ABORIGINAL IDENTITY DEVELOPMENT, LANGUAGE KNOWLEDGE, AND SCHOOL ATTRITION: AN EXAMINATION OF CULTURAL CONTINUITY

by

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Abstract

This dissertation elaborates on the concept of “cultural continuity” by exploring efforts on the part of First Nations communities to revitalize their cultures in ways that impact on the well-being of their young people. Previous work has demonstrated that although provincial Aboriginal youth suicide rates are alarmingly high, these rates vary significantly from one Aboriginal band to another. These earlier findings demonstrate that those bands that strive to connect to their cultural past and gain control of their cultural future were found to have fewer youth suicides. In fact, those communities that possessed all six previously identified markers of “cultural continuity” had virtually no suicides, while those bands that had none of these factors had an incredibly high suicide rate. Taking a lead from these earlier findings, this dissertation reports the results of three interlocking studies each of which is meant to extend and further evaluate the notion of cultural continuity. The first study demonstrates: (a) the same variability that characterizes band-level suicide rates is also present in similarly variable school drop-out rates; and, (b) that cultural continuity also accounts for an important part of this variation. The second study explores the role that community level knowledge of an Aboriginal language plays in the construct of cultural continuity. Evidence in hand demonstrates that knowledge of an Aboriginal language is associated with reductions in youth suicide rates, but not with school drop-out rates. The last study explores the changing ways in which Aboriginal youth express their own ethnic identity. Results from this 10-year longitudinal study indicate that the way in which Aboriginal youth change these ethnic declarations over time is related to their likelihood of dropping out of school. Taken as a whole, these studies demonstrate qualified support for the notion of cultural continuity and its association with social problems in Aboriginal youth, including both youth suicide and school attrition. Furthermore, these efforts lay the foundation
for future programs of research exploring possible associations between cultural continuity and other social problems.
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Co-Authorship Statement

The thesis author is the first author on all of the draft manuscripts that are included in this dissertation. For all three manuscripts, he was centrally involved in the identification and design of the research, performed all the analyses, and wrote the dissertation. Although the various co-authors identified below will contribute to the versions of these manuscripts that are eventually submitted for publication, these chapters, in their current form, are the intellectual property of the thesis author.

Michael Chandler supervised the research reported in all three manuscripts. Dr. Chandler was also instrumental in the identification and design of the research and provided extensive writing suggestions. He is included as a second author for the manuscripts included as Chapters II and III, and is a third author for the manuscript in Chapter IV.

Chris Lalonde is a third author for the manuscripts included as Chapters II and III. Dr. Lalonde is a key contributor to the formation of the concept of cultural continuity. He also compiled and provided the data regarding the cultural continuity factors and the youth suicide rates for each band in British Columbia.

Stephen Want is the second author for the manuscript in Chapter IV. Dr. Want provided conceptual support for the identification of the research in this chapter, as well as background research on the effects of ethnic identity and some writing suggestions.

Grace Iarocci is the fourth author of the manuscript included as Chapter II. Dr. Iarocci was involved in the identification and design of this research and provided background information about Aboriginals and school attrition.
Julie Desroches is the fifth author of the Chapter II manuscript. Ms. Desroches did some of the groundwork with "Edudata" in order to acquire the school attrition data. She also provided some background research regarding Aboriginals and school attrition.

Leigh Koopman, Erica Gehrke, and Jessica Flores are the fourth, fifth, and sixth authors, respectively, on the manuscript included as Chapter IV. These colleagues were involved in the identification and design of this research, provided background research for the literature review, and also provided some writing suggestions.
Chapter I
Introduction

This dissertation is about “cultural continuity” – the extent to which whole cultures succeed in both connecting to their cultural past and securing some control over their collective future. This construct is the central focus of a larger, decade-long program of research (Ball & Chandler, 1989; Chandler & Ball, 1990; Chandler & Lalonde, 1998, in press; Chandler, Lalonde, Sokol, & Hallett, 2003) concerned with mapping out how both individual persons and whole cultures solve the problem of persistence in the face of inevitable change. Like this larger project, my dissertation is also about British Columbia’s (B.C.’s) Aboriginal people and their efforts, in the face of centuries of assimilationist policies, to reconnect with both their cultural past and their culture’s future. In particular, this program of research is about working to integrate these two themes by exploring how matters of cultural continuity impact Aboriginal school drop-out rates and, more dramatic still, the variable rates at which Aboriginal youth undertake to end their own lives. To accomplish this, I have conducted three separate studies that are individually and collectively meant to expand upon the construct of cultural continuity – a concept that, while rich with theoretical promise, has, to date, been only thinly investigated.

Research regarding cultural continuity, reviewed in greater detail below, was inspired by early findings (Ball & Chandler, 1989; Chandler & Ball, 1990) indicating that the variable ways in which young people work to justify their own “self-continuity,” is strongly predictive of suicidal behaviours. Almost a decade later, Chandler and Lalonde (1998) expanded this earlier individually-focused work by hypothesizing that not only is self-continuity critical to sustaining

1 In Canada, the term ‘Aboriginal’ refers to all indigenous people. Aboriginals can be further separated into three groups: (a) The Inuit, indigenous people of the North; (b) First Nations, who are indigenous people, other than the Inuit, who belong to recognized bands; and, (c) The Métis, who, in the first instance, are descendents of European fur traders and First Nations women.
a sense of personal identity, but that analogous community-level efforts to own a collective past and to commit to a collective future (i.e., cultural continuity) are also predictive of suicide at the community level (Chandler & Lalonde, 1998). In carrying out this research, these investigators identified six variables that were taken as indicators of the efforts of individual First Nations communities in B.C. to establish meaningful links with their cultural past and future. Their results strongly indicate that bands with more of these cultural continuity factors have dramatically lower suicide rates than those communities with few or none of these factors. Although the work of Chandler and his colleagues has so far featured suicidal behaviour as a primary outcome measure, there are good reasons to suspect that suicide is not the only negative outcome associated with a loss of cultural continuity. In particular, because self and cultural continuity are reasoned to be foundational to any serious sense of connectedness to one’s past, and instrumental to any serious commitment to one’s as yet unrealized future, it would seem to follow that anything that impairs cultural continuity should undermine a wide range of other markers of general community well-being. The three studies that make up this dissertation are meant to help explore this prospect.

In brief, the first of these studies is outcome-oriented, and investigates whether cultural continuity, in addition to serving as an indicator of youth suicide rates, is also predictive of school drop-out rates. The second study aims to further elaborate the notion of cultural continuity by exploring how another potential indicator – knowledge of one’s indigenous language – relates to the previously identified markers of cultural continuity, and to the outcome measures of both youth suicide and school drop-out rates. Finally, a third study examines a still further way that individual Aboriginal youth might manifest their commitment to their culture, and how this indicator of ethnic identification is related to school attrition. These studies are
described below in three separate (stand-alone) chapters – manuscripts intended as three separate journal submissions. This structure follows the guidelines published by the Faculty of Graduate Studies for manuscript-based dissertations – guidelines meant to facilitate the preparation of manuscripts for publication. This format, despite its obvious advantages, does, nevertheless, introduce some unavoidable redundancy by duplicating some of the same background materials and methods common to these studies.

Before turning to these three studies, I will first describe the prior research and theory that support the notion of cultural continuity. Following this literature review, I will then go on to consider how cultural continuity might also be related to other social problems, such as school drop-out rates. Finally, the three studies included in this dissertation will be briefly described, followed by some conclusions about what these projects, when taken together, might suggest about the potential of this construct to predict still further social problems. In general, all three of these studies, like all the work regarding cultural continuity to date, can be considered to be specific examples of a broader research enterprise regarding risk and resiliency. Like that general field of research (see Cicchetti & Rogosch, 2002; Gutman, Sameroff, & Eccles, 2002; Luthar, in press), the work reported here seeks to investigate how adverse consequences (in this case, youth suicide or school attrition) can be avoided with the use of ‘protective factors’, factors which, if in place, provide a environment where fewer youth are killing themselves or dropping out of school.

Building a Case for Self-Continuity

In order for the notions of both self and culture to have any understandable meaning, they must be understood to somehow persist through time. That is, both selves and cultures must be
envisioned as identifiable and re-identifiable in spite of inevitable change. This argument – which is foundational to both this dissertation and the research on which it was predicated – dates back at least as far as Aristotle, who asserted that “animals differ from what is not naturally constituted in that each of these [living] things has within it a principle of change and of staying unchanged” (cited in Wiggins, 1980, pp. 88-89). Because their existence presupposes a certain measure of sameness, and because (given their temporally vectored nature) they are necessarily subject to change, both selves and cultures are necessarily rooted in a common paradox – a paradox that I argue, in the good company of many classic and contemporary philosophers (Cassirer, 1923; Harré, 1979; James, 1891; Locke, 1694/1956; MacIntyre, 1977; Parfit, 1971; Strawson, 1999; Taylor, 1988; Wiggins, 1980), must somehow be resolved if notions of self or culture are to have any meaning. If this were not so, if past and future identities could not be connected in time, then selves and societies as we know it would cease to function. Notions of personal and collective obligation and responsibility would be impossible to maintain, given that any conceivable moral order requires some system for holding people accountable for their own past actions (Locke, 1694/1956). Furthermore, making plans for the future would be a waste of time, for, as Unger (1975) put it, there would be no way to ensure that people would be the inheritors of their own just deserts, or otherwise reap the benefits, or bear the consequences, of their own planful efforts. As Chandler and his colleagues put it, “Why, if all this were not so, would anyone stop smoking, or go on a diet, or bother to get an education? We forego short-run pleasures for long-term gain because, among other things, we find it reasonable to suppose that, when all was said and done, the knowledgeable, thin person with healthy lungs would somehow still be us” (Chandler et al., 2003, p. 5).
Backed by such classic claims for self-continuity, Chandler and his colleagues (Ball & Chandler, 1989; Chandler & Ball, 1990; Chandler, Boyes, & Ball, 1987) have argued that, in order to have any viable sense of self, ordinary people (and not just philosophers) must somehow work out their own ways of justifying what makes them the self-same person in the face of inevitable change. To investigate these folk conceptions of self-continuity, samples of adolescents were asked to respond to a story (and also a situation about themselves) involving radical personal change. In these studies, abbreviated versions of classic stories of character development (Les Miserables and A Christmas Carol) were presented to participating youth – stories in which the main characters (Jean Valjean or Ebenezer Scrooge) are seen to change so much that they become practically unrecognizable. Presented with these stories, and the fact that Valjean and Scrooge change as much as they do, participants were then asked to justify how these characters could be still be considered the self-same person despite all these changes. Following this, they were also asked to reflect on how much they themselves have changed over the last 5 years, and to respond to similar questions about their own self-continuity. Their transcribed responses indicated that these adolescents commonly offered one or another of a small set of qualitatively different ways of justifying how they and others might still be considered the same person in the face of radical change. Subsequent research involving interviews with more than 200 adolescents (Chandler et al., 2003), found that young people's reasoning about self-continuity could be reliably coded as expressions of one or the other of two general warranting strategies, each of which supported five distinct (and more or less sophisticated) response styles. The details of this rich coding scheme aside (see Chandler et al., 2003), the important point to be taken from these findings is that even though some of the answers offered were quite simplistic, practically all of those interviewed over the course of
several studies had some workable means of resolving the paradox of personal sameness within change.

The sole exception to this general rule, and the only identifiable group to date to be at an utter loss to justify their self-continuity, are suicidal youth. In the first study in which they probed adolescents’ conceptions of self-continuity, Ball and Chandler (1989) compared the responses of suicidal youth (represented by psychiatrically-hospitalized adolescents who were on active suicide watch) with the responses of non-suicidal youth (represented by both hospitalized youth who were not known to be suicidal, as well as a group of non-hospitalized, matched controls). Although practically all of the youth in the non-suicidal groups were able to offer some kind of justification for their convictions about self-continuity (just like the approximately 200 youth who have been otherwise interviewed), almost all of the suicidal adolescents in this study proved unable to provide any rationale to warrant their continued identity. Moreover, these adolescents were just as verbal as the two control groups, and just as depressed (according to their scores on the Beck’s Depression Inventory) as the hospitalized comparison group. Nevertheless, they, unlike their non-suicidal counterparts, typically were unable to offer any personally acceptable reason why they or someone else would still count as the same person in the face of radical change. To be clear, it is not that these adolescents were rated as giving less sophisticated answers compared to the other two groups – they simply were unable to offer any personally acceptable answer at all. Ball and Chandler hypothesized that this lack of connection to one’s past and future could make it that much easier to reach the decision to bring an end to one’s own life. That is, if you do not feel meaningfully connected to the person you are en route to becoming, then there is less reluctance to take the drastic step of choosing to end your own
life. Without a workable sense of self-continuity, you simply fail to appreciate that the dead person in the future would be you.

While this hypothesis is both interesting and promising, the data provided by Ball and Chandler (1989) do not preclude the possibility that the lack of self-continuity is nothing more than a covariate of suicide and not a partial cause. Indeed, it is possible that the lack of self-continuity is only a consequence of surviving a suicide attempt, because, obviously, this research could not have been conducted with those who managed to successfully kill themselves. The next section considers how the relation between self-continuity and suicide has been modelled, as well as evidence that supports the hypothesis that self-continuity, more than simply being a happenstential covariate, plays an instrumental role in actually accounting for youth suicide.

Self-Continuity as a Moderator Variable

In attempting to propose a causal model of suicide, it is difficult to sort out exactly what, in this instance, is meant by a ‘cause’. By definition, suicide is caused by the person who commits it – using whatever lethal means he or she happens to choose. To call the gun or the knife or the drugs the ‘cause’ of a given suicide may be technically correct, but it is not especially pertinent. Even when better transformed into a psychological question (i.e., what brings somebody to actually choose to end their own life?), talk of causes still seems a little murky. There are many different types of dismal circumstances or traumatic events that one could potentially point to, most often in a post-hoc fashion, to try to explain why a person would take the drastic action of killing themselves. The unfortunate truth, however, is that dismal circumstances and traumatic events are exceedingly common.
Fortunately, most people who suffer such terrible experiences do not even attempt to commit suicide. As Chandler (2005) points out, suicide is extremely rare. For whatever reason, humans appear especially reluctant to end their own lives, and incidence rates of 10 or 20 per 100,000 are considered to be epidemic. Similarly, while various depressing or traumatic happenings may "trigger" suicidal thoughts, such thoughts are, in fact, quite common (Chandler, 1994). Few people who suffer such suicidal thoughts, however, actually follow through with serious suicidal behaviours. Standing the problem on its head, the real mystery, then, is perhaps not why the rare person commits suicide, but, rather, why more people do not. Common tragedies aside, it would seem that, for most people, suicide is not really a viable option. As such, although it may be technically correct that desperate circumstances play a causal (or triggering) role in suicide, this fact does little to advance our understanding. Rather, it seems more important to try and work out what it is that makes a particular person (in contrast to the vast majority who soldier on) consider suicide as a real or viable option.

The model being laid out here, and the one implicit in the work of Ball and Chandler (1989), maintains that a lack of self-continuity leads to a special vulnerability regarding suicide—that is, the idea of killing oneself is somehow more palatable if you do not feel meaningfully connected to your future self. This is not the same thing as saying that the lack of self-continuity causes or even solely predicts being suicidal. That is, many people could (and, we argue, most people do) experience transitional moments when they feel unable to warrant their self-continuity, and yet, they do not automatically become suicidal. Instead, during these moments of transition, people are hypothesized to become especially vulnerable to the possibility of choosing suicide as a "solution" to their current problems. In other words, if some triggering event induced suicidal thoughts while someone was in this vulnerable state—a state of lacking a
workable sense of self-continuity – then, this model suggests, he or she would be more likely to commit suicide. In this sense, the ability or inability to justify one’s self-continuity can be seen as a moderator – an interaction between events that might trigger suicidal thoughts and a lack of self-continuity that together serve to make one consider suicide a live option.

This model notwithstanding, the results presented by Ball and Chandler (1989) still do not rule out the possibility that a lack of self-continuity is simply associated with suicidal thoughts rather than interacting with them. Nevertheless, there are two main arguments that support the contention that self-continuity plays an instrumental role in suicide. First, the construct of self-continuity provides a conceptual tool that can be used in answering the question posed above: why is it that more people do not commit suicide? If self-continuity is as central to our sense of personhood as philosophers have traditionally claimed it is, then it is perhaps understandable why it would be very difficult to actually choose to end one’s life. It would also follow that a disruption in one’s sense of self-continuity would make suicide more likely. In short, because self-continuity holds the potential of both explaining why people do and why they do not commit suicide, the prospect that self-continuity is a mere consequence of suicidal thought is made more problematic.

Second, Ball and Chandler (1989) argue that a lack of self-continuity also has the promise of explaining why suicidal behaviours are a special problem in adolescence. Not only are suicide completion rates in adolescence known to be about 5 to 20 times those of adults (Burd, 1994), the rate of adolescent suicide attempts are also calculated to be 20 to 200 times the rate of any other age group (B.C. Vital Statistics, 2001). Moreover, demographic evidence also suggests that the vast majority of suicidal adolescents do not go on to be suicidal adults (Ennis,

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2 Suicide completion rates are also known to spike in the elderly to nearly the same level as adolescents, but suicide attempts are far more numerous in the adolescent age group.
Barnes, & Spenser, 1985; Maris, 1981). Suicide, then, seems to be especially problematic for adolescents, and any serious psychological account of suicidal behaviour has to somehow explain why this behaviour spikes in adolescence and then subsides in adulthood.

Suicidal behaviour may be predominantly an adolescent problem because, as Ball and Chandler (1989) argue, adolescence is the time where one is forced to grapple again and again with how to warrant a sense of personal persistence through time. Coming to a mature understanding of one’s self-continuity has been shown to ordinarily occur through a sequence of as many as five stages of increasing sophistication and complexity (Chandler et al., 2003). The inevitable consequence of this is that, though people spend most of their time in one stage or the other, there are as many as four transitional periods between these stages. During these transitions, one’s earlier strategies for solving the problem of personal persistence are no longer judged to be adequate, and, at the same time, one has yet to settle upon a suitable replacement strategy (presumably one based on the next stage). As described above, adolescents who experience these moments of transition are vulnerable – caught, in some way, with both feet temporally off the ground – and, in such moments, they are briefly at a loss to explain their own or other’s self-continuity. As such, when fate conspires to bring about some traumatic event during these transitional windows of vulnerability, adolescents (it is argued) find suicide more of a real prospect than it would otherwise be. Adolescents, in general, would be more susceptible to these vulnerable moments because the process of progressing through these increasingly sophisticated warranting strategies takes place primarily during the adolescent years. In other words, problems in warranting self-continuity are a routine part of the teenage years, and this fact could help to explain why suicide is so often an adolescent problem.
These arguments, while not conclusive, support the notion that self-continuity is instrumental in understanding youth suicide. Subsequent research has built on this promising perspective and has provided empirical support for the model outlined above. In addition, work that followed from the Ball and Chandler (1989) study led to the formulation of the concept of “cultural continuity”, the main focus of this dissertation, and the subject of the next section.

