Community Resilience: Models, Metaphors and Measures

Laurence J. Kirmayer, MD, FRCPC, Professor and Director, Division of Social and Transcultural Psychiatry, Department of Psychiatry, McGill University and Director, Culture & Mental Health Research Unit, Department of Psychiatry, Jewish General Hospital

Megha Sehdev, Johns Hopkins University

Rob Whitley, PhD, Culture & Mental Health Research Unit, Institute of Community & Family Psychiatry, Jewish General Hospital and Dartmouth Psychiatric Research Center

Stéphane F. Dandeneau, PhD, Culture & Mental Health Research Unit, Institute of Community & Family Psychiatry, Jewish General Hospital

Colette Isaac, Program Coordinator, National Network for Aboriginal Mental Health Research, Culture & Mental Health Research Unit, Jewish General Hospital

ABSTRACT

In this paper, we discuss the importance of community resilience for Aboriginal health and well-being. The concept of resilience has been used in developmental psychology and psychiatry to describe individuals' capacities to achieve well-being and thrive despite significant adversity. Resilience is also a useful concept in ecology where it draws attention to the ability of ecosystems to adapt to environmental stress through transformation. The study of community resilience builds on these concepts, to understand positive responses to adversity at the level of families, communities and larger social systems. Despite historical and ongoing conditions of adversity and hardship many Aboriginal cultures and communities have survived and done well. In this review, we critically assess the various definitions of resilience as applied to individuals. We then examine resilience as applied to families, communities and larger social systems. We examine links between the concept of resilience and social capital. We then consider interventions that can promote resilience and well-being in Aboriginal communities. These include strengthening social capital, networks and support; revitalization of language, enhancing cultural identity and spirituality; supporting families and parents to insure healthy child development; enhancing local control and collective efficacy; building infrastructure (material, human and informational); increasing economic opportunity and diversification; and respecting human diversity. We also discuss methods of measuring community resilience, examining advantages and disadvantages to each method. Community resilience is a concept that resonates with Aboriginal perspectives because it focuses on collective strengths from an ecological or systemic perspective.

KEYWORDS
Community resilience, social capital, system dynamics, mental health promotion

INTRODUCTION

In the field of mental health, resilience is generally defined as a person's ability to overcome stress and adversity. Psychologists have often portrayed resilience as an individual trait. Recently though, there is increasing recognition that this individual-centered approach to resilience is problematic, because it lacks sensitivity to social and cultural context. A new body of work is attempting to expand the focus on resilience as a characteristic of the individual to one of resilience as a community and cultural process. This new focus on "community resilience" looks at how people overcome stress, trauma and other life challenges by drawing from the social and cultural networks and practices that constitute communities. At the same time, it draws attention to the resilience of the community itself.

Much recent work on community resilience has focussed on responding to environmental disasters like flooding, hurricanes, tsunamis, or earthquakes. While there are many aspects that are relevant to the concerns of Aboriginal communities, there are also fundamental differences. The adversities that Aboriginal communities face are not sudden, impersonal events like natural disasters but the persistent results of long historical processes borne of deliberate human actions and policies aimed at cultural suppression, oppression and marginalization. Unlike a disaster that disrupts or destroys existing infrastructure, many Aboriginal communities have undergone radical changes, displacements and reconfigurations in response to colonization and have had to improvise ways to cope with continuing marginalization and external control. As a result, rather than focussing on crisis responses to catastrophes, Aboriginal resilience must be considered in terms of the impact of structural violence, and interventions must take a long-term approach to rebuild, repair and revitalize community strengths and institutions.

The concept of community resilience has important implications for efforts to promote mental health in Aboriginal communities. Theories of community resilience are consonant with Aboriginal values that emphasize the importance of a person's relations with others and the environment. Aboriginal perspectives on resilience then lead us to think about the social-ecological networks that can reduce individual vulnerability and enhance well-being. These networks are embedded in and sustained by value systems that include notions of personhood, ethics, and religion or spirituality. Of course, there are many approaches to community resilience and not all fit with every Aboriginal setting. Each approach must be evaluated in terms of its relevance and applicability to diverse Aboriginal realities.

1.1 Outline

In this report, we explore a variety of current models and metaphors for community resilience that are pertinent to the diversity of contemporary Aboriginal contexts. We have emphasized those approaches that are consistent with Aboriginal values, that are relatively well developed, and that have some prospect of being measured in ways that can guide public health responses to community mental health needs and crises.

The concept of resilience is a technical term that has wide currency in developmental psychology as well as in ecology and organizational studies. There are many other terms that touch on similar concepts including strength, adaptability and hardiness. The common element is the ability of an individual, system or organization to meet challenges, survive and do well despite adversity. Resilience can occur at the level of the individual, family, community, nation, or global system as well as in ecosystems. The review addresses each of these different levels but focuses on the community level. We also address indigenous concepts of holism, which emphasize the importance of all sectors or dimensions of human experience in achieving balance and well-being.

Despite the appeal of the metaphor of resilience, there is a risk that the focus on resilience will reproduce the same biases and stereotypes that occur with discussions of risk and protection (Holton, Brass & Kirmayer, 2009). In particular, talk of resilience may lead to blaming individuals or communities as being somehow at fault for their own difficulties because they lack resilience. This ignores the complex web of factors that contribute to health and well-being. Instead, the construct of resilience aims to draw attention to positive aspects of adaptation that can be mobilized to improve outcomes. Resilience, however defined, is only part of the complex set of historical and current forces that influence the well-being and functioning of Aboriginal communities.

In Section 2, we trace the evolution and definition of the notions of individual resilience in both the published and "grey" literature. We briefly review work from psychology and psychiatry on resilience at the level of the individual. Understanding the characteristics of resilient individuals can help identify those features of communities that enable or facilitate individuals to thrive. At the same time, existing work on individual traits and processes provides ideas that can be applied by analogy to community resilience. In Section 3, we focus on "community resilience" in both the published and "grey" literature. The aim is to identify what is distinctive about communities that are "resilient" compared to those that are not. This, in turn,

points to both structural and process issues in the nature of Aboriginal communities.

Section 4 focuses on what is distinctive about resilience in Aboriginal contexts. We summarize the factors that appear to enhance or diminish resilience in different Aboriginal settings, with particular attention to history, scale, politics, and other factors that differ among communities.

In Section 5, we consider issues of measurement, outlining some potential indicators of community resilience that can be used to guide prevention and intervention and measure their success. Section 6 summarizes the implications of this review for interventions that aim to promote community resilience.

In Section 7, the conclusion discusses the appeal of resilience and outlines some of the broader questions that must be addressed to develop effective interventions. Appendix B provides some questions for further discussion and Appendix C some useful Internet resources.

1.2 Key Concepts and Terminology

The concept of community resilience brings together broad notions of resilience and community that function both as abstract concepts and as metaphors for a wide range of phenomena. In this section, we consider some definitions of resilience, community and community resilience. Other terms are defined in the Glossary (Appendix A).

1.2.1 Resilience

Resilience is a term derived from the physics of materials that has been applied in ecology, developmental psychology and psychiatry. In materials science, resilience refers to the ability of something to return to its original form after having been bent or compressed. This view from physics has a parallel in Eastern philosophy where the natural symbol for resilience is bamboo—the plant can be bent to the ground but will spring back, healthy and strong, and essentially unchanged.

In ecology, resilience refers to the capacity of an ecosystem to recover from environmental stresses like fires, drought, climate change, or pollution (Holling, 1973; Odum & Barrett, 2005). Ecological views of resilience emphasize the ability of natural systems to respond to a stress or challenge by self-correcting processes that restore pre-existing patterns and populations of plants and animals. Ecosystems show resilience through three broad mechanisms: buffering disturbances to reduce their impact, self-organization to maintain crucial system functions, and learning or adaptation (Abel & Stepp, 2003; Trosper, 2003). Often, however, ecological recovery does not involve a return to precisely the same original state but to a new

configuration in which the types of plants and animals and their relative numbers are changed to fit the new environment. In many ecological systems, therefore, resilience involves transformation: the system responds to a challenge not simply by restoring its usual form but by changing in ways that better fit the new environmental constraints. This notion of resilience as adaptation and transformation is crucial for psychological and social resilience.

In organismic biology, resilience refers to the capacity of the individual organism to respond to physiological challenges by restoring or maintaining bodily homeostasis or equilibrium. For ordinary fluctuations or small challenges, the body has mechanisms to restore balance; for example the level of blood sugar is maintained within narrow limits despite wide variations in our sugar intake from over the course of a day. When a stress exceeds the capacity of ordinary regulatory systems, set-points shift and other systems designed to deal with major challenges work to re-establish a new steady-state, a phenomenon called "allostasis" (McEwan, 1998). McEwan (2003) takes a developmental approach that assumes that each individual varies in (i) their "allostatic load" as a consequence of lifespan experience; and (ii) their ability to bear such a load. Allostatic load is a function of long-term stress and insult, and the individual's ability to bear a heavy load depends on many personal and contextual factors. Again, as in ecological systems, this adaptation often means not simply a return to pre-stress conditions but a transformation of the system in ways that may lead to both specific strengths and vulnerabilities.

In psychology, resilience is generally defined as an individual's ability to overcome stress and adversity. Personality psychologists have usually studied resilience in terms of individual traits or characteristics. Developmental psychologists have adopted a more interactional view, seeing resilience in the interactions of children with their caretakers or peers. Increasingly, however, researchers have critiqued these individual-centred models because they tend to ignore the larger social and cultural context in which individual development and adaptation takes place. A new body of literature is moving beyond the focus on individuals to consider the importance of social and cultural dimensions of resilience. This shift in focus is particularly relevant for Aboriginal communities, not only because of the obvious structural issues they face in response to the history of colonization (King, Smith & Gracey, 2009), but also because where indigenous notions of personhood, identity and well-being emphasize the interconnectedness of persons with each other and with the environment.

Any social grouping that forms a self-organizing or self-sustaining dynamical system in which different actors or

agents interact may exhibit resilience. At this abstract level, resilience is "the capacity of a system to absorb disturbance and re-organize while undergoing change so as to still retain essentially the same function, structure, identity and feedbacks" (Walker et al., 2002). Although different types of systems have different structures and processes, there are some general features of the dynamics of systems that are relevant to understanding resilience (Odum, 1994; Holling, 2001). To the extent that ecosystems, physiological systems and individuals share similar systems dynamics, ideas from ecology or biology may be used to understand psychological or sociological processes.

Fleming and Ledogar (2008a) discuss current definitions of resilience applied to Aboriginal research. A common definition is "adaptation despite high risk." Other definitions include "good development despite high risk," "competence under stress," "recovery from trauma," and "normal development under difficult conditions" (p. 8). Definitions of resilience require an element of adversity. For instance, some authors define resilience as "successful adaptation" in the face of "high risk," "stressful experiences," or "trauma" (Masten, 2001). Resilience often results in positive outcomes that are "beyond predicted expectations" (Richman & Fraser, 2001).

There are several important limitations to the resilience metaphor as it is tends to be applied to Aboriginal peoples and communities. Resilience is seen as a process of returning to a previous state ("springing back") rather than transforming into something new, as is more commonly the case. In psychology and psychiatry, talk about resilience tends to focus on internal characteristics of the individual rather than interactions with others and with the environment. Resilience is not a single entity or "essence" of the person but a name for the outcome of many processes. Many discussions of resilience look at specific traumas or catastrophic events rather than the persistent adversities that result from of structural violence, racism and discrimination. Finally, and most importantly, in its emphasis on describing positive characteristics, the resilience metaphor tends to obscure the many tradeoffs that inevitably occur between risk and protective factors that are actually part of the same interacting system. All of these biases can be traced to a more general lack of attention to the social and cultural contexts that define adversity, positive outcomes, and adaptive strategies that contribute to resilience. Aboriginal values and perspectives emphasizing interconnectedness, integration and wholeness can provide an important counterbalance to the ways of thinking about resilience as discrete factors that tend to dominate current scientific writing.

1.2.2 Community

"Community" has many meanings and can refer to groups of pe   ople linked by common identity, geography, commitment, interest, or concern (Jewkes & Murcott, 1996). In an effort to clarify the concept of community, Christensen and Robertson (1980) suggest that a community consists of people, living within a geographically bounded area, involved in ongoing social interaction, and with psychological ties with each other and to the place they live. Although this definition fits the situation of rural and remote Aboriginal communities, it does not capture all of the meanings of community for Aboriginal peoples. The emphasis on bonds with others and with place is central to indigenous notions of identity and community. However, many Aboriginal communities arrived at their current form through processes of sedentarization, displacement or forced relocation, which continue to exert profound effects on community identity and dynamics. Some communities were established quite recently, and are built out of much older, smaller scale networks of families, clans or other groups. Other communities are derived from large-scale complex societies but, in the wake of colonization, have had to adopt new forms of governance, hierarchies and social structures. In most cases, current communities bear the traces of these earlier forms of communal life and this history adds layers of complexity to community resilience.

The importance of community reflects the fact that human beings are fundamentally social and usually live in closely knit groups. In the contemporary world, the idea of community also speaks to the feelings of isolation and lack of connectedness that many feel as a consequence of the shrinking of the extended family and atomization of society into individuals (Bauman, 2001). Some social scientists have critiqued the term "community" because it is often ideologically loaded and "tends to imply unverified assumptions about how people in small face to face groups are supposed to interact" (Tanner, 2008, p. 250).

There are enormous differences among Aboriginal groups depending on their original forms of social organization and ways of life, their historical relationship to colonizing powers, their geographical location, as well as their ongoing efforts to sustain and rebuild communities in the light of political challenges and new technologies. For example, Inuit "community" was originally based on the extended family unit, whereas some other Aboriginal groups lived in larger communities. The community as an historical entity therefore cannot be assumed to mean the same thing for every Aboriginal group. Indeed, the meaning of community has changed over time with changes in

living circumstances both locally and in interaction with the larger society (Allen, 1999). The challenges brought by colonization, residential schools, bureaucratic control, and other social, cultural and political changes may have different impact on communities depending on their pre-existing social structure, resources, strategies of adaptation, and consequent dynamics.

Although connections to the land or to specific places are an important aspect of indigenous identity for many Aboriginal peoples, communities are defined not only in terms of geographic locations but also larger networks that link people as members of First Nations, Inuit or Metis communities that may be geographically dispersed yet strongly connected through a sense of belonging. Many Aboriginal people move back and forth from a rural community to urban settings, while maintaining their sense of community membership. Others Aboriginal individuals are connected to an urban community or to one that is defined by shared historical experiences, cultural values, and political commitments and concerns.

Continuing social, political and technological changes are re-configuring Aboriginal community life. New forms of networking also have allowed new forms of community to emerge that are based on common interests and perspectives, or shared identities, that are facilitated by the Internet and other telecommunications rather than regular face-to-face interaction. This may be particular important for youth who make active use of new technologies. Such networking also allows communities to form common cause and to find resources and share experiences in ways that may confer new types of resilience.

In this paper, we will use the definition of community provided by Christensen and Robertson (1980) as a starting point, remaining mindful that the term means different things in different contexts and is continuing to undergo transformation.

1.2.3 Community Resilience

The notion of "community resilience" has two interpretations:

1. It may look at how people overcome stress, trauma and other life challenges by drawing from social networks and cultural resources embedded in communities.
2. It may consider the ways in which communities themselves exhibit resilience, responding to stresses and challenges in ways that tend to restore their functioning.

Identifying the ways in which communities foster individual resilience can begin with analysis of the roots of individual resilience. The different factors that contribute to individual resilience can then be mapped onto those structures and processes of the community that promote, enable or enhance these individual-level factors. Resilience of the community itself involves the dynamics of the social response to challenges that threaten to damage or destroy the community. These dynamics may involve adaptations and adjustments of individuals, groups and organizations with the community (seen as components of the community as a system) as well as interactions of the whole community with its surrounding environment, including especially other social, economic and political entities.

1.3 Methodology

This report is based on a selective review of community resilience using online search engines (Google, PubMed and PsyLit). We searched for all material addressing "resilience" and either "community," "collective," and Aboriginal, First Nations, Inuit, Metis, American Indian, or Alaska Native. From this we selected articles and reports directly addressing our core topic of Aboriginal peoples in Canada. This was supplemented with material on other Indigenous peoples, and specific issues, including: ecosystems, family systems, community response to trauma, measurement of resilience, social capital, and mental health promotion. Although the focus is on community resilience, we reviewed basic issues in individual resilience because of its importance for health and well-being.

2. MODELS AND METAPHORS OF RESILIENCE

Barton (2005) traces the evolution of concepts of individual resilience and shows how it began as a conceptual move away from illness, vulnerability and stigma towards a focus on strengths and assets. Initially, this involved identifying lists of personal traits, skills and resources that were viewed as independent factors that contributed to the individual's resilience. The literature has moved from a "silo approach" of discrete or independent resilience factors towards an "ecological" view that focuses on the interaction of risk and protective factors. Resilience factors emerge at different levels: individual (psychosocial and biological), family, school, neighbourhood, and the macrolevel of social and economic structures.

Barton (2005) identifies several problems at the conceptual core of "resilience" theories. First, he argues that "resilience" is a culture-bound concept grounded in Euro-American and neoliberal discourses of choice, agency and flexibility. To go beyond this culturally bound or biased view, he encourages researchers to explore resilience in both general models and local cultural perspectives. Secondly, Barton points out that most definitions of resilience focus on it as a response to adversity. Yet resilience may also be shown in situations where hardship and vulnerability are not as apparent. Everyday challenges may also call for some of the same qualities of resilience that are seen in more difficult situations. Barton advocates a phenomenological approach to resilience that takes into account individual agency, situational context and processes of improvisation in everyday life.

On analogy to its use in ecology, resilience can be found at the level of families, groups, communities, and larger social systems. If many individuals in a community exhibit individual resilience, this can contribute to making the whole community resilient, since they work together more easily to respond to stresses and challenges. The link may also work the other way: a community that has resilient characteristics may increase the resilience of its individual members. This may occur in part because the community environment is conducive to healthy early child development but also because individuals can draw from community resources across their lifespan to meet new challenges. However, the interaction between individual and community resilience may not be so simple or exclusively positive. It is possible that certain aspects of resilience at the individual or community level may be in conflict with each other, involving tradeoffs of one aspect against the other. What is good for certain individuals is not always good for the community and vice versa. To consider this more complex possibility of trade-offs, we need to understand resilience at multiple levels. Before addressing community resilience, therefore, it is useful to consider the concept of resilience at the level of the individual.

2.1 Defining Resilience

In psychology and psychiatry, the concept of resilience emerged from clinical observations and research that recognized that many children do well despite very difficult childhood experiences (Luthar, 2006). In particular, some children whose parents have severe mental health problems nonetheless grow up to be well-functioning adults (Rutter, 1985, 2001). From this perspective, resilience is recognized as a positive outcome despite childhood adversity. Similarly, resilience was used to describe the success of children living in harsh urban environments, exposed to poverty and violence, who nonetheless do well in school and grow up to be well-functioning adults (Garmezy, 1991). In adulthood, the resilient person is someone who lives a successful life as defined by such factors as steady employment, a stable marriage and overall well-being in spite of having been exposed to high levels of emotional, mental or physical distress (Lafrance, Bodor & Bastien, 2008). A large body of research has identified genetic and environmental factors that interact to confer resilience on the individual (Kim-Cohen et al., 2004).

In this view, resilience is an individual characteristic that is indicated by the person's successful functioning; success is measured in terms of the achievement of specific social norms and roles (e.g. stable employment, relationships). The positive outcomes that provide evidence of resilience may be experiential or behavioural. Bonanno (2005), for example, defines resilience as an ongoing "capacity for positive emotions and generative experiences" during or following hardship (p. 136). Well-being, absence of depression or other symptom indicators may be taken as measures of individual resilience if the individual has a history of adversities that would usually lead to poor mental health. Behaviourally, resilience may be indicated by good performance in relationships, school, work, or other social roles. This makes it clear that social roles, norms and expectations are intrinsic to any definition and recognition of resilience. The strong normative aspect of resilience means it can only be defined in terms of specific cultural values and frameworks, and thus, may vary in different cultural contexts.

