

Resource development and aboriginal culture in the Canadian north

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ABSTRACT. This paper examines the relationship between resource development and aboriginal community and cultural impacts in Canada's north from the 1970s to the present. Based on a review of published literature, it is contended that northern centred scholarship can be conceptualised in two phases. These are firstly the community impacts phase (1970 to mid-1990s), a phase guided largely by a cultural politics of assimilation, a sociology of disturbance, and an anthropology of acculturation; and secondly the community continuity phase (mid-1990s to present), a phase underpinned by political empowerment, participatory social impact assessment, and the influence of cultural ecology. Due to these shifting political dynamics and research frameworks, and a lack of longitudinal research in the north over the last four decades, it is concluded that the nature of the relationship between resource development and aboriginal culture remains elusive and subject to wide ranging interpretation. Analysis shows that cultural impacts from resource development are dependent on the scale of development and spatial disturbance. It also shows growing political power in the north, a greater focus on community-based research, and renewed discussion of cultural continuity and how it is defined and assessed over time.

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Introduction

Resource development in the Canadian north has been accelerating at an unprecedented rate. Between 1999 and 2005, the mining, oil and gas sector in the Northwest Territories (NWT) grew by 207% compared to 15% for Canada (GNWT 2006), with the plan to build a C\$16 billion natural gas pipeline through the Mackenzie Valley conditionally approved. If the Mackenzie Gas Project be approved, economists predict that NWT's gross domestic product will rise to C\$8 billion by 2015 (NWT Bureau of Statistics 2007).¹ In the last few years, due to the global economic downturn, investment in the exploration and mining sectors in the NWT have dropped significantly with forecasted exploration dropping from C\$30 million (McLeod 2009a); a reminder of the inherent instability of resource extraction economies. Notwithstanding these economic fluctuations, economic conditions in the north appear to be improving in terms of higher average incomes and lower levels of income support. For instance, average incomes in smaller communities within the NWT have risen from C\$23,038 to C\$33,667 between 1996 and 2006 (NWT Bureau of Statistics 2009). While the magnitude

of these upward economic trends is notable, these improvements in economic performance are not evenly distributed across the population, and other indicators, such as health status in aboriginal communities in the north remain well below that of the non-aboriginal population. Indicative of other northern jurisdictions, statistics indicate that aboriginal peoples in the NWT, who comprise 50.5% of the territory's total population, have significantly higher rates of substance abuse, crime, and suicide than their non-aboriginal counterparts, in addition to lower levels of education, employment, and income (INAC 2006). Although these health issues have complex origins and are deeply rooted in early colonial malpractices, contemporary stressors such as resource booms and ineffective institutions perpetuate these inequalities (Wotherspoon 2003).

Not surprisingly, aboriginal culture, the unique set of beliefs and practices which have successfully sustained aboriginal peoples physically, socially, and spiritually, since time immemorial, has been identified as an important factor in the well being of aboriginal communities, particularly under conditions of rapid social change (Chandler and Lalonde 1998; Duhaime and others 2004; Usher 1981; Notzke 1994). Participation in the traditional economy², for instance, plays an 'integrating role' in aboriginal communities by 'providing social continuity with the past and a vital sense of self-worth to those struggling with a new identity in a changing northern world' (Condon and others 1995: 43). In contrast, cultural discontinuity and oppression have been associated with high rates of depression, alcoholism, suicide, and violence in many aboriginal communities, with the youth population being at highest risk (Kirmayer and others 2000).

The asymmetrical context of the Canadian north, characterised by high economic growth yet low health status among the aggregated aboriginal population,

justifiably alerts northerners, social scientists, policy-makers and the like to an imperative question. Given the rapid pace of resource development in the Canadian north and the significance of aboriginal culture in supporting positive health outcomes, what is the relationship between resource development and aboriginal culture?

The central purpose of this paper is to lay the foundation for an informed and critical discussion regarding the unprecedented industrial development in the Canadian north and the corresponding socio-cultural health and well being of northern people. A foundation for this discussion is built in three stages. First, to set the context for the analysis, we describe how the political and academic milieus of the north have shifted since the 1970s. Second, we present a summary and analysis of literature, largely from sociology and anthropology, emerging out of this northern context that is explicitly focused on the interactions between resource development and impacts on cultural practice. This literature is varied and comprises a number of ethnographic studies and social assessments that document northerners' responses to rapid resource development. While this paper specifically focuses on the Canadian north, we also draw on relevant studies from Canada's provincial norths and Alaska. Third, we identify a number of research gaps that currently exist with respect to resource development and aboriginal culture and highlight the implications of these gaps as we attempt to address the crucial question posed above. Before we begin; however, it is first necessary to define two key terms in the paper: resource development and aboriginal culture.

Resource development and aboriginal culture

Resource development is defined in this paper as non-renewable resource extraction activities including mining, oil and gas exploration, large scale hydroelectric projects and associated infrastructure developments such as pipelines. Resource development in the north is typified by variable, short term wage work opportunities; large influxes of transient, southern skilled workers (predominantly during the construction phase of the project); and, of course, rapid, large scale landscape changes. In recent years, governments are creating initiatives to convince 'fly-in-fly-out workers to make our territory their home,' which further extends the social and cultural impacts of resource development in the north (McLeod 2009b). The nature of resource development projects, then, directly affects many markers of culture that are so intimately tied to the land.