**Cultural Continuity**

The preceding sections were intended to make the case that in order to qualify as a self, one must be able to somehow justify one’s personal persistence in time. That is, it was argued that the very nature of selfhood requires that, regardless of personal transformations and changing circumstances, one must somehow find the conceptual means of counting oneself as one and the same numerically identical entity. Other ordinary objects, while having a continuing identity of a sort, can stop being what they are (e.g., a chair) if they have suffered a sufficiently drastic transformation (e.g., a chair is disassembled, and reassembled as a small table). It is, however, constitutive of selves that they endure all such transformations (except perhaps death, or some consciousness-switching experience imagined only in science fiction) and continue to be counted as somehow one and the same individual through time. Nevertheless, though selves are different from ordinary objects in this way, whole cultures are much more like selves than they are like artifacts or other things of a “natural kind”. Cultures too have a past and a future, are constantly changing, yet still need to be understood as somehow persisting through time. Without imagining that cultures are just like selves, or just selves writ large, it is nevertheless constitutively true that cultures must have a temporal dimension, and consequently need to be understood as inherently temporally vectored. How exactly “cultural continuity” might be
related to "self-continuity" is not entirely clear. Still, if we assume that people's cultures are important to them, it also follows that, despite inevitable change, these cultures must also be understood to be both firmly rooted in a past and as having a viable future. By implication, cultural continuity would need to be psychologically important, and, as in the case of self-continuity, circumstances that work to undermine the persistence of one's culture would be expected to have dire personal and social consequences.

Armed by the results of Ball and Chandler (1989), and with the idea that continuity could be predictive of suicidal behaviour at the cultural level, Chandler and Lalonde (1998) investigated whether differences in cultural continuity were related to suicide rates among British Columbia's First Nations people. This population was chosen for three main reasons. First, Aboriginal people in Canada, as elsewhere, have been subjected to policies of alienation, disenfranchisement, and assimilation that have ravaged their culture over the last few centuries. Under such shameful circumstances, it would not be surprising if Aboriginal cultures had suffered painful breaks from their past and uncertainties over their future – unfortunately, just the kind of situation guaranteed to rupture a people's cultural continuity. Second, Aboriginal people in Canada, like their counterparts in many other places, suffer from one of the highest suicide rates of any culturally identifiable group in the world (Carsten, 2000; Kirmayer, 1994; Resnik & Dizmang, 1971). That such elevated rates of suicide occur in just those groups that you would expect to have problems with cultural continuity seemed worthy of study.

More to the point of their study, however, is that while Aboriginal suicide rates are generally high, Chandler and Lalonde (1998) found that this is not uniformly true across all the different First Nations communities, or bands, in B.C. In their analysis of epidemiological data provided by the Coroner's office, Chandler and Lalonde found that suicide rates vary quite
dramatically from one band to another. Almost half the bands in B.C., for example have very few suicides while other bands have suicide rates as much as 800 times the national average. Numbers such as these easily put the lie to generic actuarial artifacts about the propensities for self-harm among Aboriginal persons as a whole. That is, despite provincial or national averages that are meant to show that youth suicide rates are especially high among Aboriginal youth, it is obviously a mistake to lump or batch process all of these diverse communities into one undifferentiated whole. Across B.C., 14 different and mutually uninterpretable Aboriginal languages are spoken and used in the context of different cultural practices and distinctive spiritual beliefs. Although the usual amalgamated results – results that neglect well-understood cultural differences – are, no doubt, useful in dramatizing an evident social problem, it is also true, given the enormous cultural, geographic, linguistic, and spiritual diversity that mark these communities, that such summary statistics are, at best, actuarial aggregations that fail to accurately describe any real band or Aboriginal community.

While there are, undoubtedly, underspecified individual differences that predict the likelihood that a given young person will or will not take their life, the variability in suicide rates across B.C.'s numerous bands raises the prospect that some set of community-level factors might also help to explain the variable incidence of these social problems. While many possible candidate variables could be imagined to predict some of this variability (e.g., socio-economic status (SES), urban vs. rural, extent of government support), Chandler and Lalonde (1998) hypothesized instead, given the results of Ball and Chandler (1989), that those bands that exhibited more cultural continuity would have fewer youth suicides. Again, the researchers did not visualize cultural continuity as a direct cause of suicide, but instead as an index of the relative vulnerability to suicide. In other words, cultural continuity was seen to provide support
for a strong sense of self-continuity and under cultural circumstances where that support has
gone missing, it was again predicted that suicide would become a more viable option than it
might otherwise be.

In order to test whether the variability in suicide rates between various Aboriginal bands
was related to cultural continuity, Chandler and Lalonde identified six community-level variables
intended to serve as indicators of cultural continuity. These six “cultural continuity factors”
were:

1) self-government;
2) community control over police and community protection services;
3) control over health services;
4) control over educational services;
5) whether land claim negotiations had been initiated; and,
6) the existence of a community cultural centre.

These six variables were taken to be indicators of the efforts of individual Aboriginal
communities to establish meaningful links with their cultural past and future. Some of these
factors (e.g., self-government and control over various community services) reflect increased
administrative control over the future path their culture will take. Other factors (e.g., existence
of a community cultural centre) better reflect ways that bands are attempting to promote and
reconnect with their traditional cultural past.

Each of these protective factors are meant to indirectly tap an aspect of cultural continuity
which, taken together, can be used to compute a general index of a given band’s level of cultural
continuity. Each of the approximately 200 bands in B.C. was coded as either possessing or not
possessing each of these cultural continuity markers. When these markers were summed, each
band received a score of 0 through 6 representing how many cultural continuity factors they possessed. As hypothesized, those bands that have all six cultural continuity factors were shown to have virtually no suicides, while those communities that have none of these factors were found to have dramatically higher suicide rates. For all of those bands that fall between these two extremes, the more cultural continuity factors a band has, the lower its suicide rate proved to be (see Figure 1.1).

![Figure 1.1. Suicide rate by number of cultural continuity factors present. From Chandler et al. (2003).](image)

Although these findings are quite strong, they are still correlational. Like the research regarding self-continuity and suicide, these results do not, by themselves, rule out the possibility that the factors chosen to index cultural continuity simply co-vary with other social indicators –
indicators that are themselves more directly related to suicide. In order to discount these possible alternative hypotheses, Chandler and Lalonde (1998; Lalonde & Chandler, 2005) also examined the relations between suicide in B.C.'s Aboriginal communities and two likely candidate constructs: (a) the population density of a given community; and (b) the SES of the band. To cast as wide a net as possible, Lalonde and Chandler quantified SES in four different ways: (a) percentage of band income derived from government transfers; (b) labour force participation rate; (c) unemployment rate; and, (d) distribution of skill levels in the labour force. No relation was found between suicide and any of these variables – a finding that supports Chandler and Lalonde's (1998) original contention that it is cultural continuity, and not other social indicators, that accounts for the variation of youth suicide rates across B.C.'s Aboriginal communities.

These results make an appealing case that cultural continuity is related to the problem of youth suicide. Furthermore, this research suggests that, not only is a lack of self-continuity evident in the thinking of those individuals who have recently survived a suicide attempt, but similarly that a lack of cultural continuity, measured this time at the community level, also predicts variation in suicide rates across Aboriginal bands. These strong findings notwithstanding, cultural continuity remains a relatively untested concept with the promise of predicting other social problems thought to depend on temporal connectedness. This potential, as well as a need for further validation, is what inspired the research presented in this dissertation.

Widening the Footprint of Cultural Continuity

The research summarized above strengthens the argument that folk conceptions of how we are linked to our past and future are psychologically important, and, in no small part, related
to suicidal behaviour. There is no reason to suppose, however, that self-continuity or, in the case of this dissertation, cultural continuity should be predictive of only suicide. Self-continuity is argued to be "constitutive" of being a self and, by implication, psychologically central to one's identity. As such, it seems plausible that a breach in self-continuity might be related not only to suicide, but also to many other psychological matters. The same argument holds for cultural continuity. That is, it seems likely that a community that has lost a connection to its cultural past and future might suffer from a host of other social problems in addition to heightened suicide risk. In spite of the promising results presented above, however, possible relations between cultural continuity factors and other outcome measures have yet to be investigated. In fact, with the sole exception of a currently in-progress replication of this earlier work (Chandler & Lalonde, in press; Lalonde & Chandler, 2005), no other study has examined cultural continuity in any context. This dissertation begins to address this shortfall by expanding and testing the construct of cultural continuity in three different ways. These three studies are previewed below.

The first of these studies investigates whether cultural continuity is predictive of school drop-out rates among B.C.'s First Nations bands. School attrition was chosen for this study because it seemed to be similar to youth suicide in key ways that appear conceptually related to cultural continuity. First, early school leaving, like youth suicide, is known be especially common among Aboriginal youth. Second, dropping out of school, not unlike killing oneself, is seen to foreclose on the future, and, from the perspective of the youth in question, it should also be foreseeably bad. Although suicide is obviously the ultimate case of acting against one's future self-interest, it also seems highly improbable that a young person would see leaving school as something that would lead to more positive life outcomes. That is, while we often make life decisions that turn out, in hindsight, to be wrong, some things, like committing suicide
and dropping out of school, do not need the wisdom of hindsight to advise against them. People who are disconnected from their past as well as their future, however, might not fully appreciate that the person with the substandard education would, in the future, be them, and so might prove more likely to make the foreseeable error of leaving school. As such, Chapter II describes a study that combines the same cultural continuity data developed by Chandler and Lalonde (1998) with a new longitudinal dataset provided by the B.C. Ministry of Education. With these data in hand, this study follows a cohort of Aboriginal youth from grade 7 to their scheduled high school graduation year and investigates whether the same cultural continuity factors that predicted band differences in suicide rates also predict band differences in school drop-out rates.

The second study examines how well indigenous language knowledge serves as a further indicator of cultural continuity. The cultural continuity factors used by Chandler and his colleagues have not been seen to be exclusively definitional of cultural continuity, but instead represent only a sample of a potentially much larger set of such proxy measures. In a perfect world, one would create a roster of purpose-built measures of cultural continuity and somehow administer them to groups representative of all of B.C.’s 200 Aboriginal communities. Instead, Chandler and his colleagues relied on a select set of the already available measures reasoned to be indirect or proxy indicators of cultural continuity. One consequence of this measurement strategy has been that the previously employed cultural continuity factors are open to the criticism that they may not actually measure cultural continuity, but instead tap some other construct. For example, it could be argued that the current list of cultural continuity factors better reflect variations in local control or community empowerment. From this perspective, local control over issues of civic life, separate from anything to do with culture, is what provides the helping hand that leads to healthier communities with fewer suicides. Although not all of the
cultural continuity factors easily admit to such a competing interpretation, most of them could be classified as measures of administrative control. By adding a measure of indigenous language knowledge as a prospective cultural continuity factor, the research reported here offers another potential indicator that is not easily subsumed under the rubric of administrative control. Furthermore, a factor that reflects a band's knowledge of their Aboriginal language, it could be argued, is more directly tied to culture than some of the other indicators and, as such, should measure another part of the variance of cultural continuity. To test this hypothesis, Chapter III investigates whether indigenous language knowledge adds predictive power to the already available set of cultural continuity factors, both in the case of youth suicide and school attrition.

The third study represents an effort to examine how cultural continuity is represented at the level of the individual. Though cultural continuity has been operationalized as a property descriptive of entire communities, it is obviously individuals within such communities who are either killing themselves or dropping out of school. There is necessarily some kind of mechanism, as yet unspecified, that allows the presence or absence of a community's strong connection to its cultural past and future to reach down to the mental lives of individual community members. As such, Chapter IV investigates differences in Aboriginal youths' declarations about whether or not they are Aboriginal, and how patterns of these declarations – viewed across a 10-year study window – can serve as possible indicators of how these youth relate to their culture through time. Although one might expect that an Aboriginal student, when asked every year whether he or she was “of Aboriginal ancestry”, would consistently give the same answer, this, as it turns out, is frequently not the case. Instead, almost half of the students in this large study cohort of over 4000 Aboriginal adolescents changed their mind about their Aboriginal status at least once. Chapter IV examines the different patterns of ethnic
identification responses given by Aboriginal youth and investigates whether these different patterns predict different drop-out rates. These response patterns are hypothesized to reflect different ways in which cultural identity might affect their commitment to their own as yet unrealizable future.

Cultural continuity, if it is to live up to its initial promise, should be an indicator of general community well-being. The three studies described below begin to test the limits of the utility of this construct.
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Chapter II
Cultural Continuity as a Determinant of School Retention Rates Among British Columbia’s First Nations Youth

In Canada, as in many other countries with indigenous minorities, Aboriginal youth generally suffer markedly higher school drop-out rates than do their non-Aboriginal counterparts. Recent federal estimates set this rate at 40% – significantly higher than the 16% rate reported for the general population (Applied Research Branch, 2000). In British Columbia (B.C.), where the research on which I will report was conducted, Cameron (1990) has surveyed 36 secondary schools and similarly found that those with higher Native enrolment had significantly higher drop-out rates. More alarming still, data from the provincial Ministry of Education (2001) indicate that in 1997 only 34% of B.C.’s Aboriginal students received their high school diploma, compared to 74% of non-Aboriginals – a figure that improved only slightly in the year 2000, during which 39% of Aboriginals, and 77% of non-Aboriginals, graduated from high school. This disturbingly low rate of Aboriginal school completion signals that, whatever the advances in our educational practices, considerably less than half of all Aboriginal youth are likely to be on hand to fully profit from them. Worse still, Aboriginal adolescents who drop out of school: (a) are also known to experience higher rates of depression, suicide, and other emotional difficulties; (b) are more likely to be involved in high-risk behaviours such as substance abuse, violence, and sexual promiscuity; and, (c) are more prone to being incarcerated (Applied Research Branch, 2000; Cummins, Ireland, Resnick & Blum, 1999; First Nations Education Council, n.d.; Jessor, Turbin, & Costa, 1998; Tonkin et al., 1999; van der Woerd & Iarocci, 2002).

The research detailed below addresses the issue of high Aboriginal drop-out rates, but comes at this troubling matter by a somewhat circuitous route. It does so by drawing upon a
recent set of findings arising out of a related program of research into the problem of youth suicide – another critical problem facing Aboriginal youth. Before briefly reporting on some of these earlier findings, however, and before exploring their relevance to the present efforts to better understand the problem of high Aboriginal drop-out rates, it is important to first ask whether we are seeing the problem of Aboriginal drop-out rates in the correct way.

Actuarial Slights of Hand

In order to properly approach the problem of early school leaving among Aboriginal youth we need to first begin by determining whether the widely reported summary figures – figures that suggest that fewer than half of all Aboriginal youth in B.C. complete high school – are, in fact, actually descriptive of any naturally constituted group of young Aboriginal people. While all of the actuarial data pointed to above support the conclusion that, when viewed in the main, Aboriginal youth do drop out of school at shockingly high rates, there is no reason to automatically suppose that this degree of early school leaving is uniformly true across all Aboriginal communities or groups. In B.C., as elsewhere, such summary data are ordinarily collected by collapsing across the almost 200 Aboriginal “bands” that make up the province’s widely scattered Native population. Some of these Aboriginal youth and their families live on the seashore, others in the mountains. Some live in or near large cities while others live in remote settings. Many live on reserves, but most do not. Across the province, 14 different and mutually uninterpretable Aboriginal languages are spoken and used to describe different life circumstances, different cultural conditions, and separate spiritual beliefs. Although the usual amalgamated results – results that gloss over these differences – are, no doubt, useful in dramatizing an evident social problem, it is also true that, given the enormous cultural,
geographic, linguistic, and spiritual diversity that marks these communities, such summary
statistics are, at best, actuarial artifacts that might (as the data presented here will quickly
demonstrate) fail to accurately describe any real band or Aboriginal community.

Some recent, if scattered, B.C. Ministry of Education data suggest just how variable
Aboriginal drop-out rates may actually be. To choose an extreme example, in 1999, Aboriginal
youth who resided in the (rural) Stikine school district had only a 5% graduation rate while those
living within the bounds of the (more urban) Richmond school district had a 66% graduation rate
- a success rate not remarkably different from that of the non-Aboriginal population (B.C.
findings hint at the variability of Aboriginal drop-out rates, school districts are themselves
simply administrative conveniences, the boundaries of which are generally arbitrary, relative to
any culturally meaningful way of parsing the province's heterogeneous Aboriginal population.

In the hope of proceeding less arbitrarily, my colleagues and I have chosen to look
instead at how drop-out rates vary across the almost 200 Aboriginal 'bands' in B.C. - bands that
constitute real communities with a shared language, geography, historical ties, and governance
systems. By explicitly focusing on how various individual communities and the "cultural
continuity factors" that characterize them might influence drop-out rates, I do not want to deny
the range of individual-difference variables that may also help to explain whether or not a given
Aboriginal youth decides to stay in school. That is, the band-level approach adopted here should
not be seen to be in competition with such individualist accounts; it simply aims to explain a
different part of the variance. From a public policy point of view, however, it is arguably more
practical to promote changes aimed at ameliorating community-level factors, as opposed to
individual-level variables, simply because it can be more difficult to separately identify and target individuals with the appropriate interventions.

Having justified choosing to look at Aboriginal drop-out rates at the band level, I will next turn to a different but related program of research concerning Aboriginal youth suicide — work that has served to shape the choice of those specific community-level factors to be used as predictor variables in the present analyses. Recent findings from this second stream of work show interesting parallels between the patterns of Aboriginal school drop-out and Aboriginal youth suicide rates. That is, as with early school leaving, Aboriginal youth are generally known to kill themselves at disproportionally high rates — in fact, at rates that are about 7 to 10 times the national average. It is also the case that the actual suicide rate for individual bands varies dramatically across B.C. In fact, within a 6-year window between 1987 and 1992, more than half of the bands in B.C. had no youth suicides, while others had youth suicide rates as much as 800 times the national average (Chandler & Lalonde, 1998).