Even within developmental psychology, resilience has been operationalized and measured in diverse ways (Luthar & Brown, 2007). In many cases, resilience is defined simply as a positive health outcome in situations where an individual is exposed to risk, challenge or adversity. This raises the problem of how to separate resilience as a characteristic of the individual that explains past outcomes and predicts future responses from the outcome it is supposed to explain.

Disentangling resilience from positive outcomes is difficult. Strictly speaking, being resilient is not the same as simply doing well — a positive outcome depends on many other circumstances beyond the individual's control. Faced with adversity, many individuals may show some negative effects. Resilience then would be shown by being "competent" or having normal capabilities despite exposure to severe or persistent adversities. Competence is defined in terms of the social demands and requirements at each stage of life and its meaning varies across the lifespan (Masten & Powell, 2003).

Resilience can refer to (i) a sort of strength, resistance or invulnerability that prevents the individual from getting sick; (ii) a capacity to heal, recover and return to functioning quickly and fully; or (iii) an ability to adapt, change course, and find a new way to live and go forward despite impairment. In terms of developmental pathways, resilience may involve maintaining a developmental trajectory, returning to the original trajectory after a temporary deviation or shifting to an entirely new trajectory that also represents a healthy life path (Luther, 2006; Masten, 2007).

The most common view of resilience in the literature is as a *positive adaptation in the context of significant adversity*. Situations of resilience are characterized by "successful outcome" rather than the negative consequences that would otherwise be expected (Rutter, 2007, p. 205). This implies (i) an exposure to threat or adversity and (ii) the achievement of positive adaptation despite major challenges on the developmental trajectory (Luthar, Cicchetti & Becker, 2000). Here "adaptation" indicates some combination of coping and growth or transformation despite chronic risk, stress, trauma, or catastrophe.

Of course, some measure of adversity is inevitable in every life. Ordinary challenges are central to the developmental process and may spur the individual on to greater health, strength and insight. Resilience is built not by avoiding stress but by facing stress "at a time and in a way that allows self-confidence and social competence to increase through mastery and appropriate responsibility" (Rutter, 1985, p. 608). In the case of more severe adversity, an individual may recover from a stress or trauma but carry a persistent "scar," weakness or vulnerability related to the adversity they endured. In other cases, the experience of living through and overcoming a threat results in greater strength and mastery in the face of later challenges. This phenomenon also has been discussed in relation to more severe adversity in the literature on "posttraumatic growth" or "creative crises" (Rousseau & Measham, 2007; Tedeschi & Calhoun, 2004). Of course, both outcomes may co-exist, with strength in some areas and vulnerability in others reflecting the nature of the stresses and the strategies of adaptation.

In early work in developmental psychology and psychiatry, researchers defined resilience as a characteristic of individuals at high risk who have positive developmental outcomes. For example, a resilient child who has a parent with a severe mental disorder that disrupts their capacity to nurture, may nevertheless grow up to be healthy and high functioning. Similarly, children who do well despite experiencing extreme deprivation or abuse are said to display resilience. Because these situations are expected to lead to negative outcomes, children who do well are viewed as exceptional. Their resilience may be attributed to constitutional traits and strengths, or to skills they acquire that allow them to survive and thrive in situations that seem to result in illness for most children. On this definition, resilience is an unusual characteristic of exceptional individuals. An alternative approach sees resilience as a common characteristic of healthy individuals, reflecting normal processes that promote positive adaptation despite stressful experiences (Konner, 2007). Masten (2001), for example, argues that resilience is not an unusual characteristic of exceptional individuals, but rather an ordinary process found in abundance in most individuals and populations.

Although many theories hold that resilience depends on exceptional social resources, such as a highly functional family, or community support, the way that people use these resources varies. Resilient individuals are able to use available resources to navigate through transitions and difficulties, whereas others may easily give up, become exhausted or deteriorate (McCubbin & McCubbin, 2005).

2.2 Resilience as an Individual Trait or Characteristic

Research in psychiatry and psychology tends to approach resilience as an individual phenomenon. From the 1970s, psychologists have continued to explore the individual qualities that enable people to deal effectively with adversity. Traits such as self-mastery, self-efficacy, positive outlook, and sense of humour have been isolated as contributing to resilience in the general population (Richardson, 2002). This work, much of which has focused on children, has also identified developmental processes that contribute to resilience, such as brain maturation, cognitive development, control of emotions, motivation for learning, and actively participating in social environments.

These characteristics and developmental processes may be viewed as residing within the individual or as fundamentally interactional, depending on relationships with other people. They may also be viewed as more or less "automatic," emerging through normal development or as depending on adopting specific strategies through individual choice and agency.

Rutter (2007), for example, suggests that resilience largely depends on mental operations and mediating processes that reflect personal agency, idiosyncratic habits, coping mechanisms, mental sets, and the ways that people deal with challenges. In other words, an individual's source of resilience lies mainly in their personal abilities and the cognitive strategies they use to get through adversities. For

example, a study of adults affected by severe trauma found that resilient individuals could enhance or suppress emotional expression according to context. These individuals "minimize the impact of loss while increasing continued contact with, and support from important people in the social environment" (Bonanno, 2005, p. 137). Those with "self-enhancing biases" were socially awkward but nevertheless effective managers of stress. Based on these results, Bonanno suggests that there are different types of resilience both in terms of pathways and outcomes; individuals may apply specific abilities to achieve different desired outcomes.

Similarly, Polk (1997) described four patterns or strategies of individual resilience: (i) the *dispositional pattern* is characterized by features of self-worth, sense of mastery and self-efficacy, as well as constitutional features such as intelligence, health, appearance, and temperament; (ii) the *relational pattern* reflects the person's ability to seek comfort, support or inspiration from others; (iii) the *situational pattern* involves approaching circumstances using appropriate cognitive skills and problem solving abilities; finally, (iv) the *philosophical pattern* emphasizes the role of personal beliefs, the construction of meaning and self-knowledge in enhancing life experience. Polk believes that health professionals can shift people's adaptive patterns by nurturing their inherent strengths and resources. Other researchers agree that resilience is a matter of individual adaptation, which though reflecting constitutional traits, can also be taught and learned (Bonanno, 2005).

2.3 Resilience as a Process

Resilience is a dynamic process that may vary from one social context to the next and from one worldview or value system to another. Resilience is not one thing or process. Different metaphors and models highlight aspects that may be relevant to individuals or communities in different settings or times. However, at a more general level, resilience reflects processes that draw from multiple sources of strength and resources to allow people to face, live with, manage, and overcome challenges.

Masten (2001) and others have argued that personality traits must be distinguished from more complex patterns of resilience. She suggests the contribution of personality traits be termed as "resiliency" while the dynamic process of competence can be described as "resilience" (Masten, 2001, p. 554). As Waller (2001) argues, the idea of static resilience is at odds with the human condition, since no one is resilient or non-resilient all of the time. Resilience, therefore, is better described as a process occurring through time, over a developmental trajectory, and in constant interaction with adversity and with changing life circumstances.

Luthar and Cicchetti (2000) note that recent research focuses on dimensions of risk and protective factors "that might *modify* the negative effects of adverse life circumstances and, having accomplished this, [identify] the *mechanisms* or *processes* that might underlie associations found" (Luthar & Cicchetti, 2000, p. 858). Burack and colleagues (2007) also discuss resilience as a process involving interacting protective and compensatory factors in an individual's life. For example, supportive parents, employment and education might increase an individual's level of protection, while the absence of such factors contributes to risk. A major challenge in this work is to describe the effect of these variables throughout developmental stages. Risk or protection at one stage, for instance adolescence, might affect a person immediately, or only later in life. In addition, ways of overcoming risks and drawing from protective factors used at one stage may not be adaptive or appropriate at a later stage. The significance of specific competences, challenges and relationships changes over the life cycle.

Resilience is not a simple linear causal process in which an abundance of strength leads directly to a good developmental outcome; instead, resilience involves interactions among multiple processes or strategies giving rise to alternate trajectories of development. These trajectories may be unstable, requiring constant input to maintain, or they may be self-sustaining. Resilience often involves tradeoffs, in which something is gained and something lost. Clearly, this makes it important to monitor the effects of any intervention carefully, measuring multiple outcomes to insure that desired effects in one area of a person's life are not being achieved at the cost of another equally important concern.

2.4 Vulnerability, Risk and Resilience

Luthar and Cicchetti (2000) have distinguished between "risk," "vulnerability" and "protection." They use "risk" to refer to the broadest level of adverse life circumstance shared among a collective such as a community or neighbourhood, for example urban poverty. "Vulnerability" factors are specific adversities that exacerbate the effects of risk. Conversely, "protective" factors mitigate risk and bolster resilience. Vulnerability and protective factors can be found at individual, family and community levels.

Vulnerabilities of the individual could include poor impulse-control, or learning difficulties. Protective factors could involve a sense of self-efficacy or optimism. Vulnerability at the family level could involve harsh parenting or divorce, while protective factors could include

strong bonds of affection and good communication. At the community level, vulnerability might include neighbourhood violence and prevalence of alcohol use, while protective factors would include supportive relationships and frequent sharing of resources (Luthar & Cicchetti, 2000). Ungar (2008) has cautioned, however, that risk and protective variables cannot be divided clearly into levels of individual, family and community. Rather most vulnerability and protective factors work across levels, with implications for individuals, families and communities. For instance a sense of self-efficacy may be experienced by the individual but will also influence their capacity to provide support to others, and their contribution to community activities.

Most current work relates lists of risk and protective factors identified from epidemiological, clinical and developmental research in the general population to Aboriginal community resilience. [1] However, little is known about the mechanisms by which risk and protective factors work. A common assumption is that the effects of different factors is "additive." Thus, a single protective variable, such as enculturation, can add to other protective factors, like perceived community support (LaFromboise et al., 2006) to yield a net effect of resilience. Other models recognize that risk and protective factors may be linked and interact creating situations of amplified risk or greater protection (Waller, 2001).

In addition to interacting with each other, risk factors interact with protective factors, which may also be thought of as resilience factors. In the *compensatory model*, the resilience factor is seen to completely counteract the risk factor (e.g. alcohol abstinence counteracts risk of alcoholism). In the *protective model,* the resilience factor reduces or buffers the effects of risk (e.g. family dinners mitigate the use of alcohol). In the *challenge model*, resilience arises from moderate exposure to risk; but the same resilience does not emerge in extreme (high or low) exposure to the same risk (for instance, a parent who uses alcohol moderately may positively influence his/her children; whereas excessive use may exert a negative influence) (Walsh, 2006). Thus, moderate-risk situations can, in certain cases, prove useful for developing resilience.

Some researchers have cautioned against constructing lists of risk and protective factors because these tend to reify resilience, implying it is a matter of fixed and deterministic traits. Further, the accumulation of risk and protective factors is not a simple, additive phenomenon (Burack et al., 2007). Rather, risk, protection and resilience are variable and dynamic. The inter-relations among risk and protective factors can be better appreciated through narrative and

phenomenological approaches to the study of development, coping and illness experience (Barton, 2005).

Ungar (2008) also urges researchers to be cautious when discussing categories of vulnerability or protective factors. Risk and protective factors must be understood and interpreted in local, and social contexts. A given factor may be protective in one situation, and confer vulnerability in another. For instance, academic performance has been shown to increase resilience in some Aboriginal youth (Strand & Peacock, 2003). However, in other cases education does not correlate with resilience outcomes (Carlton et al., 2006). In some Aboriginal communities, adults with more formal education who have few opportunities to make use of their skills may experience frustration, disappointment and distress (Kirmayer, Boothroyd, Tanner, Adelson, & Robinson, 2003; Duhaime, Searles, Usher, Myers, & Fréchette, 2004). Resilience may, to a large degree, be domain specific and involve tradeoffs (Iarocci, Root, & Burack, 2008). Thus, youth who do well in school may do worse than their peers in social relations. The potential for these sorts of tradeoffs means that resilience must be understood as multi-dimensional or, more accurately, as involving many distinct processes with potentially quite different effects on any specific outcome.

2.5 Family Resilience

Individual resilience may be strongly influenced by family process (Walsh, 2006). Families too have their resilience (Patterson, 2002). For McCubbin and McCubbin (2005), the defining outcomes of resilience are "adaptation" and "growth." They see resilience as part of a family developmental transition involving "successful adaptation in the face of trauma if not catastrophic conditions" (p. 28). This leads them to distinguish between resilient and non-resilient families. Resilient families find a way through transitions and situational difficulties, and can "cope, adjust, adapt, and even thrive" despite hardship. In contrast, a non-resilient family tends to give up more easily or become exhausted.

Families have diverse responses to stress and there have been attempts to relate the models and typologies of family systems theory and family therapy to understanding resilience. Some of this work draws from studies of how families deal with stressors like war, illness, loss, life transitions, or dislocation (Boss, 2006; McCubbin & McCubbin, 2005). Family "protective factors" may increase prosocial behaviour and resistance to the negative effects of crises or stress by providing a stable yet flexible and supportive environment that allows for the "stability,

harmony and growth of family members" (McCubbin & McCubbin, 2005, p. 31). In contrast, a poorly functioning family environment leads to symptoms of distress, like depression or anxiety, and general inability to cope with trauma or other challenges.

From a family systems perspective, the family is a self-regulating system that interacts with a larger community, social system or ecology. The family must adjust its roles, goals, values, rules, and priorities according to external changes in order to achieve and maintain "balance and harmony." The ability to "bounce back and transform" requires a range of competencies in the areas of communication, emotion, spirituality, community relationships, and more. Culture and ethnic identity can exert positive influences on family resilience. Culture helps families to make sense of change and is therefore "a source of stability and support, a way of dealing with the problems of daily life" (p. 32). Protective factors like cultural knowledge and practices enable flexibility and coherence, which are key components of both individual and family resilience.

2.6 Ecological or Systemic Resilience

Most psychological theories treat resilience as an individual phenomenon reflecting the constitutional and developmental experiences of the person. Resilience usually has been approached primarily as an individual characteristic even by community psychology researchers (O'Neill, 2005). This approach tends to downplay or ignore higher-level systemic and structural issues that may be the root causes of individual suffering and hold the potential for more effective interventions. This is a crucial issue for understanding resilience in indigenous communities, which continue to struggle with structural violence, systemic racism and other forms of adversity.

An increasing body of recent work within psychology, approaches resilience from an "ecological" perspective, in which individual risk and resilience are understood as being shaped by a dynamic environment. This includes individual's biological and psychosocial experience, as well as the micro-social environments of family, school and neighbourhood, and the macro-level of social, economic and political processes.

To reflect this dynamic view, new metaphors have been developed to describe resilience borrowed from cybernetics and systems theory. For example, McCubbin and McCubbin (2005) describe the resilient system—whether an individual or family—as a sort of "thermostat" organized through feedback loops to seek and maintain a steady state. The individual or family system interacts with a larger social

ecology, resulting in adjustments in "roles, goals, values, rules, and priorities" according to external challenges in order to achieve "balance and harmony" (McCubbin & McCubbin, 2005, p. 29). The ability to return to a steady state or adapt by transforming the system requires a range of competencies that address communication, emotion, spirituality, and community relationships. Protective factors then are conceptualized in dynamic terms, resulting in adjustments to achieve "stability, harmony and growth" and serving as "a source of stability and support, a way of dealing with the problems of daily life" (McCubbin & McCubbin, 2005, p. 32). The ecological view emphasizes resilience as the ongoing maintenance of balance. The system itself (family or community) is responsible for achieving balance in response to changing contexts.

While ecosystemic approaches to resilience consider environments, they generally focus on how the environment affects individual resilience trajectories (Bogenschneider, 1996; Luthar & Cicchetti, 2004; O'Neill, 2005; Waller, 2001). However, larger systems such as communities and societies can also demonstrate resilience (Sonn & Fischer, 1998), and interactions between levels (individual, family, community) contribute to resilience at each level. Rather than seeing individuals in isolation from their cultural, social and communal contexts, an ecological perspective also emphasizes the relationships within and between social systems, such as families, communities, societies, and cultures. Resilience is more than the sum of factors from each component. Each domain contributes new types of interaction with new dynamics. As Waller (2001) puts it, "resilience is a multi-determined and ever-changing product of interacting forces within a given ecosystemic context" (p. 290).

Fleming and Ledogar (2008) discuss how Aboriginal researchers have added a relational, cultural dimension to resilience by focusing on "traditional" activities in people's lives, such as spirituality, healing practices and language. Healy's (2006) definition of "cultural resilience" is useful in this regard:

> The capacity of a distinct community or cultural system to absorb disturbance and reorganize while undergoing change, so as to retain key elements of its structure and identity that preserve its distinctiveness (p. 10).

In this view, resilience occurs through a dynamic interaction of individual and collective processes that contribute to adaptability, strength, the ability to surmount obstacles, meet challenges, and recover from setbacks.

3. COMMUNITY RESILIENCE

The ecosystemic view of individuals as embedded in a web of complex, interacting relationships has given rise to a new interest in community resilience. This work recognizes that resilience is a "clustered" phenomenon that is not randomly distributed among individuals in a society or community, but occurs in groups of people located in a web of meaningful relationships. The individual, family unit, community, and larger environment are interconnected, and factors from each realm contribute to processes that can counter stress and adversity. This perspective is shifting resilience research towards emphasis on collective processes, strengths and assets (Richardson, 2002).

This community perspective does not negate the importance of individual agency. In fact, research on community resilience advances the view that people can directly and actively harness their surrounding resources to foster healing. A resilient community provides individuals and families with new opportunities and resources to deal with challenges (Sonn & Fisher, 1998). The result may be quite different, and more effective, than what could be achieved by an individual or a single family acting alone.

Some approaches to community resilience emphasize the resources available to the community. Adger (2000) refers to community resilience in terms of the quantity and quality of resources accessible to the community and the extent to which these resources can be modified to meet new challenges. Breton (2001) suggests that community resilience is dependent on the stock of human and social capital within the community. Social capital, in this context, consists of people, networks and voluntary associations that can effectively mobilize individuals to action, as well as community services and infrastructure. In both of these conceptions of resilience a community's strength is seen as residing in material and social resources. This lends itself to a relatively straightforward method of measuring resilience in terms of taking stock of resources and assessing the ease with which they can be mobilized and adapted to new challenges. However, it seems clear that the nature of available resources and their relevance to the community's resilience will vary with other social and cultural factors, including the scale and structure of the community, cultural values and priorities, and relationships with the larger society and global systems.

In contrast to this emphasis on human and material resources, Clauss-Ehlers and Lopez-Levy (2002) suggest a conceptualization of community resilience as a process rooted in cultural values and practices. Based on work with Latino and Mexican youth living in the U.S., they consider community resilience as consisting of three crucial factors: (i) obligations to nuclear and extended family members; (ii) the authority of community Elders; and (iii) the value placed on relationships in and of themselves as opposed to as a means to an end.

A resilient community is able to withstand internal conflict while maintaining the diversity of its individual members, families and groups (Sonn & Fisher, 1998). It also provides the capacity and resources for its members to cope with adversity. The social, cultural and psychological resources offered by Aboriginal communities are "alternative modes" to the mainstream assimilation model. In the indigenous context, what the authors call the "indigenous psyche" provides a counter-model and form of resistance against mainstream representations of Aboriginal people that serves as "identity protection" (Sonn & Fisher, 1998, pp. 458-460).

In work on how communities respond to disasters, community resilience is the capacity of a community or similar group to withstand, recover from, and respond positively to a collective crisis or adversity. On analogy to the different types of individual response to challenges, community resilience can take three broad forms that are not mutually exclusive[2]:

Resistance – the community may resist change, adjusting and adapting in ways that counter-act the impact of the challenge. A resilient community can withstand considerable disruption before undergoing any lasting change.

Recovery – with severe or prolong challenges, the community is changed but after the challenges resolve, the community may work its way back to its original situation. A resilient community returns to its pre-disaster state more quickly than a community that is less resilient.

Creativity – a community may be transformed by adversity, developing new modes of functioning that take it along a new path. A resilient community can adapt to new circumstances and create new institutions and practices that carry its values forward.