Operationalising the terms aboriginal culture and aboriginality is considerably more challenging. For instance, a number of scholars have found that ethnic self-identification varies across time (Hallett and others 2008) and declaring oneself aboriginal may depend on social and political contexts. Likewise, culture typically falls along a materialist-ideational spectrum, with the materialist perspective focusing on the behaviour, customs, and way of life of a group of people, and the ideational perspective

focusing on their ideas, beliefs, and knowledge (Fetterman 1998). With respect to Inuit societies, Collignon (2006) points out that northern scholars have tended to emphasise the importance of the material culture over the ideational. The same appears true for northern governments that track aboriginal cultural practice via harvesting activity, consumption of harvested meat and fish, and ability to speak an aboriginal language. Given our focus on this literature, our definition of culture here is largely informed by the materialist perspective in northern research in which various traditional practices such as language and subsistence activities stand for markers of cultural practice and cultural continuity.

Northern political and academic contexts

Northern political context

Our reality is that the pipeline is just a poorly masked attempt to overwhelm our land and our people with a way of life that will destroy us. Our reality is that all of the 'help' your nation has sent us has only made us poor, humiliated and confused. Our reality is that we are in great danger of being destroyed. Our reality is that there is a very simple choice – Dene survival with no pipeline, or a pipeline with no Dene survival. (Stephen Kakfwi, field worker for the Dene nation, speaking at the Berger Inquiry, 1975³)

The construction of a pipeline through the Mackenzie Valley is the key that will unlock the development of our oil and gas. . . We believe the time is right for making this vision a reality.

(Stephen Kakfwi, premier of the NWT, speaking to energy executives in Calgary, summer 2000⁴)

A number of watershed moments have marked a transformation in aboriginal political power in Canada since the 1970s. Much of the political mobilisation of aboriginal peoples in the 1970s, such as the formation of Indian Brotherhood of the NWT (now the Dene nation), was in part triggered with the announcement of a White Paper in 1969. This Canadian policy document proposed a new direction for Indian policy: to close the book on the past, including existing treaties and outstanding disputes, and to assimilate Indians into Canadian mainstream society. Aboriginal people across the country saw the White Paper as the government's newest assimilation tactic and indignantly opposed it. The Trudeau government later backed away from the paper.

The political landscape in other parts of northern Canada and the United States was also undergoing change at this time. To the west, the Alaska Native Claims Settlement Act (1971) set out a resolution to long standing native land claims in anticipation of energy development on the north shore and pipeline construction throughout the state. This settlement was rushed to completion but not without considerable resistance from aboriginal communities which continue to debate the legacy of such settlements on the persistence of native

lifestyles (Thomas 1986). Similarly, the James Bay and Northern Quebec Agreement (1975) was a comprehensive agreement for the Cree people of northern Quebec that opened the opportunity for hydroelectric development in the region. But the agreement was contested with concerns over the impact of hydro development on Cree way of life. These agreements in Alaska and Quebec were freshly completed or under close scrutiny when pipeline development proposals emerged in the Northwest Territories. The Mackenzie Valley Pipeline Inquiry (1974–1977) was formed to investigate the issues associated with the building of a pipeline along the Mackenzie Valley. After traveling over 17,000 miles to 35 different communities and hearing from roughly 1000 people in eight languages, the head of the inquiry, Justice Thomas Berger, recommended a 10 year moratorium on the pipeline to allow sufficient time for aboriginal peoples to settle outstanding land claims (Berger 1988). In the light of concerns over the rush to settle land claims in Alaska and the James Bay region, the moratorium on pipeline development in the NWT was viewed as a great victory for aboriginal peoples' rights and an exemplary model for the advancement of social impact assessment (SIA) in Canada and around the world. Then, in 1979, for the first time in history, aboriginal leaders comprised the majority of elected representatives in the Legislative Assembly of the Northwest Territories. Aboriginal peoples' influence on northern policy was growing more visible.

In the 1980s, the steadfast political organising and lobbying of aboriginal groups in the years previous began to materialise into substantive, legal changes.⁵ In 1982, on the heels of the aboriginal political victory in the NWT assembly, the Inuvialuit Final Agreement (IFA), the first of a number of land claim agreements, was signed.⁶ The political climate in the north during the 1980s was also influenced by the National Energy Program (NEP). This federal policy sought to promote Canada's self-sufficiency in energy supplies and thus strongly encouraged resource companies, via incentives and subsidies, to develop the country's northern resources. A number of resource projects, such as the Norman Wells Pipeline, ensued.

In the following decade, the political tone in northern Canada was punctuated by two national events: the voting down of the Meech Lake Accord by aboriginal politician Elijah Harper, and shortly following, the Oka Crisis. In response to these events, and to mounting national concerns over aboriginal rights, the Royal Commission on Aboriginal Peoples (RCAP) was appointed. The commission's broad mandate was to 'investigate the evolution of the relationship among Aboriginal peoples (Indian, Inuit and Métis), the Canadian government, and Canadian society as a whole' (INAC 1996). RCAP's final report (1996), which concluded that aboriginal and non-aboriginal relations in Canada required a complete restructuring, would establish the *raison d'être* of northern aboriginal research in years to follow.