In an attempt to explain this variability in the youth suicide rates of various Aboriginal bands, Chandler and Lalonde (1998) hypothesized that communities with more of a tie to their cultural past and future would have lower suicide rates, and those with less “cultural continuity” would have higher suicide rates. In order to better understand this hypothesis, the sections that immediately follow aim to describe what is meant by this notion of “cultural continuity” — first by reviewing research regarding the related notion of self-continuity, and second, by illustrating how the construct of continuity can be differently understood as a community-level variable.
Self-Continuity and the Parallel Problem of Youth Suicide

Selves are necessarily temporally vectored, and, if they are to retain their identity, must somehow vouchsafe their sameness in the face of inevitable change (Chandler, Lalonde, Sokol, & Hallett, 2003). This argument dates back at least to Aristotle, who asserted that “animals differ from what is not naturally constituted in that each of these [living] things has within it a principle of change and of staying unchanged” (cited in Wiggins, 1980, pp. 88-89). The fact that, despite inevitable changes, it is constitutive of selves to maintain a certain measure of sameness creates a paradox – a paradox, I will argue (along with many classic and contemporary philosophers [Cassirer, 1923; Harré, 1979; James, 1891; Locke, 1694/1956; MacIntyre, 1977; Parfit, 1971; Strawson, 1999; Taylor, 1988; Wiggins, 1980]) that must be somehow resolved if notions of self or culture are to have any meaning. If this were not so, if past and future identities could not be connected in time, then selves and societies as we know them would fail to retain their ordinary meaning. Notions of personal obligation and moral responsibility would, for example, be impossible to maintain if there were not some conceptual means of holding individual people and groups accountable for their own past actions (Locke, 1694/1956). Furthermore, making plans for the future would be a waste of time, for, as Unger (1975) put it, there would be no way to ensure that people would be the inheritors of their own just deserts, or otherwise reap the benefits, or bear the consequences, of their own planful actions. As Chandler and his colleagues put it, “Why, if all this were not so, would anyone stop smoking, or go on a diet, or bother to get an education? We forego short-run pleasures for long-term gain because, among other things, we find it reasonable to suppose that, when all was said and done, the knowledgeable, thin person with healthy lungs would somehow still be us” (Chandler et al., 2003, p. 5).
Inspired by these classic arguments for self-continuity, Chandler and his colleagues (Ball & Chandler, 1989; Chandler & Ball, 1990; Chandler, Boyes, & Ball, 1987) have argued that suicide may reflect some kind of shortfall in people’s folk conception of their own sense of self-continuity. In brief, it was argued that each of us must somehow work out our own way of justifying what makes us the self-same person in the face of inevitable change. Subsequent research, involving interviews with more than 200 adolescents (Chandler et al., 2003), has supported this notion. Almost without exception, all of these adolescents were able to offer some workable means of resolving the paradox of personal sameness within change, even if some of these warranting strategies were quite simplistic. The pointed exception to this rule, and the only identifiable group to date to be at a collective loss to justify their own and others’ self-continuity were suicidal youth. Ball and Chandler (1989) hypothesized that such a breakdown of self-continuity was something like a necessary but not sufficient condition for actually committing suicide. That is, if you do not feel meaningfully connected to the person you are en route to becoming, then it is a lot easier to take the drastic step of attempting to end one’s life. Under such circumstances, the life you take somehow fails to feel like your own.

To test this hypothesis, Ball and Chandler (1989) compared the responses of suicidal youth (more specifically, psychiatrically-hospitalized adolescents who were on active suicide watch) with those of non-suicidal youth (represented by both hospitalized adolescents who were judged not to be suicidal, as well as a matched group of non-hospitalized comparison adolescents). While practically all of the youth in the non-suicidal groups were able to offer some kind of justification for their own and others’ self-continuity (just like the approximately 200 youth who have been subsequently interviewed), almost all of the suicidal adolescents in this study seemed unable to provide any rationale to warrant their continued identity. That is,
although the suicidal adolescents were just as verbal as the two control groups, and no more
depressed than their non-suicidal but psychiatrically hospitalized counterparts (according to their
scores on the Beck's Depression Inventory), they, unlike their non-suicidal age-mates, typically
proved unable to find any reason why, given enough time and change, anyone would still qualify
as the same person. To be clear, it is not that these suicidal adolescents were found to give less
sophisticated answers compared to the other two groups – they simply were unable to offer any
personally acceptable answer at all.

Given these earlier results specifying the relation between individual suicidal behaviour
and an understanding of self-continuity, Chandler and Lalonde (1998) hypothesized that
continuity, this time measured at the community or cultural level, might also help explain
differences in the suicidal rates that characterized B.C.'s various Aboriginal bands. What is
meant by the notion of cultural continuity is the subject of the paragraphs to follow.

*Cultural Continuity*

The preceding section was intended to make the case that in order to qualify as a self, one
must somehow succeed in justifying one's personal persistence in time. That is, it was argued
that the very nature of selfhood requires that, regardless of personal transformations and
changing circumstances, one must persist in being somehow one and the same numerically
identical individual. Other ordinary objects, while having a continuing identity of a sort, can
stop being what they are and become something else entirely if they suffer a sufficiently drastic
transformation (e.g., a chair is disassembled and reassembled to make a small table). It is,
however, constitutive of selves that they endure any and all transformations (except perhaps
death, or some consciousness-switching experience imagined only in science fiction) and still
continue to be counted as somehow the same self through time. Nevertheless, though selves are different from ordinary objects in this way, whole cultures are much more like selves than they are like artifacts. Cultures have a past and a future, are constantly changing, yet still need to be understood to persist through time. No one would presume to say that cultures are just selves writ large, but, like selves, it is constitutive of their being marked as cultures at all that they must be understood to persist through time — as both firmly rooted in a past and has having a foreseeable future. One could argue further that cultural continuity could be psychologically important to those who belong to the culture in question, and (like self-continuity) that its loss may have dire consequences.

Armed by the results of Ball and Chandler’s study (1989), and the idea that continuity could be predictive of suicidal behaviour at the cultural level, Chandler and Lalonde (1998) investigated whether band-level differences in cultural continuity were related to suicide rate among British Columbia’s First Nations people. This population was chosen for two main reasons. First, Aboriginal people in Canada, as elsewhere, have historically been subjected to policies of alienation, disenfranchisement, and assimilation that have ravaged their culture. Under such shameful circumstances, it would be surprising if Aboriginal communities had not suffered some degree of discontinuity from their past and an uncertainty over their future. Second, Aboriginal people in Canada, like their counterparts around the world, suffer from one of the highest suicide rates of any culturally identifiable group (Carsten, 2000; Kirmayer, 1994; Resnik & Dizmang, 1971). The fact that this elevated rate of suicide occurs in just those groups that you would expect to have problems with cultural continuity seemed worthy of study.

Consequently, these investigators undertook to identify a range of ‘cultural continuity’ factors that could be argued to function as proxy measures indicative of the extent to which
different bands have worked to establish meaningful continuities with their cultural past, as well as having a measure of local control over the practicalities of their civic lives and their own destinies. The six factors identified in their 1998 study are listed below:

1) self-government;
2) community control over police and community protection services;
3) control over health services;
4) control over educational services;
5) whether land claim negotiations had been initiated; and,
6) the existence of a community cultural centre.

Each band in B.C. was first scored for the presence or absence of these six cultural continuity factors, and their overall score (0-6) was related to the suicide rate of that band over a 6-year window. The results are quite striking. It turns out that those bands that have all six cultural continuity factors had no suicides while those bands with none of these factors had rates more than 100 times higher than that of the provincial average. In an almost picture-perfect way, these results also showed that the more cultural continuity factors each band had, the lower its suicide rate. Furthermore, Chandler and Lalonde (1998; Lalonde & Chandler, 2005) demonstrated that cultural continuity was significantly related to this variation while other variables, such as socio-economic status and population density, were not.

Given the success of these cultural continuity factors in accounting for the variability of youth suicide rates between different Aboriginal bands, a similar analysis is conducted below, this time using school drop-out rates as the outcome measure. The findings reported here are meant to detail the relation between these same six cultural continuity factors originally
identified by Chandler and Lalonde (1998) and band-level differences in Aboriginal school drop-out rates.

Method

Sample Characteristics

Data on Aboriginal drop-out rates were supplied the British Columbia Ministry of Education, with the assistance of “Edudata”, a non-profit facility that functions as an intermediary between researchers and the Ministry. Each year, in September, the Ministry of Education collects information on each student using what is called Form 1701. In addition to identifying information, this questionnaire includes the grade level of the student and asks if the student is “of Aboriginal ancestry” (the form explicitly indicates that this information is to be self-volunteered). The parent cohort chosen for this study was every Aboriginal student in the province who was in Grade 7 in 1995, where being Aboriginal meant that you had declared yourself to be “of Aboriginal ancestry” any time between 1993 and 2002. This resulted in a total sample of 4399. There were 20 students who were excluded because their young age upon entering Grade 7 (10 years old or less) would not make them comparable to other students in the cohort. The sample was further restricted by only including those who had entered Grade 7 for the first time in 1995 – a criterion that excluded an additional 91 students. This left a potential sample size of 4288.

A cautionary point about these data concerns how the B.C. Ministry of Education records the band membership of students. Because of constitutional obligations in Canada, the federal government is responsible for funding the education of Aboriginal students who live on a reserve. As such, although the Ministry of Education does record all those students who declare
themselves to be Aboriginal, they only collect details about band affiliation for those students who live on reserve. Consequently, it is (for the moment) only possible to establish the band membership for that roughly 30% of the province’s Aboriginal youth who live on reserve land. The remaining 70%, who self-declare as Aboriginal, but do not live on reserve, are lost to the present analyses. Efforts are currently underway to collaborate with the Federal Department of Indian and Northern Affairs and with the provincial Ministry of Education to acquire band affiliations for the remaining students. For the moment, however, the existing data concern only a sub-sample of the larger parent cohort of Aboriginal youth who entered Grade 7 in 1995. Consequently, the sample reported here consists of a total of only 1288 students, made up of those who are both self-declared as “of Aboriginal ancestry” and are currently living on a reserve.

Although the data provided by Edudata included, for the entire province, all appropriate students in the public and private school system, these data did not include students who attended schools run by Aboriginal bands. These schools are federally funded and are, consequently, not obligated to report attendance or grade information to the provincial Ministry of Education. Though school attrition data for these students were not available, information provided by the federal government indicated that, based on the number of Grade 7 students who were in band run schools in 1995, only about 260 students were consequently missing from our cohort (B. Laskin, personal communication, January 24, 2005). This represents less than one quarter of our final sample, but it is possible that those students who attended a band school exhibited different relations between drop-out rates and cultural continuity than those who did not. As such, the results of any analyses reported here must be interpreted with the caveat that they may not necessarily apply to those students who attended a band school.
It should also be noted that, in those cases where it records a band code, the B.C. Ministry of Education does not record band of membership, but rather band of residence. In other words, a student who, for example, belongs to the Sekani tribe but is living on a Musqueam reserve would be recorded as being a Musqueam in the B.C. Ministry of Education's database. At this time, it is not known how common it is for members of a given band to be living on a different band's reserve, nor it is clear which variable should be the most important to consider in predicting drop-out rates. This is a question, however, that may be partially answered once a data-sharing agreement between the Federal Department of Indian and Northern Affair and the B.C. Ministry of Education is achieved. Despite these shortfalls, however, the analyses of those data should still be suggestive, though the usual caveats regarding less than representative samples still apply.

Assigning Cultural Continuity Scores and Calculating School Attrition Rates

The scores of every band in B.C. on the six cultural continuity factors were the same scores that were used by Chandler and Lalonde (1998) and were supplied by the original authors. Each band was scored as either having the given cultural continuity factor, or not having it, during the years 1987 to 1992 (more details about the criteria used in making these category assignments can be found in Chandler & Lalonde, 1998). Furthermore, each band was also given a score based on the total number of these factors they possessed.

For these analyses, a drop-out was considered somebody who did not graduate within 2 years of his or her target graduation date. Since this cohort began Grade 7 in September of 1995, moving through school in a timely way would mean that they would graduate by June of 2001. As such, a person was counted as a drop-out if they had not graduated by June of 2003. Two
extra years were allowed so that this measure of drop-out rate would capture only those people who were unlikely to graduate sometime in their high school career and not count as a drop-out those who simply moved more slowly through the system (Applied Research Branch, 2000). In addition, a different measure of school retention, called the ‘never-grade-12 rate’ was calculated to measure the proportion of students who failed to reach Grade 12. This variable was meant to indicate how many students failed to achieve this easier educational milestone, and, as such, serve as another indicator of a student’s ability to stay in school. Consequently, all analyses performed on school attrition rates were performed on both school drop-out rates and never-grade-12 rates.

Using these data, the general overall drop-out and never-grade-12 rates in our cohort were first examined, and the expectation that there would be a great deal of variability in these school attrition rates from band to band was also tested. A factor analysis of the cultural continuity factors was then conducted in order to test whether or not these variables could be psychometrically argued to underlie a single construct. Finally, correlational methods were used to investigate whether or not the cultural continuity factors could help explain any of the variation in school attrition.

Results

Variability Among Bands

The overall “drop-out rate” (i.e., failing to graduate within a 2-year window of their final year) for those Aboriginal youth who lived on reserve was 65%. The sample was fairly evenly split between boys and girls (663 boys, 625 girls), but boys had a significantly higher drop-out
rate (68%) than did girls (62%; $\chi^2(1) = 5.006, p = .025$). The overall never-grade-12 rate for this sample was 44% and, again, boys had a significantly higher never-grade-12 rate (47%) than did girls (40%; $\chi^2(1) = 5.915, p = .015$). These gender differences are similar to those found in the non-Aboriginal population (B.C. Ministry of Education, 2001, 2002, 2003).

As anticipated, both measures of school attrition for each individual band varied dramatically from 0% to 100%. Because many of the smaller bands had few children in our study cohort, the fate of even one or two children obviously influenced, in dramatic ways, such bands' drop-out and never-grade-12 rates. Still, if we restrict our analysis to those bands that have at least 5 children in the cohort (97 bands out of 195), the drop-out rates range from 13% to 100%, and the never-grade-12 rate continues to vary between 0% to 100%. Restricting our sample still further to include only those bands with at least 10 children in the cohort (47 bands), the variability in school attrition rates continues to be extreme (i.e., 18% to 93% for school drop-out and 0% to 87% for never-grade-12). Even if we further focus attention only on those 21 bands that have at least 15 children in the cohort, drop-out rates range from 37% to 93% whereas never-grade-12 rates vary from 12% to 87%. What these data make startlingly clear is that simply aggregating across all of B.C.'s diverse bands to create a single drop-out rate for Aboriginal students as a whole is highly misleading and serves to obscure the evident fact that school attrition is a major problem in some communities and not a remarkable problem in others.

**Cultural Continuity as an Underlying Construct**

Table 2.1 describes the bivariate relations between the cultural continuity factors by displaying the lower triangle of their correlation matrix. For the most part, these correlations are moderate and are relatively similar. In order to test whether the cultural continuity factors could
be said to underlie the same construct, a principal components factor analysis was conducted, with each band being coded as either having or not having each cultural continuity factor, in order to generate the list of eigenvalues. The scree plot of these eigenvalues indicates two eigenvalues that exceed 1, but also shows a steeper decline between the first and the second eigenvalue. This suggests that a one-factor solution may be the best fit to the data, though this is not definitive (see Figure 2.1). The Likelihood ratio test was also conducted to test if a one-factor solution best fit the data. Results indicate a barely significant chi-squared value ($\chi^2(9) = 17.359, p = .043$) for a one-factor solution and a non-significant chi-squared for a two-factor solution ($\chi^2(4) = 6.788, p = .148$). Since non-significance reflects goodness-of-fit in the Likelihood Ratio test, the near non-significant result of the one-factor test is ambiguous and could support either a one- or two-factor solution. Using an Unweighted Least-Squares Factor Analysis, the one-factor solution, however, was also able to satisfactorily reproduce the correlation matrix of the original items. The average residual (in absolute value terms) of these 15 correlations was .0527, and only two residuals (with values of .102 and .107) exceeded .100. Consequently, the one-factor solution seems to be the best fit with the data, with the one factor accounting for 33.23% of the variance. This finding adds further weight to the contention that these six variables underlie a single construct.
Table 2.1

*Intercorrelations Between the Cultural Continuity Factors*

<table>
<thead>
<tr>
<th>Cultural Continuity Factor</th>
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<th>3</th>
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<tbody>
<tr>
<td>1. Self Government</td>
<td>----</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Land claims</td>
<td>.242*</td>
<td>----</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Education</td>
<td>.245*</td>
<td>.034</td>
<td>----</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Health Care</td>
<td>.336*</td>
<td>.032</td>
<td>.239*</td>
<td>----</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Cultural Facilities</td>
<td>.241*</td>
<td>-.016</td>
<td>.256*</td>
<td>.133</td>
<td>----</td>
<td></td>
</tr>
<tr>
<td>6. Police and Fire Services</td>
<td>.261*</td>
<td>.182*</td>
<td>.158*</td>
<td>.308*</td>
<td>.152*</td>
<td>----</td>
</tr>
</tbody>
</table>

*Note.* * marks significance, $\alpha = .05$. Number of bands, N = 195.

*Figure 2.1.* Scree plot of eigenvalues.
Explaining the Variability Among Bands

Preliminary analyses revealed no significant relation between the population of the band in question and school attrition, so band size was not included in the following analyses. As such, the question of whether cultural continuity predicted differences in drop-out rates was first examined by testing the relation between the number of cultural continuity factors and school attrition. Results tentatively suggest that the number of factors attributed to a band was associated with both drop-out rates and never-grade-12 rates. Those students who lived in a band with none of the requisite cultural continuity factors had a drop-out rate of 73%, and a never-grade-12 rate of 52%, while those students residing in bands that had all of these factors had a drop-out rate of only 63% and a never-grade-12 rate of only 44% (see Figures 2.2 and 2.3). A Pearson correlation between the number of cultural continuity factors and dropping out of school was small but trending towards significance \( r = -0.047, p = 0.093 \), while the relation between never-grade-12 rates and cultural continuity, on the other hand, was slightly stronger and statistically significant \( r = -0.061, p = 0.030 \).

A logistic regression analysis was run to examine the individual contribution of each of the cultural continuity factors to whether or not a student graduated. A modest (but statistically significant) overall relation was observed \( \chi^2(6) = 16.969, p = 0.009 \). As can be seen from Table 1, the only cultural continuity factor with (statistically significant) unique predictive power, however, is whether or not a band had initiated land claims, although self-government was also trending towards significance. Results indicate that those students who lived in a band that had begun litigating for Aboriginal title to traditional lands had a drop-out rate of 62%, while those who did not had a drop-out rate of 70%. 
Figure 2.2. Drop-out rates by cultural continuity factor. Number of students in each group: $n_0 = 89$, $n_1 = 394$, $n_2 = 277$, $n_3 = 133$, $n_4 = 173$, $n_5 = 46$, and $n_6 = 70$.