As these terms make clear, resilience is a dynamic property of systems. A system may express resilience, insuring its own continuity, in ways that maintain its components but it may also transform or eliminate components. Thus, a community may express resilience that maintain its continuity and growth as an entity in ways that are distinct

from what is best for the individuals that comprise the community. Some individuals or groups within a community may be favoured while others are disadvantaged. This raises an important issue for considerations of community resilience: not all processes that serve the survival of the community as such will necessarily benefit all community members. Analysis of community resilience must always be considered in the light of the impact on individuals and the potential disparities experienced by some individuals or groups within the community.

3.1 Social Capital

Social capital is an umbrella term used to describe aspects of social networks, relations, trust, and power, either as a function of the individual, or as a function of a geographical location. Numerous studies have suggested that geographical units (ranging from small neighbourhoods to whole states or provinces) with "high levels" of social capital have lower suicide rates, lower overall mortality and longer life expectancy (Berkman & Kawachi, 2000; Kawachi & Berkman, 2001). However, Henderson and Whiteford (2003) have commented on the need for more refined theory and evidence for the posited links between social capital and mental health.

The concept of social capital was developed originally for thinking about urban or suburban communities but it has been extended to villages, neighbourhoods, networks, and other levels of social organization. Social capital can be defined as the degree to which a community's resources (physical, symbolic, financial, human, or natural) are reinvested in social relations. Mignone and O'Neil (2005a) suggest that social capital is a potentially useful concept for First Nations communities for three reasons. First, social capital offers a dynamic metaphor for characterizing the internal and external relationships of communities. Second, it captures core social elements (e.g., sharing and reciprocity) that are important from a First Nations perspective. Finally, as a theory of the impact of the social environment, social capital can be linked to health outcomes (Baum & Ziersch, 2003; Crossman, 2008; Edmondson, 2003; von Kemenade, 2003a).

Social capital has several dimensions that vary across different types of communities. Mignone and O'Neil (2005a) outline the basic components of social capital, which include: social relationships, networks and reciprocity, shared norms and values, a culture of trust, collective participation, and access to resources. They formulate social relations in three ways: i) bonding relations, or intra-community connections; ii) bridging relations, or inter-community connections; and iii) linkage relations, or the relations between communities and governments,

institutions and other official bodies. Networks including these relations should be inclusive, flexible and diverse. A social network that is too rigid and exclusive can have a negative impact on mental health.

Whitley and McKenzie (2005) offer a critical perspective on the relationship between social capital and mental health. They note that the literature is still in its infancy and requires serious development, especially in relation to psychiatry. They suggest that social capital may not always be positive for mental health. For example, a "cohesive community… may be dependent upon homogeneity and obedience to social norms" (p. 79). Social capital may therefore be positive for some members and stifling for others. In addition to pointing to the importance of recognizing multiple dimensions of social capital and considering their benefits and drawbacks for different individuals or segments of a community, Whitley and McKenzie argue for the importance of a dual focus, on both vertical relationships (e.g., between communities and governments), and horizontal relationships (between communities of equal standing).

The concept of social capital provides a lens through which many aspects of community resilience can be viewed, since it focuses on social networks, in-group dynamics and relations with the wider society. Research suggests that social capital and social support are major determinants of individual and community mental health (Wilkinson, 2005; Wilkinson & Picket, 2009). However, there are conceptual and methodological issues that limit the generalizability of existing work on social capital. Moreover, the dimensions of social capital that are important for Aboriginal peoples may differ from those relevant in urban multicultural settings due to their distinct history and contemporary experience (King, Smith & Gracy, 2009).

3.2 Social Networks and Social Support

Social networks refer to the nature and extent of linkages between individuals; these networks often include "strong" links to family and close friends, and "weak" links to acquaintances and colleagues. Social support refers to the emotional, material and instrumental assistance individuals receive (or can potentially receive) from other individuals both in everyday life and especially in times of crisis. Social support is often a function of the extent of social networks.

Social networks are the very stuff of community—the links between individuals and groups of people that are forged through a variety of practical, instrumental and emotional bonds. [3] Social networks include families, friends, clans, work groups (e.g. businesses, co-ops, offices or groups of hunters), ceremonial, religious, recreational, and other community organizations. The size and scale of networks can

vary by community and are affected by many other social factors. In Aboriginal communities, extended families, clans and other traditional forms of linkage through mobility, trade and other activities all contribute to social networks.

Networks can provide material, economic, informational resources, assist with problem solving, and provide emotional and other forms of support in everyday life and in times of special need. Individuals are embedded in networks and these webs of relatedness, in turn, provide each person with social roles and statuses as well as common purpose and direction to their life. Giving to others through these networks may be just as important as being able to receive. Indeed, those who give to others are much more likely to receive in turn (Plickert, Côté, & Wellman, 2007).

Emerging research suggests the importance of the internet as a form of networking in some Aboriginal communities (Smith & Ward, 2000; Dyson, Hendriks & Grant, 2007). The role and impact of the internet as a contributor to social networks is an under-researched area. However, initial work suggests it can support existing networks and create new networks which provide people with some sense of identity and resilience.

There is a large literature documenting the profound mental and physical health impacts of social support and social networks (Berkman, 2000; Berkman & Kawachi, 2000). Much research suggests that social support and social networks can buffer the impact of crises, illness, trauma, loss, and other challenging life events, thereby protecting mental health during vulnerable times (Brown & Harris, 1978). Other research suggests that social support and social networks confer direct benefits in terms of better mental health and well-being. Social networks and social support also have a significant impact on physical health. Social support has beneficial effects on the cardiovascular, endocrine and immune systems (Uchino, Cacioppo & Kiecolt-Glaser, 1996). Conversely, loss of social support, through bereavement or social marginalization can have strong negative effects on the same bodily systems.

In a study with data from the 2001 Aboriginal Peoples' Survey Canada, social support was strongly associated with health (Richmond, Ross & Egeland, 2007). Four types of social support were examined: positive interactions, emotional support, tangible support, and affection and intimacy. For women, both emotional support and instrumental support were associated with better health, while for men only emotional support conferred this benefit. Social support is also one of the strongest predictors of positive outcome after exposure to violence or other forms of trauma (Charuvastra & Cloitre, 2008).

Of course, the same networks that provide social support may also stress the individual. The response of others to a

trauma can make it worse. For example, being rejected by others after experiencing rape can greatly intensify the impact of the rape (Andrews, Brewin & Rose, 2003; Hammack et al., 2004). So it is not only the density or richness of the social network but the types of relationships and emotional exchanges that determine the health outcomes.

Social support may also be associated with pressures, including demands for conformity and burdens of care or responsibility for others; these demands may be more intense in collectivist cultures that emphasize the value of the group over that of the individual (Kim, Sherman & Taylor, 2008). In such cultures, asking for help from others may be perceived as being burdensome and have negative effects on relationships. This may lead some individuals to restrain themselves in seeking help.

The types of social support available and their implications for the individual may vary by age, gender, social class, disability, and larger social structural issues, as well as by the individual's personality and specific health problem. For example, some communities may be rich in social support for older people, due to a high population density and an abiding respect for Elders throughout the community. This may be the situation for many Aboriginal communities. Other communities may see Elders as a burden, with older people being abandoned to their own devices. This situation is commonly seen in European and North American urban communities, which tend to valorize youth over age.

Theoretically, communities with strong social networks and social support should be marked by a high level of community resilience. However. making this inference requires a leap of faith, given that there has been little empirical work exploring the association between extent of individual level social support and community level resilience. In a landmark paper on "the strength of weak ties," Granovetter (1973) argued that extensive externally-focused weak ties are more important in terms of obtaining work, financial success and societal influence than intense and deep internally-focused strong ties. This builds on the work of Bourdieu (1986) who posited the importance of individual-level connections as determinants of economic success and well-being. The implication is that while interventions that enhance intra-community social cohesion may be helpful in increasing in-group social support and social networks, this should be accompanied by interventions that enhance linkages for individuals *outside* the community, as this allows for communal empowerment and influence on wider society.

3.3 Dimensions of Social Capital

Social capital is a broader concept than social support and social networks with multiple dimensions (Ferlander, 2007). The most common definition of social capital used in the health sciences originates with Putnam, which emphasizes the role of relationships, networks, trust, and norms. This definition arose out of empirical studies of the performance of regional government in Italy (Putnam, 1993). Putnam defined social capital as consisting of five principal characteristics, namely:

1. Community networks: number and density of voluntary, state and personal networks.
2. Civic engagement: participation and use of civic networks.
3. Local civic identity: sense of belonging, of solidarity and of equality with other members of the community.
4. Reciprocity and norms of cooperation: a sense of obligation to help others, along with a confidence that such assistance will be returned.
5. Trust in the community.

A key point of Putnam's work is that while social capital is often measured by gathering data at the individual level, its impact is collective, thus making it a qualitatively different concept from social support). For example, all individuals living in neighbourhoods where there are high levels of trust and civic engagement may benefit from these community characteristics—even the individuals who are suspicious of others and engage in no civic activity; any resident will be less likely to be a victim of crime and will be able to access a comprehensive social safety net in times of need, regardless of their individual contribution toward social capital. There is thus a complex relationship between individual- and group-level factors in social capital, which raises important questions about measurement, another issue of critical debate in social capital research. Most empirical studies in public health anchor the concept of social capital around levels of trust, community participation and community/individual networks. This transcends conventional social network/social support theory, which exclusively concentrates on an individual's social relationships as a variable of interest, by focusing on the role of group values and norms, rather than the characteristics of individuals. These values and norms, in turn, can be thought of as aspects of culture that influence both individual and collective identity.

One area of continuing debate, which much of the empirical and theoretical literature has not quite confronted, regards the question of whether social capital should be conceptualized as primarily a property of neighbourhoods, groups and communities (ecological social capital), or primarily a property of individuals. While related, individual-level and ecological-level social capital may capture separate processes that differentially affect everyday experience—and, ultimately, individuals' mental health and well-being.

Although social capital was conceived of as an integrative concept with multiple dimensions, these dimensions may not all fit a given social context equally well. Accordingly, it may be more useful to think in terms of different types of social capital, recognizing that not all forms will be present or equally important in communities that vary widely by size, composition, history, and way of life. Such a conceptualization would reflect concepts of social support, which has often been divided into various types, for example the division between instrumental, informational and emotional support.

Uphoff (2000) defines social capital as consisting of two dimensions—structural and cognitive. Both *structural* and *cognitive* social capital are primarily conceptualized as properties of collective entities (e.g. neighbourhoods) rather than properties of the individual. Structural social capital is seen as consisting of relationships, networks, associations, and institutional structures that link people and groups together. These factors can thus be crudely measured numerically through an analysis of linkages and network density at a community level. This direct observation and enumeration will not be influenced by the perceptions of individuals within the sample, thus leading to some form of independent assessment. Cognitive social capital consists of values and norms of reciprocity, altruism and civic responsibility. Thus, cognitive social capital taps into shared patterns of cognition and subsequent social behaviour explicitly attempting to describe what Uphoff calls "collective moral resources."

As an extension of his previous work to address power relationships, Putnam (2000) formulated two dimensions of social capital: *bonding* (within group) and *bridging* (between group). Bonding social capital is inwardly focused and characterized by homogeneity, strong norms, loyalty, exclusivity, and a reliance on solid intra-group ties. Bridging social capital is outwardly focused, linking diverse groups and people; it is between groups and usually characterized by weaker ties.

Although the distinction between bonding and bridging social capital is theoretically interesting, it has rarely been empirically employed as a framework in studies of social capital and health. There are numerous questions regarding how this division could be used or measured. Furthermore though this distinction stimulates further thought regarding social capital, it still does not address issues of power and

structural inequality, which are inherent in alternative definitions of social capital such as that of Bourdieu (1986).[4]

Depending on their history, pre-contact social structure, and new configurations, Aboriginal communities may have different forms of bonding and bridging social capital. For example, some communities retain the complex social and political structures of families, clans and traditional leadership that provide lines of support in times of need. Other communities were created by forced sedenterization or relocation of people who were traditionally organized in separate small groups. The larger communities have had relatively little time to develop new patterns of connection and social support and the fault lines separating different families or other groups are still present and may hamper solidarity within the community.

Woolcock (1998) argues that it is important to distinguish between social capital at the micro level, on the one hand, and social capital that maintains and provides institutional integration at the macro level. The distinction between micro and macro depends on the scale of the community and its relationship with other communities or larger social institutions. Colletta and Cullen (2000) formulate a similar distinction, describing social capital as consisting of two dimensions: *horizontal* and *vertical*. Horizontal social capital is defined as the number and extent of linkages between groups of an equal standing in society. Vertical (also sometimes called "linking") social capital can be seen as the degree of integration and social efficacy of groups within a hierarchical society (including, for example, relationship with various levels of government). Vertical social capital can be used by entities such as Aboriginal groups to influence policy, to utilize and receive fair treatment from the legal system, and obtain resources from those in power. Woolcock (1998) argues that vertical social capital is a function of the organizational integrity, penetration and effectiveness of the state and, to a lesser extent, of the market.

In Aboriginal communities, vertical social capital poses a conundrum since the government organizations from which resources can be obtained are often the same institutions that have contributed to a community's past, present and ongoing challenges (Samson, 2008). In addition, in many community contexts, the externally imposed (e.g. by federal or provincial government) vertical system does not coincide with traditional social networks and patterns of governance. Rather than mobilizing vertical social capital, the imposition of bureaucratically dictated structures of governance then undermines traditional forms of authority and solidarity. With these caveats, the concept of vertical social capital can be useful for investigating potential sources of social capital and concomitant community challenges.

Colletta and Cullen (2000) equate horizontal bridging social capital and vertical integration with an inclusive, cohesive society. Through this definition of social capital, extra-community integration and social efficacy of groups are seen as being just as important as intra-community cohesion. This idea of vertical integration can have useful implications for deciding the kinds of interventions that would be appropriate and likely to obtain results in a certain social context. Efforts simply to increase within-group "community spirit" in an economically-deprived community, for example, by the building of new communal facilities, may be insufficient if the community still has unequal access to employment, education, lobbying power, and other important resources that may have an equal bearing on social capital. Additional attention may have to be given to re-structuring or forming vertical relations, such as the group's relations with local government, employers, law enforcement agencies, and educators.

Rolfe (2006) explores connections between "ecological capital" and community resilience. She focuses on rural communities under stress. Her thesis is that ecological capital gives people options to "navigate and negotiate" social networks, which in turn, gives rise to "positive outcomes in community well-being" (pp. 3-5). To arrive at a definition of "ecological capital," Rolfe draws on Hart's (1998) conception of "community capital." According to Hart, community capital is "the natural, human, social and built capital from which a community receives benefits and on which the community relies for continued existence" (as cited in Rolfe, 2006, p. 9). Similarly, *ecological capital* has four constituent domains. The first is "natural capital" -- the surrounding biological ecosystem, access to natural resources and natural services (i.e. clean air). The second domain is "human capital" – including skills, health, abilities, education, and the cultural values of community members. Third, "social capital" is comprised of bonds between individuals – in close and intimate relationships as well as across wider voluntary or institutional networks and organizations (Rolfe, 2006, p. 10). Finally, "built capital" involves roads, homes, equipment, and other human-made structures. The quality of relationships that emerges within the network of natural, human, social, and built capital is the total "ecological capital" of a community. Ecological capital also manifests as a sense of cohesion or "togetherness." Rolfe describes resilience as a process, in which individuals and collectives "navigate and negotiate ecological capital… to sustain or improve community well-being" (p. 12).

3.4 Social Capital in Aboriginal Contexts

The vast majority of the research literature on social capital and health has focused on general population samples from the U.S., Canada, Australia, or Europe. Likewise social capital theorists have generally eschewed a detailed discussion of factors such as culture, race and ethnicity; instead taking a broad-brush approach to their conceptualization of social capital. Fortunately, a handful of scholars have recently taken the social capital concept and attempted to assess its utility in the Aboriginal context.

Mignone and O'Neil (2005a, 2005b) pioneered this approach in Manitoba. They worked with three communities in Manitoba, conducting in-depth qualitative research to identify dimensions of social capital to measure, and then used this list to create a questionnaire. The researchers eventually created a 99-item questionnaire and a 55-item short version to measure social capital in an Aboriginal context. Mignone suggests that this tool can be used to assess the strengths and weaknesses of a community, guiding and prioritizing subsequent policies. Their work led them to create the first framework of social capital that was grounded in the experience of First Nations people. This was done through a "concept analysis" of the qualitative data. This analysis led to an emerging framework dividing social capital into three dimensions useful for the First Nations context: (i) bonding; (ii) bridging; and (iii) linking (this last category is similar to "vertical social capital" discussed above). Mignone and O'Neil conclude that social capital in a First Nation community is based on the degree to which (2005a, p. 27):

- the communities resources are socially invested;
- there is a climate of trust, norms of reciprocity, collective action, and participation;
- the community possesses flexible and diverse networks that are include all members of the community.

Mignone and O'Neil (2005a, 2005b) have described plausible linkages between the components of social capital identified above and community level health, especially youth suicide. They argue that a community where more resources are "socially invested" will confer community-level protection against suicide risk factors such as hopelessness, lack of meaning to life, instability, and lack of control. Social capital and socially invested resources will manifest itself in stronger and self-confident communities with strong social networks and community pride.

The work of Mignone and colleagues is important for various reasons. It documents community-level characteristics that could be indicative of higher or lower levels of social capital in Aboriginal contexts. These include conventional measures of social capital, for example trust and reciprocity. They also include characteristics more specific to Aboriginal communities. These include language revitalization programs and collective ceremonial or spiritual practices (for example sweatlodges or powwows). Their work takes the appropriate first steps to understand the cultural appropriateness of social capital in the Aboriginal context. The authors have created a culturally grounded framework based on in-depth qualitative methods. They have made plausible theoretical links between this framework and health, simultaneously creating an instrument to measure community level social capital grounded in empirical research. Their work suggests that the concept of social capital may be a very useful proxy for the measurement of community resilience among First Nations. Indeed, this position is taken by Ledogar and Fleming (2008), who argue that collective efficacy and social cohesion are key aspects of social capital particularly relevant to community resilience in Aboriginal contexts. Collective efficacy is important because Aboriginal communities have traditionally faced exploitation, racism and colonialism. Defending communities against these forces can be considered an important component of social capital and community resilience. New assaults on Aboriginal communities have come from global enterprises wishing to make money from Aboriginal communities. As such, bridging and vertical social capital is considered protective in that it can assist resistance to these external threats.

3.5 Summary

Community resilience has been discussed largely in terms of social capital and related constructs. Despite the diversity of approaches to the definition and measurement of social capital, there are a number of common themes and trends. First, most theorists agree that social capital is based on four main factors: networks, relationships, norms, and trust. Secondly, while some argue that social capital can be defined and measured as a property of an individual, others recognize it as a property of a social system or ecological unit such as a community. This social-ecological approach is found in the small body of work that examines social capital among First Nations (King, Smith & Gracey, 2009; Waldram, Herring & Young, 2006). Finally, a number of distinctions among types or dimensions of social capital have been made (e.g. cognitive, structural, bridging, bonding, horizontal, vertical) to fit the different contexts and social realities of communities.

Unpacking the notion of social capital can help with devising models and measures that can address the

great diversity of First Nations, Inuit, Métis, and urban Aboriginal communities. The challenge is to identify the dimensions of social capital that best fit the context of Aboriginal communities. Given their great diversity, it is likely that no single model will be applicable across all communities. Instead, we need a toolbox of constructs and corresponding measures that can be selected according to the characteristics of specific communities.

The contextual variables that will influence the appropriate model or dimensions of social capital include: (i) size or scale of the community; (ii) heterogeneity of the community; (iii) geographic location (urban, per-urban, rural, remote); (iv) history of the community, including whether it constitutes a longstanding social group or one newly formed under extrinsic pressures (e.g. relocation); (v) historical and current relationship to other Aboriginal groups and neighbouring communities; and (vi) cultural, social and historical values and norms influencing relationships with others within and outside the community.

4. COMMUNITY RESILIENCE IN ABORIGINAL CONTEXTS

Aboriginal people and organizations have found the concept of resilience useful because it focuses on strengths rather than weaknesses. Resilience theories emphasize the importance of family, community and culture in "countering the stresses that families encounter" (MacDonald, Glode & Wien 2005, p. 361). Culture and community can provide a sense of "mastery, self-esteem and ethnic identity" (p. 361). In an ecological, contextual or relational view, the individual, family unit, community, nature, and the spiritual world are interconnected. "Adaptation" is a process of balancing in which the whole of the person comes into play, including mind, body, spirit, and social-environmental context. The process of adjustment and finding balance draws resources from each of these domains. Resilience therefore involves holistic, complex, interacting relationships.