In more recent years, much of the political scene has been dominated by the proposed Mackenzie Gas Pipeline

(MGP), as well as the formation of the Aboriginal Pipeline Group (a 100% aboriginal-owned one-third partner in the MGP). National attention is also focused on climate change, its implications for northerners and, with the melting sea ice and increased access to Canada's most northerly shores, Canadian sovereignty (Coates and others 2008). Meanwhile, aboriginal groups continue to lobby the Government of Canada to act on the recommendations set forth by the RCAP report in 1996, with the Assembly of first nations (AFN) recently assigning a failing grade to the federal government for its lack of progress over the last 10 years (AFN 2006). This general political frame can be loosely positioned within a field of political ecology that identifies aspects of culture within land claims and other regulatory frameworks such as the Mackenzie Valley Resource Management Act (Christensen and Grant 2007).

Academic context

While the political climate in the north evolved, various research traditions were also undergoing considerable change. For example, the theoretical paradigms underlying anthropology have shifted significantly. Within the north in particular, a mode of anthropological research focused on community impacts and the problems associated with the integration of aboriginal communities into mainstream North American lifestyles. Scholars such as Honnigmann (1965) and Chance (1960) were leaders in tracking the acculturation of aboriginal communities and the challenges along this path of modernisation. Within anthropology, the *acculturationist* tradition focused on questions of cultural integration and documenting this process with attention to social pathologies and the changing locus of social control from traditional systems to modern systems of church and state.

In contrast to the acculturationist traditions, another way of understanding cultural transformation was taking shape in northern research through the work of Steward (1955) and a host of contemporary scholars in the *cultural ecology* tradition. Cultural ecology is concerned with the ways in which technologies and practices are utilised in different social and environmental arrangements. Moreover, the notion of cultural ecology is closely linked to the idea of cultural adaptation and an understanding of the ways in which communities are adapted to their biophysical and socio-cultural environment (Wenzel 2001). That culture is adaptive provides a basic premise within this research tradition. Although these two research traditions were present in the Canadian north during the 1970s, it would appear that the acculturationist tradition, focusing on problems of cultural integration, began to give way to the cultural ecology tradition, focusing on adaptation and resilience (Balıkcı 1989; Wenzel 2001).

Similarly, in the field of environmental impact assessment and the sub-field of social impact assessment in particular, a transition in the approach to research can be noted. Much of the early work on social impacts in the north was closely akin to the acculturationist tradition under which social problems were identified as a

component of the transition to the modern industrialised economy. Thus, one of the primary areas of focus within this literature involved consideration for social problems. Building on the Durkheimian attention to ‘disturbances of collective order’, this phenomenon of rapid social change within aboriginal contexts is expressed in several ways: ‘social pollution’ (Justus and Simonetta 1982a), ‘collective trauma’ (Erikson 1976), and the ‘total intrusion effect’ (Waldrum 1988). These scholars point to what can be generally described as a social disruption hypothesis. While this hypothesis was originally formed through research in non-northern and non-aboriginal communities experiencing oil booms (Davenport and Davenport 1980; England and Albrecht 1984; Freudenburg 1981; Kohrs 1974), this focus on social disruption was a key aspect of research on the socio-economic conditions of northern communities.

This focus on social pathologies and social disruption in the 1970s and 1980s has given way in more recent years to a community based orientation to social impact assessment and a set of scholarly ideas that place local actors and local knowledge at the centre of the impact assessment process. Crucial in this turn toward the local is a transition away from top down impact assessment frameworks where indicators and metrics are identified by experts and imposed on the community (O’Faircheallaigh 2007). Slowly, we are seeing more scholarship that is focused on participatory dimensions of SIA and attention to traditional knowledge in aboriginal communities (Usher 2000). The participatory approach to SIA goes beyond baseline assessment and trend analysis, to include efforts on behalf of social scientists to secure better futures for communities faced with major project developments (Becker and others 2004).

In summary, this section identifies the shifting milieus of political activity and academic research that lead to very different approaches to questions of resource development and aboriginal culture. As one might expect, early research into aboriginal culture is more heavily influenced by a politics of assimilation and the acculturationist and social disturbance traditions in anthropology and sociology. Over time, however, attention to new political forces of empowerment and a research tradition that is focused on adaptation and participatory impact assessment has become more prominent. Coming to the key question of this paper then, requires an articulation of literature that takes into consideration these broader forces of change.

Research on community impacts: 1970s to present

This review of published literature involved a comprehensive search into the major northern journals for articles pertaining to the topic, as well as a detailed search into relevant books and government sources. Based on our analysis, we identify two distinct phases within the literature:⁷ Firstly is the community impacts phase (1970s to the mid–1990s), and secondly is the community continuity phase (mid–1990s to present). Much of the

literature that explores the direct relationship between resource development and aboriginal cultural practice in the northern Canada and Alaska was published between the 1970s and the mid–1990s. A few earlier reports, NOGAP research team (1986); Knight and others (1993); and DesBrisay (1994), provide a comprehensive review of these impacts. However, we have not identified any significant efforts to provide a comparable review of this literature since the mid–1990s. Consequently, this paper, which predominantly focuses on the latter phase, documents a significant shift in the direction of research during the 1990s and points to an emerging set of priorities for contemporary scholarship.