Figure 2.3. Never-grade-12 rates by cultural continuity factor. Number of students in each group: $n_0 = 89$, $n_1 = 394$, $n_2 = 277$, $n_3 = 133$, $n_4 = 173$, $n_5 = 46$, and $n_6 = 70$. 
### Table 2.2

**Logistic Regression Predicting Drop-Out and Never-Grade-12 With Cultural Continuity Factors**

<table>
<thead>
<tr>
<th>Criterion and Predictors</th>
<th>$B$</th>
<th>$p$</th>
<th>Exp($B$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drop-Out</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self Government</td>
<td>-0.404</td>
<td>.069</td>
<td>0.668</td>
</tr>
<tr>
<td>Land claims</td>
<td>-0.329</td>
<td>.018*</td>
<td>0.720</td>
</tr>
<tr>
<td>Education</td>
<td>-0.234</td>
<td>.193</td>
<td>0.791</td>
</tr>
<tr>
<td>Health Care</td>
<td>0.263</td>
<td>.084</td>
<td>1.300</td>
</tr>
<tr>
<td>Cultural Facilities</td>
<td>0.045</td>
<td>.726</td>
<td>1.046</td>
</tr>
<tr>
<td>Police and Fire Services</td>
<td>0.044</td>
<td>.761</td>
<td>1.044</td>
</tr>
<tr>
<td>Constant</td>
<td>0.775</td>
<td>.000*</td>
<td>2.171</td>
</tr>
<tr>
<td>Never-Grade-12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self Government</td>
<td>-0.053</td>
<td>.810</td>
<td>0.948</td>
</tr>
<tr>
<td>Land claims</td>
<td>-0.274</td>
<td>.036*</td>
<td>0.760</td>
</tr>
<tr>
<td>Education</td>
<td>0.177</td>
<td>.314</td>
<td>1.193</td>
</tr>
<tr>
<td>Health Care</td>
<td>-0.315</td>
<td>.029*</td>
<td>0.730</td>
</tr>
<tr>
<td>Cultural Facilities</td>
<td>0.061</td>
<td>.619</td>
<td>1.063</td>
</tr>
<tr>
<td>Police and Fire Services</td>
<td>0.049</td>
<td>.722</td>
<td>1.050</td>
</tr>
<tr>
<td>Constant</td>
<td>-0.037</td>
<td>.749</td>
<td>0.964</td>
</tr>
</tbody>
</table>

*Note. * marks significance, $\alpha = .05$. N = 1288.

Lastly, a logistic regression analysis was also conducted with each cultural continuity factor as a predictor and the never-grade-12 variable as the criterion. The overall test was again found to be significant ($\chi^2(6) = 13.735, p = .033$) and, by inspection of Table 2.2, we can see that, this time, both land claims and community control of health care uniquely predict not reaching grade 12. Those bands that did not initiate such land claims had a never-grade-12 rate of 49%, while those that began such negotiations had a 41% never-grade-12 rate. Likewise, those bands that did not have community control over their health care system had a 47% never-grade-12 rate while those that did have such control only had 39% of their youth in this cohort fail to reach grade 12. Moreover, the above analyses were also conducted as Weighted Least
Squares Regressions where band drop-out rates were weighted by the number of students belonging to each band. The results of these analyses closely paralleled the results of the logistic regressions.

Discussion

The first main implication of these data is that, with reference to the much-discussed problem of school completion failure among Aboriginal youth, it is evidently simplistic and wrong-headed to paint all Aboriginal communities with the same broad brush. It is important, instead, to appreciate the extensive variation in school completion rates that exist among Aboriginal bands if we are to better understand the challenges faced by these communities. This incredible variation found amongst B.C.’s First Nations bands highlights this need to fashion different approaches to the problem of early school leaving that are tailored to the different needs of individual communities.

The data also suggest that the extent to which individual tribal Bands in B.C. have both sought to gain control over their future civic lives and are working to better connect to their cultural past accounts for an important part of the variation in school attrition within the Aboriginal population, much as it earlier explained differences in youth suicide rates. Though these observed relations are in some sense numerically small (i.e., Pearson rs of -0.047 and -0.061), the effects remain at least practically significant. Having all six cultural continuity factors reduces the drop-out rate from 73% to 63% (a drop in 10%) whereas the never-grade-12 rate dropped from 52% to 44%. Although importantly short of providing anything like a complete account of the problem, such a reduction in drop-out and never-grade-12 levels would be counted as an unqualified success had it resulted from some kind of policy intervention.
At the same time, a stronger result, given the research hypothesis in this study, would involve having all of the cultural continuity factors individually predictive of school attrition. The results, as they currently stand, suggest the possibility that the observed differences in dropout rates are related mostly to the whether or not a band has initiated land claims, and not to any of the other cultural continuity factors. On the other hand, the presence or absence of self-government does trend towards predicting lower drop-out rates, suggesting that this relation cannot be solely explained by the land claims factor. Furthermore, when never-grade-12 rates are considered, control over health care services also becomes an individually predictive factor. These results suggest that perhaps the ability to discriminate between the variable rates of school attrition is at least somewhat distributed across some of the cultural continuity factors. Nevertheless, since our sample is too narrowly defined, this question cannot yet be resolved with the currently available data. That is, it is possible that the relation between cultural continuity and school attrition is different for those who live off reserve, and that the other cultural continuity factors will prove to be more predictive when these off-reserve students are added to the analyses. This hypothesis, however, cannot be tested until the band membership of these students becomes available.

Alternatively, these findings may be influenced by the fact that our band data reflect a student’s band of residence rather than band of membership. In other words, it may be that the cultural continuity of one’s band influences one’s sense of continuity regardless of where you live, and that it is this sense of cultural continuity that better relates to drop-out rates. This would be an interesting finding, because it would suggest that the psychological affect of knowing your band is hard at work to connect to their culture is more influential than the work being carried
out where you happen to live. These again are open questions that may be examined only once
the band code of these students can be obtained.

The results presented above are suggestive, but far from conclusive. Nevertheless, the
notion of cultural continuity has only begun to be tested. Consequently, the original contention
of this paper – that it is cultural continuity as a whole, rather than any factor in particular, that
insulates a community against the problem of early school leaving – still provides a plausible, if
contested, account of these findings. This account, nevertheless, suggests a potential that, with
further research, may yet show more promise.
References


Chapter III
Aboriginal Language Knowledge, Youth Suicide, and School Drop-Out Rates: A Further Look at Cultural Continuity

The preservation and revitalization of Aboriginal language knowledge is widely viewed by First Nations leaders, and by many in the professional community, as an important tool in the maintenance of cultural and group identity. Such languages have communicative as well as symbolic purposes that many argue are important to the continuation of cultural and group identities (Norris & MacCon, 2004). In those communities where the language does not face eminent extinction, language knowledge is often considered to be one of the most important markers of cultural identity (Kinkade, 1991). Even more pointedly, as Battiste (1998) points out:

Languages are the means of communication for the full range of human experiences and critical to the survival of the culture and political integrity of any people. Aboriginal languages provide a direct and powerful means of understanding the legacy of tribal knowledge. They provide the deep and lasting cognitive bonds that affect all aspects of Aboriginal life. Through sharing a language Aboriginal people create a shared belief of how the world works and what constitutes proper action. (p. 18)

In short, knowledge of Aboriginal languages is broadly regarded as a major factor in the maintenance or rehabilitation of Native culture.

Given this important tie to culture, the research reported here investigates the relation between Aboriginal language knowledge (in British Columbia’s Aboriginal communities) and two markers of community well-being: (a) youth suicide rates and (b) early school leaving. Though it may not be immediately evident why youth suicide and school attrition might be related to Aboriginal language knowledge, previous research by Chandler and his colleagues (Chandler & Lalonde, 1998, in press; Chandler, Lalonde, Sokol & Hallett, 2003; also see Chapter II) indicates that both of these social problems are related to what has been termed
"cultural continuity" – the extent to which B.C.'s Aboriginal communities succeed in both connecting to their shared cultural past and securing some control over their community's collective future. In light of such evidence, the research reported below concerns whether knowledge of an indigenous language – as another potential indicator of cultural connectedness – also distinguishes between those bands characterized by high and low youth suicide rates, and by high and low school drop-out rates. In other words, this research addresses the question of whether the degree to which Aboriginal languages are known functions as a further marker of cultural continuity, one that accounts for a significant amount of variance in the between-community variance of school attrition and youth suicide.

Efforts on the part of Aboriginal communities to connect to their cultural past and future are difficult to measure and, as such, the available list of variables used to indicate the presence or absence of cultural continuity was never envisioned by Chandler and his colleagues to be exhaustive. In many ways, indigenous language knowledge (a previously unavailable variable) would appear to be an especially pertinent indicator of community attempts to connect to their cultural past. This is especially true in B.C.'s First Nations communities where, without special diligence, no Aboriginal language could realistically be expected to survive beyond one or two more generations (Kinkade, 1991). By examining the ability of indigenous language knowledge to predict youth suicide rates and school attrition rates, the research reported here tests the prospect that connecting to one's culture through the medium of traditional language knowledge may serve to bolster cultural continuity and so positively improve various markers of community well-being among Aboriginal youth. Before outlining this argument in greater detail, it will prove useful to first better detail: (a) how suicide and school drop-out rates vary across Aboriginal communities; (b) what is meant by "cultural continuity"; and, (c) why this construct,
now further indexed by knowledge of traditional language, might serve as a protective factor against various social problems.

*The Actuarial Artifact of Youth Suicide and School Drop-Out Rates*

Chandler and his colleagues, in their research, (Chandler & Lalonde, 1998, in press; Chandler et al., 2003) have underscored two main points about youth suicide and school attrition in B.C.’s Aboriginal communities. The first is that, while the general youth suicide and school drop-out rates in the Aboriginal population are known to be unusually high, there is, as this earlier work demonstrates, a great deal of variability across different Aboriginal bands. In B.C., where this research is being conducted, about half of the province’s approximately 200 bands have virtually no suicides, while some bands have suicide rate as much as 800 times the national average. Similar variability is evident in school drop-out rates. In some bands, more than 90% of the children fail to complete high school, whereas other bands have drop-out rates that are at or near the national average.

Numbers such as these put the lie to easy actuarial artifacts about the generic prevalence of self-harm and school failure among Aboriginal persons as a whole. That is, despite commonly reported provincial or national averages that are meant to demonstrate that youth suicide or school drop-out rates are especially high among Aboriginal youth, it is obviously a mistake to lump, or batch process, all of these culturally diverse communities into one undifferentiated catch-all statistic. Across B.C., for example, 14 different and mutually uninterpretable Aboriginal languages are spoken and used to support an equally varied range of different cultural practices and distinct spiritual beliefs. Although the usual amalgamated results – results that ride rough-shod over well-understood cultural differences – are, no doubt, politically useful in
dramatizing an evident social problem, it is also true, given the enormous cultural, geographic, linguistic, and spiritual diversity that mark these communities, that such summary statistics are, at best, actuarial artifacts that fail to accurately describe any real band or Aboriginal community.

The second point is that while there are, undoubtedly, individual differences that predict whether particular young persons will or will not attempt to take their own life, or drop out of school, the variability in suicide rates and school attrition across B.C.'s numerous bands raises the prospect that some set of community-level factors might also help to explain the variable incidence of these social problems. While many possible candidate variables could be imagined to predict some of this variability (e.g., socio-economic status (SES), urban vs. rural, extent of government support, etc.), Chandler and Lalonde (1998) hypothesized that those bands hard at work making connections to their cultural pasts, and that otherwise exercise more effective control of their cultural futures, would be just those bands to have fewer of these social problems. That is, those communities that exhibited more cultural continuity were predicted to have fewer youth suicides and, as it turns out (Hallett, Iarocci, Want, Koopman, & Gehrke, 2004), fewer school drop-outs. The grounds for this hypothesis are explained in more detail below.

**Cultural Continuity**

The origins of the notion of cultural continuity began with early efforts by Chandler and his colleagues (Ball and Chandler, 1989; Chandler & Ball, 1990; Chandler, Boyes, & Ball, 1987) to investigate the different ways suicidal and non-suicidal youth justify their "self-continuity" in time. Self-continuity (i.e., being able to justify that one is the self-same person across time despite inevitable change) has been argued to be a constitutive feature of the self (Cassirer,
Selves necessarily exist in time, and, as such, must necessarily own their own past and future. If one could not count themselves as somehow the same person through time, notions of personal obligation and responsibility would be impossible to maintain, just as any conceivable moral order necessarily presupposes some conceptual means of holding self and others accountable for their own past actions (Locke, 1694/1956). Similarly, without some confident sense of personal persistence, making plans for the future would amount to a waste of time, for, as Unger (1975) put it, there would be no way to ensure that each of us would be the inheritors of our own just deserts, or otherwise reap the benefits, or bear the consequences, of our own planful efforts. As Chandler and his colleagues put it, “Why, if all this were not so, would anyone stop smoking, or go on a diet, or bother to get an education? We forego short-run pleasures for long-term gain because, among other things, we find it reasonable to suppose that, when all was said and done, the knowledgeable, thin person with healthy lungs would somehow still be us” (Chandler et al., 2003, p. 5).

While the importance of self-continuity for the broad notion of selfhood is well understood (Cassirer, 1923; Harré, 1979; James, 1891; Locke, 1694/1956; MacIntyre, 1977; Parfit, 1971; Strawson, 1999; Taylor, 1988; Wiggins, 1980), Ball and Chandler (1989) further argued that anyone hoping to warrant their own necessary claims to personhood is also obligated to present some kind of workable folk conception of self-continuity as a means of justifying their own serious commitment to their own past and future. As such, those who failed to justify a sense of their own self-continuity were expected to lose any real connection to, or investment in, their own prospects – a futureless stance that makes them more likely to contemplate ending their own lives, or giving up on their own as yet unrealized future. Ball and Chandler’s (1989) data supported this hypothesis – psychiatrically-hospitalized adolescents who were on active suicide
watch were typically unable to warrant their own and others' self-continuity, while hospitalized youth who were not suicidal were regularly able to offer such justifications. A strong sense of self-continuity, these results suggest, can make life worth living, or at least enhance the instinct against dying, and drives home the importance of connecting oneself to one's own still unaccomplished future.

Taking their lead from these findings, Chandler and Lalonde (1998) hypothesized that analogous community-level efforts to own a collective past and commit to the preservation of a cultural future, might also predict the likelihood of suicide at the community level. In other words, whole cultures, like selves, necessarily have a past and a future, are constantly changing, and yet still need to be understood as persistent through time. On this logic, being part of a culture that is both firmly rooted in a past, and is seen to have a viable future, should work to insulate individual youth from the prospect of suicide and other expressions of cultural collapse.

To test this hypothesis, Chandler and Lalonde (1998) identified six variables that were taken to be indicators of the efforts of individual communities to establish meaningful links with their cultural past and future. These six factors were:

1) self-government;
2) community control over police and community protection services;
3) control over health services;
4) control over educational services;
5) whether land claim negotiations had been initiated; and,
6) the existence of a community cultural centre.

These six variables were taken to be proxy measures of the efforts of separate communities to establish meaningful links with their cultural past and future. Some of these factors (e.g., self-
government and control over various community services) are perhaps best seen as measures aimed at gaining future control of their culture. Other factors (e.g., existence of a community cultural centre) do not necessarily reflect efforts to gain such forward-looking control, but are seen instead as ways that bands might work to reconnect with their traditional and cultural past.

In both their original study (Chandler & Lalonde, 1998), and in more recent work in progress (Chandler et al., 2003; Chandler & Lalonde, in press), these colleagues found that bands with more of these “cultural continuity factors” had dramatically lower suicide rates. In fact, those bands that have all of these cultural continuity factors have virtually no suicides, while those communities that have none of these factors have dramatically higher suicide rates. For all of those bands that fall between these two extremes, it turns out that the more cultural continuity factors possessed by a particular band, the lower its youth suicide rate. Furthermore, Chandler and Lalonde demonstrated that although cultural continuity was significantly related to variation in suicide rates, other variables, such as SES and population density, were not (Chandler and Lalonde, 1998; Lalonde and Chandler, 2005). These results make a strong case that cultural continuity, like self-continuity, is importantly related to the problem of youth suicide.

Although not as strong as the results on youth suicide, cultural continuity has also been found (Hallett et al., 2004) to predict differences in school drop-out rates among Aboriginal bands in B.C. Those students who lived in a band with none of the requisite cultural continuity factors had a drop-out rate of 73%, while those residing in bands that had all of these cultural continuity factors had a drop-out rate of only 63%. Furthermore, as a whole, there was a statistically significant relation between the cultural continuity factors and school drop-out rates. Taken together, these lines of related research suggest that cultural continuity may represent an
important protective factor against, not only youth suicide, but also school attrition, and potentially other social problems as well.

Why Language?

The cultural continuity factors that have been used by Chandler and his colleagues are not imagined to be exclusively definitional of cultural continuity, but instead represent only a sample of such potential proxy measures. In a perfect world, one would create a full roster of purpose-built measures of cultural continuity and somehow administer them all to representatives of all of B.C.’s 200 Aboriginal communities. Instead, Chandler and his colleagues have relied on a select set of the already available cultural continuity factors as indirect or proxy indicators. As such, there is room for other potential variables, like indigenous language knowledge, that might be added to the current set already available of cultural continuity factors.

Aboriginal languages are argued here to be “critical components in maintaining and transmitting... culture and identity” (Norris & MacCon, 2004, p. 168). Many Aboriginal people have historically spoken more than one language, and, given the central role of oral history in Aboriginal life, language knowledge is inexorably linked to the preservation and continuation of these cultures (Sachdev, 1998). Not surprisingly, language has similarly been found to be central to ethnic identity in countries around the world, including Canada, Russia, Spain, Belgium, India, Malaysia, and Finland (Fishman, 1989; Giles, 1977; Ros, Cano, & Huici, 1987; Liebkind, 1982; Bourhis, 1984; Gudykunst & Schmidt, 1987; Sachdev & Bourhis, 1990; cited in Sachdev, 1998). Furthermore, most of these earlier studies suggest that the relationship between language and culture is bi-directional (Sachdev, 1998). Given its obvious links to culture, language knowledge seems to be a potentially well-chosen indicator of cultural continuity. Efforts to
revive or preserve one’s traditional language, especially considering that most Aboriginal languages in Canada are considered to be endangered (Foster, 1982), are widely taken to be critical in the efforts of Native communities to rehabilitate Aboriginal cultures.

Indigenous language knowledge, as an indicator of cultural continuity, also has the benefit of tapping a different aspect of cultural continuity than those previously measured. A potential problem with the presently available set of cultural continuity factors employed by Chandler and his colleagues is that they can be argued to be more reflective of local administrative control, or ‘social capital’, than cultural continuity. On this account, it is local administrative control alone, separate from anything to do with cultural preservation, which provides the helping hand leading to healthier communities with fewer suicides. Although not all of the cultural continuity factors easily conform to this model, a rough-sorting of the currently available proxy measures makes it clear enough that several of these factors could reasonably be classified in this way. By adding a measure of indigenous language knowledge as a cultural continuity factor, a further potential indicator is introduced that is generally divorced from matters of administrative control. That is, this new factor would work against any easy claim that perhaps the most successful bands are simply those that are becoming more efficient, empowered, or just more Westernized. Interestingly, knowing how to speak one’s indigenous language is not especially pragmatic, and it is not an obvious way of empowering Aboriginal communities to gain control over their civic lives. Given the all but universal requirement to speak English, practicality would, no doubt, actively advise against any current effort on the part of many Aboriginal communities to teach their Aboriginal language to their youth – languages spoken by practically no one. As such, community efforts to revitalize their language are much more likely to reflect a collective desire to re-connect the community to its own cultural past. In
this way, knowledge of an indigenous language should serve as potential indicator that is more directly tied to cultural preservation than many of the current cultural continuity factors.

