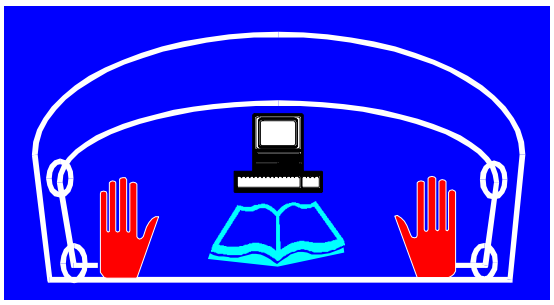

Native Socio-economic Development In Canada: Adaptation, Accessibility And Opportunity

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NATIVE **SOCIO-ECONOMIC** DEVELOPMENT IN CANADA: ADAPTATION, ACCESSIBILITY AND OPPORTUNITY

Paul Kariya, editor

INSTITUTE of URBAN STUDIES

UNIVERSITY of WINNIPEG

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ADAPTATION, ACCESSIBILITY AND OPPORTUNITY

Native Issues 1

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Paul Kariya

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INTRODUCTION

The protests of Canadian Indian leaders, particularly in the 1970s, focused upon Indian-government relations pertinent to the level, quality and control of public services on-reserve. As an example, with 50 percent of all Indian reserve housing without running water in 1977, and a difference of 15 percent in the secondary school participation rate from the general Canadian population in 1978, it is understandable that level of living issues were of paramount concern to Indian leaders (Canada, 1960). The 1976 rejection of all government funding by the Union of British Columbia Indian Chiefs, the mid 1970s blockade and occupation of numerous Department of Indian Affairs and Northern Development (DIAND) offices and the 1974 cross country Caravan to Ottawa were the result in part of frustrations, and an inability to participate in the good life of a just society (Pointing and Gibbons, 1980: 206).

As a consequence of these concerns, the nature of Indian-government relations has changed through time. Even though there continues to be a large disparity in many level of living indicators between Indian reserve society and the rest of Canadian society, improvements have been made. Critical in this has been the change in the fiscal relationship between Indian bands and the federal government. One cannot deny the overall financial dependence of Indian government upon the federal government (particularly DIAND), however, the actual delivery of services and administration of programs is now effected through Indian local governments By 1965, approximately 80 percent of all DIAND community infrastructure, housing and public services budgets were administered by local band and tribal administrations.

Models of even greater arm's-length type arrangements are beginning to appear. The Sechelt Act and Cree-Naskapi Act are two legislated examples of Indian self-government. Another thirty band or tribal councils have negotiated alternative funding arrangements with DIAND whereby a form of block funding tied to negotiated service objectives are set out in multi-year agreements. More importantly, alternative funding arrangements attempt to change the accountability relationship between Indian bands and DIAND so that Indian elected officials are accountable to their electorate. The 1980s have been a period when what the Penner Report called third stream approaches to Indian self-government have been explored (Canada, 1983).

The late 1980s and 1990s have been and will be a period characterized by what I label as second order initiatives. Where first order initiatives pertain to basic social and community services, I categorize second order initiatives as including issues pertinent to the settlement of land claims, development of self-government and increased economic independence through economic development. Second order

initiatives speak more to a mature agenda and *to an* alteration of structural barriers which have confronted Indian people under post-colonialism.

Examples of this change are evident in recent Indian-government relations, both in substance and process. The Lubicon dispute, the Haida and South Moresby, the Innu of Wader and the settlement of the Dene-Métis Claim are concerned with the prosperity, independence and meaning of Native peoples in *Canada,*

It is with a view to the immediate past and to the future that a paper session entitled, Native Socio-Economic Development was organized for the annual meeting of the Canadian Association of Geographers in Halifax, June 1988. Out of the discussion, the first formal session of this type amongst geographers, a commitment was forged to establish a speciality or study group under the auspices of the Canadian Association of Geographers to continue examining these issues. In addition, it was thought to be important that the papers read at the session should be reproduced for a larger audience. The following four papers, Volume 1, in the institute of Urban Studies new Native Issues series, *reviews current* adaptation, accessibility and opportunity-related subjects; the four papers in Volume 2 examine change, promise and innovations in the arena of Indian socio-economic development.

Armstrong's paper, the first in volume one, presents an empirical analysis of factors associated with the dynamics of economic development on-reserve. Bone's paper explores the enduring importance of "country focal in the diet of Indian and Métis people despite the influence of the construction of the Norman Wells oil expansion and pipeline project. Kariya's piece compares the relative success of a 1978 sample of Indian university students with non-Indian university students in the 1983 workforce. Finally, Duerden's paper examines factors which led to the collapse of the 1984 Yukon land claims settlement agreement-in-principle.

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FACTORS OF INDIAN ECONOMIC DEVELOPMENT ON-RESERVE: AN INITIAL ANALYSIS

Robin Armstrong
Indian and Northern Affairs Canada
Ottawa'

INTRODUCTION

In terms of employment and income, the economic wellbeing of Canada's Native people is significantly lower than that for the rest of the population. This is particularly true with respect to registered Indians residing on reserves.[2] Despite progress during the past two decades, finding more effective ways of supporting economic development in Indian reserve communities remains a challenge.

There is a considerable body of scholarly, bureaucratic and popular literature that suggests, and to some degree analyzes, the reasons for this state of affairs. Almost none of this work is empirical. As a result, little has been done to verify or determine the relative importance of the various factors typically associated with the dynamics of economic development in Indian communities. The purpose of this paper is to outline economic circumstances on-reserve, to identify general factors of development commonly associated with the 'Indian economic development equation,' and to present the results of an initial empirical analysis of these factors.

ECONOMIC CIRCUMSTANCES ON-RESERVE

Employment and income statistics indicate. the magnitude of economic disparity that exists between on-reserve Indians and the non-Indian population (Brecher et al., 1985; Lithwick et al., 1986). At the time of the 1981 Census, the employment rate among on-reserve Indians aged 15 and older was 32.3 percent compared with 60.2 percent for non-Indians. Indeed, only 50.7 percent of the former group had any employment experience during the 17 months prior to the Census= opposed to 70.7 percent for the latter.

Average individual income for on-reserve Indians aged 15 and over with income during 1980 -$7,000, compared with $13,000 for their non-Indian counterparts. The major source of income for 58.0 percent Of the on-reserve Indian population reporting income was employment income, while 39.2 percent reported government transfer payments as the primary source of income.[3] Non-Indian figures for major source of income were 75.1 percent for employment income and 15.8 percent for government transfer payments.

Perhaps the most telling statistical indicator of Indian on-reserve poverty is that based on "low income cut-offs" for households (NCW, 1984, p. 7). Special tabulations of 1981 Census data indicate that 46.0 percent Of on-reserve Indian households were at or below the low income cut-offs for the

relatively low levels set for rural areas. Employing the higher urban area cut-offs, the corresponding figure for non-Indian households was 221 percent.[4]

OBSTACLES TO DEVELOPMENT

It is evident that on-reserve Indians experience less economic success than other Canadians. Numerous reasons have been advanced to explain low levels of economic development and employment success in Indian communities.' These can be grouped under three general headings: conventional, cultural and legal.

CONVENTIONAL FACTORS

Reserve communities generally exhibit characteristics that inhibit development, These include locational disadvantages, low levels of education and training, relatively weak infrastructure development and limited internal wealth (Nicholson and Macmillan, 1966). Statistics cited below give an indication of the types and degree of the developmental disadvantages faced by reserve communities.

Indian reserves tend to be small in population and have relatively poor access to the markets, supplies, services and information generally required for successful economic activity. About 800 of 2,262 reserves are inhabited. In 1961,772 reserves were treated as 0S0s by Statistics Canada Only 26 had a population of 1,000 or greater. Community-based markets, therefore, tend to be minuscule. Table 1 shows the distribution of reserve communities by size.

Table 1

Population Distribution of Indian Reserves, 1981

Class	1-249	250-499	500-999	≥1Ooo	Total
Count 772	531	142	73	26	
Percent	66.8	18.4	9.4	3.4	100.0

Reserves are similarly disadvantaged in terms of accessibility to "regional-scale' populations; that is, in terms of their nearness to populations sufficient to support regional-scale manufacturing and service activities. The figures in Table 2 demonstrate that while more than 70 percent of all Canadians lived in census subdivisions within a average distance of 22 kilometres per person to the nearest 100,000 people (1981), only 125 percent of the population on Indian reserves enjoyed a similar

advantage. Nearly 20 percent of the on-reserve population lived in areas where the average distance to the nearest 100,000 people is greater than 200 kilometres per person in comparison with less than 1 percent of non-reserve population.

Table 2

Regional-Scale Accessibility:

On-Reserve Population Compared with Total Population

Accessibility	Potential Accessibility*	Percent: All Canadians	Percent: Residents on Indian Reserves
high	o to 4.69	30.0	0.6
	4,70 to 9s9	25.0	22
	9.60 to 21.62	15.0	9.7
	21.63 to 35.81	10.0	9.7
	35.62 to 63.63	10.0	16.0
	63.64 to 86.87	5.0	16.2
	66.88 to 197,93	4.0	25.7
low	197,94 to 2024	1.0	19.9

*"Potential Accessibility" is a first approximation measure of regional code ● oondbiiity. The measure is hued on simple distances from the geographic centroid of ● census subdivision to the centroids of the nearest census subdivisions containing 100,000 people in total and is calculated as average distance in kilometres per person to the nearest 100,000 people. The program to calculate potential accessibility was written for the author by staff of the Geocartographics Sub-division, Statistics

One final indicator of locational disadvantage is the fact that only 22 reserves with a combined population of 14,575 were located in what can be termed the 'national manufacturing core."[6]

Literacy is a basic qualification for many sorts of work. Using a level of education less that grade 9 as an indicator of functional illiteracy, 53 percent of on-reserve Indians aged 15 or older, and attending school full-time, were functionally illiterate in 1961 as compared with 22 percent of the non-Indian population. In terms of higher education, only 0.8 percent of on-reserve Indians aged 15 and over had obtained a university certificate, diploma or degree, while 8.1 percent of the non-Indian population had achieved thii level.