Community impacts: 1970s to the mid–1990s

As described above, northern research in the 1970s, 1980s, and early 1990s was primarily underpinned by the acculturationist tradition in anthropology and the social disturbance tradition in sociology. Based on a summary of research from this era, DesBrisay (1994: 108) suggests that the following circumstances lead to an increase in social problems in aboriginal communities:

[W]hen there is a significant change to the social order of those communities; when the change creates considerable stress and disruption at the family and the individual level; when the pace of change is rapid; when change results in, or occurs in, communities which are less integrated, less interdependent, and without a strong collective set of values; and when residents experience a loss of roles, and concomitant feelings of powerlessness, loss of self reliance, and loss of self-esteem.

Not surprisingly, DesBrisay (1994) found that most of the resource projects that are associated with causing severe and persistent social problems are also those that have inflicted significant damage to the land based economy of communities. Much of the research that is summarised by DesBrisay deals with social disturbance along the lines of Durkheimian theory.

During this first phase of research, authors note that some of the most dramatic disruptions in aboriginal communities from resource development have been related to hydroelectric mega-projects, and lessons from the James Bay Hydroelectric Project in particular. These impacts are largely due to staggering spatial impacts and resultant ecological changes, such as the relocation of communities due to the flooding of traditional lands and the subsequent mercury poisoning of fish (Knight and others 1993; Niezen 1993; Shkilnyk 1985). Severe social impacts from oil and gas development were also documented in the 1970s and 1980s in Alberta. In fact, soon after the oil royalties were distributed among the Stoney and Hobbema reserve residents, alcoholism increased, cocaine arrived, and suicides skyrocketed (for example from 1985 to 1987, the suicide rate for men was 83 times the national average) (Notzke 1994). The cumulative effects of oil sands development in the Fort McKay area of northeast Alberta from the 1960s to the

1980s were also significantly disruptive. Fort McKay residents experienced a loss of trapping areas, a decline in traditional activities, a deterioration of the community's social fabric and ability to control community life (Justus and Simonetta 1979; Justus and Simonetta 1982a; Justus and Simonetta 1982b). In general, however, a review of post-project impact studies by Knight and others (1993) found that studies that compared findings of actual impacts to pre-project projections concluded that the actual impacts were less than predicted.

There may be a number of explanations for this. One explanation involves the changing political landscape and improving resource practices (that is higher environmental standards, training and integration of aboriginal people into a project's workforce) following the conclusions of the Mackenzie Valley Pipeline Inquiry in 1977. Additionally, several studies noted that resource development and wage employment did not significantly affect the level of traditional harvesting (Bone 1985; Hobart 1982; Kruse 1991; MacEachern 1983). Usher (1989) identified two important factors that facilitate a harmonious relationship between wage work and the traditional economy: high wage rates and flexibility in labour time through practices such as rotational employment at remote work sites and job-sharing. Usher explains that with high pay and a flexible work schedule, aboriginal people were able to purchase expensive hunting equipment and spend sufficient time on the land. Another positive finding came out of a study by Hobart (1982) which found that workers who participate in the wage economy by commuting on a rotation work schedule, and who do not have to relocate to a town to work, are more likely to continue traditional hunting activities (Hobart 1982: 59). Other research, however, has found that rotation employment caused shortages in bush foods (BRIA 1979; O'Faircheallaigh 1995); that aboriginal males withdrew from the traditional sectors as they increased their skills for employment in the modern wage economy (Stabler and Howe 1990); and that tensions arose between aboriginal persons exclusively pursuing a traditional lifestyle versus those that took up wage work employment and only pursued hunting and trapping activities at weekends (MacEachern 1983). Furthermore, a study of subsistence productivity in rural Alaska (after an intensive decade of wage employment) found that the following factors tend to decrease community harvest levels: close proximity to urban centres and roads, an influx of non-aboriginal people, and high personal income (Wolfe and Walker 1987). Although a number of studies from this period point to the potential for neutral to net positive outcomes, the literature also reveals that outcomes are far from certain, and, in some cases, can be devastating.

In general, the literature suggests that the overall impact of resource development largely depends on the social, cultural, economic, and political state of the community, as well as the type, size and pace of the resource project. Ross (1990), for instance, describes that the current state of a community and its 'adaptive potential' is a function of the historical impacts endured

by the community as well as the current aspirations of its peoples. Also, the literature indicates that, between 1970s through until the mid-1990s, aboriginal people have not only gained more political power, but have become more involved in decisions concerning resource development projects. This has in turn contributed to more positive project outcomes. In short, the face of resource development in the north has changed from the general aboriginal community being 'dreadfully uninformed' about development plans and receiving little enduring benefit, to aboriginal communities being involved in resource co-management schemes, environmental impact review boards, and so on (DesBrisay 1994; Notzke 1994). In fact, it was the 'politicisation' of nonrenewable resource development impacts through the Mackenzie Valley Pipeline Inquiry (1974-1977), coupled with lessons learned from Alaska experience of settled lands and the James Bay Agreement, that contributed to a more rigorous, human centered approach in non-renewable resource development in the 1980s and forward (Notzke 1994). Because of this new era of resource development, DesBrisay (1994: 111) states, 'in general, the likelihood that a community will experience significant adverse, social impacts from a development project is decreasing.'