The Question of Interest

The research reported here tests whether indigenous language knowledge adds predictive power to the existing list of cultural continuity factors previously reported, both in the case of youth suicide and school attrition. By potentially demonstrating the added explanatory power that indigenous language knowledge might contribute to the existing cultural continuity factors, the present research is meant to further the argument that it is cultural continuity in general, rather than any of its individual marker variables in particular, that serves as an indicator of community health among Aboriginal youth in British Columbia.

Method

Information about Aboriginal language knowledge came from the 1996 Statistics Canada census and was compiled by Mary Jane Norris (Norris & MacCon, 2004). These data specify: (a) the number of Aboriginal people in each census district in British Columbia; (b) the Aboriginal band most evident in each census district; and, (c) how many of these people stated on the census that they have knowledge of an indigenous Aboriginal language. This information was used to calculate, for each band, the proportion of band members who claimed to have some knowledge of an Aboriginal language. These numbers, as is routinely done, were rounded to the nearest 5 by Statistics Canada as a way of protecting anonymity. Consequently, these data only provide rough estimates of the proportion of Aboriginal people in each census district that have knowledge of an Aboriginal language. Furthermore, because Statistics Canada recorded this
information by census district, and because it recorded only one band for each census district, the language data for some of the smaller bands were not recorded and, as such, were submerged into the data of the larger bands. Consequently, the following analyses are restricted to only those bands (152 of the 195) in British Columbia for which the language data are available.

**Suicide Data**

Data about suicide rates and the previous list of available cultural continuity factors were supplied by Chandler and Lalonde (1998). These data indicate all the suicides among B.C.'s Aboriginal youth over a 6-year period from 1987 to 1992, as well as which cultural continuity factors each band possessed for that same time period. Further details about how these variables were defined can be found in Chandler and Lalonde (1998). Preliminary analyses revealed no significant relation between the population of the band in question and school attrition, so band size was not included in the following analyses.

These data were first analyzed by conducting a factor analysis in which the previous compliment of cultural continuity factors were combined with the newly introduced index of language knowledge. Prior research (see Chapter II) has found that the previously available set of cultural continuity factors conform to a one-factor structure and can consequently be argued to underlie the same construct. Language knowledge was added to this analysis to see if the results still conformed to a similar one-factor structure. The relation between youth suicide and language knowledge was then tested first by itself, and then, in combination with the other cultural continuity factors.

Because the incidence rates of suicide are so low, and because the population of any given band in B.C. is relatively small, these analyses relied on grouping bands together into
larger population units based on their scores on the cultural continuity factors. This proved feasible because the cultural continuity factors are scored dichotomously. In other words, bands could be grouped together on the basis of the number of cultural continuity factors they possessed. For this reason, the index of language knowledge was also dichotomized, and those bands having a score above 50% on this variable were assigned a ‘1’ (16 bands), and those with less than 50% were assigned a ‘0’ (136 bands).

**School Attrition Data**

Data on Aboriginal school attrition was supplied by the provincial Ministry of Education, with the assistance of “Edudata”, a non profit facility that functions as an intermediary between researchers and the Ministry. Having chosen as a cohort every Aboriginal student in the province who entered Grade 7 in 1995, Edudata supplied information indicating whether or not each of these students was still in school, and in what grade they were considered to be, for every subsequent year up until 2002. The data also include the Band code and the graduation date (if applicable) for each student. A student was considered to have dropped out of school if they did not graduate within 2 years of their target graduation date (i.e., by June 2003). Two extra years to graduate were allowed so that the drop-out rate better reflected only those people unlikely to graduate sometime in their high school career, rather than those simply moving more slowly through the system (Applied Research Branch, 2000). Furthermore, previous research regarding the relation between school attrition and cultural continuity (Chapter II, this volume; Hallett et al., 2004) included another index of school retention, reflecting the proportion of students who fail to achieve the easier educational milestone of reaching grade 12, to test the relation between
school attrition and cultural continuity. This measure is not included here because it did not demonstrate any differences from more conventional measures of school drop-out rate.

A major caveat about the available data concerns how the B.C. Ministry of Education records the band membership of students. Because of constitutional obligations in Canada, the federal government is responsible for funding the education of Aboriginal students who live on a reserve. As such, although the Ministry of Education does record all students who declare themselves to be Aboriginal, they only collect details about band affiliation for those students who live on reserve. Consequently (and for the moment), band membership can only be established for that roughly 30% of the province's Aboriginal youth who currently live on reserve land. The remaining 70% who self-declare as Aboriginal, but do not live on reserve, are lost to the present analyses. Efforts are currently underway to collaborate with the Federal Department of Indian and Northern Affairs and with the provincial Ministry of Education to acquire band affiliations for the remaining students. At present, however, the data reported here concern only a sample, and not the full population, of Aboriginal youth who entered Grade 7 in 1995.

In total, 1320 students had band code information available. Another 14 students were eliminated because their young age upon entering Grade 7 (10 years old or less) would not make them comparable to other students in the cohort. Finally another 124 students were dropped from the analysis because they belonged to bands for which language data were not available. This left a total sample size of 1182 students.

Furthermore, although the data provided by Edudata included, for the entire province, all appropriate students in the public and private school system, these data did not include students who attended schools run by Aboriginal bands. These schools are federally funded and are,
consequently, not obligated to report attendance or grade information to the provincial Ministry of Education. Though school attrition data for these students were not available, information provided by the federal government indicated that, based on the number of Grade 7 students who were in band run schools in 1995, only about 260 students were consequently missing from our cohort (B. Laskin, personal communication, January 24, 2005). This represents less than one quarter of our sample, but it is possible that those students who attended a band school exhibited different relations between drop-out rates and cultural continuity than those who did not. As such, the results of any analyses need to be interpreted with the caveat that they may not necessarily apply to those students who attended a band school. Nevertheless, there is good reason to believe that these results will still be suggestive, despite the usual caveats that apply to less than representative samples.

Each student in the dataset was assigned a value on the language knowledge index and the cultural continuity factors determined by the band to which they belonged. As was the case with youth suicide rates, language knowledge was first correlated individually with school drop-out rates and then included in a logistic regression analysis with the other cultural continuity factors. Furthermore, preliminary analyses revealed no significant relation between the population of the band in question and school attrition, so band size was not included in the following analyses.

Results

Factor Analysis

Language knowledge was first correlated with the previous set of six cultural continuity factors. The intercorrelations of all these factors are displayed in Table 3.1. For the most part,
these correlations are moderate, although the language factor seems less correlated with the other factors than these factors are with each other.

A principal components factor analysis was conducted on the six cultural continuity variables reported by Chandler and Lalonde (1998), plus the new index of language knowledge, in order to generate the list of eigenvalues. Results indicate three eigenvalues in excess of 1, but an examination of the scree plot reveals a steeper decline from the first to the second eigenvalue, suggesting that these variables are best represented as a one-factor solution (see Figure 3.1). For the purposes of determining the appropriate number of factors, the Likelihood Ratio Test was also conducted. Results clearly indicate good fit with a one-factor solution ($\chi^2(14) = 18.700, p = .177$). Furthermore, the one-factor solution, in an Unweighted Least Squares Factor Analysis, was also able to satisfactorily reproduce the correlation matrix of the original items. The average residual (in absolute value terms) of these 21 correlations was .0486, and only four residuals (ranging from .101 to .113) exceeded .100. As such, the one-factor solution seemed to best describe the data, with this factor explaining 29% of the variance.

Table 3.1

Inter-correlations Between the Cultural Continuity Factors and the Language Factor

<table>
<thead>
<tr>
<th>Cultural Continuity Factor</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Self Government</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Land claims</td>
<td>.254*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Education</td>
<td>.227*</td>
<td>.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Health Care</td>
<td>.349*</td>
<td>.017</td>
<td>.203*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Cultural Facilities</td>
<td>.248*</td>
<td>.045</td>
<td>.240*</td>
<td>.147</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Police and Fire Services</td>
<td>.271*</td>
<td>.208*</td>
<td>.139</td>
<td>.310*</td>
<td>.197*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Language</td>
<td>.114</td>
<td>.047</td>
<td>.088</td>
<td>.218*</td>
<td>-.033</td>
<td>.118</td>
<td></td>
</tr>
</tbody>
</table>

*Note. * marks significance, $\alpha = .05$. Number of bands, $N = 152$. 
Suicide

Results indicate that those bands with (i.e., more than 50%) language knowledge had fewer suicides than those bands without (i.e., less than 50%) language knowledge. More specifically those bands with the language factor averaged 13.00 suicides per 100,000 while those that did not have this factor had more than 6 times the number of suicides (96.59 per 100,000). These differential rates reflect the fact that, between 1987 and 1992, only one youth committed suicide from those 16 bands that had the language factor while, from the remaining 136 bands, 84 youth committed suicide during this same 6-year period.

Figure 3.1. Scree plot of eigenvalues.

Figure 3.2 illustrates Chandler and Lalonde’s (1998) results relating suicide rates to the previous set of cultural continuity factors. Each of the columns in this graph refers to the suicide
rate when all of the bands with that number of cultural continuity factors are combined. To test whether language knowledge adds any discrimination to these results, each of these columns was further broken down into those who also had the language factor and those who did not. For example, in the case of the column labelled '3', which designates all those bands that had a total of three cultural continuity factors, we separately calculated the suicide rate for all those bands that also had the language factor and all of those that did not. Since, during the 6-year window of the study, only one youth suicide occurred in the 16 bands that exhibited the language factor, the presence of that language factor made a drastic difference in suicide rates (see Figure 3.3). In all cases except one (the case of four cultural continuity factors), suicide rates dropped to zero when the languages factor was present. In the case of those bands with four cultural continuity factors, the presence of the language factor resulted in a suicide rate (37.12 per 100,000) less than half of the corresponding rate for those bands without the language factor (77.68 per 100,000). The total youth populations on which Figure 3.3 was based are shown in Table 3.2. No bands that had five or six of the previous cultural continuity factors also had the language factor, so these bands are not included in Figure 3.3 or Table 3.2.

![Figure 3.2. Suicide rates by number of factors present in the community (1987-1992). Taken from Chandler et al. (2003).](image-url)
School Attrition

To test the relationship between school drop-out rates and knowledge of an Aboriginal language, a correlation was calculated between whether or not a student dropped out and the proportion of a student’s band that claimed to know an Aboriginal language. A negative (but non-significant) relationship was found ($r = -.042, p = .152$). The correlation between drop-out rate and the dichotomous measure of language knowledge (i.e., whether more than 50% of a student’s band claimed to have knowledge of an Aboriginal language) was also negative and trending towards significance ($r = -.048, p = .101$). While the overall drop-out rate for our
sample was 64.5%, the students who belonged to a band that did not have this language factor had a drop-out rate of 65.6%, while those who did belong to a band with the language factor had a drop-out rate of 61.7%.

Table 3.2

*Total Youth Populations Underlying Suicide Statistics*

<table>
<thead>
<tr>
<th>Bands With and Without Language Factor</th>
<th>Number of Bands</th>
<th>Number of Suicides</th>
<th>Total Youth Population</th>
<th>Suicide Rate (per 100,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bands with 0 Factors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With Language</td>
<td>1</td>
<td>0</td>
<td>68</td>
<td>0</td>
</tr>
<tr>
<td>Without Language</td>
<td>18</td>
<td>9</td>
<td>896</td>
<td>167.41</td>
</tr>
<tr>
<td>Bands with 1 Factor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With Language</td>
<td>7</td>
<td>0</td>
<td>384</td>
<td>0</td>
</tr>
<tr>
<td>Without Language</td>
<td>44</td>
<td>32</td>
<td>4221</td>
<td>126.35</td>
</tr>
<tr>
<td>Bands with 2 Factors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With Language</td>
<td>3</td>
<td>0</td>
<td>226</td>
<td>0</td>
</tr>
<tr>
<td>Without Language</td>
<td>33</td>
<td>21</td>
<td>3201</td>
<td>109.34</td>
</tr>
<tr>
<td>Bands with 3 Factors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With Language</td>
<td>3</td>
<td>0</td>
<td>155</td>
<td>0</td>
</tr>
<tr>
<td>Without Language</td>
<td>19</td>
<td>10</td>
<td>2036</td>
<td>81.86</td>
</tr>
<tr>
<td>Bands with 4 Factors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With Language</td>
<td>2</td>
<td>1</td>
<td>449</td>
<td>37.12</td>
</tr>
<tr>
<td>Without Language</td>
<td>13</td>
<td>11</td>
<td>2360</td>
<td>77.68</td>
</tr>
</tbody>
</table>

*Note.* Total number of bands, N = 143. In addition, 4 bands had five factors and 5 bands had six factors, but none of these 9 bands had the language factor.

A logistic regression was conducted with each of the cultural continuity factors and the index of language knowledge as predictors, and whether a student did or did not drop out as the criterion. The results, shown above in Table 3.3, show a significant overall relationship ($\chi^2(7) = 15.416, p = .031$). Most of this variance seems, however, to be carried by the Land Claims
indicator. The language factor did not significantly predict school drop-out rates. This analysis
was also conducted with a Weighted Least Squares Regression where band drop-out rates were
weighted by the number of students belonging to each band. The results of this analysis
paralleled the results of the logistic regression.

Table 3.3

<table>
<thead>
<tr>
<th>Variable</th>
<th>Off-time rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
</tr>
<tr>
<td>Self Government</td>
<td>-0.311</td>
</tr>
<tr>
<td>Land claims</td>
<td>-0.295</td>
</tr>
<tr>
<td>Education</td>
<td>-0.304</td>
</tr>
<tr>
<td>Health Care</td>
<td>0.231</td>
</tr>
<tr>
<td>Cultural Facilities</td>
<td>0.070</td>
</tr>
<tr>
<td>Police and Fire Services</td>
<td>0.090</td>
</tr>
<tr>
<td>Language</td>
<td>-0.237</td>
</tr>
<tr>
<td>Constant</td>
<td>0.803</td>
</tr>
</tbody>
</table>

Note. * marks significance, α = .05. N = 1182.

Discussion

The data reported above offer tentative but encouraging results. In general, several
findings support the contention that knowledge of an Aboriginal language is not only related to
youth suicide, but also can serve as an additional index of cultural continuity. The factor
analysis demonstrates a fairly supportable one-factor solution with good psychometric
properties. It is this shared variance with the other cultural continuity factors – variance that also
seems to be predictive of social problems – that underscores the usefulness of this measure. In
short, this measure of Aboriginal language knowledge would seem to be a good candidate for an additional marker of cultural continuity.

Language knowledge was also found to be an indicator of lower suicide rates. Importantly, not only did this language indicator, by itself, differentiate those bands with lower suicides rates from those with higher ones, it was also able to make this differentiation over and above the discrimination ability of the other six cultural continuity factors identified in previous research. These data suggest that language knowledge can serve as an additional indicator of youth suicide, and this finding further supports its inclusion as an addition cultural continuity factor.

The results regarding Aboriginal drop-out rates, however, are more mixed. On the one hand, the cultural continuity factor scores, with the language factor included, do predict drop-out rates. On the other hand, language knowledge by itself does not significantly relate to school drop-out, although it does trend in that direction. Furthermore, results from the logistic regression would suggest not only that language knowledge does not have significant individual predictive power, but also that most of the variance of cultural continuity that is related to school attrition is due to the previously reported land claims factor. This result may reflect some of the problems with our sample. If our data included band codes for those students who live off reserve, this would add another 3000 students to our analyses. With the addition of these students, we may gain more than an increase in statistical power. Indeed, it may happen that the other cultural continuity factors play more of a role in predicting dropping out for off reserve adolescents than for those that live on a reserve. Without access to these data, however, these prospects are only speculative, making this a question for future research.
It also seems important to note that in only 16 out of 152 bands did a majority claim to know an Aboriginal language. This lack of knowledge not only suggests the need for further education in this area, it also serves as a reminder of the hardship these cultures have had to endure. There is good reason to believe that language knowledge is important in its own right and, as many people have argued, serves to connect a people to their culture. The findings reported above not only provide further evidence for the need of Aboriginal people to revive their languages, they also offer another justification for why it is important.

As a final point, it is probably instructive that language knowledge demonstrates stronger findings with youth suicide than with school attrition, since this is where a stronger relation with cultural continuity has been shown. Cultural continuity is a construct that is argued to be only indirectly measured by the current set of proxy variables and, as such, is perhaps more than just the sum of its constituent parts. In this way, the notion of cultural continuity is strengthened by the simple finding that a variable such as Aboriginal language knowledge can be added to the list of its indicators without disrupting the construct or what it predicts. In fact, language knowledge enhanced, at least in regards to suicide, the predictive power of cultural continuity without disturbing its factor structure. These findings go some distance towards strengthening the claim that it is cultural continuity in general, rather than any of these indicators in particular, that predicts cross-community variation in Aboriginal suicide rates.
References


Chapter IV
Patterns of Ethnic Identification in Aboriginal Youth

Change is an inevitable feature of the self (Chandler, Lalonde, Sokol, & Hallett, 2003). Certainly no one seriously imagines that the person who emerges on the other side of the often-turbulent period of adolescence is entirely the same individual he or she was during the childhood years. Indeed, the very notion of identity development would be non-sensical if the self were simply a static entity, fixed and immutable. The idea that one’s personal identity remains essentially unchanged throughout the lifespan is clearly false.

While some degree of change, or identity development, is then inevitable, some features of the self are taken to be fixed and, for the most part, ostensibly beyond the easy influence of changing circumstance. These less malleable aspects of one’s identity may or may not be considered central to one’s self-concept, or part of one’s ‘essential’ self (Rorty, 1986). One’s sex, for example, is typically (or once was) regarded as a permanent feature of the self; and though what it means to be a man or woman may change for any given person at any given time, the fact that one is either a man or a woman ordinarily does not. Intuitively, ethnicity also seems to be such a fixed attribute, as “conventional wisdom has long held that ethnic and racial identity... is ascribed” (Eschbach & Gómez, 1998, p.75). As such, if you were to ask somebody to declare their ethnicity in a certain year, you would ordinarily expect the same answer when you asked the same question of them again the next year and, for that matter, any subsequent year after that. We might perhaps expect young children to exhibit more inconsistency in asserting their ethnic identity, but would probably simply smile indulgently in the face of such varied declarations and attribute them to young people’s naïve and still-growing understanding of what ethnicity really is (Aboud, 1998). “Conventional wisdom” (and, as it turns out, the bulk
of existing research in this area) simply assumes that older children, like adults, conceive of
ethnicity as a constant trait of the self. The assumptions here are twofold. First, that once an
adult-like notion of ethnicity has been achieved, individuals will always give the same answer
when asked about their ethnicity, and second, that such individuals are right to do so. Most
social science research involving ethnicity seems to tacitly follow this logic, treating ethnic
identification as something that needs to be established once and only once.