HeavyRunner and Morris (1997) outline some features common to many Aboriginal worldviews that may contribute to resilience. These include values, beliefs and behaviours related to spirituality, child-rearing, extended family, veneration of age/wisdom/tradition, respect for nature, generosity and sharing, cooperation and group harmony, autonomy and respect for others, composure and patience, relativity of time, and non-verbal communication. Each of these has expressions at the level of community as well as individual values, attitudes and behaviours.

Though there are certain shared and consistent elements to Aboriginal worldviews and values, it is important to recognize the wide variation in social contexts, cultural identity and spiritual practices across different First Nations, Métis and Inuit communities (Ledogar & Fleming, 2008). There are also significant cultural differences between communities in a particular region. Moreover, even within a community, individual and group processes involving culture, religion, spirituality, and community renewal can take different forms. Not all members of a given family, community or region will share the same spiritual or religious identity. Communities can contain this diversity within broader notions of identity and belonging.

4.1 Aboriginal Concepts of Health and Well-Being

Aboriginal approaches to resilience tend to consider the whole state of the person, describing well-being in terms of the balance of physical, cultural, emotional, and spiritual elements as depicted in the medicine wheel or other metaphors drawn from the natural world (Bartlett, 2005; McCormick, 2008). From this perspective, resilience is not an exceptional quality of some fortunate individuals, but the "natural, human capacity to navigate life well" (HeavyRunner & Marshall, 2003).

Many Aboriginal traditions have rich vocabularies to discuss healing and renewal, with multiple terms expressing "living well" (Adelson, 2000a; Gross, 2002) or having "strong will" (HeavyRunner & Marshall, 2003). Inner resilience is realized through a variety of practices encompassing spirituality, family strength, the role of Elders, ceremonial ritual, oral tradition, cultural identity, and support networks (Lavallee & Clearsky, 2006). Understanding resilience in Aboriginal communities requires attention to these indigenous conceptualizations of well-being, identity and "living a good life" that include dimensions of experience ignored or downplayed in categories derived from Eurocentric ways of knowing (Lavalle & Clearsky, 2006).

Lafrance, Bodor and Bastien (2008) discuss the congruence between Aboriginal worldviews and theories of resilience, especially in modern theories of childhood. The Aboriginal resilience framework emphasizes family, identity and cultural formation. Within Aboriginal frameworks, Elders must cooperate with youth to transmit philosophies, knowledge and principles within Aboriginal culture. Youth have the important role of making the transmitted culture workable in the contemporary economic, political and social environment. In the Aboriginal context, priorities for community well-being include: shared parenting and

community responsibility for children; emphasis on language as a source of renewed culture; knowledge of history and tradition as a key element of identity; development of traditional skills; emphasis on the importance of kinship and connection with one another; and spirituality and respect for nature. The authors identify similar emphases in modern resilience theory focusing on the child. According to resilience theory, protective factors for children include: one person who values and respects the child; contribution to the community; development of spirituality and identity; development of a talent or skill; and contribution to one's community. Resilience theory thus provides a way to "reconcile" important aspects of Aboriginal and western knowledge and values. However, despite their awareness of Aboriginal contexts, Lafrance and colleagues seem to define resilience quite narrowly in terms borrowed from Rutter (2001); truly engaging Aboriginal perspectives may require a shift in values and priorities of conventional models of resilience with corresponding community-oriented interventions.

There are important convergences between current thinking about community resilience and Aboriginal concepts of health and well-being. Aboriginal worldviews emphasize the interconnectedness of all beings with their environments. Indeed, human beings and the environment form one large interacting system. This systemic view that approaches each element or aspect of experience as related, so that changes are not simply additive but interact in nonlinear ways: a small change may have very large effects over time as it is amplified by the response of other parts of the system. Human agency is only one element in this dynamic system. In traditional systems of knowledge other forms of non-human persons and non-human agency are recognized. Thus, human beings have practical and moral obligations to maintain good relations with all aspects of their social, physical and spiritual environment.

There are parallels between indigenous notions of the person and ecological perspectives in developmental psychology and resilience theory. Aboriginal concepts of the person have been described as sociocentric, communalistic or relational, emphasizing the interconnectedness and interdependence of individuals within the family and community (van Uchelen, 2000). This relational self is balanced by a strong recognition of individual autonomy of thought, feeling and experience. In addition to this relational orientation, many Aboriginal cultures foster a sort of ecocentric self, in which the person is seen as strongly connected to the environment, the animals, plants, and forces of nature (Stairs & Wenzel, 1992; Kirmayer, Fletcher & Watt, 2008). Finally, many Aboriginal traditions emphasize a spiritual dimension to the self, in which the

person in transaction with a spirit world of ancestors, non-human persons or animal powers that influence human life.

This points toward the possibility of translating between the two knowledge systems or constructing a synthesis of indigenous knowledge and ecological science. The key tenets in this synthesis would include: a) reality is dynamic and constantly changing, as opposed to stable and consistent; b) adaptation is a key process in the relationship between humans and their environments; c) the process of adjustment and balancing draws on resources of the individual, family, community, and the natural and spirit worlds; and, d) resilience rests on the interaction and holistic interconnection of these spheres (Fleming & Ledogar, 2008a, 2008b; LaBoucane-Benson, 2005). An Aboriginal perspective would move resilience away from a simple, linear view of risk exposure, resilience and outcome, toward a more complex, interactional and holistic view. Aboriginal knowledge would add to resilience theory an emphasis on relational, cultural and spiritual dimensions. Culture here includes the role of traditional activities, such as spirituality, healing practices, and language in dealing with change, loss and trauma. Approaching resilience from Aboriginal perspectives can generate new and compelling models of wide relevance and applicability.

4.2 Historical Context

Aboriginal resilience must be understood in relation to the specific forms of adversity that Aboriginal individuals and communities have faced. These stem from the history of colonization, the unequal power and exploitative relationships that came with contact with Europeans, and the subsequent state machinery of regulation, control and active suppression of Aboriginal cultural traditions, community and autonomy (Kirmayer, Brass & Tait, 2000; Warry, 1998). Each Aboriginal community may face additional adversities specific to its history.

Duran and colleagues (1998) list six interconnected phases in the disruption of Aboriginal life in the U.S. that have close parallels in Canadian history: (1) first contact; (2) economic competition; (3) invasion and war period; (4) subjugation and reservation period; (5) boarding school period; and (6) forced relocation and termination period. These events have produced drastic transformations in Aboriginal life, involving loss of identity, trust, and connection to land and community (Hill, 2006). Historical losses and suppression of culture along with contemporary forms of marginalization and exclusion, including racism and discrimination, can interact with other vulnerability factors, such as poor parenting or health problems to increase the risk for a specific population or group. Each of these risk

factors do not operate in isolation; rather they are part of an interconnected web of factors that influence each other.

Many of the most severe threats to Aboriginal existence have come directly from government policies. The banning of sacred ceremonies such as the Potlatch and the Sundance suppressed cultural and spiritual systems of meaning. Policies of assimilation undermined Aboriginal languages and traditions and broke the transmission of traditional knowledge and childrearing practices. The residential school system dislocated nearly five generations of children resulting in enormous losses at individual, family and community levels. Euro-Canadian norms of the nuclear family portrayed Aboriginal families as unfit to provide for children and systematic out-adoption further disrupted kinship networks, confidence in parenting and the viability of the family as the core social institution.

Many writers have compared the Aboriginal experience to the situation of Holocaust survivors. Yet others have pointed out that the Aboriginal predicament differs because it involves significant ongoing oppression embedded in everyday routines and circumstances, including poverty, unemployment, discrimination, and health issues (Whitbeck, Adams, Hoyt, & Chen, 2004). As a result, resilience must be understood both in terms of response to historical trauma and loss, and to the ongoing challenges to Aboriginal identity and well-being.

4.3 Cultural and Community Protective Factors

Many Aboriginal individuals connect their sense of strength, safety and resilience to wider processes at social, cultural and community levels. For example, in recent interviews about resilience, Inuit elders from the Inuvialuit region emphasized spirituality, interconnectedness with others, and knowledge of culture and traditional practices as key protective mechanisms (Ajunnginiq Centre & Korhonen, 2007). Others have found similar mechanisms of protection following the themes of connectedness, spirituality, cultural knowledge, and tradition.

4.3.1 Family and Community Relationships

Families are the building blocks of community. They create the "nests" in which children grow to healthy adults and the support systems for adults and older people when they are ill (Ungar, 2004). A study of 120 Aboriginal youth from Canada and U.S. identified connections to parents, teachers, schools, and community as major contributors to resilience for youth (Bergstrom, Cleary & Peacock, 2003). Caldwell (2008) argues that more emphasis must be placed on primary or "upstream" interventions which create resilient youth. These interventions include improving parent-child communication, encouraging daily activities that increase well-being, and fostering cultural and community ties.

In the past, policies of child protection and systematic out-adoption have threatened the continuity of Aboriginal communities (Blackstock & Trocmé, 2005). Carriere (2007) takes resilience as a starting point to reflect on adoption policy for First Nations children. She notes that First Nations children who are separated from family, community and culture face potential adverse effects as they negotiate their identity. Among her suggestions for government policy is the concept of "cultural plans," which would help adopted children maintain contact with their First Nation community and culture (Carriere, 2007).

A disproportionate number of Aboriginal families involve grandparents taking care of their grandchildren (Fuller-Thomson, 2005). These "skipped generation" families reflect traditional patterns of shared childcare but are also a resilient adaptation to the impact of early pregnancies among youth. However, compared to their counterparts in skipped generation families in the general population, First Nations grandparent caregivers have more health problems, provide more hours of childcare and housework.

Resilience includes a "family's ability to resolve transitional conflict caused by multiple stressors that they have endured and their successful navigation of subsequent transitions" (Landau, 2007, p. 353). Many Aboriginal people who show higher levels of resilience report that family and community ties are essential to their thriving (Carlton et al., 2006; Carriere, 2007). In a study of adolescent behaviour in mental health clinics, Landau (2007) observed that knowledge of grandparents was a predictor of lower sexual risk taking. Additionally, clients who knew and shared family stories, even those involving themes of vulnerability, displayed more protective tendencies than youth who did not. Landau concludes that adolescents from families that discuss themes of resilience generally show greater self-esteem than do their counterparts without such family learning about resilience.

Carlton and colleagues (2006) investigated multiple resiliency indicators in a comparative study of "high-risk" Hawaiian and non-Hawaiian youth. They asked about three levels of indicators: individual, family and community. At the individual level, physical fitness proved more influential for Native Hawaiians than non-Hawaiians in determining resilience. Academic achievement was less influential. At the family level, the support of relatives was significant in reducing psychiatric symptoms in the adolescents. Similarly, in a recent study, Silmere and Stiffman (2006) interviewed 401 urban and reservation-based Southwestern American Indian youth. Successful youth reported higher

levels of family satisfaction. Less successful participants on the other hand, reported a history of family abuse, living in a dysfunctional neighbourhood and friendships with misbehaving peers.

In a discussion of resilience, Inuit elders repeatedly emphasized the importance of connections to others as a source of resilience and a means of suicide prevention (Ajunnginiq Centre & Korhonen, 2007). In order to overcome hardship, they said, people must feel that others love and care about them. They also suggested that people must find opportunities to talk about problems and emotions so that negativity does not become overwhelming. Finally, the elders emphasized the importance of intergenerational communication in sharing coping skills.

Values associated with family and connectedness is reinforced by ideas from other domains of traditional knowledge. For example, Boss (2006) describes how Aboriginal notions of the cyclical nature of time and the human lifecycle enhance individuals' ability to deal with the challenges of caretaking a family member with dementia.

4.3.2 Oral Tradition and Storytelling

Stories and storytelling plays a central role in many Aboriginal traditions (King, 2003). Stories provide a way of talking about stressors and change that can enhance resilience (MacDonald, Glode & Wien, 2005). The narratives presented through stories have their origins in collective history, spiritual traditions and lived experience. They serve to link the generations, transmitting knowledge, values, and a sense of shared identity. The act of storytelling and listening itself is a way to connect people and create a sort of communitas—a lived sense of belonging and solidarity.

In Aboriginal communities, oral tradition reinforces social connections. Aboriginal languages often have specific terms that define the social relationships, roles and rules of conduct between persons (LaBoucane-Benson, 2005). Many relationships have a sacred aspect, involving harmony, cooperation, and periods of quietude, stillness and introspection (Heavy Runner & Morris, 1997). Aboriginal cultures also incorporate a tradition of oral storytelling which builds ties between family and community members and encourages moral and spiritual growth (King, 2003).

Denham (2008) refers to the oral tradition of teaching in Aboriginal families as a circle of learning and teaching in which the wisdom of ancestors guide current family members. Denham provides an in-depth analysis of how a Native family in Idaho uses narrative as a source of family strength. The family often discussed traumatic "risk" experiences, including the brutalities of colonialism and

current struggles such as racism and economic difficulties. Yet they reframed their narratives of trauma to promote resilience. The process involved connecting the personality traits, struggles and accomplishments of ancestors to current family and individual struggles. Through stories, the positive features of ancestors were captured in family and individual identity. Thus, past traumatic events were given significance and contributed directly to the construction and transmission of family identity. Families used a particular style of narrative "emplotment" in which narratives were fashioned according to a "strengths-based perspective" that highlighted the successes of family members in overcoming difficulties in traumatic conditions (Denham, 2008, p. 405). Stories emphasized learning and positive outcomes rather than failure or negative results. The narratives did not focus simply on events or manifest content, but showcased challenges, survival and persistence.

LaBoucane-Benson (2005) has also written on the way individual resilience connects to group and community resilience in such communal practices. Each member's skills, for instance, storytelling or drumming, help the family and community to adapt and function to support changes. Processes of collective sharing of stories allow for the transmission of protective features from individual to group. Traditional storytelling often employs humor to re-frame historical events and human foibles; this can mobilize a playful, creative, and open way of thinking and relating (Gruber, 2008; King, 2003). Sharing personal narratives also can work to enlarge the view of Aboriginal peoples in the mainstream society (Dion, 2009). This education and engagement of the public is an important process to insure that Aboriginal communities find a positive reflection in mass media and in their relations with other communities.

4.3.3 Connection to the Land and Environment

There is growing recognition in environmental studies and geography of the importance of place for individual and collective identities as well as health and well-being (Cosgrove, 2000; Gesler & Kearns, 2003). Research with non-Aboriginal peoples suggests that consciousness of the human relationship with nature may have benefits for both physical and mental health (Kaplan, 1995). This impact might be expected to be stronger for people whose lives and traditions have been linked to the land and the natural environment.

Indigenous people around the world have worldviews that recognize the links between place and health. However, notions of "place," "land" and "nature" have cultural specificities that must be taken into account to appreciate indigenous worldviews (McGregor, 2004). For most

Aboriginal peoples "the land represents more than just the physical or symbolic space in which people carry out their daily activities" (Wilson, 2003, p. 88). The Aboriginal connection to specific places is "fundamentally *interpersonal*" (Gone, 2008, p. 394). A study by Richmond and colleagues (2004) illustrates this idea, quoting a Namgis First Nation participant who stated, "the rivers and mountains and stuff are people in the family" (p. 356). At the same time, the land and the natural world constitute a larger encompassing reality of which the person is but one element (Kirmayer et al., 2008a).

> The term 'Land' . . . is not restricted to the physical environment only. It has a much broader meaning, used by indigenous people to refer to the physical, biological and spiritual environments fused together. The closest scientific equivalent of the 'Land', taken without its spiritual component, is 'ecosystem' (Gleb Raygorodetsky in Gwich'in Elders, 1997, p. 14, cited in MacGregor, 2004).

In many Aboriginal worldviews, the environment is seen as constantly in flux, exposing the person to many challenges and disruptions that require constant adjustments (Robards & Alessa, 2004). At the same time, there is an assumption that life makes sense, that there is a higher or ultimate harmony or balance that can be experienced by the individual who attends closely to the natural world, including their experience.

In Canada, Aboriginal people clearly understand that their collective identity, health and well-being are intimately connected to their relationship to the land (Isaac, 2009). Knowing how to survive on the land and being able to maintain oneself and one's family through economic activities associated with the land provides a path to develop and maintain self-efficacy and self-esteem (Richmond, 2007; Richmond et al., 2004; Wexler, 2006).

An analysis of data from the Cree Health Survey in Quebec found that spending time in hunting camps in the bush was associated with less psychological distress (Kirmayer et al., 2003). Ethnographic work found that community members frequently mentioned the psychological benefits of bush activities, which involve contact with nature, spiritual relations with animals, consumption of valued foods, and participation in traditional activities. Time in the bush was reported to increase family solidarity and social support, cultural identity and physical strength. Of course, the experience of connection to the land may also vary within a community by gender, age, and other individual and social characteristics.

Consumption of "country foods" is associated with feelings of health and well-being among Inuit, Cree and other Aboriginal peoples (Borré, 1991; Kirmayer et al., 2008a; Tanner, 1979, 2004). As well as the association between food, blood and mental well-being, connection to the land itself is viewed as having mental health benefits (Kirmayer et al., 1994; Therrien, 1987). This connection may be experienced and expressed through ceremonial and subsistence activities. A recent study with Aboriginal people in Australia demonstrated the health benefits of "caring for country" activities, including spending time on country, the seasonal burning of grasses, gathering of food and medicinal resources, performing ceremonies, production of artworks, and protecting sacred areas (Burgess et al., 2009).

Aboriginal perspectives on healing recognize this connection between the individual and the natural environment. Hardship and difficult emotions are considered part of life that can be mitigated through careful and considerate interaction with the land. The land provides ways to regain a sense of balance and well-being in difficult moments. In a study of healing in B.C., one participant stated: "[w]e were taught you go down to the river when you are stressed… I was taught by the elders that when you are blue and sad to go to the river and let the river draw that sadness out of you" (Strickland et al., 2006, p. 9). This very personal way of relating to place is also found in Wilson's (2003) in-depth interviews with First Nations participants: "I talk to the trees and they listen. They take my problems away" (p. 90), and in the words of an Inuit elder discussing resilience: "[i]f you are at home being depressed and unhappy there is a place you could go – outside; that is the best place to take away bad things from your mind" (NAHO, 2006, p. 19).

For some urban Aboriginal people, many of these activities are now framed as "leisure" but their meaning goes well beyond that of other forms of recreation. Iwasaki and Bartlett (2006) describe how some Aboriginal individuals in Western Canada proactively cope with stress through culturally meaningful leisure activities. In Aboriginal cultures, leisure activities are located in a worldview that includes belief in the sacredness of all things, and reciprocal and interdependent relationships between human society and nature. Dance, music, sport, art, religion, and spiritual practices all emphasize engagement in a cyclical and ongoing pattern of life. Participants in the study noted many stressors related to health issues and social structural problems, such as lack of housing, poverty, discrimination, and political conflicts. Yet activities such as visiting the reserve, going out on the land camping or simply walking about, significantly relieved stress levels. Iwasaki and

Bartlett suggest that the process of protection in this case occurs in several ways. First, leisure activities emphasize interdependence and connectedness with others, reducing isolation. Secondly, leisure enhances cultural identity and satisfaction; and finally, leisure activities encourage spiritual and emotional growth.

The understanding that land and culture are inextricably bound together is important for maintaining cultural continuity in Aboriginal communities. Dominant societies have tried to erase the histories and geographies that provide the foundation for indigenous cultural identities and sense of self that are central to health in the indigenous worldview (Alfred & Corntassel, 2005; Hudson-Rodd, 1998). Re-establishing expressions of indigenous identity that connect the land, the language, and the spiritual and cultural practices of a people may be vital to the resurgence of indigenous communities, and result in an increase in health and well-being (Panelli & Tipa, 2007). The land thus carries memories both of traditional ecological knowledge (TEK) and current political struggles (Feit, 2004).