In summary, the early literature in this field seeks to document the cultural impacts of resource development on aboriginal peoples; that is, it seeks to identify changes in communities and cultural traditions via particular markers such as the hunting and gathering of food. These early studies most often took the form of 'native harvest surveys' and served to inform public policy with respect to resource management and allocation, support economic planning and project assessment, and aid in impact mitigation and compensation (Usher and Wenzel 1987). These studies were consistent with acculturationist thinking in their attention to social problems and issues of integration, but the harvest studies in particular can also be understood as a reaction to this acculturationist tradition. In this case researchers were able to demonstrate the important relationship between money economies and subsistence economies as an adaptive aspect of culture, a theme that is picked up more broadly in the next phase of research in the north. Some studies show no impact from resource development on subsistence harvest, whereas other studies indicate significant impacts. Much of the work was conducted either by government researchers or by outside experts employing conventional social science research techniques (that is quantitative surveys). After this early phase of research, a more reflective phase of research ensued, initiated by several changing traditions within the academic community and ongoing political developments in the Canadian north. We now turn to examine developments in this second phase of research.

Community continuity: mid-1990s to the present

Since the mid-1990s, research on aboriginal community impacts has taken a decidedly reflective turn. Recognising the limitations and eurocentric nature of the 'passive

victim' research perspective, contemporary scholarship advocates a new research perspective, one that is more responsive to the changing milieu of northern aboriginal peoples, and a perspective which recognises aboriginal peoples as conscious, pragmatic actors in cultural change and adaptation.

This call for a new perspective on northern aboriginal research stems from the growing political power among these peoples, their increasing education levels and political astuteness (Hovelsrud and Krupnik 2006), and the subsequent 'renewal' of aboriginal communities today. Champagne (2007: 338) suggests that aboriginal people increasingly assert their own terms of involvement, in 'ways that do not compromise their values, culture, and community institutions.' In addition to this new research perspective, researchers are also calling for a re-examination of research relations. In effect, research in anthropology and sociology has undergone a paradigm shift from 'one in which outsiders seek solutions to 'the Indian problem' to one in which Indigenous people conduct research and facilitate solutions themselves' (McNaughton and Rock 2004: 39). In essence, the earlier phase of research sought to document the level of acculturative stress in aboriginal communities due to resource development. The latter phase of research, in general, seeks to document the presence of enculturation; that is, 'the process of being actively engaged in living out one's traditional cultural norms and values' (Wolsko and others 2006: 347) among aboriginal peoples, and the link between enculturation and aboriginal health and well-being. Cultural ecology and participatory impact assessment underpins this new paradigm of research. In addition, we posit that the expanded range of research trajectories in this second phase was, in part, catalysed by the release of the Royal Commission on Aboriginal Peoples report in 1996. The second phase therefore may also be characterised as a 'problem-solving' phase. Within this phase, researchers are involved in: (1) recognizing the persistence of aboriginal cultural practice, or cultural continuity, in the face of significant social and economic change and the reasons for this persistence, (2) expanding and improving upon the range of research methods and indicators that facilitate links to theory and community centered research, and (3) understanding the implications for an expanded legal and political context as a basis for recognition and renewal of aboriginal cultural practice.

Although several early studies document significant negative impacts from resource development on hunting and trapping (for example Justus and Simonetta 1979, 1982a, 1982b; Niezen 1993), by the mid-1990s, researchers were beginning to identify a pattern of persistence and continuity in the traditional activities and cultural practices of many northern communities. In the mid-1990s, although present much earlier in the cultural ecology tradition, authors such as Condon and others (1995) and George and others (1995), became more prominent in documenting the ways in which a 'culture' of subsistence continued to underpin contemporary con-

ditions in their study communities. In particular, George and others (1995) maintained a sense that many Cree communities are best characterised in terms of a mixed economy, one in which people 'going in between' reflects the complementarities of the wage based economy and the hunter-gatherer economy.

This theme of cultural continuity runs through much of the contemporary literature on cultural practice in northern aboriginal communities. For instance, in her study of the Yup'ik people of Alaska, Fienup-Riordan (2000) notes that continuity between earlier generations and the present generation was as significant as the innovations. In discussing these early continuities, Fienup-Riordan (2000: 15) writes as follows.

The people continued to speak the Central Yup'ik language, enjoyed a rich oral tradition, participated in large ritual distributions, and focused their lives on extended family relations that were bound to the harvesting of fish and wildlife. They never converted to gardening or reindeer herding regardless of sustained missionary and federal encouragement to do so.

These signs of cultural continuity within earlier generations were then compared with cultural continuity in the present generation, in which Fienup-Riordan states that integration into the larger economy remains marginal, and household activity continues to focus on 'extraction and consumption rather than investment and production' (Fienup-Riordan 2000: 17).

Authors also point to the persistence of traditional food sharing systems. For instance, Collings and others (1998) described the food sharing system in Holman, NWT, as a functional equivalent to the system described by the early Arctic anthropologist Diamond Jenness in 1922. Also, Wenzel (2000) indicates that the traditional Inuit food sharing system (*ninguqtuq*) in Clyde River continues to be practiced and should be characterised less so as an informal economy and more so as a highly elaborate system of food distribution. Consistent with this theme of persistence and continuity in the subsistence economy, several authors observe no relationship between levels of income within the wage based economy and levels of subsistence activity. In other words, individuals with low and high wage employment appear to be equally engaged in subsistence activities. The international Survey of Living Conditions in the Arctic (SLiCA) of northern residents provides ample evidence for this claim (Poppel and others 2007) as does with research from northwest Alaska (Magdanz and others 2002).