CULTURAL FACTORS.

There is a sizeable body of literature suggesting that a variety of cultural factors serve to impede economic development directly and indirectly. Cultural factors affecting Indian economic development are found both in Indian and mainstream cultures. For example, negative stereotyping of Indians by individuals and institutions of the mainstream society can create impediments to economic success when it manifests itself in employers being unwilling to hire Indians, financial institutions being reluctant to finance Indian-owned ventures and mainstream co-workers creating untenabfe work environments for Indian employees.

Many Native cultures maintain elements of traditional culture that are incompatible with conventional economic development. Traditional cultures have been characterized as being Past/present oriented, stressing socio-cultural needs and valuing generalized work skills that are suited to reciprocal*economic activity. Mainstream economic activity generally requires a future orientation, stressing economic goals and specialized work skills (Hanson, 198S).

Traditional cultures value the equitable distribution of resources, sometimes to the extent that steps will be taken to 'make sure that some don't get to much" (Lithman, 1984). Capital accumulation and even personal business success are subject to sanctions where these values prevail. Similarly, contemporary resource exploitation, particularly if restricted to a limited number of individuals, is unattractive in the context of the sharing ethic, especially given the ties to the land associated with traditional cultures (Reid, 1984). Indeed, in the context of some Native cosmologies, contemporary modes of resource exploitation are saen as dangerous threats to the harmony of spirits and powers integral to these realities (Brody, 1981 and Mills, 1986).

Despite pressures to change, elements of traditional cultures can be expected to persist for generations. Maintenance of traditional cultures has been linked to

a) maintenance of place within family and community, particularly in face of racism (real or perceived) directed from mainstream society (Hedican, 1986);
b) maintenance of a separate, Indian, identity (Reid, 1984); and
c) rejection of mainstream values as inferior to Indian values (Lithman, 1984).

Cultural change also creates obstacles to development. Breakdown of tractional cultures can result in destructive behaviour and social pathologies similar to those associated with the culture of poverty, limiting the potential of individuals and communities (Morinis, 1982 and Shkilnyk, 1985). It is not uncommon for community conflict to arise between change-oriented and tradition-oriented factions (Clifton, 1965 and Hanson, 198S), Thii is particularly true in areas where family units traditionally

hunted and gathered in isolation from each other for much of the year, but now live in reserve communities (Ross, 1986).

It should be noted that traditional culture need not preclude successful participation in the mainstream labour market. Some occupations are surprisingly compatible with traditional cultural patterns. A case in point is the involvement of Mohawks in high steel construction (Freilich, 1958). Further, various groups of Indian people have shown themselves adept at maintaining Central aspects of their cultures while either making limited lifestyle concessions (Guillemin, 1973) or adopting new technology (Reid, 1984).

LEGAL FACTORS

Economic development initiatives on Indian reserves are subject to laws different from those applicable to non-reserve land (DIAND, 1976). The *Indian Act* and its implementation are frequently cited as posing obstacles to development. Sections 29 and 89 protect reserve lands and property from seizure and alienation. Accordingly, land and other property on reserves cannot be used as collateral, posing impediments to surety bonding (DIAND, 1985, p. 22) and the securement of capital investment (McLachlan, 1986, p. 272). Provisions pertaining to land management, taxation and the removal and sale of resources either limit or make difficult a range of activities conducive to economic development (see, for example, DIAND, 1983; Mactavish, 1987, pp. 3746 and DIAND, 1975). Other federal and provincial laws pertaining to areas as diverse as fish harvesting, mineral rights and taxation also affect development prospects. In short, law, as it pertains to reserves, creates a development milieu different (creating uncertainty for potential investors) and more restrictive than that associated with non-reserve lands.

...ICAL RESEARCH

Despite the high profile accorded to Native issues by the media and a significant, if more recent, interest in these issues exhibited by the academic community, surprisingly little empirical work has been done to verify and determine the degree to which various factors affect the level of economic ...ment in Native communities. Exceptions are Bone and Green (1986) and McLachlan (1986). ...e and Green, investigating levels of wage income in Métis communities of northern ..., conclude that accessibility (measured by presence or absence of road access) was ... While education was a factor in accessible communities, it was not a factor in remote ... McLachlan suggests that level of annual employment income earned by on-reserve

residents for 26 reserves in Alberta, controlling for weeks worked, is significantly affected by acres of reserve land per individual in the labour force and average number of years of education.

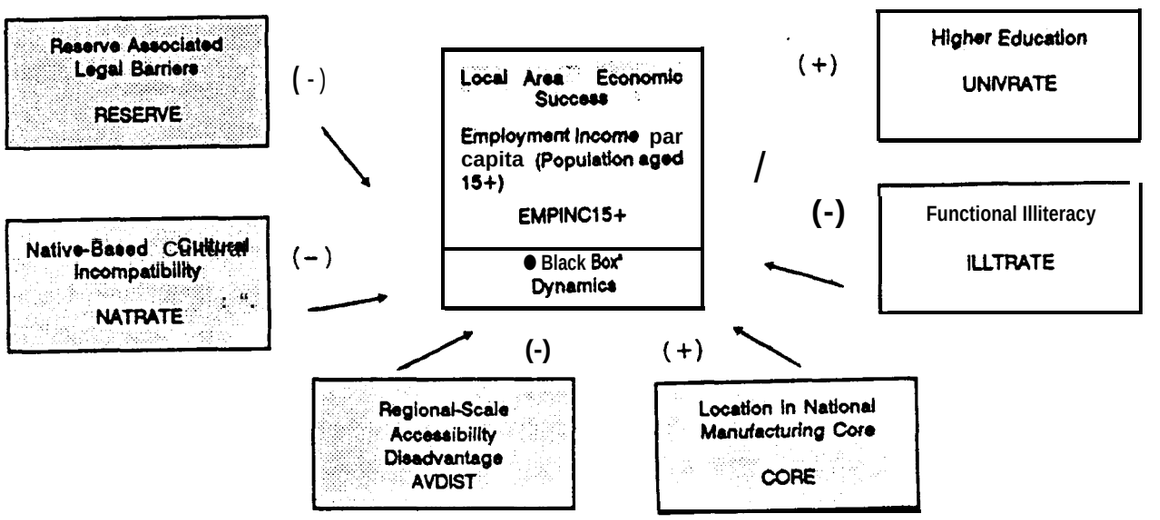
Since this limited body of empirical research yields little by way of consistent results, it is useful to examine whether or not the general factors of accessibility, education, culture and legal framework have significant effects on the economic development of Indian reserves. To this end, a simplified model of local area economic success incorporating these factors is proposed and examined using 1981 Census data

LOCAL AREA ECONOMIC SUCCESS MODEL

The economic success model views economic success as the degree to which a localized population is able to earn income through employment. Economic success is seen as resulting from an unexamined set of dynamics (treated as a black box) associated with the educational level of the area's population, the degree to which Native culture is present and incompatible with mainstream culture, whether or not the local area comes under the legal framework of the Indian Act and the degree of accessibility of the area to markets and the basic factors of production. The model is illustrated in Figure 1.

-F@In31

Local Area Economic Success Simplified Modei



Indicators representing model components and the corresponding rationale are developed below.

1. *Economic Success*: EMPINC15+

EMPINC15+ is total employment income for a local area population divided by the number of individuals aged 15 or greater. This variable is used as an indicator of local area economic success as values will be determined by a combination of the proportion of individuals finding employment, the duration of employment and wage levels.

2a. *Accessibility* AVDIST

AVDIST is a measure of accessibility disadvantage at the regional-scale. Measured as the average straight-fine distance per person (in kilometres) to assemble the nearest 100,000 individuals to a CSD centroid, the measure is intended as an inverse indicator of accessibility to the necessities of economic activity.

2b. *Accessibility*: CORE

CORE is a dummy variable for which the value 1 indicates that the CSD is located in the national manufacturing core' (see note 6). "

Education: ILLTRATE

ILLTRATE is the proportion of the population aged 15 or greater that has fess than a grade 9 education.

Education: UNIVRATE

UNIVRATE is the proportion of the population aged 15 or greater that has had some university education.

Cultural Incompatibility: *NATRATE*

NATRATE is the proportion of the population (all ages) that claimed exclusively Native ancestry. [illegible] here as a proxy of the degree to which the culture of the population differs from the [illegible] mainstream culture. The link between NATRATE and cultural incompatibility lies in two [illegible] tenuous assumption; (i) that social-interaction and, hence, cultural segregation is a [illegible] population segregation and (ii) that all Native cultures are incompatible with the [illegible] culture.

5. *Legal Barriers*: RESERVE

RESERVE is a dummy variable for whii the value of 1 indicates that the CSD is an Indian reserve.

ANALYSIS AND INTERPRETATION

Multiple linear stepwise regression is employed to assess if, and to what degree, EMPINC15+ is significantly associated with the independent variables identified above. Data are drawn from a set of 629 CSDS characterized by populations being at least 25 percent Native. The set included 546 Indian reserves. The inclusion of non-reserve CSDS permits the treatment of RESERVE as a variable.

Independent variables are forced into the analysis in the following order: AVDIST, CORE, ILLTRATE, UNIVRATE, NATRATE and RESERVE. The rationale for this order is that accessibility and education should account for much of the geographic variation in local economic success regardless of the ethnicity of the population. Accessibility is viewed as relatively independent of education, so variables pertaining to accessibility are entered before those for education. The degree to which residual variation can be explained by the presence of Native people is seen as largely attributable to cultural factors and not the fact that Native people tend to live in locationally disadvantaged areas and tend to be less well educated (although low education achievement may be due in part to cultural considerations and locational disadvantage). The degree to which remaining variation can be explained by whether or not a CSD is a reserve should be attributable to legal considerations, since the Native composition of the population already will have been taken into account.