4.3.4 Helping and Healing

Resilience may reside in the ability of individuals or communities to connect to effective and appropriate sources of help and healing. The renewal of traditional healing practices has been an important source of strength and identity for many Aboriginal individuals and communities (Gone, 2006, 2008; Kirmayer, Brass & Valaskakis, 2008; Waldram, 1997, 2008).

Some Aboriginal individuals may be suspicious of mainstream heath services due to their association with exploitative and paternalistic approaches. The paradigm of resilience may prove useful in countering negative perceptions of mainstream services, framing interventions in ways that connect to Aboriginal cultural values (Fleming & Ledogar, 2008a). A focus on resilience encourages people to "navigate their way to health-sustaining resources, including opportunities to experience feelings of well-being" by connecting with family, community and culture in meaningful ways (Ungar, 2008, p. 225). According to this perspective, resilience overlaps naturally with community level protective mechanisms to mitigate risk, dependency and destructive behaviour.

Many Aboriginal communities have a range of "natural helpers." Natural helpers are ordinary community members who offer advice, support and comfort in times of need (Cross, 1998). A recent study by Waller and Patterson (2002) revealed the importance of natural helpers in a Diné (Navajo) Nation in Arizona. The authors found that Diné helpers were flexible in their approach, did not discriminate based on their specific relation to the person in need, lacked expectations of reciprocity and provided instrumental support over an extended period of time. Waller and Patterson note that many community members often refer to natural helpers before they rely on professional helpers (such as social workers or doctors) for support.

Adelson (2000a, 2008) and Tanner (2008) have described how the Cree in Quebec created their own community "healing movement" drawing from a range of beliefs and practices. The healing movement incorporates three specific cultural and spiritual genealogies: i) Pan-Indian religious ideology, which includes collective practices such as Pow-wows, sweat lodge and pipe ceremonies; ii) Pentecostalism and its variations; and iii) local East Cree cultural traditions. Tanner shows how the three influences are sometimes merged or co-exist with certain tensions and contradictions in the Cree Healing Movement. For the most part, settlement-wide "Gatherings" mix knowledge, beliefs and practices – religious, non-religious, animist, and non-animist. There is a diversity of opinions about and forms of participation in the Movement. Some people, particularly some Elders, reject both pan-Indianism and Pentecostalism because neither relates to local East Cree cultural traditions. Yet Tanner describes the Healing Movement as a "local-level community building initiative" that contributes to collective support. He distinguishes the Healing Movement from mainstream therapeutic programs in three ways. First, the Movement is not concerned with tracing the origins of the social problems in the Cree communities to historical events and outside forces. Instead, the Movement focuses on those most directly concerned as being responsible for addressing the problems. Secondly, the Movement addresses problems not in the individual, but in the collectivity. Finally, the Movement is more than a therapeutic endeavour – it is a form of community strengthening.

Aboriginal attitudes toward illness and disability may encourage integration and support resilience in the family and individual (Boss, 2006; Conners & Donnellan, 1998). Infirmity and disability in Euro-Canadian value systems are often considered burdens because they affect economic productivity and drain resources. In contrast, Aboriginal notions of holistic care and healing do not always explicitly view individual illness as a sign of social illness; instead, the collective response to the weak and vulnerable is considered the prime indicator of communal health and well-being (Connors & Donnellan, 1998). In this context, it is the response to illness or disability, rather than the presence of illness or disability as such, that may be an indicator of resilience.

4.3.5 Spirituality and Ceremony

Spirituality has received increasing attention in the resilience literature. Aboriginal spirituality emphasizes several elements, including: interconnectedness with others; a sense of the sacred; efforts to renew oneself; balance and harmony; and desire for lifelong learning. In Aboriginal societies, spirituality is an important aspect of cultural strength.

Aboriginal spirituality may protect against alcohol use, the impact of discrimination, and suicide (Fleming & Ledogar, 2008a). A study in two Northern Plains American Indian communities found that strong cultural spiritual orientations (as indicated by endorsing statements on a question such as "there is balance and order in the universe," "I am in harmony with all living things") was associated with lower risk of suicidal behaviour than others to make suicide attempts (Garoutte et al., 2003). This benefit of spirituality persisted when age, gender, education, heavy alcohol use, substance abuse, and psychological distress were statistically controlled. A study in an Inuit community in Nunavik also found that frequent attendance at church was associated with lower suicide risk among youth (Kirmayer et al., 2003).

Spirituality may serve as a strong buffer against depression (Perez, 2008). In circumstances of high stress, such as the loss of loved one, serious illness, homelessness, or severe psychiatric illness, spirituality has been shown to significantly mitigate depressive symptoms. This may be because participation in a religious congregation or community provides social support. Religiosity and spirituality also tend to increase hope, positive affect, meaning making, and coping mechanisms while reducing negative feelings (Boehnlein, 2007). Individuals who report higher levels of religious or spiritual belief and practice are less likely to engage in risky health behaviours and generally engage in stable and positive health practices. The positive relationship between religiosity and physical health, and mental health holds even when controlling for variables such as gender, ethnicity, income, or education (Koenig, 2009).

Of course spirituality and religious identity may also be sources of conflict within families and communities. Different forms of spirituality and religious practice are available in most Aboriginal communities and individuals within the same family may have different levels of engagement or even follow different paths (Adelson, 2008; Tanner, 2008). Some traditions are critical of other paths, while some are more tolerant. Given the diversity in some communities, explicit values of tolerance and respect for individuals and for other groups may be important to promote a sense of solidarity and belonging despite differences.

Ceremonial activities such as the sweatlodge can be highly effective in forging a sense of connection to others in the community. Participants in a sweatlodge reported higher levels of self-discipline, self-actualization, caring for others, and sense of creativity after a ceremony (Schiff & Moore, 2006). Practices like the sweatlodge reinforce collective identity while providing participants with a rich, emotionally charged metaphoric language for transforming experience. For example, at one Southern Plains treatment centre, people with addictions attend a sweatlodge ceremony in which they visualize heat, rocks, wood, fire, and offerings as elements of cleansing and restructuring their lives (Bigfoot & Dunlap, 2006). Other ceremonial activities can also contribute to an embodied sense of identity and healing (Dion Stout & Kipling, 2003).

4.3.6 Cultural Knowledge and Identity

A prominent theme in studies of community protective factors is the importance of cultural knowledge and identity. It has been repeatedly shown that engagement with traditional beliefs and practices has considerable influence on Aboriginal well-being (Reynolds, Quevillon, Boyd, & Mackey, 2006). For example, a study of American Indian and Alaska Native students, researchers found that youth subject to stress exhibited resilience because they were "embedded in traditional culture" (Strand & Peacock, 2003). In this study, connection to tradition involved several characteristics, including: "feeling good about tribal culture," participating both in Native and mainstream worlds, feeling a strong belonging to community, appreciating parents and Elders, and being exposed to a Native school curriculum. In a recent study of First Nations communities in Saskatchewan, McKay and Prokop (2007) found that children's resilience was enhanced by a strong sense of belonging to a vibrant community that "celebrates its own culture and history" (p. 47). Tradition reinforces resilience through the values of belonging, mastery, independence, and generosity (Brendtro, Brokenleg & von Bockern, 2001).

In a study of health issues among Aboriginal women, Walters and Simoni (2002) observed that spiritual and cultural engagements like the sweatlodge ceremony and Native crafts contributed to positive "identity attitudes" in women, mitigating their negative health concerns. These traditional practices offer an "indigenist" alternative to mainstream health interventions and so participation affirms cultural identity. Adelson (2000) has also observed how indigenous communities foster vitality and renewal through the creation and promotion of pan-Indian identities, involving practices such as the powwow ceremony.

Others have defined enculturation in terms of people's identification to their culture, their sense of pride in their cultural heritage, and the extent to which they integrate their cultural heritage into their lives (Zimmerman, Ramirez, Washienko, Walter, & Dyer, 1995, 1999). Studies have generally shown that ethnic pride knowledge and practice of culture can serve as a buffer against stress and reduce negative health outcomes (Austin, 2004). For example, in a study of Anishinabe communities Whitbeck and colleagues (2004) found that enculturation, as measured by identification and by participation in cultural practices, tended to be associated with less alcohol abuse.

Identity tends to be seen as something defined by membership in a group, heritage or line of descent. However, identity is actively constructed by social interaction, narration, and embodied enactment. Identity then may be acquired by birth or by conscious choice, a distinction the Anishinabe scholar Gerald Vizenor (1999) calls, natio or ratio. In cultural psychology and medical anthropology, there has been a shift away from an essentialized view of cultural identity toward recognition of the negotiated nature of identity as self-fashioning and this has been applied to understanding Aboriginal identities (Gone, 2006, 2007; Waldram, 2004). Identity is embodied through lived experienced and narrated in specific social contexts, both of which depend on the nature of community. Identity also is supported by larger political struggles to assert collective rights (Niezen, 2003).

Gone (2006) discusses the complexity of American Indian identity. For example, some individuals assert an "authentic" Indian identity, based on blood quantum, language fluency or ceremonial practice. At other times "authentic" identity relies on "proof" of having been marked by the colonial experience, for instance by family alcoholism. Gone frames American Indian identity as a process of active "intentional construction" involving individual agency and both local and wider social influences. For this reason, Aboriginal identity cannot be approached as a single construct; rather, it varies depending on how people draw on cultural meanings and practices to make sense of their own experiences.

In urban settings, shared cultural practices may be more difficult to measure because people may have very different backgrounds reflecting differences in community affiliation, level of urbanization, cultural background, and education. Urban Aboriginal peoples are often dispersed throughout a city. Urban health providers often misidentify Aboriginal clients and make incorrect assumptions about their cultural practices (Macdonald, 2008). For all of these reasons, it has been difficult to conduct epidemiological research on urban Aboriginal groups and there is little information available about their health status or other factors relevant to resilience.

Many Aboriginal people living in urban spaces are bicultural or multicultural; they may live or value a traditional way of life and they may be integrated to varying degrees into the mainstream culture or other ethnocultural commnuities (Clark, 2006; Sissons, 2003). Long and Nelson (1999) have shown that Aboriginal people living off-reserve in rural or metropolitan areas may be more consciously aware of tradition to maintain their cultural identity and affiliation whereas settlement/reserve-based Aboriginal people may participate in tradition without consciously articulating it as such. For individuals living in a remote community, many elements of tradition are embedded in their way of life; for urban Aboriginal people, many expressions of tradition must be actively sought and recreated. Measures of resilience must capture this diversity, which may differ within and between Aboriginal cultures and communities (Clark, 2006).

Aboriginal people often have multiple cultural traditions represented in their families, friends and communities. This may give rise to mixed or hybrid identities, with new values, attitudes and activities (Sissons, 2005). This diversity may also create tensions and contradictions that individuals must negotiate to maintain a sense of personal coherence, clarity and comfort with their identity (Brass, 2008). Resilience is also demonstrated by individuals who mobilize the strengths of multiple cultural commitments of the groups with which they are affiliated (Reynolds et al., 2006; Strand & Peacock, 2002).

The mental health consequences of multiple or hybrid identities depend, in large part, on the receptivity of the community. Traditionally many Aboriginal societies have been respectful of individuals' perspectives and small communities allow each person to be known by others in their individuality, in ways that go beyond stereotyping and may prevent stigmatization. However, communities may also demand conformity and have little tolerance for diversity. When a community feels stressed or threatened by divisive forces, there may be stronger efforts to re-assert a common identity and silence or suppress alternate perspectives and ways of being. Tolerance for diversity and explicit acceptance of some notion of pluralism in identity are important to allow individuals to find their place in the community (Niezen, 2005).

The pathways from cultural identity and knowledge to resilience and well-being are complex. A study of Southwestern American Indian youth living on reservation or in urban settings found that participation in American

Indian traditional activities actually correlated with less successful outcomes, including higher levels of substance use. The authors suggest this counter-intuitive result may reflect the fact that since youth often attend traditional activities with their friends, these activities may increase the likelihood of negative peer influences. Waller, Okamoto, Miles, and Hurdle (2003) have also argued that due to values of collectivism and non-interference in Aboriginal cultures, children who are pressured to use drugs or alcohol may have a difficult time resisting. It also may be more difficult to refuse drugs from family members than from other peers at school. Then too, being more visibly indigenous may expose youth to greater levels of racism and discrimination which may, in turn, have a negative effect on their coping and well-being.

These examples make it clear that cultural identity does not operate in the same way for all groups of youth; rather, the meanings and implications of culture specific to each context must also be taken into account. Thus, although culture can be an important source of strength and wellness for individuals and communities, it cannot be conceived nor applied as a "one-size fits all" solution. Careful consideration must be given to how historical, social, economic, and political realities affect specific and global cultural aspects in turn, impact community members and the community as a whole.

4.3.7 Cultural Continuity

A key element of resilience is the "persistence of identity" or a subjective sense of sameness over time, despite internal or external change. Identity persists because experience is continually integrated through language into meaningful sequences (Chandler, 2000). In this view, every individual is an author who reflects on the diverse episodes and events of his or her life and connects them to form a more or less unified story.

At the individual level, Lalonde (2006) describes two common cognitive strategies for maintaining identity: (i) identifying a stable underlying essence that remains the same over time and across situations; and (ii) constructing a narrative that links disparate aspects or versions of the self through descriptions of processes of change and transformation. Individuals (and cultural communities or traditions) may emphasize one more of identity construction more than the other. Those who "essentialize" tend to deny changes in identity, insisting on a stable personal core and those who "narrativize" foreground change while maintaining certain threads of continuity. In a study in BC, Lalonde found that Aboriginal youth tended to use the narrativizing style of identity construction. This style

may confer resilience in the face of rapid change as youth simultaneously reinterpret their external realities and find consistency in their internal worlds. According to Reynolds and colleagues (2006), resilience is apparent when a person is able to deal with contextual changes while maintaining identity factors, such as traditional values, beliefs and behaviours, with few personal or social difficulties.

Extending the notion of continuity of personal identity to the continuity of collective cultural identity, Chandler and Lalonde (1998, 2008) have conducted an important set of studies linking community indicators of health and well-being with community characteristics. They found that indicators of greater "cultural continuity" in the community were associated with better mental health, including lower suicide rates and school dropout rates. They define "cultural continuity" as a "workable personal or collective… mechanism" that reinforces "responsible ownership of a past and hopeful commitment to the future" (Chandler & Lalonde, 2008, p. 222). Originally, Chandler and Lalonde (1998) identified a set of indicators of cultural continuity including local (First Nation or community) control of education, police and fire, government, cultural centres, health, and social services. These were chosen partly for theoretically reasons but also because they could be readily determined by contacting a community representative. Most relate to the degree of control people exert over their "civic lives." Subsequently the study was expanded to include a longer time period and more potential factors (Chandler, Lalonde, Sokol, & Hallett, 2003). The final set of factors found to be related included community efforts to: 1) secure legal title to traditional land; 2) establish self-government; 3-5) control local education, police and fire, and health facilities; 6) preserve and promote traditional practices; 7) involve women in local governance; and 8) take control of child and family services. The strongest effect on decreased suicide rates was with engagement in processes of self-government (which also strongly connected to the strengthening of traditional culture). The authors note that the "quest for self-determination" takes different forms depending on the community. For instance, in some communities success follows from renewing culture, while for others, priorities of land claims and education are more prominent. Collective means of preserving identity are linked to an individual process of coherence and continuity; both levels serve to mitigate suicide risk.

Extending this work, Hallett, Chandler and Lalonde (2007) found that among 142 BC First Nations communities, the preservation of indigenous languages had the strongest correlation with lower youth suicide rates, more so than processes of self-government, land claims,

education, health care, or cultural facilities. First Nations in which more than half the membership was fluent in their indigenous language experienced approximately 1/6 the rate of suicide of those without such language fluency. However, this effect of language may reflect the distinct context and variability of groups in BC. In other regions, language may not have the same predictive power. For example, there are very high rates of fluency and literacy in Inuktitut across the Arctic but many Inuit communities still suffer from high suicide rates. Similarly, several Quebec First Nations communities with good preservation of language nevertheless have high rates of social problems. Clearly, language can be a powerful source of resilience through its effects on strengthening identity, transmission of cultural knowledge and community cohesion. However, maintenance of Aboriginal language alone is not sufficient to protect communities from the effects of social adversity.

4.3.8 Political Activism and Collective Agency

Adger (2000) identifies a new focus in resilience research on the social, political and institutional mechanisms which determine resilience in relation to environmental change. He investigates the direct link between changes in ecological and environmental resources, and social resilience, using a case study of market liberalization and the privatization of mangroves in coastal Vietnam. He finds that social resilience in this community was decreased as privatization undermined common property institutions. Adger recommends focusing on several indicators of resilience in context of economic change: 1) Mobility and migration are significant markers. Labour mobility over time can point to either instability or stability in a population. Sometimes such moves can enhance resilience, and in other situations, relocation can have deleterious effects on communities in both sending and receiving areas; 2) Coping strategies used in a household or community facing economic and food insecurity, which can include voluntary or involuntary short-term adjustments, such as food choices, and other consumptive changes, or adaptation of income-generating activities; 3) Cultural modes of adaptation and local conceptions of human-environment interaction. The adaptation of a communal knowledge system, especially if it includes local technical knowledge, can counter larger lapses in trust generated by economic vagaries; and 4) Legal methods, such as maintenance of property rights are essential to resilience in a changing agricultural and economic context.

The evolution of resilience theory has paralleled changes in approaches to Aboriginal mental health that increasingly emphasized community empowerment, activism, autonomy

and control. These recognize Aboriginal persons as situated in current political realities that demand they balance traditional values with active negotiation and struggle for the authority and resources to direct their own lives and communities.

General discussions of identity tend to underemphasize the role of social action or collective agency in the production of well-being. According to Lavallee and Clearsky (2006) resilience is not only about self-definition, but also about "self-determination." Engagement in political activism and other forms of collective action can articulate, assert and solidify collective identity.

In their discussion of community level factors related to the prevention of suicide, Kral and Idlout (2008) argue that the concept of "social capital" is limited because it does not focus enough on social action, collective agency and control in the production of well-being. They suggest that programs that focus on community empowerment may resonate with Innuqatigiitiarniq, the Inuit perspective on mental health which focuses on the "healthy interconnection of mind, body, spirit, and the environment" (p. 318). Similar conclusions were reached in a comprehensive review of suicide prevention programs (Advisory Group on Suicide Prevention, 2003).

Chandler and Lalonde (2008) note that the "quest for self-determination" takes different forms depending on the community. For instance, in some communities success follows from renewing culture, while for others, issues of land claims or locally controlled and culturally relevant education are more prominent. For many communities, resilience has been fostered through programs related to promoting traditional healing and well-being. In some cases, these have been supported by government community wellness initiatives, in others by the Aboriginal Healing Foundation or local organizations.

Based on his experience with Innu communities in Labrador, Samson (2008) is more critical of the value of collaborative efforts between government and communities, arguing that government bureaucratic programs tend to undermine autonomy and self-determination. He suggests that resilience can be better achieved through Innu recovering their culture on their own by living on the land, speaking Innu and regaining traditional knowledge. Given the tendency for outside interventions to undermine local autonomy and control, focusing on personal and communal agency may be a more effective way to overcome the structural and social adversities that communities continue to face.

Of course, political activism or other forms of collective action are not always positive for every group in a community. In a study by Carlton and colleagues of native Hawaiain youth, community movements had relatively little effect on resilience among Native Hawaiian adolescents. In fact some community factors impacted resilience negatively. The authors suggest that the Hawaiian sovereignty movement may have generated communal divisions and other frictions that have negatively affected youth (Carlton et al., 2006). Communities that report greater cohesion and community participation—whether due to political activism, social movements or shared tradition—may also alienate some individuals through lack of tolerance for difference and diversity (Onyx & Bullen, 2000).

4.4. Summary
Theoretically, communities with high levels of social networks and social support should be marked by a high level of community resilience. Indeed, some approaches to community resilience emphasize the social resources available to the community as instrumental. Adger (2000) refers to community resilience in terms of the quantity and quality of resources accessible to the community. Importantly, he states that the extent to which these resources can be modified to meet new challenges is of prime importance. Similarly, Breton (2001) suggests that community resilience is dependent on the stock of human and social capital within the community. Social capital, in this context, consists of people, networks and voluntary associations that can effectively mobilize individuals into action, as well as community services and infrastructure. In all of these conceptions of resilience, a community's strength is seen as residing in material and social resources.