Given this emerging picture of continuity and persistence, we contend that contemporary scholarship has moved into a more reflective phase in comparison with earlier research. For example, Wolfe and Kruse, two Alaskan researchers who were involved in empirical studies during the 1970s, 1980s and early 1990s, are now reflecting on their decades of findings, realising the wide range of factors which influence subsistence traditions (Wolfe 2004), and the importance of cultural continuity research (Kruse 2006). The same reflective tone can be

found within some Canadian researchers as well (Coates 2004; Goulet 2004). This does not suggest that survey work has halted entirely, several large scale studies were completed in recent years and government agencies have developed better ways of tracking subsistence activities within their populations. However, compared to the 1970s and 1980s, there does appear to be a dearth of contemporary survey research on the relationship between resource development and aboriginal cultural practice. Instead, a good deal of scholarship is focused on understanding and explaining the significance of cultural continuity, in both the material and ideational forms, within a broader context of adaptation and sustainability.

Along these lines, recent scholarship has taken steps towards understanding the functional role of a vibrant aboriginal culture within, and often in conflict with, the colonising forces of western societies. For instance, in their explanation for the robust qualities of northern mixed economies, Usher and others (2003) identify a strong ethos of communalism within subsistence societies, in which collective benefits are pursued at the expense of individual benefits. In this text, the authors challenge readers to consider the important role of subsistence economies (through collective hunting efforts and food sharing) in the lives of many northern residents. Along similar lines, Duhaime and others (2004) articulate the ways in which subsistence economies contribute to social cohesion through collective acts of harvesting, processing and distributing locally harvested resources. Champagne (2007) also emphasises the way that conservatism within North American Indian culture helps to preserve Indian identity. Champagne's work is valuable, in particular, because it explores how conservatism has assisted aboriginal people to resist colonial assimilation efforts while also providing a source of great strength to achieve some level of cultural preservation. Using Weberian cultural theory and Parsonian theories of social differentiation, Champagne (2007: 41) offers a theoretically grounded understanding of conservatism within aboriginal communities.

The combination of conservatism in worldview and relatively undifferentiated societal orders accentuates and complements orientations toward preserving traditional institutions and ceremonies, and ways of resisting assimilation and institutional change imposed by colonising nations. Since many American Indian groups retain much of their culture, worldview, and social order, they will continue to emphasise community and cultural preservation.

According to this emergent view of aboriginal tradition as an adaptive strategy, participating in subsistence activities is not merely a lifestyle choice based on 'primeval impulses' (Usher 1981: 59), but is economically rational (Coates 1988; Usher and others 2003). Therefore, if resource development and wage based activity cause people to lose their ability to participate in the traditional economy, it will not be consistent with sustainable development (Bowles 1981; Wismer 2003). This does not necessarily mean that each member of the community

needs to participate in the traditional economy all of the time, but that 'the store of traditional knowledge and capacity of community members – both young and old – to participate. . . must not be impaired' (Wismer 2003: 416).

Based on this contemporary phase of research on community continuity, there are several general trends that can be noted in the literature. The first is methodological, in which authors are utilising qualitative methodologies, such as critical ethnography (Stern and Stevenson 2006), and narrative inquiry (Cruikshank 1998, 2005; Morrow 2002), as powerful tools to explore themes of aboriginal culture. Arctic ethnographer, Stern (2001), for example, investigates the role of wage work in Holman, NWT. Contrary to belief that hunting serves as the moral basis of Inuit culture, Stern found that 'people in Holman have come to regard wage work as necessary and important to the achievement of personal goals and to the social stability of the community' (Stern 2001: 90). In addition, research in Holman revealed that the Inuit system of reciprocity and food sharing, *ningirsiniq*, has been extended to other things besides country food. Jobs, expertise, time, childcare, store bought food, clothing, and tools are now incorporated into this traditional social system. Based on these findings, Stern (2001: 218) advocates for a new approach to the research, from how Inuit have become 'victims of progress' to how 'Inuit are active participants in the making of their own history.'

Less optimistically, Whiteman's ethnography (2004), which explores the economic development impacts on the Cree tallymen (hunting leaders), shows how the social order of a community can be significantly destabilised through the emergence of a mixed economy. Loss of control over resources, environmental degradation, and erosion of respect for traditional roles within the community have 'had a strong emotional impact on individual tallymen and to some degree have caused a schism within Cree culture' (Whiteman 2004: 434). The qualitative methodologies employed by these scholars have complemented and expanded the range of insights associated with social science research in aboriginal communities. Work of this nature has contributed to a more reflective phase and a theory of practice that continues to challenge former notions of culture and how it is assessed.

A second trend relates to developments within the political sphere and SIA, both within the courts and within public policy. Recent court ruling that allow for the legal standing of oral histories has stimulated a considerable amount of research to resurrect, document, and preserve the oral histories of many cultures. These changes correspond with new interests in traditional ecological knowledge (TEK), and a variety of related concepts, that signal a growing interest and political force behind the historical and cultural uses of particular landscapes and places. The introduction of a TEK policy in the NWT (1996), the rise of recent developments in environmental impact assessment and the use of TEK within this context

(Galbraith and others 2007; O'Faircheallaigh 2007; Paci and others 2002; Usher 2000), and the development of co-management and community based monitoring programmes in the north (Kofinas and others 2002), all signal a movement toward community empowerment and enhanced political control over the management of natural resources and traditional lands.