The analysis yields several noteworthy results. First, simple correlations between the independent variables and the dependent variable indicate that each independent variable, with the exception of CORE, is significantly correlated withEMPINC15+ (one-tailed significance at the .001 level). As expected, EMPINC15+ was negatively correlated with ILLTRATE, NATRATE, and RESERVE and positively correlated with UNIVRATE.

A second finding, contrary to expectations, was a positive correlation between EMPINC15+ and AVDIST, indicating a negative correlation between accessibility and local area economic success. Taken in conjunction with the insignificant correlation between EMPINC15+ and CORE, this result is consistent with Bone and Green's finding that accessibility is not a significant factor of economic success for Native communities. This, in turn, supports the assertion that racism and cultural incompatibility form major barriers to participation by Native people in the mainstream of national economic life and that the employment economies of Native communities are largely based on work that is outside the confines of industrial organization and values, instead based upon activities such as

trapping, fishing and forest work and on local government services funded by senior levels of government.' This latter source of employment is relatively independent of location and education.

Finally, the step-wise model itself yields insights into factors of Native economic development. Table 3 lists the regression coefficients (B), the amount of variation explained by the inclusion of each variable in the equation and the significance of the variable in the final equation. The education variables account for 19.6 percent of the variation of EMPINC15+. NATRATE, after controlling for the educational variables, explains an additional 8.4 percent of the variation, suggesting the importance of cultural factors beyond those associated with educational attainment. RESERVE adds no significant explanation to the model. Overall, the model accounts for 35.5 percent of the variation of EMPINC 15+.

Table 3

Variable	B	R^2 added	Significance
(constant)	6602,22	.	-
AVDIST	257	.0707	.0000
CORE	36.99	.0010	.9441
ILLTRATE	4504.75	.1493	.0000
UNIVRATE	7256.57	.0468	.0000
NATRATE	4618.59	.0645	.0000
RESERVE	-429.81	.0002	.2725

The methodology used here to examine factors of Indian economic development on reserves is not without weaknesses. The order of variables introduced into the regression controls in part, but not fully, for interdependence between independent variables. The possibility of non-linear relationships has not been explored. Only four of approximately eighty factors associated with various economic development models have been incorporated, using indicators that are less than ideal (e.g., NATRATE as an indicator of cultural factors).

Despite the drawbacks listed above, the following conclusions are presented with the expectation that they will be subjected to more rigorous examination in the future by others.

1. Education and cultural factors are major determinants of economic development in Indian reserve communities.

2 Lack of accessibility and provisions *d the* Indian Act are potential impediments to development, but do not generally influence development at the present time due to the overriding influence *d other* factors. Some factors will be particularly difficult to assess in that they may be random-like in nature (e.g., the variation between chiefs in their ability to access government funds for a variety d purposes that result in employment and the variation through time d local construction projects that result in short term employment for community members) or may be difficult to quantify (e.g., Indian-government relationships, cf. Driben and Trudeau, 1983).

Economic development in Indian communities is important in the context d the socio-economic well-being d Indian people and the emerging thrust toward self-government. Further research on this subject could make important contributions toward these goals.

NOTES

1. I am grateful to Mr. Ron Hoppe for file manipulation and data processing associated with this paper. While the Department made available computing resources and support staff for this project, the research has been conducted independently. Contents of this paper do not necessarily reflect official views or policy.

2 The term 'registered Indian' refers to a person who under the terms and conditions of the *Indian Act* is registered as an Indian in the Indian Register. The term "reserve" refers to a tract of land set aside by the federal government for the use and benefit of an Indian band(s), for which the legal title is vested in Her Majesty.

3. *Employment income* refers to total income received by persons 15 years of age and over during 1980 as wages and salaries, and net income from non-farm self-employment and/or net farm income. *Government transfer income* refers to total income received by persons 15 years of age and over during 1980 from all cash transfer payments from all levels of government.

4. Low income cut-offs for 1980 are as follow:

Household size	Rural cut-off (ss)	urban cut-off ($s)
1	5,289	7,152
2	6,912	9,436
3	9,256	12,622
4	10,699-	14,545
5	12,441	16,949
6	13,563	18,511
7 or more	14,966	20,375

5. Wien (1986) presents an interesting discussion of Indian socio-economic development in the context of a variety of formal social science models including the culture of poverty hypothesis, modernization theory, segmentation theory, dependency theory and Marxist interpretations.

6. The 'national manufacturing core' consists of census divisions in the Quebec-Windsor corridor for which at least 20 percent of the labour force was employed in manufacturing industries and 14.5 percent or less was employed in primary activities.

7. INAC special tabulations of 1961 Census data show that disproportionate numbers of on-reserve Indians in the experienced labour force (compared with other rural Canadians) are engaged in fishing, trapping and forestry industries (8.5 percent vs. 3,3 percent) and public administration and defense (26.1 percent compared with 6,2 percent).

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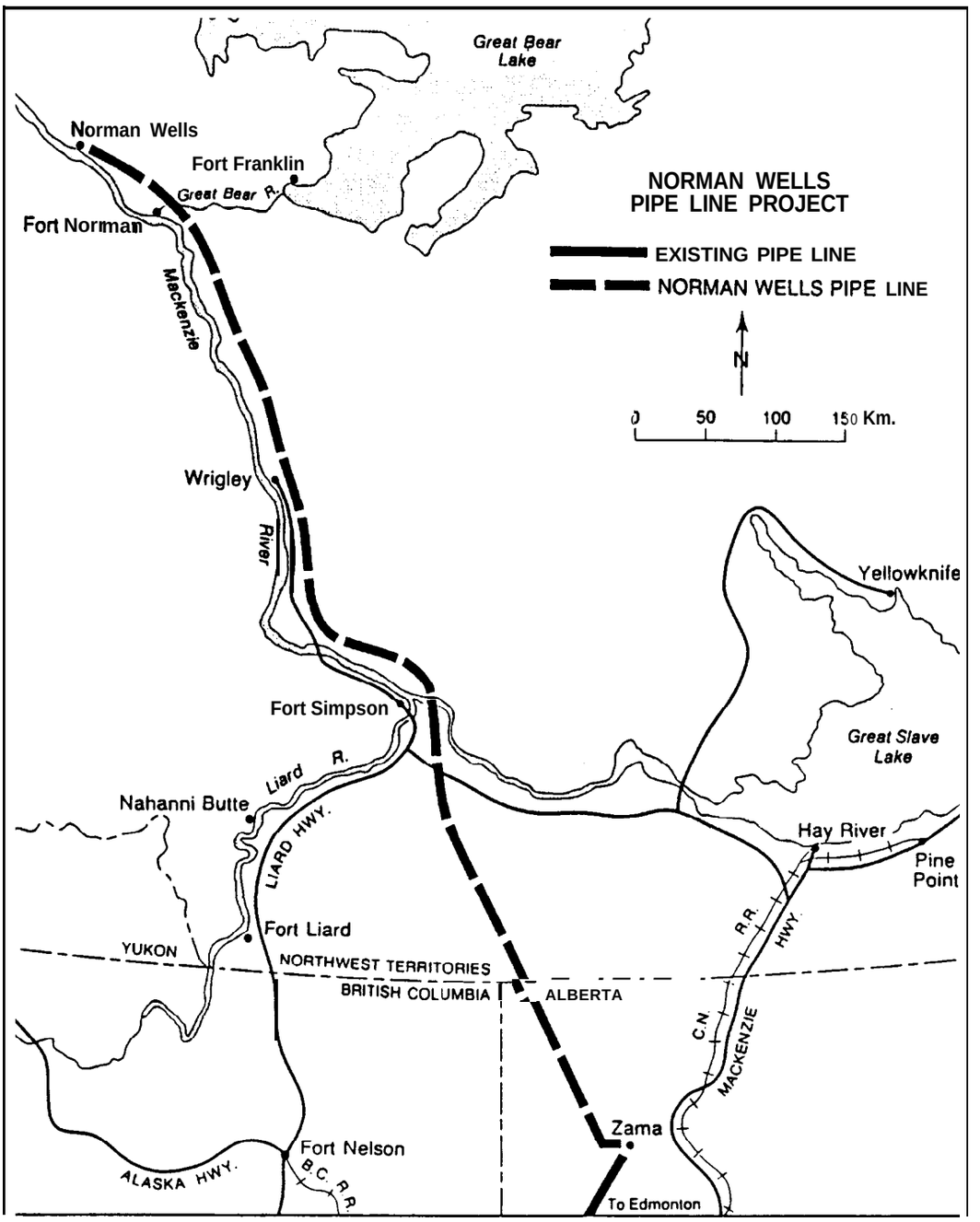
Figure 1


Great Bear Lake
Norman Wells
Fort Franklin
Great Bear R.
Fort Norman
Mackenzie
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EXISTING PIPE LINE
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Wrigley
River
Yellowknife
Fort Simpson
Great Slave Lake
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Nahanni Butte
LIARD HWY.
Hay River
Pine Point
Fort Liard
YUKON
NORTHWEST TERRITORIES
BRITISH COLUMBIA
ALBERTA
R.R.
HWY.
C.N.
MACKENZIE
Zama
Fort Nelson
ALASKA HWY.
B.C. R.R.
To Edmonton

ECONOMIC DEVELOPMENT AND COUNTRY FOOD

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INTRODUCTION

Hunting, fishing and gathering of renewable food resources continue to be extremely important to Native peoples living in Northern Canada (DeLancey, 1985). These food resources exist in the Northern environment and are generally referred to as "wild" or "country food.' For the aboriginal peoples of the Mackenzie River Valley, these foods include wild game, fish, birds, and berries.

