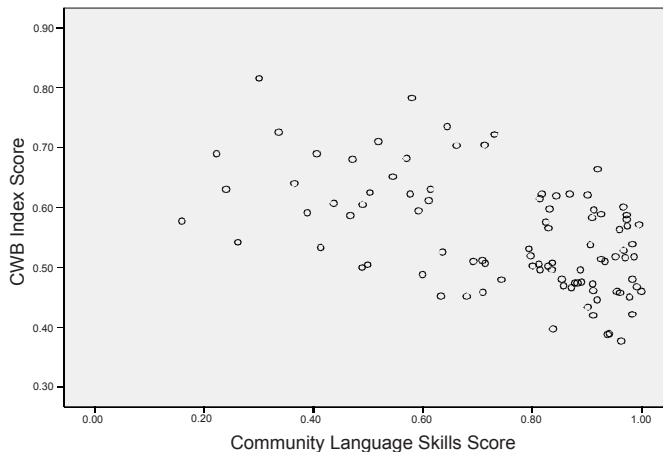


language skills and each individual component of the CWB are not, however, homogeneous. The strength of the association between language and well-being appears to be strongest for the education and housing components of the CWB, and less pronounced for the income and labour force components.

Discussion and Conclusion

This study suggests that the ability to understand or speak an Aboriginal language is negatively associated with well-being at the community level. In other words, as the proportion of community members who understand or speak an Aboriginal language increases, community well-being decreases. Conversely, as the propor-

Figure 5.5: Scatterplot of CWB Score and Community Language Skills Score, 2001,
 $r = -0.53$



tion of community members who understand or speak an Aboriginal language decreases, community well-being increases. This finding is consistent with the literature that illustrates the economic limitations and drawbacks of traditional language retention. Consider both the modernization theory and the ghettoization perspective as previously discussed. It is argued that retaining a traditional language is detrimental to a community's socio-economic status, as it interferes with the ability to participate competently in the dominant language and, therefore, also in the dominant spheres. Moreover, this study's finding may indicate that there has been a general devaluation of traditional languages within modern mainstream arenas by dominant cultures. Furthermore, considering what is believed to be an intrinsic link between language and culture, this notion of devaluation might also be extended to traditional cultural retention. Possibly a result of this devaluation, Aboriginal cultural capital, in the form of traditional language skills, may be non-applicable and non-transferable to the Canadian dominant/mainstream cultural, social, and economic fields. In fact, Aboriginal cultural capital may only yield beneficial outcomes if such capital is applied within the social and economic context of an Aboriginal community.

Although this study demonstrates that Aboriginal language skills and community well-being are negatively associated, we cannot necessarily conclude that the two variables are causally related. It is imperative to consider additional factors that may influence this negative association. Aboriginal language skills may be correlated or related to a third variable or set of variables; for example, geography. Isolation from high-density urban and market centres is recognized as a deterrent to economic investment and economic development. If traditional languages are more likely to thrive in isolated areas, we might expect a correlation between low economic development and language to exist, in which case,

isolation and not language may be the trigger of poor economic conditions. Further research is required to examine the influence of other variables, as well as to determine whether Aboriginal language skills and community well-being are in fact causally related.

Furthermore, while this study demonstrates that Aboriginal language skills are negatively associated with each individual component of the CWB Index, these relationships are not homogenous. The strength of the association between language and well-being appears to be strongest for the education and housing components of the CWB Index, and less pronounced for the income and labour-force components.

One possible explanation for the stronger association between Aboriginal language skills and education involves the notion that the ability to speak a traditional language may interfere with the ability to speak the dominant language. It is believed that those with less developed English skills will display lower levels of educational attainment. Furthermore, those with strong Aboriginal language skills may also display strong ties to their traditional culture, and, as a result, may feel alienated and isolated from the Western educational system in which both the dominant language and culture are so integral to the curriculum. Such feelings of alienation may discourage students from staying in school or pursuing higher education.

This study also reveals a strong negative association between Aboriginal language skills and the housing component of the CWB. In interpreting the strength of this association, it is important to consider that another variable correlated to language may in fact be triggering the poor housing conditions within First Nations communities. For example, Aboriginal language retention tends to be highest in more traditional communities, which tend to be located in more isolated areas with poorer housing conditions. Traditional language retention may be a good proxy for isolation. As a result, it seems logical to expect a strong association between language and housing; however, isolation and not language may be responsible for the poor housing conditions found within these communities.

In terms of explaining the negative but less pronounced associations between language and both the labour force and income components of the CWB, it is important to consider that, although not shown, the labour force and income scores for the communities in this analysis were highly correlated, with $r(94) = 0.83, p < 0.01$. This may be an indication that there are similar processes at work. Community labour-force outcomes and income depend on the economic success of a community which is often influenced by multiple factors, including the proximity to major economic centres as well as the natural resources of a community. These two factors alone can produce an economically viable community—in which labour-force opportunities are proliferated and income per capita is increased—despite high levels of cultural capital in the form of traditional language retention or low levels of educational attainment. In sum, the

negative associations between community language skills and both labour force and income may be less pronounced due to additional influencing factors.

Furthermore, interpreting the less pronounced association between language skills and the income component of the CWB can be challenging due to issues associated with using income in measures of well-being. Firstly, income per capita is problematic because it can vary based on the levels of transfer payments. In addition, income does not account for variations in the cost of living across communities, which may be highly problematic in understanding and comparing levels of community well-being. For example, some communities can have lower income per capita, yet greater well-being in terms of housing because they are located in areas where the cost of living is relatively low.

Despite this study's findings, it is imperative that conclusions relating to Aboriginal language and community well-being be drawn with caution. Although the CWB serves as a valuable tool in measuring well-being at the community level, its predominant focus on economic elements of well-being is certainly a major limitation. Both data collection and surveys should be expanded in an effort to capture multiple and more diverse dimensions of well-being, including Aboriginal physical, spiritual, and psychological health. In addition, it is important to recognize that this study's finding is inconsistent with substantial evidence illustrating community advantages of retaining traditional language skills, which include fostering a sense of cultural identity and developing community cohesion.

In closing, this study reveals a negative association between Aboriginal language skills and well-being at the community level. It is hoped that the findings of this study will spark future empirical research aimed at exploring this complex issue in greater depth. Although this paper provides insight into the issue of Aboriginal language retention and community well-being, it is important to reiterate that this study has tested only for an association; further research is required to determine whether Aboriginal language skills and community well-being are causally related. In addition, it is important to consider other variables when exploring this issue, as Aboriginal language retention per se may not be responsible for the poor socio-economic conditions within these communities; rather, there may be other factors, such as isolation, which may be the root cause. Moreover, because data used for this analysis was at the community level, we cannot assume that a negative association between Aboriginal language skills and well-being also holds true at the individual level. Future research should aim at examining this relationship at the individual level. Understanding Aboriginal languages and the impact they may have within communities is by no means an easy feat, yet this issue proves to be an exceptionally important avenue for exploration in that it may offer valuable lessons for policy development. Much more research on Aboriginal language and its relation to community well-being is required before any definitive conclusions or policy implications can be drawn.

Endnotes

- 1 Characterized by the Census as “the first language learned at home in childhood and still understood by the individual at the time of the census” (Norris 2006, 224), “mother tongue” is thought to be a strong indicator of language vitality and continuity.

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