In fact, these resources are always in the service of particular individual and collective goals, aspirations or "life projects." Both everyday choices and larger political activities aimed at negotiating development must be understood in the context of these life projects.

Indigenous communities do not just resist development, do not just react to state and market; they also sustain 'life projects'. Life projects are embedded in local histories; they encompass visions of the world and the future that are distinct from those embodied by projects promoted by state and markets. Life projects diverge from development in their attention to the uniqueness of people's experiences of place and self and their rejection of visions that claim to be universal. Thus, life projects are premised on densely and uniquely woven 'threads' of landscapes, memories, expectations and desires (Blaser, 2004, p. 26).

Table 1 (next page) summarizes the community resilience factors identified in the general literature and those specific to Aboriginal communities. There is much overlap among these constructs and even those that are independent interact in many ways to amplify the effect of each other.

What is absent from this list are the larger factors affecting the larger society in which Aboriginal peoples live, both at regional, provincial, national, and international levels. These larger systems have a profound impact on the resilience of Aboriginal communities. Hence interventions aimed at enhancing resilience must also consider the broader society and global systems. Respect for Aboriginal cultures and autonomy in the larger society will contribute to conditions that enable individuals and communities to use their own resilience to maximum effect.

5. MEASURING COMMUNITY RESILIENCE

The ability to measure community resilience is important in order to recognize communities that are doing well, to identify factors or processes that may contribute to resilience and to evaluate the outcome of interventions designed to increase community resilience. Although various community level factors that contribute to resilience can be measured (including social capital, cohesion and ecological capital), resilience itself is difficult to conceptualize in ways that can be directly measured. In effect, resilience must be "inferred by the presence of positive outcomes in the social, economic, cultural and environmental health indicators of community well-being" (Rolfe, 2006, p. 12).

As previously discussed, there are a variety of definitions of community resilience. Each definition or conceptualization of resilience implies a different measurement strategy, ranging from assessing and aggregating individual-level data to the measurement of community-level institutions and activities (Harpham, Grant & Thomas, 2002). Each of the approaches has specific strengths and weaknesses; each approach captures certain aspects of community resilience, while missing other aspects of the concept. In this section, we review recent work on measurement of community resilience as well as making some suggestions to advance the field.

Norris and colleagues (2008) note several caveats to measuring community resilience. First, the advantages of particular resources may not hold across varying levels of analysis. For instance, "place attachment" may decrease resilience in situations of forced relocation, or it might actually increase the will of a community to rebuild after

Table 1. Dimensions of Aboriginal Community Resilience

Resilience Domain	Dimensions	Indicators/Measures
Social Capital*		
Bonding	Cognitive	Trust in others from same group Belief that community is close knit
	Behavioural	Membership in groups within community Number of meetings attended in last year
	Structural	Strength of ties to groups within community
Bridging	Cognitive	Trust in others from other groups Sense of personal safety
	Behavioural	Membership in organizations based outside community Number of meetings attended in last year
	Structural	Strength of ties to groups outside community
Linking	Cognitive	Trust in health care professionals Trust in community organizations Trust in different levels of government
	Behavioural	Political activism
	Structural	Number of contacts/meetings with government
Ecological Capital**	Social Capital	(As above)
	Natural capital	Quality of environment
	Human capital	Knowledge, skills, values, diversity
	Built capital	Infrastructure (housing, water, power, communications)
Aboriginal Cultural Knowledge, Values and Practices	Family and Community Connectedness	Support from relatives Intergenerational communication Positive parenting and family communication Strengths-based interactions in families
	Oral Tradition and Storytelling	Knowledge of traditional stories Community sharing of stories
	Connection to the Land	Participation in land-based activities Consumption of country food Caring for Country (Burgess et al., 2009)
	Healing Traditions	Number of healers or others with healing knowledge Frequency of healing activities Number of people participating
	Spirituality & Ceremony	Number of Elders or others with ceremonial knowledge Frequency of ceremonies Number of people participating
	Collective Knowledge and Identity	Number of different types and frequency of activities to learn, honor or celebrate collective knowledge and identity
	Cultural Continuity***	Local control of fire, police, education, social services, and other organizations Cultural heritage centers
	Political Activism	Land claims, self-government, involvement of community in challenges to development

* Adapted from Derose & Varda, 2009; ** See: Hart, 1998; *** Chandler & Lalonde, 2008.

disaster. Secondly, broad resources such as economic status or social security are not culture-neutral, but often culture-specific. Mechanisms for assuring social standing and class are often specific to tradition, such as degree of filial responsibility and other customs. Norms for social reciprocity and emotional and kin support can vary even within a culture. Third, the authors note that resilience is not an unchanging concept but a process that stems from changing resources. Resilience should not be used in new ways to stigmatize communities.

Before reviewing current strategies and available measures, it is important to consider the potential uses of such information by policy makers, public health workers and researchers. This primary purpose of measurement in this domain is to compare and contrast community resilience over time and across communities. Measuring community resilience over time can indicate the efficacy of interventions or policies designed to buttress community resilience. For example, health promotion interventions or language revitalization policies in Aboriginal communities may aim to increase community resilience. In this case, longitudinal research can measure community resilience before and after the intervention to assess impact.

The other main reason to measure community resilience is to compare data from different contexts, communities and circumstances. These comparisons can help identify specific components of community resilience. In some cases, Aboriginal communities can be compared with each other, or with other communities in the general population in order to identity the shared and distinct aspects of resilience. Several studies, for example, have compared the results of communities in different locations to each other; or Aboriginal participants to non-Aboriginal participants (Carlton et al., 2006; Kirmayer, et al., 2003; Schiff & Moore, 2006; Silmere & Stiffman, 2006). These types of analyses can help identify resilient communities and lead to a better understanding of the factors that promote community resilience. On the other hand, vulnerable communities can also be identified and offered appropriate interventions to strengthen resilience.

5.1 Aggregating individual-level data

One way of measuring community resiliency is to aggregate individual-level data to produce an average indicative of resilience at the community level. In other words, community resilience is approximated by evaluating and averaging community members' resilience. The average of individuals' resilience is used to represent the community's resilience. Such an approach can rely on data that is either (a) routinely collected through existing systems and procedures, or (b) specifically collected for the purposes of assessing community resilience.

Whitley and McKenzie (2005) outline a number of methodological traps in measuring correlations between social capital and mental well-being that are pertinent to studies of community resilience. Studies that use measures from individuals face problems of individual bias. Individuals' state of well-being or distress influences their perception of the community. People who are distressed may not perceive social capital in their communities; on the other hand, an individual with relatively good mental health may report high levels of social capital. To get beyond this individual perception, it is important to canvas many individuals in a community and to use methods other than individual interviews or questionnaires, including participant and community observation.

5.1.1 Existing or routinely collected individual indicators

Existing or routinely collected indicators refers to statistics that are collected as part of ongoing policies and programs. In the Canadian context, these statistics are often collected at the community (e.g. municipality or First Nation Reserve), provincial and federal levels. Examples of routinely collected statistics include vital registration (births, marriages, divorces, and deaths), census data (each decade), health services utilization data, and public health surveillance systems (especially concerned with notifiable diseases). Crime and educational statistics are often routinely collected as well. These statistics are generally not collected by academic researchers as part of an academic program of research. They are collected by government agencies aiming to document and monitor secular trends as part of their routine business.

Aggregating individual-level data collected through existing systems is extremely efficient and a relatively low-cost way to assess community resilience. However, such data collection remains underdeveloped in Canada (e.g. Smylie, Anderson, Ratima, Crengle, & Anderson, 2006; Smylie & Anderson, 2006). As well there are several methodological limitations to using this type of data. First, there is wide variation in what is routinely collected depending on the province, municipality or Aboriginal community. Each jurisdiction also has different ways of defining Aboriginal identity. Some Aboriginal communities collect precise and publicly-available data on health outcomes. Others may be more circumspect in collecting and releasing statistics on sensitive outcomes such as suicide and depression. Second, some statistics are routinely collected, but are not publicly available and are difficult to access, for both the community

and academic researchers. Again this varies by geographic region and institution (Smylie et al., 2006). Third, definitions of key concepts may vary across databases. Suicide is an example in this regard, with research showing that in some communities suicides may be officially recorded as "accidental deaths" for religious or social reasons. Fourth, routine statistics are often only collected on certain key variables, which may be poor proxies for community resilience. Fifth, assessing the size and characteristics of the population itself may be difficult in communities where there is much fluidity, mobility and in/out migration.

The routine collection of standardized statistics would assist enormously in the assessment of community resilience in Aboriginal communities. Some of the suggestions below can only be implemented given an improvement in the availability of such routine statistics. However, every Aboriginal community is unique and should also be encouraged to develop locally customized and culturally meaningful measures of community resilience. Ideally, this process would allow for the generation of standardized data that can be validly compared across communities, as well as locally grounded data that can be validly compared over time.

In analyzing existing statistics for indicators of community resilience, researchers often focus on the following domains: (i) economic indicators; (ii) health indicators; (iii) educational indicators; and (iv) social and familial indicators. To be interpreted as measures of resilience such indicators must be compared across communities exposed to similar levels of adversity.

Economic indicators that can be utilized in this way include factors such as the per cent of able-bodied adults employed, average household income or levels of home ownership. This approach can gauge the economic well-being of a population and is often used to compare city neighbourhoods to assess need for urban regeneration programs. Poverty and unemployment are well-established determinants of health and well-being. Communities with high unemployment and low levels of income are often assumed to lack community resilience. However, this ignores other sources of meaning and value in the community including important unpaid activities (e.g. hunting, ceremonial activities, caregiving) and spirituality, which may contribute to community resilience. Economic indicators are often collected by the various levels of government, though they may be difficult to access. They can tell us something about community resilience, but must be appropriate for the context and can only give a partial picture.

Another common approach is to assess routinely collected health statistics as a proxy for community resilience. This often involves assessing the incidence or prevalence of a given health problem within a community and then comparing these statistics over time or across communities. Most commonly, this is a mental health outcome variable collected by public health authorities or the coroner, such as deaths by suicide. Psychiatric epidemiologists may measure the extent of an outcome or risk factor, for example substance abuse or depression in the community. This is done through the administration of standardized measures such as the Beck Depression Inventory (BDI) (Beck et al., 1988) or the Center for Epidemiologic Studies Depression Scale (CES-D) (Somervell et al., 1992) of the K-6 (Furukawa et al., 2003) to a representative sample of a community. Results can then be aggregated and compared over time or to community averages and norms. Other health measures that may be used as proxy variables for community resiliency include life expectancy or per cent of people disabled.

Another common approach is to assess educational indicators as signs of community resilience. Commonly used measures include school retention rates or the percentage of students graduating from high-school. Again the availability of these statistics varies. Other measures could include percentage of individuals entering higher education or completing college degrees. Academic performance has been shown to increase individual-level resilience in some Aboriginal youth (Strand & Peacock, 2003). However, these indicators focus on formal schooling rather than education in its broader sense, and therefore do not capture the range of learning experiences important in Aboriginal communities. Aboriginal communities may place greater value on education by participation in traditional subsistence activities rather than "book-learning" in schools.

Social and familial indicators can also be aggregated to measure for community resilience. This may include factors such as the divorce rate, the number of single-parent families or rates of domestic abuse. Again, the significance of these depends on cultural configurations of the family, which may differ from Euro-Canadian notions of the nuclear family. Crime statistics can also be used as proxies for community resilience. Criminologists often divide crime into serious crime (for example murder, rape, assault) and "minor incivilities" which includes vandalism, graffiti and minor theft. These can be compared and contrasted over time and place as indicators of resiliency.

In the social domain, many of the factors discussed in the social capital section can be used as proxies for community resilience. These include levels of trust, community spirit, social support, and social networks. Again these data can be collected through self-report measures where individuals report subjective levels of trust or social

support using measures such as the Harvard University Social Capital Scale (Harvard University, 2002). These self-report measures are most effective if used in pre/post longitudinal studies testing the population impact of a population-level intervention.

5.1.2 Specific Measures of Individual Resilience

All of the measures discussed above are proxy variables that can be used to infer levels of community resilience. However some researchers have created instruments that deliberately attempt to measure self-perceived individual-level resilience.

This work includes interest in individual resources for dealing with chronic illness. For example, the "Brief Resilient Coping Scale" was developed to measure resilience in people with rheumatoid arthritis (Sinclair & Wallston, 2004). The scale consists of four items: 1) "I look for creative ways to alter difficult situations, regardless of what happens to me;" 2) "I believe I can control my reaction to difficult situations;" 3) "I believe I can grow in positive ways by dealing with difficult situations;" 4) "I look for ways to replace the losses I encounter in life." Responses to this scale correlate with other individual attributes, such as tenacity, optimism, creativity, problem solving, and commitment to positive growth in difficult situations. People who endorse the items are likely goal-directed and successful in overcoming challenges (Sinclair & Wallston, 2004).

Another approach to measuring individual resiliency is based on research that suggests that "sense of belonging" or "sense of community" are linked to resiliency (Baumeister & Leary, 1995; Macintyre et al., 2002; Young, Russell & Powers, 2004). Davidson and Cotter (1986) set out to evaluate people's "sense of community" which they defined as the "special attachment" between people and their social milieu in urban settings, by measuring people's social motives "especially likely to produce sense of community." The scale includes factors such as affiliation, control, safety, privacy, sense of urban aesthetic, and spiritual fulfilment. The authors envisioned these variables to be at work in social contexts such as the home, neighbourhood, government institutions, public services, religious venues, and recreational and educational sites. The goal of their scale was to make resilience a generalizable concept across cities—though, of course, such a technique may overlook important cultural differences in measurement.

While much of the work on measuring social capital has occurred in the general population in the U.S. and U.K., without reference to culturally specific factors, there have been efforts to develop measures that can be used internationally (Chen et al., 2009; De Silva et al., 2006; Grooteart et al., 2003). Mignone (2003) has developed

a guide to measuring social capital for First Nations communities.

5.2 Community-Level Indicators of Community Resilience

Communities are complex systems with emergent dynamics (i.e. they are more than the sum of the individuals they contain). Conversely, individual members of a community or group do not necessarily reflect the characteristics of the group. Both individual and collective processes require separate study and analysis because each level has its own properties and patterns of interaction or dynamics. Misattributing the characteristics of the group to individuals within it has been termed the ecological fallacy; incorrectly assuming that group level processes can be identified purely from individual characteristics has been called the "atomistic fallacy" (Diez-Roux, 1998).

Medical geographers, sociologists and epidemiologists have long argued that community-level concepts must be measured through community level indicators. This tradition has a strong theoretical and empirical heritage, and many creative researchers in these fields now use multi-level designs with complex statistical models to discern community level influence on health and well-being. This approach addresses the influence of structural factors on individual and collective well-being. As such, it avoids the tendency to "victim-blaming" that occurs with an exclusive focus on individual-level risk factors divorced from their social context (Holton, Brass & Kirmayer, 2009).

5.2.1 Existing or Routinely Available Community-Level Indicators

Von Kemenede (2003b) provides a useful review of community-level indicators of social capital based on available statistics. Some of these are not consistently available for Aboriginal communities.

One instrument currently being applied to First Nations across Canada is the First Nations Community Well-Being (CWB) index (McHardy & O'Sullivan, 2004). It combines several dimensions of social and economic well-being into a single indicator. Developed by Indian and Northern Affairs Canada (INAC) to assess the socio-economic well-being of First Nations, the CWB index uses data on education, labour force participation and employment, income, and housing from the Canadian Census to derive a single index score. Notably, data on other important aspects of life in First Nations communities, such as health, the natural environment and freedom from crime are not collected in a way that makes their use suitable in this index. Nonetheless, Cooke (2005) concludes that the

CWB is a valid measure of quality of life, it is sensitive to changes over time, and as such "will be a useful indicator of the well-being in Aboriginal communities" (p. 17).

In the past few years, INAC has attached the CWB index score to their published First Nation community profiles as a comparative indicator of "well-being." The use of routinely collected data has allowed researchers to see if policy changes have had a positive effect on First Nations over a 20-year period. In an application of the CWB to census data from 1981 to 2001, O'Sullivan (2006) concluded that despite the gains made by First Nations in their index score, the gap between them and other Canadian communities remains significant. A comparative analysis of First Nation and non-First Nation communities concluded that there is something about First Nation communities apart from isolation and small size that is inhibiting their ability to achieve well-being levels seen in comparable non-native communities (White & Maxim, 2007). Although it only offers some insight into a portion of what comprises well-being in Aboriginal communities, the CWB does offer an important first step in understanding well-being. Furthermore, it may serve to act as a baseline when considering the effect of policy decisions and other attempts to address the disparities seen in Aboriginal communities.

The work of Chandler and Lalonde (1998, 2008; Chandler et al., 2003) is also relevant to the development of an index of a community-level resilience in Aboriginal contexts. Though the focus of their study was not community resilience, they identified six indicators of "cultural continuity," which relate to the degree of control people exert over their civic lives: 1) securing legal title to traditional land; 2) establishing effective self-government; 3) gaining control of social services, including education, police, fire and health facilities; 4) preserving and promoting traditional practices; 5) involving women in local governance; and 6) taking control of child and family services. These variables all could be assessed by simple questions to administrators or consulting existing databases. In later work, they found additional indicators that could also be extracted from existing records, including the status and progress of legal actions over land claims, the proportion of women in government and the level of traditional language use in the community. This work has opened a very promising avenue for identifying community strengths related to cultural continuity, local control and empowerment. However, to date all of their work has been with BC First Nations. This work needs replication in other regions of the country to determine whether the same indicators work for communities with different histories, geography and social structure.

5.2.2 Developing New Community Level Indicators

Community level indicators that are truly distinct from individual measures depend on observations of community structure and process (Harpham et al., 2002). Lochner and colleagues (1999) have proposed a model for measuring overlapping ecological components of social capital (Lochner, Kawachi & Kennedy, 1999). They identify four constructs that can be used as indicators of social capital: (i) collective efficacy, (ii) psychological sense of community, (iii) neighbourhood cohesion, and (iv) community competence. However there is little agreement on the best way to measure these constructs.

The community development literature has also considered the issue of how to assess the level of community capacity or empowerment. Domains of community capacity include: participation, leadership, problem assessment, organizational structures, resource mobilization, links to others, critical awareness, and program management (Bopp, 1999; Laverack, 2005). Each of these domains can provide a measure of the level of community empowerment (Lavarack & Wallerstein, 2001).

A recent scan of community resilience literature and relevant reports revealed the need for a tool that could help communities in identifying and increasing resilience factors related to the health of racial and ethnic minorities in their community, and in decreasing disparities experienced within these communities (Davis, Cook & Cohen, 2005). THRIVE (Toolkit for Health and Resilience in Vulnerable Environments), developed by the Prevention Institute, consists of twenty resilience factors in the four areas: built environment, social capital, services and institutions, and structural factors.[5] The *built environment* is defined as a community's infrastructure, including street design, public transit, places for incidental and recreational activity, the availability of affordable and healthfood, safe housing, clean air, water and soil, and in general, an inviting and culturally appropriate environment for people to be. *Social capital* includes "connections among individual social networks and the norms of reciprocity and trustworthiness that arise from them" (p. 27), as well as socially dictated standards for behaviour, which might regulate activities such as alcohol consumption. Social capital additionally involves networks of trust and cohesion, action on behalf of the community, collective and civic engagement, and shared norms. *Services and Institutions* depends on access to quality, culturally appropriate public and private services and institutions, including local government, health care systems, social services, education, public safety services, community groups,

community organizations, faith institutions, businesses, and arts institutions. In low-income communities the availability and affordability of these services is particularly key. *Structural factors* are broader elements such as race relations, and employment and economic opportunities. When THRIVE was piloted in three American communities (rural, suburban and urban), in New Mexico, California and New York City respectively, several issues emerged as priorities across the sites: healthy, affordable food, shifting focus to the needs of youth and implementing more youth services and programs; and learning to deal with community diversity, for instance the influx of new migrants and cultural groups. While elements of this toolkit could be adapted to Aboriginal communities, there are unique aspects of Aboriginal culture, history and context not captured by this measures oriented toward culturally diverse urban neighbourhoods.