Over a decade ago, Peter Usher described the North as the only place where a poor man's table is laden with meat (Usher, 1976, p. 119). More recently, Dacks (1981, p. 21) expressed the concern that the process of industrial development and the involvement of Native peoples in the wage economy are undermining their land-based economy. Large-scale industrial projects would be particularly disruptive to the land-based economy, because as the rate of development increases, then Native use of the land and country food production would decline. The basis for this concern includes the negative effects such projects have on wildlife habitat, high wages offered by major construction project% which attract Native workers who might otherwise be engaged in trapping and hunting activities, and, after the completion of the project, the possibility that laid off construction workers may not return to trapping and hunting.

In this paper, the objective is to examine the effect of rapid economic growth associated with a large-scale construction project on the consumption of country food by Indian and Métis living in the construction zone. The central question is "should the construction of a large-scale industrial project cause a decline in the use of country food?'

THE LARGER ISSUE

People and their societies change over time. The key issue for Northern Native peoples is how can they adapt to rapid changes caused largely by outside forces and thereby retain their distinctiveness? This complex question troubled Canadian society well before the Norman Wells Project, but it surfaced and dominated the public hearings of the National Energy Board and the Federal Environmental Assessment and Review Panei for the Norman Wells Project (Figure 1). The question involved the resolution of the territorial Gordian knot, namely establishing a place for Northern aboriginal peoples within the social, political and economic theatres found in the Northwest Territories. The solution involves a settlement of their land claims. Already, the Inuvialiut have reached an agreement With the federal government, and the Dene/Métis have signed an agreement-in-principle, Such

agreements strengthen Native societies by allowing them to negotiate directly with developers. In this way, aboriginal peoples have more control of their destinies. This process of political development fosters the growth of Native institutions designed to deal with industrial projects and other changing Northern circumstances.

Until the Inuvialiut agreement, this process of change involved the so-called modernization of the Northwest Territories. This process was designed to promote the industrial development of the North and to assist Northerners to enter into the modem world and its market economy. At the same time, these changes were directing Natives away from their traditional use of the land. For instance, Native peoples now live in a settlement environment, and their children are exposed to a full range of Canadian institutions which present non-Native attitudes, beliefs and values in the form of role models. The education system familiar to all Canadians exists in these communities, and while there is now considerable local input, it is still a Western-style institution with Western-derived goals, such as preparing students for the wage economy (Duffy, 1988 and Irwin, 1988).

Some (Berger, Brody, and Dacks) are concerned that the spread of our industrial way of life in the North may marginalize Northern peoples by separating them from their tradition economies, and by not generating sufficient wage employment to allow them full participation in the industrial economy, For these reasons, they argue that the land provides an bulwark against marginalization, and that country food offers a practical reason for using the land. It is within this broader context that the effects of a large-scale construction project on country food consumption is examined.

COUNTRY FOOD AND THE NORMAL WELLS PROJECT

The preference for country food by Dene and Métis living in the Mackenzie Valley remains strong even though store-bought food is widely used. Moose and caribou meat are much preferred *to frozen beef and pork,* and these wild meats remain the preferred staple of Native meals. The desire and need for country food represent an important vehicle for the transmission of traditional knowledge and values from one generation to another. Asch (1984, p. 21) considers the distribution of country food as a key rationale to maintain the traditional share ethic. Country food, then, is but one link in a long chain of traditional values and practices. A sharp decline in country food use during a major construction project may indicate that this chain has been broken and that the traditional use of the land and the sharing of country food may no longer occupy a prominent place in Dene society. Alternatively, the maintenance of pm-project levels of country food consumption suggest that Native peoples are able to adapt to these new circumstances and that their use of the land and the sharing of country food remain key features of Dene culture.

The Norman Wells Oil Expansion and Pipeline Project (Norman Wells Project) was the first megaproject approved in the Northwest Territories after the Berger Inquiry into the proposed Mackenzie Valley Pipeline Project. In 1982, the Norman Wells Project began.[1] Its approval was a political victory for the advocates of Northern industrial development (Esso Resources Ltd. and Interprovincial Pipe Line). Both companies viewed the Norman Wells Projects as a "model" for future oil or gas development of reserves in the Beaufort Sea. The construction of this megaproject took four years and cost over $1 billion. During this time, Esso and IPL were the dominant employers in the Mackenzie Valley. Through the insistence of the federal government, this project promised and delivered more benefits to Northerners than would have occurred through the normal operation of supply and demand. While both the government and industry agreed to emphasize economic benefits and to minimize negative impacts on the Northern environment and society, they had difficulties in satisfying the Native concerns for protecting the land for hunting and trapping. For example, there are opposing views on the impact of the pipeline route on hunting and trapping. Natives tend to argue that the pipeline route takes land out of production for wildlife, while others see the route as improving access to wildlife because it can be used by trucks and snowmobiles. Industry agreed to compensate trappers for commercial losses caused by the construction of the pipeline, but the trapper would have to supply evidence of such damage. Not surprisingly, local ohii viewed the environment and traditional land-use activities in a much broader context, namely "the land had to be protected since it was 'their bank' and ensured their survival" (NEB, 1981, p. 115). In terms of country food, Dene leader's (Bone, 1983, p. 3) argued that there were three major concerns about the Norman Wells Project: (1) trappers would seek construction work, thereby reducing the time available for land-based activities and making the family more dependent on store food; (2) the project would pay Native workers high wages which would increase their ability to buy store food, that which might decrease their interest in hunting, and; (3) the project would expose Native workers to Southern foods at work camps, thereby shifting their food preferences toward store foods.

In 1980, the Federal Environmental Assessment Review Office established a panel to assess the environmental and socio-economic implications of the proposed Norman Wells Project. This panel recognized the potential negative impact of the project on Native society (FEARO, 1981, pp. 59-60). Native interveners at the public hearing expressed concern about the transient white construction workers and their families (FEARO, p. 59). Their concerns centred on the assumption that Southern workers and their families would not have an understanding of Northern people and their land-based economy and lifestyle, and that Southern attitudes and values would cause further disruption of the Native society in the Mackenzie Valley (FEARO, p. 59).

The solution proposed by the FEARO panel contained two main elements. Each was designed to minimize the impact of the construction work force on Native communities and their social order. The first and most important decision was to employ an air commuting system to supply labour to Norman Wells, rather than have the workers and their families relocate to Norman Wells. This approach greatly reduced the number of people rebating to Norman Wells which, in turn, lessened the pressure on focal facilities, such as schools and housing, and the level of social interaction with permanent residents.

The next key decision was to locate work camps for the pipeline workers outside of the village limits of Fort Norman, Wrigley and Fort Simpson. This fact plus the camp rule that pipeline workers were not to visit the 100al community greatly reduced the social interaction between construction workers and Native residents.

THE FWR COMMUNITIES IN THE IMPACT ZONE

The four communities in the impact zone are Norman Wells, Fort Norman, Wrigley and Fort Simpson. Each of these communities was affected somewhat differently by the Norman Wells Project Norman Wells is a Southern-style community with a large majority of non-Native residents who have worked in the wage economy for many years. Founded as a company town in the early 1930s, Esso still employs meet of its residents. The three communities, while each is different from the other, have two factors in common: a large Native population, and a much smaller economic base than Norman Wells. Two of the centres, Fort Norman and Wrigley, have few business activities, and local governments provide most of the jobs. At the regional centre of Fort Simpson, there are a number of businesses and government headquarters. Yet, few of the Natives are employed in the wage economy compared with the non-Native residents. For these reasons, a larger proportion of *residents of Norman* Wells have bean involved in the wage economy than those in the other communities. From this experience, Norman Wells residents were better-prepared to take advantage of the opportunities offered by the project and to shield themselves from negative effects of a construction boom than residents in the other communities.

At Norman Wells, intense construction work went on around the clock. Much of the construction work focused on the building of rock islands in the Mackenzie River. These served as drilling sites. Oil drilling also occurred on other islands and across the river from the community. A large central processing facility for the oil was constructed near the town site. This intensive industrial development triggered a second round of construction. In this case, construction focused on nw roads, houses and retail stores. As well, several trailer camps were established to house the rotation

workers. One measure of the impact d this economic growth upon the community is its population growth. In 1961, Norman Wells had a population *d 420,* while by 1966 it had reached 627 (GNWT 1988, p. 6). In addition, during the height d the construction period, some 1,200 rotation workers resided in Norman Wells.

While Norman Wells k not connected by road to neighboring communities, Fort Norman is only 15 minutes away by small aircraft. As well, river and winter road travel allows regular visits by Fort Norman residents to Norman Wells. This access factor helps explain why Fort Norman residents tended to participate in the Norman Wells Project more than residents d many other communities in the Mackenzie Valley. For example, the Fort Norman business community received $4.3 million in contracts for IPL which, on a per capita basis, represents the largest figure for the three Native communities (Table 1). Equally important, almost all d these contra% were awarded to the Fort Norman Band through its business agency, Tulita Developments or to local Métis contractors such as Fort Norman Contracting. Unlike Norman Wells, Fort Norman was not a construction site and, as a consequence, its population and community infrastructure were largely unaffected by the Norman Wells project. For example, in 1961, the population *d* Fort Norman was 266, while it was 332 in 1936.

Table 1

Northern Business Contracts Awarded by IPL

Community	Contract ($ million)	Population (1986)	Per Capita ($)
Norman Wells	14.6	627	23,295
Fort Simpson	8.1	987	8,207
Fort Norman	4.3	332	12,952
Wrigley	1.3	161	8,075

Sources: IPL, Socio-Economic Monitoring Report 1986, pp. 3-24; and Bureau of Statistics, *Northwest Territories . . By The Numbers,* pp. 5-6.

Wrigley, the *smallest* d the three communities, had a population d 137 in 1981. It also had the highest proportion d Native peoples (over 90%). Considered a traditional community, its band and peoples took part in pipeline construction work and associated employment. Approximately $1.3 million worth of IPL contracts were awarded to the band which often joined forces with an experienced contracting firm. Wrigley's per capita shared business contracts from ILP, while much less than that of Fort Norman, was about the same as that d Fort Simpson (Table 1).