The research to be presented here defies the (until now, largely untested) intuition that
ethnic identification, once declared, is a fixed and unchanging aspect of the self. Contrary to
such expectation, in our sample of more than 4000 Canadian Aboriginal adolescents, just under
half of these youth actually changed their declarations about their Aboriginality at least once
during the course of their late elementary and high school years, and about 16% changed more
than once. Moreover, the ways in which these young people changed their declarations was not
random, but instead followed one of several distinct patterns. To be clear, at various different
times in their young careers, these adolescents went beyond simply feeling more or less
connected to, or more or less positively about, their Aboriginality; rather, they went to the
extremes of either newly asserting or explicitly denying they were Aboriginal at all. Though it is
well known (e.g., Berry, 1997; Phinney, 1992; Ryder, Alden & Paulhus, 2000; Ward and Rana-
Deuba, 1999) that both adolescents and adults can vary in their ethnic identity (i.e., the different
ways that they think and feel about their ethnicity), it is generally taken for granted that they will
not vary in their ethnic identification (or more precisely, ethnic “declaration,” the ethnic label or
category that they publicly declare). While this inconsistency in ethnic identification raises
important theoretical questions about how we, as social scientists, think about ethnicity, and so is
worthy of study in its own right, such inconsistencies may also carry important personal
consequences for those individuals who first imagine themselves to belong to one ethnic group and later some different ethnic group entirely. In particular, the research reported here is meant to examine the relationship between the phenomenon of variable ethnic identification and school attrition rates. Students who exhibited certain patterns of ethnic identification were, as I will go on to detail, more at risk of dropping out of school than students who exhibited other patterns. Results such as these suggest that certain ways that young people ethnically identify themselves over time may be indicative of identity issues—problems that can have an effect not only on school drop-out, but perhaps on other social outcomes as well.

The main thrust of this effort is an attempt to understand these patterns of changing ethnic identification and their relationship to school drop-out rates. Given that investigators rarely entertain the notion that ethnic identification could change over time, other research aimed at directly exploring this phenomenon is quite sparse. Still, research in related areas may provide useful insight into such variations in ethnic identification. On this prospect, I begin by examining the fairly substantial literature regarding children’s early efforts to understand ethnicity. Here, the available evidence suggests, that, although some uncertainty is commonplace in very young children, well before the onset of adolescence children ordinarily appear to understand that ethnicity is not altered by changes in, for example, one’s outward appearance. I then review the relatively sparse literature that has considered the possibility that one’s ethnic identification may actually change during adolescence and adulthood. Finally, I will move on to consider the well-documented relationship between ethnic identity and academic achievement. Although these different literatures do not speak directly to the research reported here, all together they offer some insight into why young persons—persons who supposedly understand that ethnicity is a stable attribute—may, as a teenager, go on to make inconsistent
declarations of ethnic identification over time, and why the different ways in which they do this may affect their chances of completing school.

Pre-adolescents' Understanding of Ethnic Identification

As already indicated, very few researchers have conceived of the possibility that adolescents' or adults' ethnic self-identification might change over time. Nevertheless, there has been extensive research regarding pre-adolescent children's initially unstable, but ordinarily developing, conceptions of ethnicity. Perhaps the earliest of this work is Clark and Clark's (1947) now classic ethnic doll study. These researchers presented children with Black and White dolls and asked them to give the dolls ethnic labels. They, and the numerous other researchers who have followed them, found that by 6 or 7 years old, children could correctly label the ethnicity of the dolls. Subsequent research indicated that 6- or 7-year-olds could also separate and label Chinese dolls and White dolls, but that they are typically 9 or 10 years of age before they could correctly identify dolls representing ethnicities that are perceptually less distinct from Caucasians (e.g., Hispanic and Aboriginal dolls). Furthermore, children of this age also seem to be able to accurately identify their own ethnicity, though this does not always parallel their success in the doll task (see Aboud, 1988, chp.4, for a review of this literature).

Being able to accurately label their own ethnicity (and that of dolls), however, does not, in and of itself, necessarily indicate a consistent understanding of ethnicity. In the doll task described above, when 6- and 7-year-old minority children were asked which doll was most like themselves, the majority chose the White doll. That is, while minority children could correctly label the ethnicities of dolls, and even correctly label themselves, many still chose to say that the White doll was most like them (Corenblum, 1996). This was also found to be true in one study
of Aboriginal children attending a school where Aboriginals made up the majority of the population (Annis & Corenblum, 2001). It is, of course, quite possible, perhaps even probable, that the way that children answered this question is more of a reflection of the higher-status of White people in North American society than it is about matters of ethnic identification. Nevertheless, this earlier work serves to highlight the complexity and, perhaps, malleability of the relationship between ethnic identification and ethnicity. Interestingly, Corenblum and his colleagues, who have investigated this phenomenon among Aboriginal children, found that more of their respondents identified with the same-ethnicity doll when the experimenter was also Aboriginal (Corenblum & Wilson, 1982), or when the task was administered to them in their Native language (Annis & Corenblum, 2001).

Even if children can accurately identify with, and even label their own ethnicity, this is not the same thing as understanding that ethnicity is ordinarily taken to be a constant and unchanging feature of the self. Up until the age of 9 or 10, Black children, who properly labelled dolls at 6 or 7 years, often report that a Black person can become a White person if they put on blond wig and white make-up, or even simply if they want to (Semaj, 1980; Vaughan, 1963). Aboud (1984), demonstrating that this phenomenon is not restricted to minority children, presented children of different ethnicities with a series of photos in which a boy, labelled as an Italian-Canadian, gradually donned Aboriginal clothes and headdress. Children younger than 8 (of all ethnicities) thought that the boy was now Aboriginal, whereas those 8 or older regularly maintained that his ethnicity remained constant. In Aboud’s words, children younger than 8 who believe that a person’s ethnicity can change are “not aware of this deeper meaning of ethnicity; they are fooled by superficial features” (1988, p.49). As such, Aboud draws a distinction between ethnic awareness and ethnic constancy. That is, young children can be aware of
ethnicity simply by associating it with superficial features, and ordinarily do this for some years before understanding the ‘deeper’ meaning of ethnicity as a constant feature of the self.

Despite the problems that young children have with ethnic identification, there is, nevertheless, converging evidence to suggest that older children (i.e., those who are 9 and older) do have a “deep enough” understanding to consider ethnicity a relatively stable feature of the self. Some evidence for this claim comes from research based on the Ethnic Perspective Taking Ability (EPTA) test – a developmental measure devised by Quintana (1994; Quintana, Ybarra, Gonzalez-Doupe, De Baessa, 2000) and based on Selman’s (1980) model of Social Perspective Taking Ability. At Level One of Quintana’s model (which is said to be accomplished between 5 and 9 years of age) children are able to “apply accurately ethnic labels to themselves and to those groups with which they have frequent contact” (Quintana et al., 2000, p.336). More than simply being able to correctly label themselves, Quintana also explicitly describes this level as equivalent to a “working model” of ethnic self-identification. Similarly, Corenblum asserts that “with the advent of development of concrete operational thought between ages 5 and 9 (Piaget & Weil, 1951), what children know about the biological, social, and personal implications of race begins to approach the reasoning and understanding of race shown by adults” (1996, p. 84). In an earlier review of the literature, Aboud and Ruble (1987) similarly concluded that, in general, by the time they reach 8 or 9 years of age, children seem to understand that ethnicity is an unchanging aspect of the self.

All of the findings referenced above strongly suggest that children do have some initial confusion about ethnicity, but by middle childhood, that confusion has largely disappeared. Given this, it seems somewhat surprising that self-reported ethnic identification may change during adolescence. If children understand that ethnicity is not altered by changes in surface
features, it would seem to follow that they also think of their own and others’ ethnicities as stable characteristics of the self. If that is the case, it would also seem to follow that, when asked from year to year whether or not they were of Aboriginal ancestry, children older than 8 would consistently give the same answer. Research on pre-adolescent children’s conceptions of ethnicity has proceeded from just such an assumption, and has followed up on that expectation by trying to establish when children first come to understand that ethnicity does not change. As we have seen, such researchers have used, as their usual marker of understanding of the fixed nature of ethnicity, the understanding that ethnicity is not altered by changes in one’s surface appearance. While this prior research does indicate some maturing measure of stability in children’s conceptions of ethnicity, it does not preclude the possibility that they still believe that other changes to the self (i.e., transformations that are not changes in surface appearances) can and do alter one’s ethnic identification. In the next section, I review the relatively sparse literature that offers some suggestions as to how and why ethnic identification may sometimes change during adolescence.

Changing Ethnic Identification in Adolescence and Adulthood

While most of the research literature concerned with ethnic identification in adolescents and adults considers ethnicity to be a fixed attribute, a very small handful of studies have questioned this assumption and actively explored how ethnic identification may change over time. Stephan and Stephan (2000), for example, consider ethnic identification to be “neither an objective nor stable feature of social life, but one that is subjective and unstable” (p.543). Ethnic identification, these authors maintain, is socially constructed and, consequently, can change according to context. While there are, they claim, limits to this malleability, in one study, 89%
of mixed-ethnicity participants reported that they changed their ethnic identification in different situations (Stephan, 1991). What is not made clear by this research, however, is whether the participants simply chose to "re-label" themselves for various strategic reasons (see Bramadat, 2001, for a discussion of "strategic essentialism"), while still maintaining some private conviction about their ethnic constancy, or whether they actually convince themselves of such changes. Other researchers have similarly observed changes in ethnic identification at certain transitional points in the lifespan, particularly when adolescents leave home to begin life as adults, or when they marry (Farly, 1991; Lieberson & Waters, 1993; Waters, 1990; cited in Stephan & Stephan, 2000). Nevertheless, while this research illustrates some of the ways in which reported ethnic identification can change, the nature of these changes, and their relevance to the period of adolescence, remains unclear. Many of the life situations and contexts generated by the research just cited are ones that are usually faced by adults. As such, it does not provide any ready explanation for why, as is the case in our data, Aboriginal adolescents would shift between declaring themselves Aboriginal and non-Aboriginal during the course of their secondary school years.

While not directly measured, a shift in ethnic identification can also be inferred in Eschbach's (1993) demographic study of the recent and dramatic growth of the U.S. American Indian population. Using U.S. Census data, Eschbach calculated that the majority of the growth in the American Indian population between 1930 and 1990 could not be attributed to increased birth rate or migration. By implication, and in the absence of any other plausible explanation, Eschbach concluded that this growth was most likely due to more people classifying themselves as American Indian. Guimond (2004), who observed this same phenomenon in Canada's Aboriginal population between 1971 and 1996, drew the same conclusions. What these
demographic data suggest, then, is that North America has seen a recent trend of more and more people identifying themselves as Aboriginal who did not previously identify themselves in this way. Guimond's analysis, in fact, suggests that many of those who shifted to an Aboriginal identification were middle-aged, implying that this phenomenon is not reserved for the young. The reasons for this shift in ethnic identification, however, are not clear, nor is it clear how this phenomenon would explain the different patterns of ethnic identification evident in our data. Arguably, the increase in Aboriginal self-declarations inferred by Eschbach (1993) and Guimond (2004) is more likely to be the result of social and political change during these times than the symptoms of some mass adolescent identity crisis.

The literature reviewed up to this point has only offered indirect insights into ethnic identification shifts in Aboriginal adolescents. While many studies suggest that, well before adolescence, young people come to see ethnic identification as an unchanging aspect of the self, research with adults provides some suggestion that ethnic identification may change across contexts, both personal and historical. Few researchers have investigated, however, the issue of the consistency of ethnic identification over the period of adolescence. Eschbach and Gómez's (1998) longitudinal study of Hispanic high school students is perhaps the one exception to this rule. Eschbach and Gómez asked adolescents to report their ethnicity at two separate time points (2 years apart) and observed that 16% of their sample of high school students that declared themselves Hispanic at the first point of data collection did not do so again 2 years later. Logistic Regression analyses demonstrated that the sub-set of students who changed their ethnic identification in this direction were different in many respects from their peers who did not change. Those who changed their identification were in classrooms, and lived in areas, with a lower percentage of Hispanics, were less likely to speak Spanish, less likely to live in rural areas,
and, to a lesser extent, less likely to have high socio-economic status (SES). These researchers, however, did not look at the 21% of their sample who demonstrated the opposite pattern (i.e., those who did not declare themselves to be Hispanic at Time 1, but did at Time 2), nor did they examine whether any outcomes variables other than demographic ones (e.g., academic achievement) were related to ethnic identification switching. It is also naturally unclear whether the same variables that predict ethnic switching in Hispanic adolescents would be equally applicable to Aboriginal adolescents. Nevertheless, this research supports the notion that change in ethnic identification during adolescence actually is a genuine phenomenon.

*Ethnic Identity Matters*

The review of research to this point has attempted to shed light on why, over time, Aboriginal adolescents might switch to or from identifying as Aboriginal. While this phenomenon is interesting in its own right, we also have data that allow us to ask if these different patterns of ethnic identification co-vary with other outcome measures, such as dropping out of school. As mentioned above, virtually no research has been done relating ethnic identification to social outcome measures, principally because the very possibility of ethnic identification switching is rarely entertained. Nevertheless, there is a large amount of research relating social outcomes to measures of the “strength” of adolescents’ ethnic identity commitments. That is, while most researchers seem to assume that ethnic identification will remain constant throughout adolescence and adulthood (e.g., once Aboriginal, always Aboriginal), much research suggests that people vary in the ways in which they think about and value their identity, and that this variance predicts various social outcomes. Indeed, ethnic identity has been shown to be related to coping strategies, lower aggression, self-esteem,
perceived stress, overall mental health, and vocational identity in women, to name just a few (Caldwell, Zimmerman, Bernat, Sellers, & Notaro, 2002; Cross, 1991; Greig, 2003; Jackson & Neville, 1998; McMahon & Watts, 2002; Verkuyten, 2003). Many of these studies found that a strong sense of ethnic identity was related to positive outcomes, but others found more complex relationships. Caldwell et al. (2002), for example, found that considering ethnic identity to be central to overall identity was related to higher perceived stress, while “private regard” for their ethnic group (i.e., how they felt about their own ethnic group) was related to lower perceived stress. More to the point of the present research, however, is that these kinds of mixed results are also repeated throughout much of the literature relating degree of ethnic identity to academic achievement. As the findings regarding academic achievement are the most relevant to the present concern with school attrition, this literature will be considered in more detail. It should be noted, however, that, in the face of the incredible number of studies on this subject, what follows is more like a summary of key findings than an exhaustive review.

*Ethnic identity and academic achievement.* Fordham and Ogbu (1986) famously propose that ethnic identity is negatively related to academic success, at least among African-Americans. These researchers argue that negative stereotypes about their academic ability prevent African-Americans from reconciling academic success with being Black. As such, in order to be academically successfully, Black students have to dissociate themselves — or so the theory goes — from the traditional African-American community and, in doing so, adopt a sort of ‘racelessness’. Since they feel they cannot be academically successful and African-American at the same time, they are said to face the choice of either shedding their ethnic identity in order to
excel, or embracing their ethnicity and allowing their studies to suffer. Consequently, a strong African-American identity is said to promote lower academic achievement.

The case for Fordam and Ogbu’s racelessness argument is weakened, however, by recent research that seems to suggest the opposite relationship by pointing to a qualified but positive association between ethnic identity and academic success among African-Americans (Chavous, Bernat, Schmeelk-Cone, Caldwell, Kohn-Wood & Zimmerman, 2003; Oyserman, Harrison & Bybee, 2001; Smith, Atkins & Connell, 2003). Critics also make the points that: (a) being Black seems to be central to many successful African Americans (see Smith & Lalonde, 2003, for a review); (b) the assumption that academic achievement is discouraged in African-American culture also seems unwarranted (Hemming, 1996); and, (c) the alienation from their peers that Fordam and Ogbu use as evidence that academically successful African-Americans are divorced from their ethnic identity applies equally well to academically successful individuals, whatever their ethnicity, reflecting the simple (and rather sad) truth that it is hard to be both academically successful and popular with one’s peers! (Arroyo & Zigler, 1995).

More recent research suggests that the complex relationship between issues of identity and academic success may be best understood as involving three aspects of ethnic identity: (a) an individual’s private beliefs about members of their own ethnic group; (b) one’s perceptions of other’s beliefs and prejudices about their ethnic group; and, (c) the importance one places on being a member of that group (Chavous et. al, 2003; Oyserman et. al, 2001; Smith et. al, 2003). If, for example, you believe that the cards are stacked against you because you are an African-American, feeling strongly connected to the African-American community may not help, and instead might hinder, your academic success. Likewise, if you have a negative attitude towards your particular ethnic group, a lack of identifying with your ethnic background (i.e.,
“racelessness”) may facilitate your academic pursuits. At the same time, if you have positive feelings towards your ethnic group, a strong ethnic association will likely help you in school. The relationship between academic success and ethnic identity, it seems, is multifaceted and complex.

It should be noted that the vast majority of the available studies on this topic involve African-American students, while none concern Aboriginal people. Furthermore, although these studies employed many different measurement strategies for marking an individual’s commitment to his or her ethnic identity, none of them examined changes in ethnic identification over time. Nevertheless, these findings may suggest possible explanations for the patterns of longitudinal ethnic identification in the current dataset.

Cultural continuity. Before turning to these data, an examination of recent research by Chandler and his colleagues, with Aboriginals, may help to provide an alternate way of viewing shifts in ethnic identification and their possible relation to school attrition. This work (Chandler & Lalonde, 1998; Chandler et al., 2003) is part of a larger research enterprise examining the importance of maintaining a sense of personal and cultural continuity through time. Drawing on a broad literature concerning the self, Chandler and his colleagues argue that self-continuity – being able to justify the conviction that you have somehow remained the same continuous person despite inevitable change – is a ‘must-have’ aspect of the self. The whole notion of selfhood would make no sense without some measure of personal persistence, for if we were not understood to be somehow connected to our past and future selves, we could not be held responsible for our past actions, or anticipate collecting any just rewards from our efforts. Given the centrality of continuity to any kind of understandable notion of selfhood, an inability to
justify one’s self-continuity is, according to Chandler and his colleagues, more than a philosophical problem. Rather, the absence of a sense of self-continuity must have serious maladaptive consequences. Consistent with this expectation, Ball and Chandler (1989) found that suicidal adolescents were much less able to justify their own and others’ personal persistence than non-suicidal adolescents.