In a recent study of First Nations communities in Saskatchewan, McKay and Prokop (2007) found that individual-level child resilience was enhanced by a strong sense of "belonging to a vibrant, positive community that proudly celebrates its own culture and history" (p. 47). Factors that contribute to a vibrant positive community may include powwows, sweatlodges, longhouse activities, and extent of traditional ceremonies. The extent of traditional dance, music, sport, art, religious, and spiritual practices could all indicate a resilient and active community. Indeed, such activities are often measured by urban sociologists to gauge levels of social cohesion and community need. These are frequent variables used in the measurement of social capital. The number and frequency of these activities and the level of participation could be assessed as a potential measure of community resilience.

One aspect of Aboriginal communities where developing new indicators could be useful concerns spirituality. There are difficulties in assessing spirituality in general because the term covers an increasingly broad array of meanings (Koenig, 2008). Moreover, in assessing spirituality among Aboriginal people, it is important to remember that spirituality is often expressed in "everyday" activities, for example, in caregiving, hunting or consuming traditional foods. This is augmented by more specific sacred activities such as powwows, sweatlodges, smudge ceremonies, or in many cases conventional Christian worship. Spiritual orientation and activity can be measured at the individual level and aggregated to the community (Garoutte et al., 2003). This might include self-report measures of extent of engagement in spiritual or religious practices such as prayer or attendance at religious/spiritual ceremonies and rituals. Community-level variables can

also be measured that indicate scope and extent of spiritual practices. This could include the number of sweatlodges, healing circles or church services held within a community within a certain period of time. Self-report measures can then be triangulated with community-level measures to better assess the role and impact of spirituality/religion in the community under observation.

Another factor that could benefit from such an approach is language retention. Researchers can investigate language retention through self-report measures of who does and does not speak the language and of its use in other settings like local signage or media. However small numbers of speakers may not necessarily indicate a low resilience community; the community may have an active revitalization program in place that focuses on other aspects of culture.

5.3 Measuring Resilience in Aboriginal Contexts

Much of the adversity faced by Aboriginal peoples reflects structural violence[6]: inequalities in power, economic resources and social capital that reflect the legacy of colonization, forced assimilation and cultural oppression that Aboriginal people in Canada have faced over several hundred years.

The resilience of contemporary Aboriginal communities is a consequence of complex historical and social forces. As such, any attempt to measure community resilience must consider historical factors. Just as the developmental trajectory of the individual across the lifespan contributes to individual health and resilience at any given point, so do the dynamics of development influence the resilience of communities.

Historical changes in communities have reinforced some elements of community life while destabilizing, transforming or casting aside other aspects. Many of these historical changes, therefore, cannot be interpreted as simply positive or negative—they involve complex tradeoffs made for survival. Community resilience is not simply a matter of forging blindly ahead or of recoiling from threats and adverse circumstances, but a process of engagement, negotiation, creative adaptation, and active challenging of the evolving status quo.

Similar dynamics may be at play within communities. Qualitative research suggests that internal conflict within communities, can have a corrosive influence on community life and resilience (Adelson, 2002; Morgan Phillips, *personal communication*, August 10, 2009). Likewise friction and conflict between a First Nation and the wider geographic community can also have a detrimental effect on well-

being. That said the outcomes of conflict, rather than the presence of conflict per se, that is the prime determinant of resilience. Qualitative research on resilience in Kahnewake, for example, suggests that the "Oka crisis" galvanized the community, giving them a sense of purpose and increasing communal esteem (Morgan Phillips, *personal communication*, August 10, 2009). The types, extent and outcomes of both internal and external political conflict again could be enumerated as a potential indicator of community resilience.

The legacy of the residential school system continues to have a profound impact on Aboriginal health and well-being (Stout, 2003). However, Aboriginal communities were differentially affected by the residential school system. Some communities lost a greater proportion of children to residential schools than others. Recent research suggests that attendance at an Indian Residential School is associated to distress not only among those who attended, but also their descendents (Bombay, Matheson & Anisman, 2009). The intergenerational transmission of trauma can occur both through family interactions and larger communal processes (Kirmayer et al., 2007; Serbin & Karp, 2006). The transgenerational impact of residential schools may depend on the proportion of parents in the community influenced negatively by these experiences, and the availability of alternative resources to support effective parenting and positive family life.

Whitbeck and colleagues (2004) devised two 12-item scales to measure the effects of historical trauma among American Indian individuals in the Midwest. They originally developed the scales through extended focus groups with Elders and other Indigenous individuals on reservations. During focus groups the participants were asked to share their ideas of loss. The authors extracted the most frequent themes from discussions and incorporated them into the *Historical Loss Scale*. They also developed a second scale, the *Historical Loss Associated Symptoms Scale* as a measure of the emotional responses triggered by the thought of the losses. The Historical Loss Associated Symptoms Scale could be viewed as a measure of how individuals have emotionally coped with and managed past and current losses. Although not a direct measure of the resilience process, it can approximate individual's emotional resilience to collective adversity.

Using constructs like resilience across different cultures and communities raises issues of the equivalence of meaning and measurement. Burgess and Berry (2009) urge researchers to develop Aboriginal-sensitive measures. In some instances, scales administered in English may not accurately reflect indigenous conceptions of health, illness or resilience. Even where English or French are the languages of everyday life, Eurocentric categories can confound

results. For instance, in Aboriginal community contexts, the category of "income" on scales and questionnaires should include forms of subsistence production, and "education" should include traditional knowledge. Future studies might broaden definitions of successful functioning by examining other outcomes that are valued by Aboriginal youths and their communities (Silmere & Stiffman, 2006). Attention must also be paid to developing specific definitions of terms such as resilience or spirituality so that they are sensitive to Aboriginal conceptions. In a recent study, Schiff and Moore (2006) wanted to assess how spiritual elements of the sweatlodge translate to emotional well-being. They began the study with few available, relevant models. No existing instruments connect the two variables in context of a holistic, Aboriginal framework. In the absence of an ideal instrument, the researchers combined two questionnaires, the SF-36 and The Heroic Myth Index (HMI), for the purposes of the study. The SF-36 is a multipurpose health survey that provides a general measurement of physical and mental health. The HMI is a scale, based on Jungian psychology, that consists of 72 items reflecting various personality archetypes (innocent, orphan, warrior, caregiver, seeker, destroyer, lover, creator, ruler, magician, sage, fool, etc.). Schiff and Moore noted that Aboriginal participants seemed to dislike the SF-36 scale because of its limited, objective-style response options. Some participants had even written an "X" next to questions to indicate dissent. The HMI scale was better received, possibly because it involved more fluidity of response. It also avoided notions of deficit and focused more on strengths and resilience.

The deficiency of existing instruments is often compounded by a more basic problem termed the category fallacy (Kleinman, 1977). The category fallacy refers to the uncritical imposition of categories and constructs developed in one culture on another culture. Some of this can be seen in the social capital literature. For example, electoral turnout is often considered a valid measure of a community's social capital. However, research suggests that in some active and presumably resilient Aboriginal communities, segments of the community may boycott Council elections as these are considered externally imposed governmental institutions. In this context, electoral turnout may not be an indicator of communal resilience. In fact, in the example just given, it could be the complete reverse: lower levels of participation in Council elections could indicate more cultural continuity, which as discussed above has been linked to community resilience. Qualitative research exploring the local meanings of potential indicators is essential to develop valid measures of resilience (Adams, Madhavan & Simon, 2006; Canino et al., 1997; De Silva et al., 2006; Ungar, 2004).

5.4 Summary

We have described measures of community resilience based on an aggregate or average of individual reports and on indicators of community organization and functioning. Using both methods provides a form of triangulation that strengthens the validity of any inferences made. This approach is advocated by Ungar and colleagues (2005) who argue that resilience can be best understood as an interaction of individual capacities and structural conditions, which are closely related to social, political and economic assets.

Developing appropriate indicators of community resilience can follow three basic steps:

1. Decide how to conceptualize resilience; what is the local definition of community resilience in your context (e.g. vitality of language and culture).
2. Determine which indicators/variables speak most strongly to this definition, and how they interpreted to represent community resilience (e.g. language use and cultural events).
3. Decide how to best measure the indicators (e.g. interview people on their use of language or count language teaching programs in the community); count number and frequency of cultural events in the community and level of participation).

Although it is intended to have predictive value, identifying communities that will do well in the face of new or continued challenges in the future, resilience is usually measured by evidence of having already done well despite past adversity. Only a well-established model of resilience that documents the value of certain indicators can allow the confident use of those as markers of future response. Promising indicators relevant to the historical context of Aboriginal communities have been identified but much more study is needed to insure these are applicable across diverse communities. As well, since resilience is not a fixed trait of individuals or communities but a dynamic response to changing circumstances. Research must therefore be attentive to the fluctuations of resilience over time.

6. PROMOTING COMMUNITY RESILIENCE

The key question from the point of view of health and well-being is how to increase, promote and maintain resilience in Aboriginal communities. Many types of intervention directed at individuals and whole communities may contribute to the development of community resilience (Richardson, 2002).

As discussed in Section 4 of this report, HeavyRunner and Morris (1997) outline some features common to many Aboriginal worldviews that may contribute to resilience. These include: values, beliefs and behaviours related to spirituality, child-rearing, extended family, veneration of age/wisdom/tradition, respect for nature, generosity and sharing, cooperation and group harmony, autonomy and respect for others, composure and patience, relativity of time, and non-verbal communication. This list overlaps with that developed in recent research with Inuit elders in Nunavut, who emphasized spirituality, interconnectedness with others, and knowledge of culture and traditional practices as sources of resilience (Ajunnginiq Centre & Korhonen, 2007). Tanner (2008) found that sources of well-being recognized by James Bay Cree included: shared parenting and community responsibility for children; emphasis on language as a source of renewed culture; knowledge of history and tradition as a key element of identity; development of traditional skills; emphasis on the importance of kinship and connection with one another; and spirituality and respect for nature. Others have found similar sources of resilience emphasizing themes of connectedness, spirituality, cultural knowledge, and tradition (Lavallee & Clearsky, 2006).

As can be seen from this brief summary, the themes that commonly occur as potential areas of action to promote resilience in Aboriginal communities are varied but center on factors such as cultural practices, tradition, spirituality, interconnectedness, and respect for land. Potential domains for action are listed in Table 2. Intervening in these broad domains may be the best strategy for enhancing community resilience. In briefly considering these domains, we will refer to examples of culturally sensitive prevention or resilience promotion programs with Indigenous populations that have been studied or documented (Ellis, 2004; LaFromboise & Lewis, 2008; Waller, Okamato, Hankerson, Hibbeler, Hibbeler, et al., 2002). These prevention programs focus not just on reducing risk, but also on promoting protective factors which include resilience (Bogenschneider, 1996).

6.1 Revitalizing Language, Culture and Spirituality

Language, culture, spirituality, and ceremony are thoroughly intertwined in many Aboriginal communities. It has been repeatedly shown that engagement with traditional cultural beliefs and practices has considerable influence on Aboriginal well-being (Reynolds, Quevillon, Boyd, & Mackey, 2006). Walters and Simoni (2002) have written of the way Aboriginal women draw from indigenous cultural resources to combat stress and negative health effects. They discuss the importance of "enculturation," the processes by

which individuals learn their own culture, as a buffer against stress and negative health outcomes. Such work is consistent with other work on ethnic identity which indicates a strong cultural and ethnic identity is good for health and subjective well-being.

Renewing and promoting traditional cultural beliefs and practices may enhance community resilience. Pilgrim, Samson and Pretty (2009) describe six main types of cultural revitalization interventions; these are centred on: (1) reviving traditional methods of food collection and preparation and increasing the consumption of traditional foods; (2) reviving traditional cultural practices and ceremonies as part of income generating through ecotourism; (3) providing culturally-appropriate and locally controlled education; (4) protecting and promoting the use of traditional language (which serves to reinforce the connection between Elders and youth; (5) maintaining or reinstating cultural knowledge and practices that have been suppressed, displaced or forgotten; and (6) working to assert human rights and land rights. These strategies are closely interrelated in Aboriginal worldviews. For example, subsistence activities related to traditional foods involve cultural knowledge and language, and ceremonial practices with spiritual meaning. Interventions that target one or more of these factors may promote community resilience.

Revitalizing cultural traditions does not mean rejecting modernity. It is more than simply a return to the past. Culture is best understood as an ongoing, creative process of self-definition and self-fashioning, rather than a timeless, static system or backdrop on which life events occur. For example, ecotourism on Aboriginal land represents a new way of relating to the land but may tap into traditional knowledge and values of hospitality toward the stranger. Teaching visitors about living on the land then becomes a way to honor, preserve and promote Aboriginal culture. However, fostering such ecotourism may require innovation in terms of using the internet and communications technology to market and facilitate such ecotourism. This may bring new skills to an Aboriginal community which can be utilized in other business domains. Tradition and modernity may thus intertwine to revitalize a culture and thus enhance community resilience.

Much of the material reviewed suggests that a spiritual outlook on life and participation in ceremonies contribute to individual resilience. Additionally, given that they often are communal events, ceremonial activities can be highly effective in forging a sense of connection to others in the community. Participation in activities such as a powwow or sweatlodge brings both individual and community benefit. Participants in a sweatlodge reported higher levels of self-

discipline, self-actualization, caring for others, and sense of creativity after a ceremony (Schiff & Moore, 2006). Walters and Simoni (2002) observed that spiritual and cultural engagements like the sweatlodge ceremony and Native crafts contributed to positive "identity attitudes" in women, mitigating their negative health concerns. Promoting community resilience may involve supporting the renewal and consolidation of Aboriginal spirituality and ceremony. This occurs internally to communities but can be supported by sharing across communities and by resources to develop heritage centres, and protect sacred sites and other settings needed to conduct ceremonies.

Aboriginal people have always had an intimate and abiding relationship with the land. This has persisted, despite land expropriations and forced sedentarization on non-traditional lands. Several studies suggest that spending time on the land and conducting meaningful activities lead to improved health and well-being. As such, programs that facilitate and support bush activities with family and other community members, especially those that are inter-generational, should foster community resilience.

Indigenous languages contain much cultural knowledge about the environment, human relationships and moral systems and, as such, constitute a previous resource for the community, and for humanity as a whole (Harrison, 2007). There is evidence that language revitalization can play an important role in community resilience (Hallett, Chandler & Lalonde, 2007). Funding and promoting language revitalization efforts may be a key intervention, especially in settings where languages are under threat. This may involve educational programs as well as community or population-level interventions such as the development of radio or websites in Aboriginal languages.

It should be noted, however, that some of the work suggesting the importance of language revitalization comes from places such as British Columbia where there is a large variation of language retention among different First Nations communities. There are many communities, mainly in remote and northern regions that have very high rates of language retention, but also have high rates of suicide and other mental health problems. Language revitalization may thus be most important in communities where local language use is in the minority or in decline. Language alone is not sufficient to protect communities from the effects of social and economic adversity, however as part of a broader approach support for language learning may promote community resilience. Language revitalization may also be an important intervention for urban Aboriginal people. Language classes in cities may bring together otherwise isolated people to participate in culturally meaningful

activities and reinforce a sense of community, belonging, cultural knowledge, and pride. Such classes could also be open to some interested non-Aboriginal people to enhance linking social capital. This would have the added effect of improving understanding and appreciation of Aboriginal culture and worldviews in the broader society, which in turn, can contribute to resilience in Aboriginal communities.

In many Aboriginal communities, cultural knowledge and identity are transmitted through oral tradition. Facilitating the exchange and telling of stories may be an important factor in developing community resilience. Places and events should be set up that encourage story telling in Aboriginal communities. In the clinical setting, Gone (2006) has advised practitioners to assess their clients' "cultural identity status" in the process of formulating therapeutic goals. He suggests that practitioners support distressed clients in reconstituting cultural identity as a form of wellness. Undoing self-pathologizing narratives, for example, may help resolve identity confusion. The same process can occur at the community level. Narrative interventions can also be extended beyond the family, as when communities work to establish, maintain and access collective cultural and spiritual histories.

In the clinical setting, Landau (2007) encourages use of the "genogram," a pictorial display of family relationships and health histories, to map the connections between personal, historical and social events. This can help individuals to understand their predicaments in terms of larger historical forces. The same strategy can be extended to families, groups or whole communities through group discussions and explorations of collective identity.

6.2 Strengthening Local Control and Collective Efficacy

Many studies suggest that collective efficacy and local control are important determinants of well-being in Aboriginal communities. Ledogar and Fleming (2008) argue that collective efficacy is especially pertinent in the Aboriginal context; they cite the definition of Sampson and colleagues collective efficacy as "the capacity of a group to regulate its members according to desired principles – to realize collective, as opposed to forced, goals" (Sampson, Raudenbush & Earls, 1997, p. 918). Collective efficacy reflects the extent to which people feel they can count on their community to take specific forms of action needed to insure their collective well-being. Collective efficacy and local control are important because colonialism, government control and tutelage have undermined traditional political structures and autonomy. New assaults on Aboriginal

communities have come from global enterprises and market forces that operate without concern for local governance. Political activism allows Aboriginal people to defend their communities against these external forces. Local control can insure that services are tailored to the needs of the community (Bowles & Gintis, 2002).

The work of Chandler and Lalonde suggests that local control and collective efficacy in Aboriginal communities are key determinants of community well-being. In their studies, the predictors of health and resilience include: 1) securing legal title to traditional land; 2) establishing self-government; 3) controlling local education, police and fire, and health facilities; 4) preserving and promoting traditional practices; 5) involving women in local governance; and 6) taking control of child and family services. All of these factors can be promoted to enhance community resilience.

Creating and directing local community activities may be essential to collective well-being. To the extent that community members feel a sense of belonging, collective agency, in turn, will support personal agency. Ways of fostering this sense of local control include: community gatherings, community conversations, the collective sharing of feelings, relationships between younger generations and Elders, and language promotion. Community mobilization to address social concerns and collective control over health and other projects are also essential to enhancing identity and self-esteem.

Community empowerment aims to build the capacity within a community to meet challenges. It can do this across multiple domains through interventions that aim to: improve participation; develop local leadership; increase problem assessment capacities; increase critical awareness; build effective organizational structures; improve resource mobilization; strengthen links to other organizations and people; create an equitable relationship with outside agents; and increase local control over programme management (Bopp, 1999; Laverack, 2005). A review of programs in Australia and New Zealand aimed at increasing indigenous community empowerment identified the following factors associated with positive outcomes: community ownership of the problem and solution; the level of existing community empowerment in the local setting; the use of local facilitators; use of outside resource people; establishing trusting partnerships; a local coordinating group; and adequate resources (Campbell et al., 2007).

Kral and Idlout (2008) describe community-generated activities in two Nunavut communities just before each experienced a decrease in suicide activities. One such activity involved the regular gathering of community members over a period of time. Members of the group discussed

recent suicides, and identified their feelings, concerns and motivations about suicide and its prevention in the community. Kral and Idlout call this a space of "synchrony" in which group thoughts generated productive ideas. Similarly, an effective measure in the community of Igloolik involved the establishment of a Youth Committee which met every two weeks to discuss issues and ways to improve community life. Finally, another Igloolik group came together to produce a successful feature film ("Atanarjuat: The Fast Runner"). In light of their experience, Kral and Idlout emphasize that "it does not appear to matter so much what the project is as much as that program or initiative is the community's own" (Kral & Idlout, 2008, p. 328).

Decentralized and collective power allows communities to determine their own health priorities and establish culturally appropriate programs. In urban centres, Clark (2006) has also found that the best mental health intervention programs depend on community ownership, along with consistent and effective leadership and a culture-focused approach.

Compared to local programs, interventions that are parachuted in from the outside are less likely to be successful in promoting community resilience because they do not build local capacity. Support for the development of local interventions will build local capacity and have broader effects on resilience. This support can include financial resources and expertise that is oriented toward facilitating local program development.

6.3 Supporting Families and Healthy Child Development

Building resilience may involve preventive measures that occur early in development. This can include support for parents and families with young children or early adolescents. Interventions that encourage positive parenting and intergenerational exchange within families are likely to foster community resiliency. This is especially the case given that the residential school system fragmented families and disrupted intergenerational relationships. Programs and services geared to the well-being of Aboriginal communities therefore must facilitate the importance of sharing and cooperation between generations.