Fort Simpson, a regional centre *with* a large business community, obtained $6.1 million worth of contracts from IPL Yet, given the size, number and variety of business firms, this amount seems small, and on a per capita basis, it b lower than Fort Norman and about the same as Wrigley (Table 1). There is no simple explanation for this situation, though the Fort Simpson Band did not participate in IPL contracts as extensively as the Fort Norman Band and possibly the Wrigley Band.

COUNTRY FOOD QUESTION

During the Norman Wells Socio-Economic Impact Monitoring Program, a series of household and business surveys were conducted. The purpose of this monitoring program was to measure changes in the communities during the construction of the Norman Wells Project. The procedure was to contact a member of each business and household and to ask them *to* complete either a business or household questionnaire. The responses to one question in the household questionnaire provided the data on country food consumption. In the three household surveys (19&Z 1964, and 1965), the question "How much of your household food is country food?' was asked. Seven response categories were available to the interviewees. These categories were scaled from O to 100 percent (see Table 2). For example, the user category "none or almost none" means that the respondent indicated that they had eaten very little or no wild meat, fish, birds or berries over the past 12 months. This descriptive label was quantified as O to 5 percent of the total food consumed in the family's diet over the past twelve months. A Iii of the seven user groups, their descriptive labels and percentages of country food estimated by the head of the household to have been consumed bymembers of that household over the last twelve months is provided in Table 2.

Table 2

Country Food Question

user Group Label	Percentage
1. none or almost	o - 5
2 very little	6 - 15
3. some	16-39
4. about half	40-60
5. quite a lot	61 -75
6. most	76-94
7, all or nearly ail	95-1oo

THE PATTERN OF RESPONSES

In June 1 982, the first survey of all residents in the four communities took place and the response from Native heads of household indicated that for nearly half of the aboriginal residents (49.1%) country food comprised at least 40 percent of their meals. The 1965 survey revealed very similar results with 50.2 percent of the Native peoples using at least 40 percent country food in their diet.

Country food consumption did vary from one household to the next, and these differences have been summarized in Table 3 as low, medium, and high users of country food. In this Table, the data have bean collapsed into three user classes (low, medium, and high) in order to make the task of viewing the pattern of country food consumption over time easier. The three new classes of country food consumers are defined as low consumers of country food, eating 15 percent or less country food in their diets; medium consumers of country food being the group eating 16 to 60 percent; and high consumers consisting of those eating over 60 percent country food in their dii

Table 3

Three User Classes and the Responses

User Class	User Group	Percentage	Responses 1982	Responses 1985	Diffs.
Low	none or almost very little	0-5 6-15	47.5	41.7	-5.8
Medium	some about half	16-39 40-60	34.8	40.6	+5.8
High	quite a lot most all or nearly all	61-75 76-94 95-100	17.7	17.7	0

In 1982, country food use by these three user classes revealed that most households (47.5 %) made little use of country food; the next largest group (34.8 %) had a higher use of country food; and the smallest grwp (17.7 %) made extensive use of wild game, fish, birds, berries and other forms of country food in their meals throughout the year (Table 3). These data suggest that the assumption

that there is a universally high use of country food by all aboriginal peoples is false, and the explanation for these differing usages likely relates to settlement life, commitment to a land-based economy, and the convenience of buying store food. Significantly, this variation in country food consumption existed prior to the Norman Wells Project, and suggests that the general process of modernization had already altered the food behaviou of Native peoples in these centres. The next question is, did the Norman Wells Project accelerate the shift toward store bought foods?

From 1982 to 1985, the pattern of country food use remained fairly stable among the three user classes. The 1985 responses indicated that the percentage of low users had declined by 5.8 percentage points to 41.7 percent while medium users had risen by the same amount to 40.5 percent. There was no change among high consumers and their percentages remained constant over the three year period at 17.7 percent (Table 3). These longitudinal results by the three user classes demonstrate that country food consumption underwent minor changes and that the overall result was a slight increase in the use of country food as revealed by the upward shift from low to medium users. From this evidence, it appears that the Norman Wells Project did not interfere will the harvesting of country food nor with its traditional place in the diet of Native peoples in the three communities.

DISCUSSION

During this construction project, country food consumption rose marginally over the pre-construction level among the Native peoples of the communities of Norman Wells, Fort Norman, Wrigley and Fort Simpson. Therefore, the fears that the Norman Wells Project would disrupt country food harvesting and cause a drop in use of these foods by Natives proved false. The question then arises, what were the factors contributing to the continued high use of country food by people living in the construction zone of the Norman Wells Project? These are cultural and geographic factors.

CULTURAL FACTORS

The traditional practice of harvesting, preparing and eating wild game, fish and berries remains a vital part of Native culture in the 1980s. The majority of Native peoples continue to consume large quantities of wild meat, birds, fish and berries, although a small number (less than 10%) no longer make much use of wild foods.

The strength of this practice is related to its relevance to the Dene/Métis life styles now found in Northern communities. Simply stated, the strong desire/need for country food caused local residents to work around constraints imposed by this mega construction project. It is also true that the regular pace of living by residents of Fort Norman, Wrigley, and Fort Simpson was less disrupted by project

employment than at Norman Wells because most employment was short-term or seasonal. Since few focal residents worked full-time on the Norman Wells Project, hunting, fishing and gathering of country food continued as before the project. Also, extended family units fend themselves to reassignment of tasks and the deployment of Norman Wells Project wages/capital obtained by a family member into the country food enterprise. For example, a son is employed as a construction worker; part of his wage pays for the expenses of other members of the family to engage in hunting and trapping activities.

GEOGRAPHIC FACTORS

The Norman Waifs Project was centred on Norman Wells. The oil drilling and infrastructure buildup of Norman WeIfs had little direct impact on the three Native communities. It is true that rotational workers from these communities were able to participate in the wage economy, but, at the same time, they were able to leave their families in their home communities. Workers from Fort Norman and Fort Simpson provided the bulk of the rotational workers from the three Native communities.

Pipeline construction did occur near the three Native communities. This work took place over two very short periods of time. There weretwowinter construction periods, one in 1984 and the other in 1985. Both lasted about eight weeks. Because of the brief but intense pipeline construction work, pay was high, but the employment was short-term and in the dead of winter, thereby minimizing interference with hunting and fishing.

Finally, the pipeline construction zone involved a narrow stretch of land from Norman Wells to the boundary with Alberta. Since most hunting/fishing/gathering areas were some distance from the pipeline corridor, traditional land-use activities could continue. This does not imply that these lands have not been scarred by seismic lines and other kinds of activities associated with oil and gas exploration, but it does mean that pipeline construction was limited to a narrow zone.

IMPLICATIONS FOR FUTURE PROJECTS

The fact that use of country food continued at pre-construction levels does not imply that this type of industrial project does not exert pressure on Native people's use of the land and their consumption of country food. For example, construction projects lease or purchase Crown land, thereby taking it out of use for hunting and trapping. The continued use of country food during the Norman Wells Project indicates that the strength of aboriginal residents' desire/need for country food was a stronger force than that offered by the project.

Given the Norman Wells Project findings, what are the implications for future projects? Do these results mean that future projects will have no effect on country food consumption? Or is the Norman Wells Project unique?

The Norman Wells Project had its main impact on the hamlet of Norman Wells. Here, the population more than doubled, and the construction work dominated the hamlet's economic and social life. in contrast, the other three communities were not involved in oil drilling, and were sheltered from pipeline impacts. The chances of a repeat of the conditions associated with the Norman Wells Project are slight. First, there are very few non-Native communities in the Northwest Territories. For example, if the Beaufort Sea oil and gas are developed, then the major impact may be on Tuktoyaktuk, which has a much higher percentage of Native peoples than Norman Wells. Secondly, the next oil or gas development may require a large diameter pipeline, whii means a larger construction effort and a larger workforce. Under these conditions, it would be much more difficult to limit access to Native communities.

On a more positive note, changes in the political landscape of the Northwest Territories appear to give more power to Native organizations than they held at the time of the Norman Wells Project. For example, the settlement of the Inuvialiut land claim is now in place, and the agreement-in-principle of the Dene/Métis claim may soon lead to a final agreement. All of these changes should create a more positive environment for Native participation in the next megaproject and, at the same time, allow the issue of Native use of the land to be resolved.

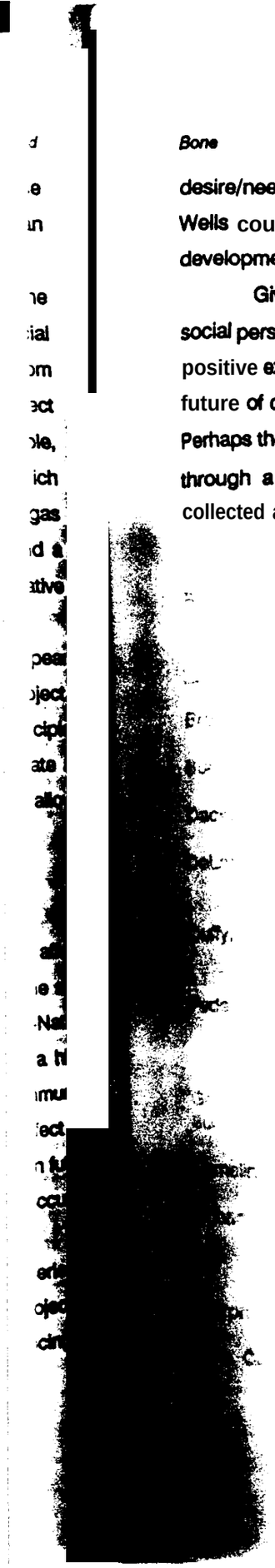
CONCLUSION

The Norman Wells experience demonstrates that a large-scale industrial project may not affect the use of country food by local Native residents. Yet, this experience may be unique, in that the size of the project was relatively small, and the concentration of its impacts took place in a non-Native community. For example, we do not know what the effect would be on a community with a high percentage of Native residents such as Fort Norman. If Fort Norman or another Native community experienced the same magnitude of construction activity as did Norman Wells, then the effect on country food consumption could be different. Therefore, these findings may not be duplicated in future industrial projects, particularly if they are much larger construction projects, or if they occur in communities with a majority of Native residents.