What do we know about resource development and aboriginal culture?

With nearly a century of resource development in the Canadian north and at least 50 years of research on the relationship between resource development and aboriginal culture, what are the relationships and how are they changing? Although a clear and unequivocal answer is not forthcoming from the literature presented here, some general themes emerge. First, resource development and wage employment have had both positive and negative impacts on aboriginal cultural practice but much of what we learn is context dependent. For instance, one contextual variable is the spatial impact of the resource development. Results from northern Quebec and hydroelectric development are quite clear on this point. Cultural impacts are also dependent on the social, cultural, economic and political condition of the community. Second, research shows an important trend in aboriginal involvement in resource development and in the devolution of natural resource management. Through political and legislative change, the lessons learned from places like Alaska and northern Quebec, and through a transformation of practice in environmental impact assessment, partnerships and aboriginal led initiatives on settled lands are now a more prevalent aspect of northern development. These developments hold the possibility for improved community outcomes that stem from resource development. Third, while research indicates that subsistence economies remain a crucial element of northern communities, discussions about the concept of culture, and what constitutes culture, are once again at the fore. In many respects, researchers are less focused on the question of cultural impact as a shift from traditional activities to modern activities, and are attempting to understand the conditions and underpinnings of cultural continuity within materialist and ideational forms. In this sense, the question of cultural impact is focused more so on how to understand and assess cultural continuity, adaptation and resilience.

Toward a research programme

Although more is known about the relationship between resource development and aboriginal culture, major gaps in understanding remain. First, a lack of longitudinal research is highly problematic for those who are interested in studying the causal relationships among economy, society, and culture. Scholarship in the NWT, for instance, indicates that 'there is an urgent need to better understand how Aboriginal communities are changing' and asks

questions about how development is related to community impacts (SENES Consultants 2005: 8–38). Measuring the continuity of aboriginal cultural practice in the face of resource development (and, unavoidably, other forces of change) requires not only adequate baseline data at an appropriate scale, but also sufficient resources and a firm commitment to long term monitoring initiatives. While the Government of the NWT has begun to document participation in the traditional economy, local level data on an array of material and ideational cultural practices are needed.

Moreover, much work is required in the development of relevant markers for cultural continuity and in exploring the links between cultural continuity and other social problems (Hallett 2005). Research into resilience indicators and models, to help explain 'how impacts are distributed, experienced, and mediated' also holds promise in forging a range of benefits from resource development projects (Gibson and Klinck 2005: 116). Determining the variables of cultural concern is a value laden process. Even within a single community, for example, a variation in values among elders and youth may exist. Condon and others (1995), in their study of subsistence hunting among Inuit youth, highlighted this important value difference. Given the range of occupational strategies open to young people in the community, the authors argue that it is 'unfair' to directly compare a young person's subsistence activities to the standards of his parents or grandparents and that '[t]he real issue is not how often young people go out, but whether they go out at all and what it means to them and their community when they do go out hunting' (Condon and others 1995: 45). Similarly, Graburn (2006: 154), in his research with the Inuit youth in Nunavut, found that many younger Inuit hold different notions of 'what makes a real Inuk' and thus for them, 'a real Inuk must neither be judged by the standards of an earlier era, nor be held up as a mythical and misleading model unobtainable today.'

Given the dynamic nature of culture, we also recognise that cultural indicators will probably change over the years, posing a problem for comparability in longitudinal studies. Innovative approaches to measuring cultural continuity, such as focusing more on subjective indicators and long term ethnographic studies (Tsetta and others 2005) may provide some remedy for this particular challenge.

Second, given that environmental impact assessment (EIA) continues to be a key legislative tool for the assessment of industrial development on aboriginal culture, much tension continues to exist between aboriginal peoples and resource developers in part due to the deficiencies still present in these processes. A number of scholars criticise Canadian environmental impact assessment legislation for focusing too heavily on quantitative data and mitigating adverse environmental effects (Des-Brisay 1994), while there has been less focus on subjective indicators (Burdge and Vanclay 1996; Riabova and others 2003; Tsetta and others 2005) and 'making positive

contributions to sustainable communities' (Storey and Hamilton 2003: 285). Critics also suggest that EIA often fails to address aboriginal peoples' social health and quality of life (Noble and Bronson 2005), and fails to integrate aboriginal peoples' unique values, culture and spirituality into the process (Shapcott 1989; Burdge 2002; Joffe and Sutcliffe 1997). Addressing these research gaps and other criticisms of the EIA is critical to protecting both the environment and, by extension, aboriginal rights (Westman 2006).