Studies have found that Aboriginal youth tend to rely on cultural and social networks for help rather than professional resources. Efforts to target youth problems, such as violence, are therefore moving away from individual psychotherapy toward family and group interventions that incorporate community and cultural values (Clauss-Ehlers & Levi, 2002). Residential treatment programs also have

acknowledged that many protective factors can be best addressed through community and cultural involvement, for example by encouraging traditional Aboriginal teachings that promote morality, humour, creativity, initiative, relationships, independence, and insight (Dell, Dell & Hopkins, 2005). Policies and programs that foster stronger cultural identity by encouraging collective events for sharing Aboriginal history and expressions of cultural pride which are youth-oriented may be helpful interventions.

6.4 Building Social Capital, Networks and Support

Activities that enhance intra-community social cohesion and expand social networks may be very helpful in increasing social support. These include regular collective events such as powwows, educational events with Elders and sports events. Shared spaces where people can gather must be created and maintained; these may include community centers, religious or other community organizational settings, or recreational facilities. Other specific programs and services can be developed to bring people together over common concerns, for example, parenting programs. Given the respect for the wisdom of Elders in Aboriginal communities, such programs can facilitate sharing and cooperation across the generations.

Much research suggests that community resilience may be mediated by natural helping among community members (Waller & Patterson, 2002) and networks. These include organizations such as church support groups, veteran's organizations, self-help groups, and sporting associations (Sonn & Fischer, 1998; Iwasaki, Bartlett, MacKay, MacTavish, & Ristock, 2005). Such community groups allow sharing of resources (both economic and emotional), and facilitate the propagation of collective systems of meaning that can increase community resiliency. The creation, perpetuation and expansion of such groups may increase social capital and social networks, and be a useful intervention for enhancing community resilience. This type of organization can be developed in both remote communities and in urban settings.

Interventions focused on developing internal links should be complemented by interventions that enhance extra-communal linkages, as this allows for communal empowerment and influence on wider society. Strengthening internal networks and building broader links among communities and across regions will contribute to the communities resilience. Political activities that allow the community to organize around common goals, for example, efforts to regulate regional development, can have a strong effect on the sense of cohesion and collective efficacy.

New media and forms of communication exert a strong influence on individual and community identity. The Internet allows individuals or groups to find others with whom they can form "virtual communities." For people living in both urban and remote communities, this sense of belonging may buffer the effects of being marginalized in their local communities. Internet forums and websites can help bring people together and be used to efficiently advertise and announce relevant events and activities. As such, the internet can allow people to connect within their own community and also to people outside their community. It may enhance resilience through protective social networks. The internet also provides unique access to knowledge and learning opportunities. As such, increasing access and familiarity with the Internet for both individuals and community groups may close the "information gap" and ensure communities are well-equipped to take advantage of the social and educational opportunities offered by the internet.

6.5 Summary

A wide variety of interventions can enhance community resilience. Table 2 (next page) summarizes some key areas for intervention and examples of effective programs. Although divided by broad categories, most of these interventions overlap. For example, activities on the land involve affirming cultural identity, transmitting cultural knowledge, strengthening social networks and supports, and deepening spirituality. The implication is that there will be broad impact from any of these interventions and powerful synergies when more than one intervention occurs. Measurement of outcomes must therefore also be broad, since some of the positive effects of an intervention may occur in areas that were not its original focus.

While interventions sometimes have impressive short and medium term affects, recent research suggests that some interventions have a delayed impact, which can only be seen in terms of years. These include interventions to enhance parenting skills in order to prevent later suicidal and self-harm episodes among participants' children. The study by Schiff and Moore (2006) of the effect of the sweatlodge ceremony measures differences in resilience pre- and post-ritual. Though they found a significant impact of ritual, they urge future studies to track effects over a longer period, and over multiple sites. It may also be beneficial to track effects over a sequence of sweatlodge ceremonies to see whether the benefits of resilience accumulate in an additive or synergistic manner. Indeed, it is often challenging to isolate complex, interacting variables over temporal frames. Certain processes of resilience may only apply at specific developmental stages.

7. DISCUSSION AND CONCLUSION

The concept of resilience holds special interest for Aboriginal communities because it focuses on strengths rather than weaknesses or stigmatizing descriptions. Resilience is a way to address the fact that despite historical and ongoing conditions of hardship, many Aboriginal cultures and communities have survived and even flourished. Conditions of adversity and risk have driven both individual and collective responses of healing, recovery and growth. As a result, many Aboriginal communities, families and individuals enjoy high levels of well-being and success in both local and mainstream settings. The resilience framework focuses attention on these positive outcomes, their underlying causes and implications for health promotion.

7.1 Resilience as a Goal

The concept of resilience includes an element of promise tied to larger frameworks of meaning and existence. The various factors that contribute to resilience are both means to achieve well-being and valuable goals in themselves. Sen (1993) has written about this from the perspective of promoting human potential or "capability." Human capabilities are not just instrumental means to an end, but have a moral claim to be developed for their own sake. Movements for indigenous self-determination aim to create the sustainable conditions of autonomy, empowerment and the realization of capabilities for individuals and communities.

Resilience is important for its role as an "indicator" of mental health that assesses critical levels of health, well-being and productive activity in Aboriginal communities. Indicators make it easier to measure outcomes, allocate public resources and influence policy development (Crossman, 2008). The model of resilience and the corresponding choice of indicators directs attention to specific social processes with implications for policy and practice. As Luthar and Cicchetti (2000) have said: "the resilience framework serves to direct interventionists to empirical knowledge regarding the salience of particular vulnerability and protective processes within the context of specific adversities" (p. 860). In terms of group and community dynamics, resilience highlights the specific types of adversities, and specific types of strengths of various groups and communities.

Community resilience also has important implications for efforts to promote mental health in Aboriginal communities. Interventions to promote community resilience include: strengthening social capital, networks

Table 2. Promoting Community Resilience

Resilience Factor*	Intervention	Examples
Revitalizing language, culture and spirituality	Cultural revitalization Language revitalization Connection with the land	Culture camps Language programs Hunter support programs Sharing of history and tradition through storytelling (Pilgrim et al., 2009)
Local Control and Collective Efficacy Leadership	Community empowerment Programs to develop youth leadership Political activism Indigenous rights	Volunteer Youth in the Millennium, Canadian Rural Partnership website http://www.rural.gc.ca/programs/ Community collaboration on assessment of unmet needs
Healthy Families and Child Development	Early childhood programs Parent education Support for mothers and families Family-centred programs Prevention child maltreatment and domestic violence Programs to create meaningful work, play and relationship opportunities for youth	Triple P-Positive Parenting Program (Sanders et. al. 2002) http://www.triplep.net PROSPER (PROmotion School-community-university Partnerships to Enhance Resilience) (Spoth et al., 2004) Other programs (Connors & Maidman, 2001)
Building social capital, networks and support	Create voluntary associations Community activities Recreational and leisure activities	Community collaboration (Johnson, Grossman & Cassidy, 1996)
Infrastructure and support services	Developing adequate housing, services, and material resources Access to information resources Development mental health services	Developing parks, place spaces, and communal meeting places
Economic opportunity, diversification and innovation	Support for local businesses and small-scale industry Promoting slow growth that fits community values and aspirations	(Wuttunee, 2004)
Diversity of people and perspectives	Community events to celebrate diversity Anti-racism and discrimination programs	Powwows and other activities that bring diverse people together

*Based in part on Hegney et al., 2008.

and support; revitalizing language, culture and spirituality; supporting families and parents to insure healthy child development; enhancing local control and collective efficacy; building infrastructure (material, human and informational); increasing economic opportunity and diversification; and respecting individual and cultural diversity within the community.

Resilience is a broad and flexible concept, encompassing processes of risk and vulnerability, growth and transformation, culture and community, social structure and personality, and power and agency. Resilience brings together a wide array of interacting factors that are best understood in relation to each other. This integrative view is consistent with Aboriginal philosophies that recognize the physical, emotional, intellectual, and spiritual dimensions of experience as essential to a balanced life. The social or communal dimensions of this balance include: knowledge of language, history and tradition; cultural and collective identity; development of traditional skills or know-how; the maintenance of kinship and connection; and spirituality, expressed in part through respect for the environment and the natural world. Most of the models of resilience discussed in this review acknowledge these cultural and spiritual elements. At the same time, thinking about resilience requires that we remain attentive to the specific forms of adversity and suffering that have shaped contemporary life in Aboriginal communities.

7.2 Models and Measures of Community Resilience

The sources of community resilience distinctive to Aboriginal communities include: connections to family and community, which are structured according to indigenous concepts of interdependence and caregiving across the life cycle; oral tradition and storytelling which provide vehicles for the transmission of cultural knowledge and values, as well as adaptive strategies of humour, context-sensitive thinking and creative problem solving; connection to the land and the environment which are central to indigenous notions of personhood; healing traditions which provide paths for personal transformation and interpersonal conflict resolution; ceremony and spirituality which provide access to collective wisdom, awareness of the modest place of human beings in the world, and a sense of the connectedness of all beings; cultural knowledge and identity which connect the individual to a valorized history as First Peoples; cultural continuity which maintains a sense of the meaningful trajectories of each person from past through present to a future with hope and possibility; and collective agency and political activism which give individuals and groups

the tools to challenge the forces of oppression and to work actively to make their own future.

The concept of community resilience has important implications for efforts to promote mental health in Aboriginal communities. However, there are many approaches to community resilience and not all fit equally well with Aboriginal values or realities. A model that works well for some types of Aboriginal community may not capture essential aspects of another Aboriginal context. Aboriginal communities vary widely in size, demography, geographic location, history and culture, with consequences for both their internal dynamics and their interactions with the rest of society and with global systems. Many Aboriginal communities have undergone profound changes as a result of colonization, bureaucratic control and interactions with neighbouring communities and populations. Each model of resilience must be evaluated in terms of its relevance to a particular community's history, current situation and future development.

Social capital is a potentially useful concept for understanding resilience in Aboriginal communities. The literature on social capital offers potential models of the internal and external relationships of communities. It captures social elements such as sharing and reciprocity that are fundamental to Aboriginal perspectives (Mignone & O'Neil, 2005). However, social capital requires systematic rethinking to be applicable across different geographic settings and cultural contexts.

7.3 Holism and Systems Thinking

Resilience depends on complex interactions within systems, including physiological and psychological processes within an individual and social, economic and political interactions between individuals and their environment, or between a community and the surrounding ecosystem and the larger society. As a result, resilience can only be understood by considering systems in their ecological and social context. In the case of communities, resilience is determined both by dynamics and by structural issues influencing access to resources, political organization and collective efficacy.

Some of the structural problems faced by communities result from government policies and administrative practices, notably the segmentation of policies, programs and services that aim to address issues of mental health, substance abuse, social services, corrections, and other social problems that are all aspects of the same underlying social problems. This artificial separation of practices, professions, aggravated by conflicts over jurisdictions (Macdonald, 2008) has imposed wrecked havoc with Aboriginal communities. Government can play a useful role in facilitating community

resilience by creating cross-cutting programs and responses, decentralizing power, and insuring that people working in communities can work together without impediments.

Technocratic control and bureaucratic rationalization tend to look at elements of community in isolation, disconnecting them from their original contexts and emphasizing their place in relation to the bureaucratic system rather than the larger system as a whole. As a result, they break dynamic cycles or feedback loops into linear cause and effect relationships. Evaluations based on this segmented view use isolated measures or indicators of outcome and value (e.g. cost, symptoms, functioning in specific domains, etc.). The result is a lopsided picture in which certain positive outcomes are targeted without noticing that others lag behind or even worsened by the same intervention. Interventions that target single aspects of the community do not take advantage of the natural synergies or reinforcement that occurs with multi-system interventions.

Health and well-being cannot be divorced from other areas of community life. Alternatives to the conceptual "silos" of government, include the holistic or integrative models of systems theory. The metaphoric map of the medicine wheel provides a tool for thinking about and moving toward holism. The medicine wheel describes the goals of balance in broad strokes. The advantage of framing the issue in such general terms is that it allows us to survey situations broadly and to shift attention from one component to another as the situation evolves. However, the balance depicted in the medicine wheel must be elaborated in specific contexts to assess relevant dimensions and devise appropriate remedies. This can be done by borrowing models from developmental systems theory in biology and psychology, family systems theory, ecosystems theory, and community development.

7.4 The Future of Community

The resilience of Aboriginal communities also depends in part on their relationship with the larger society and with government institutions. Addressing the divisive policies and practices in government at all levels and enhancing public knowledge of and respect for Aboriginal cultures, traditions and aspirations is a necessary part of any comprehensive effort to promote community resilience.

The emphasis on community resilience reflects Aboriginal values of respect for the family, interdependence, connectedness, and coexistence. However, we should not over-simplify and romanticize the notion of community. Communities provide support and nurturance for human beings and an essential sense of belonging but they also exact costs in terms of constraints on freedom and pressures to conform (Bauman, 2001). There are many types of communities, with different sizes, histories and dynamics. They have different types of problems. Some communities were newly created as a consequence of all the forces of colonization and subsequent government influence. Some have a lot of resources and simply need government agencies to be enablers (and then "get out of the way"); other communities are fragile, vulnerable and need significant outside support to jump start the internal process of building capabilities and resilience.

Even where communities are well-resourced and well-functioning, there is diversity among individuals in needs, opportunities and aspirations. This diversity means that there will be some individuals who need contact with outside helpers to solve their individual or family problems, whether they need the privacy, support and "neutrality," or the new perspectives offered by someone from outside the community. Similarly, not everyone within a given community subscribes to the same tradition, form of spirituality or sources of meaning in life. The modern world is diverse and most communities mirror this diversity to some degree. In addition to building solidarity, communities must create pluralistic systems that allow individuals or groups to find their own paths.

At a still higher level, even as they struggle to maintain and deepen their roots to a specific place and tradition, Aboriginal peoples must participate in the larger political, moral and ecological project of making our planet a sustainable home for humanity. Aboriginal knowledge, values and perspectives have a crucial role to play in developing the resilience of the human community. This contribution, in turn, will strengthen the resilience of Aboriginal communities themselves.

APPENDIX A. GLOSSARY

Bonding social capital is defined as linkages that are focused within the group and characterized by homogeneity, strong social norms, loyalty, and intra-group ties that tend to exclude others outside the group.

Bridging social capital is defined as outwardly focused linkages, that include diverse groups and people. This would include links between a community and the surrounding communities or the larger "mainstream" society.

Category Fallacy: the erroneous and uncritical imposition of a category developed in one culture onto another very different culture.

Community: a group of people who live together or are connected through emotional bonds with each other and the group, shared connection to place, common interests, values, and activities and identities.

Community-level: factors that are properties of communities, for example, pollution, collective efficacy and generic trust.

Cross-sectional research: a study design where exposure and outcome variables are collected simultaneously.

Ecological Capital: a broader concept than social capital that encompasses four domains: natural capital (the surrounding biological ecosystem and environmental resources); human capital (skills, health, abilities, education, and the cultural values of community members); social capital (bonds between individuals as well as across wider voluntary or institutional networks and organization; and built capital (roads, homes, equipment, and other human-made structures).

Epidemiology: the scientific study of the distribution and determinants of health and illness in populations.

First Nation(s): an Aboriginal community that is recognized by Indian and Northern Affairs Canada (INAC) that typically has federal reserve land and registered membership defined by the Indian Act as status Indians. A First Nation community may also include other land and members.

Generalizability: the extent to which findings from a specific study sample can be generalized to either: (i) the local population (sometimes known as internal validity); or (ii) the population at large (sometimes known as external validity).

Incidence: the number of new cases of a health problem occurring in a population over a specific period of time (e.g. one month, 12 months).

Individual-level factors: factors that are properties of individuals, for example, age, gender and income.

Linking social capital: the degree of integration and social efficacy of groups within a hierarchical society (including, for example, the relationship with various levels of government).

Longitudinal research: a study design where a cohort of people are followed-up over a specific period of time with exposure variables measured at baseline and outcome variables measured after a period of elapsed time.

Prevalence: the number of cases with a health problem in a population (usually expressed as a percentage of the total population; also sometimes specific in terms of a time period).

Protective factor: a factor that reduces the likelihood of developing a health problem.

Qualitative research: a research methodology which involves the collection of non-numerical data, mostly in the form of in-depth interviews, focus groups and participant observation.

Risk factor: a factor known to increase the possibility that an individual will develop a health problem.

Social capital is an umbrella term used to describe aspects of social networks, relations, trust and power, either as a function of the individual, or as a function of a geographical region (e.g. a First Nation community).

Social networks refer to the extent and nature of linkages between individuals.

Social support refers to individual-level instrumental and emotional support received by one individual from other individuals.

Structural violence refers to forms of violence that occur because of the way societies are structured to create and maintain inequalities, harmful and oppressive circumstances that cause illness and injury to people.

Vertical social capital: (see Linking social capital).

APPENDIX B. QUESTIONS FOR DISCUSSION

What are the dimensions of resilience at the level of the community? How do these differ from individual resilience factors?

What aspects of resilience identified in other communities apply to Aboriginal communities?

What are the unique or distinctive facets of resilience in Aboriginal communities?

What are the advantages and disadvantages of using social capital as a framework for understanding and measuring community resilience in Aboriginal communities?

Is social capital mainly a Eurocentric concept, or does it resonate with Aboriginal values and worldviews?

What does the concept of social capital omit that may be important in community resilience for Aboriginals?

Do different sizes, locations and organizations of communities require different models and measures of resilience?

What are the key dimensions of Aboriginal community resilience?

In practical terms, which factors are easiest to recognize, monitor or measure over time and across communities?

Which existing measures should be tailored to the Aboriginal perspectives? What form should this process of tailoring take?

What are the most feasible and effective methods to promote Aboriginal community resilience?

APPENDIX C. RESOURCES ON COMMUNITY RESILIENCE

Community Capacity Building – A Practical Guide
Prepared by Dr Rowland Atkinson and Paul Willis of the Housing and Community Research Unit, School of Sociology, University of Tasmania (2006) http://www.utas.edu.au/sociology/HACRU/6%20Community%20Capacity%20building.pdf

Building Resilience in Rural Communities Toolkit
The University of Queensland and University of Southern Queensland:
http://learningforsustainability.net/pubs/Building_Resilience_in_Rural_Communities_Toolkit.pdf

The National Disaster Recovery Principles
South Australian Government (2008)
http://www.dfc.sa.gov.au/pub/default.aspx?tabid=196

Community Builders NSW
an interactive electronic clearing house
http://www.communitybuilders.nsw.gov.au/

Assessing a community's capacity to manage change: A resilience approach to social assessment
Brigit Maguire and Sophie Cartwright, Bureau of Rural Sciences, May 2008
http://www.affashop.gov.au/PdfFiles/dewha_resilience_sa_report_final_4.pdf

The Community Resilience Manual: A resource for rural recovery & renewal
Canadian Centre for Community Renewal
http://www.cedworks.com/communityresilience01.html

Mental Health Foundation of Australia, Resiliency Resource
http://www.embracethefuture.org.au/resiliency/resiliency_model.htm

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END NOTES

1. "Protection" and "resilience" are sometimes used interchangeably. LaFromboise et al. (2006) for instance discuss resilience as a "protective mechanism that modifies an individual's response to risk situations and operates at critical points during one's life" (194). Protective factors identified through these studies may point to mechanisms of resilience.

2. http://www.fahcsia.gov.au/sa/communities/progserv/Pages/business_continuity_pandemic_planning.aspx, Accessed August 8, 2009

3. Social networks are one way to define communities. According to Piselli (2007), a community is "not a 'place' but a network of meaningful social relations with friends, neighbours, relatives, and work colleagues" (p. 867).

4. For Bourdieu, "Social capital is the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition—or in other words, to membership in a group—which provides each of its members with the backing of the collectively-owned capital, a 'credential' which entitles them to credit, in various senses of the word" (1996, pp. 248-249)

5. http://www.preventioninstitute.org/thrive.html

6. The term 'structural violence' was coined by Galtung (1986) and has been used by many to analyze social origins of health inequalities (Desjarlais et al., 1995; Farmer, 2003).