Then, there is another concern the possibility of the cumulative effect of a series of megaprojects on Native peoples and their societies. For instance, after a series of megaprojects, a threshold might be reached which could signal a weakening of Native values, thereby reducing the

desire/need for country food. All of these provisos suggest a cautious interpretation of the Norman Wells country food results in relation to larger megaprojects such as Beaufort Sea oil and gas development.

Given these concerns, measures fostering the harvest of country food are desirable from a social perspective. Such measures call for the intervention of the state into the marketplace. The positive experience of the Northern Quebec Hunter Support Program offers one means of ensuring the future of country food harvesting and the use of these wild foods by Native peoples (Ames et al., 1989). Perhaps the proponents of megaproject proposals should contribute to a hunter support program either through a direct annual payment to the appropriate Native organization, or through a special tax collected and administered by the Government of the Northwest Territories.



NOTES

1. The official *date* for the start of construction of the Norman Wells Project was late 1982 Before that date, Esso and IPL were permitted to 'prepare' the site, which included assembling supplies, road building and establishing work camps. As soon as ice on the Mackenzie River broke up, barges began to depart from Hay River for Norman Wails. From personal observation, the level of construction work in June 1982 was at least as hectic as it was in later summers. The actual laying of pipe did not begin until January 1984.

2 The June 1987 population of Norman Wells was 590, according to the December 1988 Statistics Quarterly of the Bureau of Statistics of the Government of the Northwest Territories. This population drop is not unexpected, and reflects both the loss of the construction business and a contraction of the retail market.

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A COMPARISON OF SOME ASPECTS OF EDUCATION AND INCOME IN INDIAN AND NON-INDIAN ONTARIO UNIVERSITY STUDENTS: "THE CLASS OF 1978 IN THE 1983 WORKFORCE"

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INTRODUCTION

During the last ten to fifteen years significant accomplishments have been achieved in the field of Indian post-secondary education in Canada.[1] Special programs exist at numerous universities and colleges to recruit, support and graduate Indian candidate in many fields of academe and training. In the fiscal year 1986-87, the Department of Indian Affairs and Northern Development (DIAND) supported 12,164 Indian students attending various post-secondary institutions. Over 1,000 of these students graduated from or completed their programs Despite these efforts, "Indians are [still] only one-third as likely as other Canadians to be enroled in university program% and are only half as likely to be enroled in other post-secondary training programs" (Hull, 1987, p. xxii). From Table 1, one can also see that Native people have the lowest rank of a selected list of ethnic groups in possession of certificates, diplomas, community college or some university education. Clearly a gap remains.

Table 1

Ethnic Groups In Possession of Trade Certificates, Diplomas, Community college or Some University (Non-Degree)

Group	% Age 15 and Older Male	Female
British Isles	22.9	20.0
French	227	21.1
Indo-Pakistani	24.0	19.7
Japanese	23.8	23.7
Black	31.4	29.8
Native People	127	10.9

Source: Statistics Canada, 1981 Census and Thatcher (1985, p. 80)

Thatcher (1 985, p. 76) and others point out that generally, educational qualifications 'act as screens on access to the primary labour market.' Lower levels of education have an influence in excluding Indian people from broader socio-economic societal opportunities. Related to this connection between education and employment, Sewall (1984) found that more than one-half of the adult students

he surveyed had enroled in university to improve their careers. A simple causal connection between education levels and employment levels does not exist, however, Hull (1987, p. 109) states that,

> Higher educational attainment is associated with higher participation and employment rates. Moreover the gap between Indians and non-Indians . . . decreases as educational levels increase. Indians with university degrees, in fact, have better employment prospects than do non-Indians with degrees . . . .

Post-secondary education has important implications for many Indian individuals. In addition to this, as self-government and land claims settlements are negotiated between Indian groups and the federal government, a cadre of trained and educated Indian people become even more important to band councils, tribal councils, development corporations and other associations.

THE STUDY

Leaving aside the larger debate of how the enduring inequities and imbalances will be overcome, in thii short paper, I examine in aggregate, how a group of Indian university students have fared in the "real world." Recently, statistical examinations of the patterns and trends of university achievement among Indians have been carried out by Hull (1987) and Thatcher (1985), but my objectives are more modest. I have taken a sample of Ontario Indian university students from 1978 and revisited them in 1983 to see if they were employed, in what sector of the labour force, with what remuneration and in what region of the country. Their success or representation in the categories noted is compared with that of a control population drawn from all other Ontario university students.

METHODOLOGY, POPULATION AND *SAMPLE*

A list of 830, 1978 Indian university students from the Ontario Region of the Department of Indian Affairs and Northern Development was scrutinized for use in the study.[2] From this lii, 829 cases were derived based on unique social insurance (S1) numbers. Using the SI numbers, the 829 cases were then matched to Statistics Canada's Education file from which 107 cases were derived for which information on faculty enroled in and institution attended was obtained. Finally, the demographic characteristic of sex, age, faculty enroled in and institution attended of the Ontario Indian university student sample of 107 was used to select a non-Indian Ontario university student control group.

Each of the three groups derived: Indian Students, N=629; Indian Students-Faculty-Known, N= 107 and Non-Indian Students, N=68,091 were further subdivided by those who had filed and those *Who had not* filed income tax returns with Revenue Canada in 1983. Table 2 presents a summary of the samples. Reviewing the Table, it is a comment on the quality of the data and of the difficulty in

collecting and maintaining information in the Indian-Government administrative interface, that in only 17 percent of the Indian student cases, educational program detail was available.

Table 2

The Sample

19s7 Students	N=	Faculty-Known	%	1983 Tax Return	%
Indian	629	107	17.0	494	78.5
Non-Indian	68,091	68,091	100.O	59*481	87.4

For researchers conducting statistical studies on Indian educational achievement, there are three primary data sources, the 1981 Census, DIAND Nominal Roll and DIAND Continuing Education Information System. In this study, I have created a more limited and potentially controversial data set. The original information I received from DIAND's Continuing Education Information System was linked to education and tax return information at Statistics Canada using SI numbers. For reasons of confidentiality, the ethics and efficacy of data record linkage investigations are a contentious issue in some government and academic circles. However, the *Statistics Act* permits Statistics Canada personnel to work with SI numbers and income tax return data for aggregate research purposes.

Turning to the class of 1978 let us see how it was doing in the 1983 labour force.

ANALYSIS AND FINDINGS

INDUSTRIAL SECTOR REPRESENTATION

Table 3 illustrates the fact that while 14.2 percent of the 1978 non-Indian student population is represented in the 1983 Goods Producing sector of the labour force, only 6.8 percent of the 1978 Indian student population living on-reserve is represented there.[3] It would seem that the image of the Indian and in particular the on-reserve Indian as being overly represented in the primary industry sector is not reflected by the statistics on Indians who have recently been enroled at a university.

Table 3

Industrial Sector Representation

%	Indian On-Reserve	Indian Off-Reserve	Indian Unknown	Indian Total	Non-Indian
Goode Producing	6.8	10.2	6.3	7.3	14.2
Non-Goods	93.3	69.8	93.8	92.7	85.8
Total	100.1	100.0	100.1	100.0	100.0

In total, the Indian student sample is more highly represented in the Non-Goods Producing sector than the non-Indian student sample. One might have expected the opposite to be the case, however, the percentages are 927 percent for the Indian and 6S.8 percent for the non-Indian samples respectively. A possible explanation for this finding is that relatively speaking, Indians with university education are in much higher demand for management or white collar type jobs than their non-Indian counterparts Ready employment is found in the non-goods producing sector. By the fact that Indians living off-reserve are more highly represented in the goods producing sector than Indians living on-reserve could be seen to support this interpretation. A more cautious interpretation might consider the fact that in the 1980s, lower level service sector jobs are the growth area in the labour force and Indians like other Canadians are increasingly being employed in them.

Off-reserve there is more competition for white collar jobs. On-reserve there is a strong demand for skilled officers and managers for band and tribal government positions. The Allen Task Force Report (1985) on Indian economic development prepared for the Department of Indian Affairs and Northern Development found that in 1983, while 20 percent of Canadians drew pay cheques from public sector jobs, for Indians living on-reserve the comparable figure was 80 percent.

Region by region comparisons in Table 4 further highlight the strong representation of the 1978 Ontario Indian University Student sample in the 1983 Non-Goods Producing industrial sector in comparison with the Ontario Non-Indian University Student control group. The only anomaly in the pattern seems to occur in British Columbia, where the Indian sample is relatively under-represented in the NomGoods Producing sector when compared with the control population's representation.

Apart from the problems inherent in utilizing a small data set, the influence of the large British Columbia fishing industry as well as other primary sector influences (Le., forestry) and the sizeable representation of Indian people in them may account for some of the difference. Even though the Indian sample is made up of Ontario Indians, through local contacts, employment opportunities in Indian fishing or forestry operations may be relatively easy to arrange.

Table 4
Representation in the Non-Goods Sector by Region

Region	Indian % Non-Goods Sector	Non-Indian % Non-Goods Sector	Difference
Atlantic	100.0	69.2	+10.8
Quebec	94.1	90.9	+3.2
Ontario	93.2	85.9	+7.3
Prairies	87.5	81.0	+6.5
British Columbia	75.0	89.4	-14.4
NW/Yukon	o	91.1	
Outside Canada	o	84.3	
Total	92.7	85.8	

LOCATION OF EMPLOYMENT

From Table 5 one can see that the regional profile for location of employment for both the Ontario Indian and Non-Indian samples is virtually identical. For both groups, almost 90 percent of the class of 1978 were employed in the province of Ontario in 1963.