Taking their lead from this research, Chandler and Lalonde (1998) hypothesized that continuity is not only an important constituent part of personal identity, but is also constitutive of any coherent notion of culture. While vital cultures normally embody both a vibrant connectedness to their past and the prospect of having a measure of control over their future, cultural groups that have suffered various assaults including government-sponsored assimilationist practice – cultures such as Canada’s Aboriginal peoples – are especially likely to suffer impairments to their sense of “cultural continuity”. Like individuals who have lost their connection to their own past and future, such communities could be expected to similarly exhibit extensive social problems, such as high suicide rates and elevated school drop-out rates.

Drawing on epidemiological, demographic and administrative data from the approximately 200 First Nations communities in British Columbia, Chandler and Lalonde (1998) identified six ‘cultural continuity factors’ that served as indicators of community-level efforts to own a collective past and to commit to the preservation of a cultural future. Results collected over a 6-year study window indicated that those communities that had all of these cultural continuity factors had virtually no suicides while those that had none of the factors had a suicide rate as much as 800 times the national average. Subsequent analyses also demonstrated that cultural continuity factors similarly predicted lower school drop-out rates at the community level (Hallett, Iarocci, Want, Koopman, & Gehrke, 2004).
As a measure of cultural commitment over time, it seemed plausible that the different patterns of ethnic identification seen in the present sample of Aboriginal adolescents might be related to cultural continuity. As the literature reviewed in this section has demonstrated, ethnicity matters to one’s identity in general and to schooling success in particular. Although it is not clear how to specify mechanisms that links problems of cultural continuity at the community level to breaks of self-continuity at the individual level, it seems plausible that shifting ethnic identification may be associated with this process. Since ruptures of cultural and self-continuity are proposed to drive a person to deny that one is persistent through time, it is also possible that such disruptions in the identity formation process might similarly impact on one’s sense of ethnic continuity.

In sum, this brief review of the available research bearing on the issue of changes in ethnic identification suggests that any change that happens during adolescence is unlikely to reflect any childish confusion over the straightforward definitional meaning of ethnicity. Rather, such change may be motivated either by some genuine struggle with the meaning of one’s ethnic identity, or may be more strategic in nature. Given the previously demonstrated relationships between measures of the strength of one’s ethnic identity and measures of academic achievement, it is hypothesized here that changes in the label one uses to describe one’s ethnicity may also predict some variation in school success.

Method

The participants in this study include every student in British Columbia (Canada) who started Grade 7 in 1995 and who declared themselves to be Aboriginal anytime between 1993 and 2002. Though these participants are effectively a population, they are treated here as a
sample in order to potentially generalize findings to other provinces and to other cohorts. In total, there were 4307 such students.

Our data were provided by “Edudata”, a non-profit agency charged with making educational data collected by the Ministry of Education in British Columbia (Canada) available to the research community. Each September, the Ministry of Education, through school administrators and teachers, collects information on each student in B.C. using what they term Form 1701. In addition to other identifying information, this questionnaire asks whether the student is “of Aboriginal ancestry”. Our dataset includes this variable for each student in our sample for every year between 1993 until 2002. Altogether, this gives each participant up to 10 opportunities to declare their Aboriginality. Although data regarding earlier declarations were available, the data were limited to those made between 1993 and 2002 in order to better guarantee that these declarations would be made at a time (i.e., when they would be approximately 10 years old) when the students could be expected to understood the formal meaning of ethnic constancy.

Although the data provided by Edudata included, for the entire province, all applicable students in the public and private school system, this cohort did not include students who attended schools run exclusively by Aboriginal bands. These schools are federally funded and are, consequently, not obligated to report attendance or grade information to the provincial Ministry of Education. Though school attrition data for these students were not available, the federal government was able to determine that, based on the number of Grade 7 students who were in band run schools in 1995, only approximately 260 students were missing from our cohort (B. Laskin, personal communication, January 24, 2005). While this only represents 7% of our sample, and likely has little influence on the picture of overall drop-out rates, it is still possible
that those students who attended a band school exhibited different relations between drop-out rates and ethnic identification patterns, compared to those who did not. As such, the results of any analyses need to be interpreted with the caveat that they may not necessarily apply to those students who attended a band school.

A further cautionary point about these data involves how Aboriginal self-declarations are recorded. Although Form 1701 explicitly instructs those who administer it that all declarations “of Aboriginal Ancestry” are to be self-volunteered, it is difficult to know how well or consistently this instruction was followed. In addition to knowing that the Ministry of Education insists (both on the form and on a separate instructions sheet) that these Aboriginal identifications be self-volunteered, we have the further assurance that the Ministry refers to these data as self-declarations in their own publications (B.C. Ministry of Education, 2001, 2002, 2003). Nevertheless, for subsequent analyses, the possibility remains that these instructions may not have been faithfully followed, and, consequently, possible alternative interpretations are proposed.

The data also include the graduation date for each student. Given that our sample started Grade 7 in September of 1995, proceeding through school in a timely fashion would have led each of them to reach Grade 12 in September of 2000 and to graduate in June of 2001. Our data include information on these students up until August 2003, allowing those that might move more slowly through the system 2 extra years in which to complete high school. Allowing for 2 extra years to graduate is commonly used in school attrition research to avoid counting as drop-outs those that simply move more slowly through the system (Applied Research Branch, 2000). If students did not have a graduation date within this expanded window of time, they were
considered to have dropped out. In addition, our data also indicated whether or not a given student lived on an Aboriginal reserve.

As described above, each participant declared whether or not they considered themselves to be of “Aboriginal ancestry” each year between 1993 and 2002. These year-to-year declarations were classified into five different patterns of ethnic self-identification described below:

(1) *Always Declared* - These youth answered “yes” (that they were of Aboriginal ancestry) each and every time the question was asked of them (e.g., YYYYYYYY, etc.).

(2) *Declared Once* - These youth answered “yes” on one occasion, but “no” on every other occasion (e.g., NNNYNNN, etc.).

(3) *Previously Declared* - These youth began by consistently (i.e., they did so at least twice) answering “yes”, and then switched to “no” and consistently (i.e., at least twice) answered “no” and did so for the remainder of their time in school (e.g., YYYNNNN, etc.).

(4) *Subsequently Declared* - These youth demonstrated the reverse pattern to the “Previously Declared” group, initially answering “no” (at least twice) and later switching to a consistent series of “yes” (at least twice) (e.g., NNNYYYY, etc.).

(5) *Inconsistently Declared* - These youth switched between answering “yes” and answering “no” two or more times during their school years (e.g., NNYNYYN, etc.).

There were 52 students for whom we did not have enough data to classify into one of these groups, and these individuals were dropped from the analyses. Furthermore, 18 students were
excluded because their young age upon entering Grade 7 (10 years old or less) would not make them comparable to other students in the cohort. This left a total sample size of 4237.

Results

For this sample, the mean age of the students the year they entered Grade 7 was 12.1 years. There were 2169 boys and 2068 girls, and although (given the large sample size) the difference between their mean ages was statistically significant (mean age for boys = 12.2 years and mean age for girls = 12.1 years, $F(1,4235) = 24.975, p < .0005$), this difference is not likely to be of practical importance (Effect size, $\Delta = 0.152$), and was only detected because of the power of the design. Age differences were also found between school drop-outs and non-school drop-outs, as well as between the five different identification patterns, but these differences again had uninterestingly small effect sizes ($\Delta = 0.132$ & $\eta^2 = 0.007$, respectively).

Students were classified into the five different identification groups as described in the Methods section above, and the resulting distribution is summarized in Table 4.1. As can be seen by an inspection of Table 4.1, a slight majority of students (51.1%) were consistent in their declarations of their Aboriginality. Still, just under half of the students changed their declarations at least once, and 16.5% of them (the Inconsistently Declared Group) changed these declarations more than once. The incidence of changing ethnic identification seems sizable in this sample.

To check for differences in drop-out rates between the five identification patterns and between gender, a 5x2x2 (Identification Group x Gender x Did or Did Not Graduate) Multiway Frequency Analysis was performed on the data (see Table 4.2). Results reveal no three-way effect ($\chi^2(4) = 1.201, p = .8779$), and the ratio of males to females did not significantly differ
across the identification groups ($\chi^2(4) = 0.655, p = .9567$). The Gender by Drop-Out distribution, however, did significantly depart from chance ($\chi^2(1) = 25.275, p < .00005$) with the Drop-Out group being composed of 54.7% boys and 45.2% girls, while the school completion group was composed of 46.7% boys and 53.3% girls. Put differently, the drop-out rate among males was 59.6% while the drop-out rate among females was 51.7%, demonstrating that proportionally more boys in our sample dropped out of school than did girls.

Table 4.1

Distribution of Students Across the Different Identification Groups

<table>
<thead>
<tr>
<th>Identification Group</th>
<th>Total number of students</th>
<th>Percentage of students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Declared Once</td>
<td>566</td>
<td>13.4%</td>
</tr>
<tr>
<td>Inconsistently Declared</td>
<td>700</td>
<td>16.5%</td>
</tr>
<tr>
<td>Formerly Declared</td>
<td>162</td>
<td>3.8%</td>
</tr>
<tr>
<td>Subsequently Declared</td>
<td>645</td>
<td>15.2%</td>
</tr>
<tr>
<td>Always Declared</td>
<td>2164</td>
<td>51.1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4237</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Overall, the drop-out rate for this sample was 55.7%, comparable to the Aboriginal drop-out rate (based on a different cohort) of 57.5% reported by the B.C. Ministry of Education (B.C. Ministry of Education, 2001). Results of the Multiway Frequency Analysis indicate that the drop-out rate calculated on the present sample differed significantly across the five Identification Groups ($\chi^2(4) = 148.385, p < .00005$; see Table 4.2). For post-hoc analyses, we used the Gardner method (2001) of doing every possible pairwise contrast with a Bonferroni correction, since a Monte Carlo study has shown this method to have the best match between nominal and reported
alpha compared to five other post-hoc methods (MacDonald & Gardner, 2000). With five
groups, this means 10 possible pairwise contrasts, so an alpha level of .005 was chosen. Table
4.3 displays a selection of the pairwise contrasts that illustrates the intuitive picture evident from
Figure 4.1 – that is, the Subsequently Declared group (i.e., those who at least twice declared
themselves to be non-Aboriginal, but subsequently went on to consistently assert their
Aboriginality) has a lower drop-out rate than any other group, the Always Declared Group (i.e.,
those who had consistently declared their Aboriginality) has a drop-out rate higher than any other
group, and the three remaining groups are not significantly different from each other. All other
pairwise contrasts also conform to this pattern.

Table 4.2

**Multiway Frequency Analysis Between Gender, Drop-Out, and Group**

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>df</th>
<th>$\chi^2$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-way Effect</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender * Drop-Out * Group</td>
<td>4</td>
<td>1.201</td>
<td>.8779</td>
</tr>
<tr>
<td>2-way Effects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender * Drop-Out</td>
<td>4</td>
<td>25.275</td>
<td>&lt; .0005*</td>
</tr>
<tr>
<td>Gender * Group</td>
<td>4</td>
<td>0.655</td>
<td>.9567</td>
</tr>
<tr>
<td>Drop-Out * Group</td>
<td>1</td>
<td>148.385</td>
<td>&lt; .0005*</td>
</tr>
<tr>
<td>1-way Effects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>1</td>
<td>2.408</td>
<td>.1207</td>
</tr>
<tr>
<td>Drop-Out</td>
<td>1</td>
<td>56.100</td>
<td>&lt; .0005*</td>
</tr>
<tr>
<td>Group</td>
<td>4</td>
<td>2445.143</td>
<td>&lt; .0005*</td>
</tr>
</tbody>
</table>

*Note. * marks statistical significance, $\alpha = .05$. 
Figure 4.1. Drop-out rates for the different identification groups.

Table 4.3

Post-hoc Analyses of Differing Drop-Out Rate Across Identification Groups

<table>
<thead>
<tr>
<th>Contrast</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subsequently Declared vs. Formerly Declared</td>
<td>11.173</td>
<td>2</td>
<td>.001*</td>
</tr>
<tr>
<td>Formerly Declared vs. Declared Once</td>
<td>0.114</td>
<td>2</td>
<td>.736</td>
</tr>
<tr>
<td>Formerly Declared vs. Inconsistently Declared</td>
<td>1.228</td>
<td>2</td>
<td>.268</td>
</tr>
<tr>
<td>Declared Once vs. Inconsistently Declared</td>
<td>1.379</td>
<td>2</td>
<td>.240</td>
</tr>
<tr>
<td>Inconsistently Declared vs. Always Declared</td>
<td>12.712</td>
<td>2</td>
<td>&lt; .0005*</td>
</tr>
</tbody>
</table>

*Note. * marks statistical significance, $\alpha = .005$. 
Differences Related to Living on a Reserve

Further analyses were performed to test for differences between those Aboriginal students who lived on a reserve (1300 students) versus those that did not (2937 students). The drop-out rate for those living on a reserve was 64.9% – substantially higher than the corresponding drop-out rate of 51.7% for those not living on a reserve ($\chi^2(1) = 64.010, p < .0005$). Some of this difference, however, is accounted for by the different distributions of ethnic identification patterns between these two groups. While there was still a substantial spread of these patterns among those who did not live on reserve, those who did live on reserve evidenced, almost without exception, the Always Declared ethnic identification pattern (only 75 of these 1300 students, 6% of the total, did not have this pattern). If we restrict ourselves to looking only at those student who exhibited the Consistently Declared pattern, then the difference in drop-out rates between those that lived on reserve (64.7%) on those that did not (60.7%) is reduced substantially – in fact, to the point where it is no longer statistically different ($\chi^2(1) = 3.706, p = .054$). To test if the relationships observed above between the different identification patterns and drop-out rate still held, the earlier analysis was repeated, this time including only those who lived off reserve. The results of this analysis replicated the findings from the whole sample.

Discussion

As foreshadowed in the introduction, our data demonstrate that adolescents, or at least Aboriginal adolescents, can and do change their ethnic identification. This dramatic finding seems quite robust, since almost half of our sample did show changes in their ethnic identification across the 10-year window for which data were available. More importantly, this ethnic identification switching does not appear to be random, but can be systemically categorized
into one of five distinct patterns. The one group that could be charged with randomly switching their ethnic identification, the Inconsistently Declared group, only represents 16.5% of the sample. This suggests that these groups are conceptually meaningful, an assertion bolstered by the finding that these groups have markedly different drop-out rates.

The data reported above also confirm what other governmental studies have sadly concluded – Aboriginal drop-out rates, overall, are extraordinarily high. Similar to the present results, the B.C. Ministry of Education has recently reported the Aboriginal drop-out rate to be 57.5%, compared to a drop-out rate for non-Aboriginals of 20.8% (B.C. Ministry of Education, 2003), a difference of 37.3%. Put another way, while only about one fifth of non-Aboriginal students are failing to complete high school, only about two-fifths (42.5%) of Aboriginals actually end up receiving their high school diplomas. This recurring evidence that the public school system fails to retain the vast majority of Aboriginal youth nevertheless represents a slight improvement over conditions in the recent past. Only 5 years ago, the provincial Aboriginal drop-out rate was 66.2% (B.C. Ministry of Education, 2003). This unhappy state of affairs – where Aboriginal drop-out rates roughly equal non-Aboriginal completion rates – highlights the problem of Aboriginal school attrition and the serious need to better understand it. This is especially true given the fact that Aboriginal adolescents who drop out of school are also known to experience higher rates of depression, suicide and emotional difficulties; are more likely to be involved in risky behaviours such as substance abuse, violence, and sexual promiscuity; and are more prone to being incarcerated (Applied Research Branch, 2000; Cummins, Ireland, Resnick & Blum, 1999; First Nations Education Council, n.d.; Jessor, Turbin, & Costa, 1998; Tonkin et al., 1999; van der Woerd & Iarocci, 2002).
That being said, the data reported above offer some prospect of better understanding this phenomenon. At a first glance, our sample presents the same dismal figures that are reported by the B.C. Ministry of Education. The overall drop-out rate for our sample was 55.7% compared to the Ministry figure of 57.5%, which was based on a slightly different cohort. Furthermore, our data also demonstrated a modest difference between males and females, with the male drop-out rate being 7.4% higher than the female drop-out rate – a figure that is again comparable to Ministry findings, both for Aboriginals and non-Aboriginals. These summary figures, however, deeply obscure differences among these same Aboriginal youth – differences found in the distinctive ways in which identifiable groups of students both fail to graduate from high school and also shift their ethnic identification over time. The magnitude of these different ethnic identification patterns is quite large and means, at its extreme, a difference of 26.84% in the drop-out rate. Not only does this difference represent a sizable advantage for a sub-set of these students, but it also brings the group with the lowest drop-out rate (36%) down to a level much more comparable that of their non-Aboriginal counterparts (21%). Separate from any rough-hewn comparison with non-Aboriginals, the present dataset demonstrates that there are identifiable groups of Aboriginal youth who, based on how they change their ethnic identification over time, are much more likely to finish school than others.

While our data have demonstrated that the phenomenon of ethnic identification switching is quite prevalent, and its relation to school drop-out rates quite strong, it remains unclear why almost half of these adolescents switched their ethnic identification and, furthermore, why the particular ways in which they do so affect their school drop-out in the ways observed. More specifically, why is the Subsequently Declared pattern associated with lower drop-rates
compared to all other patterns, and why is the Consistently Aboriginal pattern associated with the highest drop-out rate?

Furthermore, why does the Declared Once group fare as badly as it does? This is a group that, given 10 possible opportunities, only ever once declared themselves to be Aboriginal. Nevertheless, this one declaration is associated with a 31% difference in drop-out rate (i.e., the Declared Once drop-out rate is 52.12%, while the non-Aboriginal drop-out rate is 20.8%). Of course, it is possible these students are the victims of data-entry error, and are not actually Aboriginal, but this would not explain the high drop-out rate. Alternatively, these students could represent a subset of non-Aboriginal students who decided, either out of confusion or something else, to, on one occasion, declare themselves to be Aboriginal. The question, however, still remains. Why does declaring yourself to be Aboriginal only once, surrounded by up to nine declarations of non-Aboriginality, make such a drastic difference in drop-out rate?

Unfortunately, while the evidence in hand raises these important questions, it does little to answer them. In what follows, I will instead extrapolate from the available research indirectly related to this topic as a way of proposing a few candidate explanations of this new line of evidence. While these prospects are little more than guarded inferences meant to make better interpretative sense of these findings, they at least offer possible avenues for future research.