In addition, while recent criticisms of the devolution of resource management point out that while new institutions have been created for the transfer of power, devolution in practice has not led to ideological or structural reform (Nadasdy 1999; Natcher and Davis 2007; White 2006). As a result, strictly adopting western institutional governing forms serves to erode aboriginal peoples' culture, values, and traditions (Kulchyski 2005). For example, in his review of whether or not traditional knowledge has been given meaningful consideration in environmental decision making, Ellis (2005) concludes that '[w]hile policies advocate that traditional knowledge and governance structures include Aboriginal participation, true power remains concentrated in Euro-Canadian bureaucratic structures, and Euro-Canadian values remain the primary basis for action' (Ellis 2005: 74). To address this ideological impasse and facilitate the development of more meaningful management models, scholars emphasise the importance of 'process' in the development of new institutional arrangements within aboriginal communities. That is, the process must be compatible with an aboriginal community's culture and values (for example the inclusion of consensus based decision making), ensure meaningful involvement of aboriginal peoples in all stages of the process, and be transparent (Champagne 2006; Christensen and Grant 2007; Kulchyski 2005; Lawe and others 2005). A new management model by the Northern Tutchone Council (NTC) in the Yukon, which is now in the process of re-implementing a spiritual form of traditional law called Doo'Li in the management of settlement lands, shows promise in this regard (Natcher and Davis 2007).

Third, and finally, the concept of culture has once again come under fire. While the traditional or subsistence economy has generally become the primary proxy of culture, Searles points out that, as a result, many researchers take the concept of culture for granted, 'as if it were obvious what it was that was to be preserved.' Searles reminds us that a central theme in contemporary anthropological theory suggests that we re-conceptualise culture, taking into account 'highly mobile persons, highly flexible capital, highly porous boundaries, and highly politicized debates about ethnicity and cultural diversity' (Searles 2006: 10). Contemporary anthropological theory, therefore, suggests that cultures always exist in hybrid forms. Illustrating this point, Csonka and Schweitzer (2004) describe how cultural continuity is a productive exercise and does not only relate to preserving cultural aspects of the past, but

harnessing and enmeshing with present day aspects of life:

Although there has been a measurable decline in linguistic and religious knowledge, in certain songs, dances and other art forms, this is only part of the cultural reality of the Arctic. 'Culture gain' and 'culture creation' have been present as much as 'culture loss,' and many aspects of Arctic worldviews have persisted despite processes of change and replacement (Csonka and Schweitzer 2004: 45)

In another critical discussion of culture, and cultural promotion as a research motive, Searles (2006: 11) asks a number of reflexive questions, all imminent for today's northern scholars who are now situated in the culturally mandatory community based research context: '[h]ow can social scientists balance their desire to be advocates in the process of empowerment with their presumed professional need for critical distance? What happens to academic research when the anthropologist's version of the story is no longer politically correct?'. As straightforward as aboriginal culture may seem to an outsider, represented by time on the land, ability to speak an aboriginal language, and so forth, the thought provoking questions above constructively trouble our deeply engrained notions of culture and taken for granted beneficence of action research methods.

Conclusion

As the relationship between resource development and aboriginal culture has been tracked in the north via a variety of academic, government and industry commissioned studies since as early as the 1960s, one might expect that an adequate amount of data has accumulated from which to synthesise a fairly robust understanding of this relationship. This is, unfortunately, not the case. We identified two phases of research from the 1970s to present: (1) the community impacts phase (1970 to mid-1990s), a cultural politics of assimilation, a sociology of disturbance, and an anthropology of acculturation; and (2) the community continuity phase (mid-1990s to present), a phase undergirded by political empowerment, participatory social impact assessment, and the influence of cultural ecology. Overall, however, we concur that the relationship between resource development and aboriginal culture is difficult to track. The elusiveness of this relationship is due to a lack of systematic attention to questions of resource development and cultural impact from government agencies and research institutions and a changing set of research questions within several academic traditions. Although some may view these changing research priorities and variables of interest as problematic, our view is that contemporary scholarship affords considerable insight and opportunity. Aboriginal issues are being increasingly addressed in greater complexity, and are being examined from multiple points of view due to renewed political power within aboriginal communities and a growing research tradition

that focuses on the needs, concerns, and interests of aboriginal communities in the north.

Notes

1. As Canada's northern basins are estimated to contain approximately 48% of Canada's undiscovered conventional light crude oil potential and 46% of its undiscovered conventional gas potential (Task Force on Northern Research 2000), similar economic prospects may follow for other regions in the north as well.
2. The traditional economy consists of "harvesting (hunting, trapping, fishing, gathering) and processing activities by which people provide food, fuel, and other material household needs" (Usher 1989: i).
3. Scott, P. (2007). *Stories told. Stories & images of the Berger Inquiry*. Yellowknife, NT: The Edzo Institute, pp. 16–17.
4. Bergman 2000 (17 July).
5. Although land claims agreements may appear as a victory for Aboriginal rights, some scholars, such as Mitchell (1996), view land claims with cynicism. Mitchell, for example, states: "... resource development was the primary objective of the state and the Native people were treated more or less as impediments. Land claims were not entered into in good faith but as a necessary legal obstacle to be disposed of as quickly as possible" (350).
6. The IFA was followed by the settlement of the Gwich'in claim (1992), the Sahtu Dene and Metis claim (1993) and the Tlicho self-government agreement (2003). Outstanding land claim agreements in the NWT include the following groups: the Deh Cho, the Northwest Territory Metis Nation, and Akaitcho Treaty 8.
7. Acknowledging that there commonly exists a considerable time lag between initial fieldwork and publication of research results, our identification of these two phases falls approximately within the two stated timeframes.

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