Table 5
Location of Employment

Region	Indian Total	%	Non-Indian Total	%
Atlantic	5	1.0	530	0.9
Quebec	17	3.4	1,812	3.0
Ontario	440	89.1	52,203	87.8
Prairies	24	4.9	3,413	5.7
British Columbia	8	1.6	1,326	2 2
NW/Yukon	0		146	0.2
Outside Canada	o	00	51	0.1
Total	494	100.0	59,481	99.9

UNEMPLOYMENT RATE

Table 1 indicates that 21.5 percent of the 1978 Ontario Indian university students and 128 percent of the Ontario Non-Indian university students in the study did not file income tax returns for 1963. While one might want to use these figures as a possible surrogate measure for unemployment rates between sample populations, this is not advisable. Due to treaty status and other legislation such as the *Indian Act*, traditionally, many Indian people have not filed income tax returns. It is possible that the high rate of income tax returns not being filed by the Indian sample reflects this tradition, rather than an indicator of unemployment. Today, specific exemptions and tax remission orders are in place to cover income for an Indian living and working on-reserve, living off-reserve but working on-reserve and living *off-reserve and working off-reserve but receiving* a pay cheque from a company with its corporate offices located on-reserve. Clatworthy (1961), Hull (1967) and DPA (1965) support the contention, however, that amongst Native populations there is a direct relationship between years of schooling and a lower unemployment rate.

INCOME COMPARISONS BY SECTOR, AGE, SEX ANO FACULTY

Reviewing Table 6, the lowest mean income at $11,290 is recorded for the on-reserve Indian with a job in the Goods Producing sector, The highest mean income at $22,302 is for the non-Indian in the Goods Producing sector. Comparing Indian and non-Indian mean incomes for all sectors, there is an overall disparity of 36.3 percent between the two samples In the Goods Producing sector, at 56.7 percent the difference is even greater. Although the mean income for Indians in the Goods Producing sector and living off-reserve is relatively high at $17,4= note that there is very little differential in earning power in the Non-Goods Producing sector between the on and off reserve cases.

Table 6

Mean Income by Industrial Sector ($)

	Indian				Non-Indian
	On-Reserve	Off-Reserve	unknown	Total	
Goods Producing	11,290	17,492	15,458	14,055	22,302
Non-Goods Producing	13,007	13,547	13,490	13,253	17,766
All	$12,891	$13,950	$13,613	$13,311	$18,410

what about real income, ie tax breaks, other transfers + benefits ?

Borne d the explanation for the lack d variation in the on-reserve and off-reserve m incomes for the Indian sample in the Non-Goods producing sector is possibly due to the fack d pay scale variation in office administration, management and service type positions between jobs on and off-reserve. This could be a function of the labour market situation in urban centres close to Indian reserves where there is a relatively large supply of personnel with clerical, office training and service industry background% Another interpretation could be that the Indian worker in the Non-Goods Producing sector is relatively poorly equipped to compete in the off-reserve labour market. In the Goods Producing sector, the on and off reserve mean income differential could possibly be due to specialize skills which the Indians possess and which is in demand in the labour market. As an example, in primary and some secondary sector jobs, there may be a requirement for knowledge of natural resources or geography which the Indian might find in demand off-reserve (i.e., many positions in the fishing industry). However, in *reviewing these* data, *without* detailed fieldwork, interpretation *is* at best speculative.

Some of the on- and off—*reserve* disparity in income for Indians can be attributed to the fact that Indian employers on-reserve pay less than off-reserve rates to their Indian employees since these employees' wages are not taxable. Nevertheless, this does not explain the overall disparity in mean incomes between Indians and non-Indians.

Table 7 presents industrial sector income broken down by sex. For both sector categories, one can see the differential in mean income between the sexes. The only group which earns less money in the Goods Producing sector in comparison with the Non-Goods Producing sector is Indian females But note that tha income differential between the Goods and Non-Goods Producing sectors for Indian men is only $393 per annum or 2.7 percent. While Indian females are most disadvantaged group in my sample, the group with the most advantage is non-Indian males. Reviewing the differential in mean incomes, proportionately, a comparable gap exists between the sexes as it does between Indians and Non-Indians, especially in the Non-Goods Producing sector.

Table 7
Industrial Sector Income by Sex ($)

	Males		Females	
	Indian	Non-Indian	Indian	Non-Indian
Goods Producing	14,972	24,524	8,739	18,057
Non-Goods Producing	14,579	19,848	12,064	16,358
All	$14,630	$20,838	$11,958	S16,506

By all age categories, it is clear that the 1978 Indian University Student sample earned less in 1983 than the 1978 Non-Indian University Student sample in 1983. Reviewing Table 8, in absolute tams, the difference in mean income between the Indian who is less than 29 years of age and living on-reserve and the same age group non-Indian, is $5,000 per annum. In the 40-plus age group, the difference in mean income between the on-reserve Indian and the non-Indian is $12,000 per annum. Generally it appears that the earning power of the off-reserve Indian is higher than it is for the on-reserve Indian. This is particularity the case in the 40 plus and under 29 age groups.

Table 8
Mean Income by Age ($)

	Indian			Non-Indian
Age	On-Reserve	Off-Reserve	Total	
40+	16,595	20,020	17,316	28,561
30-39	14,991	14,186	14,680	23,006
<29	10.746	12.247	12,223	15,758
All	$12,891	$13,950	$13,311	$18,410

% Difference from Mean Income

	Indian			Non-Indian
Age	on-Reserve	Off-Reserve	Total	
40+	128.7	143.5	130.1	154.9
30-39	116.3	101.7	110.3	125.0
<29	83.4	87.8	91.8	85.6
Mean	$12,891	$13,950	$13,311	$18,410

Another Interesting finding from the data is that d income compression between the age groups. It appears that income compression or lack of variation from the mean income, particularly in the high end of the range is greater for the Indian sample than it is for the non-Indian sample. Using percentage point differences, the least amount of income compression exists for non-Indians, followed by Indians living off-reserve. In absolute terms, where the difference in mean income between age groups for the non-Indian sample is $12,803 per annum, for the on-reserve Indian sample the difference is $5,649 per annum.

Although the table is not included here, the smallest gap in mean income between the Indian and non-Indian samples exists between off-reserve Indian females and non-Indian females in the age grwp 40 plus. The absolute difference in mean Income was $2,400. This finding illustrates the point that even though an income differential exists between Indians and non-Indians in ail age groups, there is also a larger societal issue of income differential between the sexes in general.

From Table 9 one can seethe breakdown of 1983 mean incomes by the faculty the students were enroled in 1978. There are some surprises and anomalies. As an example, the mean income of $5,445 for the Indian Engineers group seems to be extremely low. Also the relatively low mean income of non-Indians in the Sciences, especially in comparison with the mean income of the Arts students is surprising. Due to small numbers and the non-random natured *the* data sat for the Indian students, one can understand the potential for errors, however, this is not the case for the non-Indian Student data set.

Table 9

1983 Mean Income by Faculty Enroled In 1978

	($)		% Difference from Mean	
Faculty	Indian	Non-Indian	Indian	Non-Indian
Other	14,434	16,680	91.8	90.6
Arts	17,692	19,819	113.7	107.7
Science	20,063	14,250	127.5	77.4
Engineering	5,445	21,570	34.6	117.2
All	$15,731	$18,410		

Overall, for 1983, there is a consistent pattern d income disparity between the Indian and non-Indian student samples by faculty enroled in 1978. One area where on average the Indian students

earn more than their non-Indian counterparts is in the sciences. A likely explanation for this could be that since there are so few Indians enroled *in the* sciences, *those* that make it into the labour force with a science background are in a position to command better salaries than their non-Indian counterparts.

An example of the shortage of Indian science students is when in 1966 the Canadian Council for Native Business' and several energy sector companies in Western Canada initiated a Native management internship program in the oil and gas sector. The program sought 15 Native candidates with a background in the sciences to work as interns for up to 12 months. Despite a nationwide search, even after one year it was difficult to fill all positions

Table 10 presents a comparison of 1963 mean incomes between Indian and non-Indian university student samples by their region of employment. The only region of employment which shows the Indian sample as having a higher mean income than the non-Indian sample is in Quebec. The largest difference exists in the Prairies, Atlantic and Ontario regions in that order. The high mean income for the Indian sample in the Quebec region is curious, however, there is a sizeable number of sophisticated public and private sector Native ventures in the province. In addition, there& an incipient degree of integration between the Indian and non-Indian economies. As examples, one can look at the network of Indian run caisses populaires, e.g., Kahnawake and Huron Village, or the numerous joint venturea between the James Bay Cree *and private corporations.*

Table 10

1983 Mean Income by Region of Employment

Region	Indian	Non-Indian	Difference $	%
Atlantic	11,679	17,384	4,705	67.1
Quebec	20,758	17,656	<2,902>	116.3
Ontario	13,056	18,239	5,181	71.6
Prairies	12,717	21,468	8,751	59.2
British Columbia	14,253	17,583	3,330	81.1
NWT/Yukon	0	23,160		
Outside Canada	o	27,571		
All	$13.311	$18,410		723%

CONCUSSION

Having waded through the myriad tables and numbers, what does this ail mean? Considering the range of income indicators available, it appears that the Ontario Indian university "Class of 1978" in the 1983 workforce is doing less well than the Ontario non-Indian "Class of 1978". Comparing mean income by industrial sector, age-sex criteria, university faculty background and region of employment between the two sample groups, the findings are dear but not surprising; a disparity exists and on average the Indians are earning less per annum. Such a finding, however, does not fully address the context or answer the question why this situation continues to exist. Post-colonialism casts a long shadow which includes discrimination, economic displacement and other impact related variables,

THE CONTEXT OF LARGER ISSUES IN INDIAN EDUCATION

Placing this paper's findings in a broader context, it is accurate to state that in the past several years there has been an explosion of activity in the Indian education arena. However, it is equally correct to state that the results have been mixed, especially if the objective is parity or equity in achievement or representation within non-Indian society. Looking to the next five to ten years, consider some of the issues which Indian leaders, students and families; government policy people and educators will confront (many are not new issues):

In School. Drop-out rates, absenteeism and age-grade deceleration continue to plague the system. What more needs to be done?