**Possible Accounts for Different School Drop-Out Rates Across Ethnic Identification Groups**

First, it is possible, though unlikely, that these declarations of Aboriginality are, in the end, not self-declarations. Since these data were collected by school administrations, we cannot say with complete confidence that these assertions came from the students themselves, even though Ministry instructions explicitly state that this information was only to be self-volunteered.
Nevertheless, if we consider the possibility that administrators or teachers, and not students, were making these decisions, then it continues to be unclear how this would explain the data. First of all, why would there be so much ethnic identification switching? If school personnel imposed their own interpretation of a given student’s Aboriginality, there is no obvious reason to suppose that they would not do so consistently (or inconsistently) from year to year, and there is no reason to expect that any inconsistencies might be other than random. Instead, these attributions were strongly classifiable into five distinct patterns. Moreover, even if school administrators assigned Aboriginality in some potentially arbitrary way that created patterns of ethnic identification, it is not clear why these patterns would result in the markedly different drop-out rates observed. In other words, there does not seem to be a reason why a student that an administrator first decided was not Aboriginal and later decided was Aboriginal would be markedly less likely to drop-out of school than any other Aboriginal student.

If we conclude that these data were most likely self-declarations, then one possible interpretive approach is to conceive of these patterns of ethnic identification switching as somehow akin to Marcia’s changing Identity stances (Marcia, 1987). That is, it is possible to regard the different identification patterns observed here as being somehow expressive of Marcia’s various stages of Identity Diffusion, Foreclosure, Moratorium, or Identity Achieved. Viewed from the perspective of Marcia’s theory, ethnic identification switching during adolescence might be seen as an ordinary part of gradually settling into an ethnic identity. Viewed in a certain light, the Always Declared group might be seen as equivalent to what Marcia terms a Foreclosed identity, although this is problematic for those youth living on reserve. Continuing the analogy, the Inconsistently Declared Group could be seen as being in a Moratorium or Identity Diffused period, while the Subsequently Declared group might be
viewed as akin to the Identity Achieved, which could help to explain their lower drop-out rate. If we continue this logic, however, then the Previously Declared group should also be seen as Identity Achieved, and should be doing as well as the Subsequently Declared group. Furthermore, it is unclear how the Declared Once would be classified according to Marcia’s scheme. Conceiving of the ethnic identification patterns observed in this way would appear, at best, to offer only a partial and tentative explanation of the differences in drop-out rates observed in this study.

Eschbach and Gómez (1998) suggest that those Hispanic youth who have higher SES, live in more urban areas, and are less surrounded by their culture will be more likely to switch their ethnic identification. Given recent results that suggest that higher SES is linked to lower drop-out rates among B.C. Aboriginals (Desroches, 2005), Eschbach and Gómez’s account would seem to suggest that those who switch their ethnic identifications away from being Aboriginal would be less likely to drop-out. Our data, however, do not support that contention, since the group that does this (the Previously Declared group) do not differ from the Inconsistently Declared and Declared Once groups. Instead, it is those who show the opposite pattern (the Subsequently Declared group) – that is, those who change their declaration from non-Aboriginal to Aboriginal – who have lower drop-out rates. Consistent with Eschbach and Gómez (1998), however, is the fact that those who consistently maintain their ethnic identification (the Always Declared), and who (interpolating from Eschbach and Gómez [1998]) have a lower SES, do have the highest drop-out rate.

Research regarding ethnic identity and academic achievement could potentially help explain the differences between our ethnic identification groups, but not in a completely satisfactory way. Fordham and Ogbu’s (1986) concept of “racelessness” does not seem to apply
since those who seem to be “denying” their ethnicity (the Declared Once and the Formerly declared groups) do not really differ from the whole sample in regards to their drop-out rates. The three dimensions suggested by those who have followed Fordham and Ogbu (private beliefs about ethnicity, perception of others’ beliefs about their ethnicity, and perceived importance of ethnicity) would appear to have more promise in explaining our group differences, but only if read in a certain light. That is, we would have to assume that the Subsequently Declared group switched their declaration to being Aboriginal because they felt their ethnicity was important and that they felt positively about their culture. At the same time, we would also have to assume that the Always Declared group just happened to have either low regard for their culture, or have the perception that others view Aboriginals negatively. These are plausible hypotheses, but it is just as easy to attribute other attitudes to these ethnic identification groups that would result in opposite predictions. Perhaps in future research it will be possible to measure these dimensions directly and compare them to patterns of ethnic identification switching.

By contrast, cultural continuity, unlike the ethnic identity research just mentioned, has been directly related to school-drop out rates, as well as youth suicide rates, in roughly the same population that was studied in this sample (Chandler et al., 2003; Hallett et al., 2004). Though this previously demonstrated relationship with school attrition would suggest that cultural continuity might also help to explain the different ethnic identification patterns identified in this study, it is not apparent if this is the case. The question at hand is how being part of an Aboriginal community – a community with more or less cultural continuity – is reflected in the different patterns of ethnic identification. One could speculate that the Subsequently Declared pattern can be read as an expression of Aboriginal pride – pride that arose from their band’s efforts to reconnect to their culture – and that this more robust sense of self might lead to less
school attrition. Still, this explanation, like many of those above, is tentative at best. Further research is needed to pursue this question, perhaps first by testing to see if the cultural continuity factors are related to the different ethnic identification patterns.

Limitations of the Research

Two final points about this study should be noted. The first is that, as reported in the methods section, the data examined here did not include students who attended band-administered schools. It is possible that these students did not suffer from the same propensity to drop out of school as their public and private school system counterparts, but at the same time, it is possible that their drop-out rates are in fact the same or even worse. Without further data, perhaps from the band schools themselves, it is impossible to say. Regardless of how different such band school students are, they make up only a small minority of the population from which the present sample was derived and, as such, would not importantly change the sad reality that school attrition is a major problem for the majority of B.C.'s Aboriginal youth. Furthermore, as long as we restrict ourselves to the vast majority of Aboriginal students who did not go to band schools, the results presented here still provide meaningful and interesting findings.

Second, there also seem to be sharp differences between those young persons who live on reserve and those who do not. The first main difference is that, as reported above, virtually all those who live on a reserve do not switch their ethnic identification. In our data, this pattern of responding represents something of a double-edged sword. On the one hand, the prevalence of the Always Declared pattern among those who live on reserve suggests that ethnic identification switching may not be an ordinary occurrence for those adolescents who are surrounded by others of their own culture – a conclusion similar to what Eschbach and Gómez (1998) reported
regarding Hispanics. At the same time, this means that ethnic identification switching is even more common for those who do not live on a reserve. That is, although just under 50% of our entire sample switched their ethnic identification, this proportion increases to 68% of those who lived off reserve. This implies that ethnic identification switching is even more common when you are surrounded by people belonging to a culture different than your own.

Nevertheless, despite these differences between those who do and do not live on a reserve, the ethnic identification patterns still have a strong relationship with school drop-out rates. In fact, when you restrict the comparison to those who consistently declared their Aboriginality, the difference in school attrition between these two groups narrows to the point of only being on the cusp of statistical significance. Furthermore, the relations between the ethnic identification patterns and school drop-out rates are still robust when you limit the analysis to those who live off reserve. The pattern is clear – ethnic identification matters.

Conclusions

The research presented here fractures the widely-held presumption that, once past the ordinary confusions of childhood, people see themselves as consistently belonging to the same ethnic group. While this result alone is surprising and worthy of study, the data go on to demonstrate that the way in which Aboriginal adolescents change their ethnic identification is strongly related to their likelihood of dropping out of school. What is less clear, however, is why certain patterns are associated with lower drop-out rates and other patterns are associated with higher ones. Several possible explanations are presented above, but none of these explanations seem altogether better than the rest. Further research is definitely needed to explore these differences. For now, we can only assert that the ways the Aboriginal youth come to think of
their ethnic identification is meaningful, not only in regards to youth-drop rates, but perhaps in other ways as well.
References


Chapter V
Conclusion

On the first line of this document, I stated that this dissertation was about cultural continuity. Certainly, it is about other things as well – important things like school attrition, youth suicide, ethnic identification, and the Aboriginal youth of B.C. – but the unifying theme behind this effort is to elaborate upon, and to better assess, the notion of cultural continuity. While the studies presented above can speak for themselves, they also, when considered together, provide some qualified but converging support for cultural continuity as an emerging and important psychological construct.

School Attrition

Chapter II, among other things, reported on the relation between cultural continuity and school drop-out rates. In doing so, it highlighted two important points about school attrition in B.C.’s Aboriginal youth. First, as is otherwise known, these rates are exceedingly high – two-thirds of those living on a reserve do not complete high school while only one fifth of non-Aboriginals fail to attain this educational milestone. Furthermore, data presented in Chapter IV indicate that this is not just a problem of living on a reserve, since: (a) the drop-out rate for those living off reserve, while lower, is still extremely high (52%); and (b) those living off reserve who consistently identify themselves as Aboriginal have nearly the same drop-out rate as those who live on a reserve. Second, these generally elevated rates are nevertheless highly variable and, even measured conservatively, range from 37% to 93% across B.C.’s almost 200 bands. These data make the case that it is misleading to paint all Aboriginal bands with the same broad brush,
as some bands have drop-out rates that approach the provincial average while in others almost every child fails to complete high school.

That being said, the important point for the purposes of this dissertation is not simply that Aboriginal drop-out rates are both exceedingly high and exceedingly variable, but that this pattern of results also strongly parallels the related pattern found in youth suicide rates. Both suicide rates and school drop-out rates in certain Aboriginal communities are not only alarmingly elevated compared to North American mainstream society, but also when compared to other marginalized groups – groups that by many usual standards are similarly disadvantaged. The finding that drop-out rates and suicide rates show effectively the same pattern in the same population suggests there is a link between these seemingly distinct phenomenon. This link strengthens the case for the utility of the notion of cultural continuity, since it makes a common theoretical case that not only provides some account of why these social problems are particularly evident in the Aboriginal population as a whole, but also similarly provides a plausible explanation for the variation in these problems from band to band.

Still, the relation between drop-out rates and cultural continuity factors was not as strong as the relation between youth suicide and cultural continuity. The theory behind cultural continuity suggests that youth suicide and dropping out of school are related because both problems express a common failing – that is, somehow losing track of the foreseeable consequences of one’s actions. If this logic is correct, and, indeed, if the theoretical underpinnings of cultural continuity are correct as well, then failures of cultural continuity should be predictive of both youth suicide rates and school-drop out rates. Yet, results from Chapters II and III regarding drop-out rates are not only weaker than expected, but, in the current analyses, only seem to be associated with one or two of the cultural continuity factors.
Nevertheless, the overall relations predicted to hold between the available cultural continuity factors and school attrition rates did exist, and if it had also been possible to include those youth who lived off reserve in the analyses, this relation may have also been observed in the other cultural continuity factors. Nevertheless, since we did not have access to these data, it is difficult to draw any firm conclusions. In the end, the presence of this qualified relationship is only one finding in this dissertation, and it is not the only result that lends support to the notion of cultural continuity.

Factor Analyses

Some additional support for the notion of cultural continuity is found in the factor analyses conducted in Chapters II and III. These analyses demonstrated that the available markers of cultural continuity seem to reflect a common construct, and that the common variance underlying these indicators is related to band differences in school drop-out rates. Again, it is possible this relation between the aggregated scores and school attrition is carried solely by the contribution of only one of the cultural continuity factors (i.e., the land claims factor). Nevertheless, the finding that these variables are best explained by a one-factor solution is still, by itself, important, since it strengthens the claim that these variables do underlie a single construct – a construct hypothesized, with good reason, to be cultural continuity.

Knowledge of an Aboriginal Language

The notion of cultural continuity gains further support from the results of Chapter III. The significant relation between Aboriginal language knowledge and youth suicide again argues that cultural continuity is, as postulated, more than just the sum of its prior constituent parts. In
other words, the fact that another variable – in this case knowledge of an Aboriginal language – can be added to the battery of cultural continuity measures and (a) actually increase its ability to discriminate suicide rates and (b) maintain its single factor structure reinforces the notion that cultural continuity serves to tie together these various proxy variables.

Furthermore, cultural continuity, as it was previously operationalized, was open to the criticism that its indicator variables could be read instead as measuring constructs other than cultural continuity – constructs such as civic control or “social capital” – and that it is one of these competing constructs that is actually related to youth suicide and school attrition. Since Aboriginal language knowledge is, arguably, a variable more remote from matters of administrative control and has less to do with “social capital”, the results presented in Chapter III – especially in regards to youth suicide – work against any attempt to collapse the “backward-referring”, as well as the “forward-anticipating”, features constitutive of cultural continuity to any simplifying notion of future-oriented social capital.

Ethnic Identification

Approaching the phenomenon of cultural connectedness from a different angle, Chapter IV presents some interesting, but still under-explored, results regarding ethnic identification patterns and school drop-out rates. Although these findings are more provocative than conclusive, ethnic identification seems to have real potential as an indicator of how cultural continuity might be internalized. That is, even though cultural continuity works at the community level, in the end, it is individuals who decide to drop out of school or to kill themselves. As such, ethnic identification patterns may provide an indication of how cultural continuity might work at the individual level. Given these prospects, it seems worthwhile to
briefly speculate, in more detail than what was done in Chapter IV, about how cultural continuity might be reflected by such declarations.

*Proposed connection between cultural continuity and ethnic identification.* The central question here is how being part of an Aboriginal community – a community with more or less cultural continuity – might be reflected in the different patterns of ethnic identification. To begin an answer to this question, consider that, in the context of B.C.’s Aboriginal people, cultural continuity is held out as a measure of the extent to which communities are attempting to reconnect to their cultural past and future. That is, policies of alienation, disenfranchisement, and assimilation that have ravaged their cultures over the last few centuries have necessarily worked to undermine Aboriginal people’s sense of continuity with their cultural past and their ability to shape their cultural future. As such, B.C.’s Aboriginal communities are attempting to regain what many cultures already more automatically have – a sense of cultural coherence. In situations like this, what is perhaps most important is not the current state of cultural connectedness that has already been accomplished, but the extent to which communities are hard at work rehabilitating their savaged cultures. As such, cultural continuity factors have not been chosen to reflect the overall connectedness that a community exhibits towards its culture. Rather, it is the process through which bands mend their connection to their cultural past and future that has been shown to be an indicator of communities with fewer social problems.

That being said, if we were to look for how the trajectory of improving cultural continuity would manifest itself at the level of individual Aboriginal adolescents, then a simple, one-time declaration of being or not being Aboriginal lacks the temporal dimension necessary to detect these changes. Aboriginal adolescents who declare themselves to be Aboriginal at any given
time might do so for a variety of reasons. For some it may be an affirmation of pride, while for others such declarations might be offered listlessly or begrudgingly. Given this ambiguity, we need instead to look at the patterns of these declarations over time for a better demonstration of what these patterns reflect.

With this in mind, we can now speculate about what kinds of cultural connectedness might be evident in the observed ethnic identification patterns. The Subsequently Declared group, while no doubt composed of youths who declared in this way for any number of different personal reasons, can plausibly be argued to contain an important share of Aboriginal adolescents whose shift from declaring themselves as non-Aboriginal to Aboriginal expresses a growing sense of cultural pride. In other words, these are students who once felt detached from their culture, but are now becoming increasingly committed to it. More than that, it also appears that having this new commitment makes them less likely to drop out of school. In the same vein, some of the other ethnic identification groups can be seen as composed largely of those who either deny their culture or are otherwise less culturally connected and, as such, are less likely to stay in school.

Of course, these ideas about how cultural continuity could be reflected in the different ethnic identification patterns are largely speculative. It is possible that some individualized or internalized version of cultural continuity is not driving how Aboriginal adolescents are identifying as Aboriginals over time. At the same time, there are good grounds for supposing that cultural continuity does underlie these patterns of ethnic identification, though it may not necessarily be in the way that is fathomed above. Such questions cannot be answered with the data in hand, and must instead by a topic for future research. Still, the fact that ethnic identification – which could plausibly reflect in how committed one is to their culture – is related
to school attrition suggests that a possible link to cultural continuity, given that it is the only proposed explanation with a demonstrated link to dropping out of school.

Limitations of the Data and Ideas for Future Research

One of the major problems with this dataset – a problem that has plagued all three studies – has been the inability to acquire band code data for the 70% of the province’s Aboriginal youth that do not live on reserve. These missing cases necessitate qualifying the results presented in Chapters II and III, since it is not possible to generalize to those Aboriginal youth who live off reserve. It is anticipated that if it had been possible to obtain this information, stronger relations between cultural continuity and youth suicide would have emerged. This lack of data, however, also affects the findings in Chapter IV. If band code information had been available for all of the students in the cohort, it would have also been possible to explore the question, posed by Chapter IV, of how ethnic identification patterns are related to cultural continuity factors. In other words, we could test whether the distribution of ethnic identification patterns are different for bands with and without certain cultural continuity factors. As it was, there was no variance in ethnic identification patterns among those who live on a reserve, since 94% of them consistently declared their Aboriginality. For those who live off reserve, however, such an analysis could bolster the theory-driven claim that ethnic identification patterns are individualized reflections of cultural continuity. Still, this information is currently unavailable and must, again, wait until a data-sharing agreement is in place between the B.C. Ministry of Education and the federal Department of Indian and Northern Affairs.

Our findings are also qualified, across all three studies, by our lack of data about Aboriginal students who attended band-administered schools. These students represent a small
group of the Aboriginal youth population in B.C., and likely would not have a large effect on the results. Nevertheless, it is possible that these students’ patterns of school attrition may be different from those of their peers, and may provide interesting insights into how cultural continuity is related to dropping out of school. This is yet another question that must wait until the data on these students can be made available for analysis.

Conclusion

Cultural continuity, in this dissertation, is envisioned as having a direct influence on social problems such as youth suicide and school attrition. This hypothesized nomological process suggests that cultural continuity, through some as yet unspecified mechanism, influences how individuals can construct healthy or unhealthy views about their self-continuity which, in turn, is imagined to bear on individual’s decisions to leave school or take their own life. Although much more research is needed to be confident in this model, the converging evidence in this dissertation does offer some qualified support for the cultural continuity construct in general. The demonstrated relation between language knowledge and youth suicide, combined with the factor analyses of Chapters II and III, further the contention that cultural continuity is not particularly wed to any given indicator, but is instead a construct that is meant to quantify a band’s efforts to both connect with the cultural past and gain control over their cultural future. The relation between ethnic identification switching and school attrition asserts that ethnic identity is important, and it suggests, albeit tentatively, a way in which cultural continuity may be reflected at the individual level. Lastly, and perhaps more importantly, the real, if attenuated, relation of cultural continuity with school attrition supports the notion that cultural continuity is not just about suicide. The theoretical underpinnings of the construct of cultural continuity
would strongly suggest that one’s sense of continuity, both at the individual and cultural level, is potentially related to many social problems. As such, the notion of cultural continuity appears to be a promising tool in understanding social problems like suicide and school attrition, and perhaps others as well. Future research will have to test the limits of the construct both in its explanatory power and in its application to other social problems. The research presented here is a start, but it is only a beginning.