Streaming. Full funding has existed for the university student but not for the vocational and trades student. Consequently, many students have been streamed into a university track simply to receive government support. Will the occupational track be upgraded?

Control. in practice what does Indian control of education mean? Is it input into curriculum and programs or access to federal-provincial transfer payments for education?

Structure. Three universities now have programs where program governance is shared with the Indian community (Trent, Lethbridge and Regina). How are these models working and are they the basis for an institutional-structural presence by Indians in university education?

Demography. The large urban population, echo baby boom and Bill C-31 people are radically changing the make-up of the 'client' population. What are the implications for educational requirements?

Financing. At some point does the federal government say enough, that parity objectives have been met and hence the need for extraordinary financing is unnecessary? How should equity or parity be measured?[5]

I set these issues out but do not claim to have the answers Many are complex and long standing problems. Others are new and emergent problems which require innovative thinking, resources and cooperation between groups.

In summary, thii paper's findings are not new. They only reinforce an oft echoed sentiment that educational attainment levels must continue to improve on all fronts if Indian people are to tske their full and rightful place in Canadian society. Furthermore, without an educated populace, other socio-economic development and self-government initiatives will have difficulty coming to full fruition. And only with this type of achievement will equity in income, employment opportunities and societal welfare be achieved.

For now, well-done 'Class of 1978!'

NOTES

1. When the term 'Indian' is used, I am referring to that grwp of aboriginal people under the *Indian Act.* Métis and non-status Indians are not included. Note that the term Native is used to include all of these groups.

2 The data used in this study were made available through the Department of Indian Affairs and Northern Development The interpretation and opinions, however, remain solely those of the author. Record linkage data work was carried out by officials at Statistics Canada Reference of the "Class of 1973' Includes students who where registered in university programs in 1978 and not only those who graduated in 1978.

3. *included* primary *and* secondary industrial sector activities.

4. This iS a private sector group whose aims are to assist the development of Native business in Canada. Headquartered in Toronto, a major program activity of the CCNB has been in arranging internships for Native business people.

5. In fact, changes to DIAND's post-secondary education program, effective April 1, 1939, are beginning to cause considerable political reaction by Indian leaders. The capping of support entitlement at 48 months vs. 96 months is a key issue. Beyond this, however, is a larger issue of whether education is a treaty right.

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THE QUANTUM DEBATE AND THE COLLAPSE OF THE 1984 YUKON LAND CLAIM

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INTRODUCTION

The land claims process in Canada is one in which Native populations negotiate with the federal government for retention d control over land. Such control may range from ownership of surface and subsurface resources to rights to hunt, fish, or trap on lands owned or controlled by other bodes. It is a process that has arisen either because indigenous populations never signed treaties surrendering land to the Crown in the first instance, or because treaties were signed without the population being fully cognisant of their meaning. Discussion d land claims has been around for a considerable length d time, but the only real impetus to deal with the issue came with proposed large scale domestic energy developments in the late 1980s and early 1970s. The James Bay Claim, the Inuvialuit Claim, the Yukon Claim and the Dene Claim were all in regions affected by actual or proposed megaprojects.

There are three components in fand claim agreements: land; agreements on Native participation in various programmed; and financial compensation. Essentially, the government negotiates with indigenous populations for fand to which they have never surrendered title. In return for surrender, the Native group will retain defined title to some land, obtain financial compensation, and obtain various jurisdictional rights

When a proposed land claim agreement in the Yukon collapsed in 1984, one of the major reasons cited for the collapse was inadequacy d the land base and inequities in the distribution of land on a band by band basis. This paper critically reviews the rationale behind land distribution in the abortive claim, and examines the various arguments concerning the fairness of the procedure.

THE QUANTUM ISSUE

Yukon Land Claim negotiations commenced in the mid-1970s when the Yukon Indian Brotherhood outlined its position in a document, 'Together Today for our Children Tomorrow,' in which it called for settlement of their claim both as a basis for continuing and enhancing traditional pursuits and values and as a basis for increased participation in commercial activity. By 1984, ten of the twelve Indian Bands had selected land, and it was expected that in total the land claim would provide Yukon Indians with some 8,500 square miles of land and $380 million in compensation, as well as participation in the fand and resource management process.

The total amount of land to be retained by each band was based on band population, 'quantum' (the amount of land allocated per capita) ideally reflecting the amount of land required to support the population, and the resources available in the particular land claim region. From the government standpoint, the human and economic geography of the Yukon made the selection of land to be retained by Yukon Indians highly problematic. Unlike other region north of 60 subject to Land Claim negotiations, the Yukon has a well developed non-Indian infrastructure, a widely dispersed settlement system and numerous third party interests and alienations. A major government objective in the land claims process is to resolve claims without either surrendering third party interest or detracting from the pace of development As a result, the land selection process was constrained insomuch as that areas in whkh third party interests had been identified were not available for selection, and this made the retention of land that would reflect the general character of land claim regions rather difficult.

Factors having an impact on quantum, ideally, were the economic base of the band, the potential uses of land, and the degree of band exposure to non-traditional development. Some areas of the Yukon, it was argued, have experienced extensive 'development,' while others have not, and have extensive traditional pursuits that must be protected. Areas with well developed lines of communication and high population levels had greater development potential than more isolated regions, and contained indigenous populations attuned to development impacts Land in these regions could potentiality generate substantial revenues and provide a variety of employment opportunities for Indian bands. The more northerly communities were viewed as having the least potential and the greatest reliance on traditional pursuits. More succinctly, it was further argued that lands in the Southern Yukon had considerable exchange value because of their location relative to highway access, tourism, mining development, etc., while the more northerly communities were suited to little other than traditional harvesting.

The proposed agreement recognised that there were various objectives in the kind claim process that could not be met by land retention alone. Financial compensation combined with Indian management of various programmed was designed to compensate for land surrendered to the federal government and assist Yukon Indians in meeting a number of diverse goals on a diminished land base. Monies provided as part of the proposed agreement were not intended to compensate individual bands for maldistribution in quality or quantity of retained land. Variations in land quality were see to be self-compensating, land quality was a surrogate for land quantity.

The manner in which variations in quantum were designed to accommodate the apparent differences in potential, and different attitudes toward land can be seen by examining differences in

quantum between the communities of Carcross and Old Crow. Carcross in the South obtained a low quantum allocation (.85 square miles) on the grounds that it lay in a resource rich area with a bng history of development and access to a variety of economic opportunities. On the other hand, Old Crow obtained extensive land (a quantum of 10 square miles) as a reflection of the limited devebpment opportunities in the region and its strong dependence on country food harvests. Carcross and Old Crow represented the extremes of the quantum range. The highest quantum outside Old Crow was 1.1 square miles.

In late summer 1984, concerns were expressed by some of the Yukon bands that there were major deficiencies with the land claim, and the land claim collapsed for a variety of reasons, the most important of which were inability to obtain sub-surface rights, concerns about the surrender of aboriginal title and apparent inequities in land distribution and quality. The overall issue was multi-faceted, but essentially the arguments for and against the land component of the claim could be summarised as follows

1. The *claim is fair.* The Yukon has a relatively fong history of devebpment and there is tremendous competition for use of land. Yukon Indiana are becoming increasingly assimilated into the economy and require an agreement that will aid in this process. The land claim is perhaps not land rich, a number of competing interests have to be protected, however, programme provisions and cash compensation more than compensates for this. Indeed, the claim could perhaps be characterised as classically liberal, reflecting the philosophy that disadvantaged groups in society should not be given any special rights over and above those of other Canadians, but should be provided with the basis for competition on an equal basis.
2. The *claim is unfair.* The land base is inadequate and does not reflect the actual land needs of Yukon Indians. It fails to live up to the stated objectives of the Land Claims process, fails to allocate land fairly between bands and provides very little valuable land for Yukon Indiana.

Data compiled between 1982 and 198S in a land use potential mapping exercise directed from Ryerson Polytechnical Institute (Duerden, 1985) indicated that there were some marked inequities in land distribution and a general lack of diverse or high land-use potential. Information generated by and synthesized in the study was evaluated in order to assess variations in land quality from band to band, and the extent to which variations in land quality were compensated for by variations in quantum.

Each land claim block (there were between nine and fifteen of these associated with each of the nine communities that had selected land by 1984) was divided into four kilometre square grids and

each grid was then assigned a score on the basks of the presence of identified land-use potential--importance for wildlife harvesting, mineral potential, forestry potential, agricultural potential and tourism potential-weighted by accessibility. Land was classified as of nominal quality (no potential other than traditional pursuits), fair quality and good quality. Generally, communities with the lowest "quantum" allocation had both proportionally and absolutely the highest incidence of land of fair quality or better (Table 1). Old Crow, the band with the highest quantum, had the lowest proportion of good quality land, while Teslin, with one of the smaller claims, had the highest. However, there were two marked exceptions to the pattern, Carcross and Burwash Landing, both were to receive substantially less quality kand than communities with higher quantum, giving credibility to the argument that quantum allocation was flawed.

Table 1

The Relationship between Land Quality and Quantum

	Total Land Area (sq. miles)	Quantum	% of Land with Fair to Good QuaJay	Area (sq. mikes)
Teslin	391	.85	30	117
champagne	459	.85	24	110
Uard	637	.85	23	146
Dawson	470	1.10	14	66
Pelly	451	1.10	14	63
Carcross	335	.85	11.5	37
Burwash	300	.95	8	24
Carmacks	495	1.10	6	30
Old Crow	3,034	10,00	2	61

Communities are ranked according to proportion of quality land, As quantum (expressed in square miles per capita) increases, the amount of quality land retained by bands decreases. Carcross is a marked exception to thii trend, suggesting that even nominally variations in quality did not fully compensate for variations in quantum. The communities with the lowest quantum are all on the highway system in the Southern Yukon, where there tend to be increased pressure on land and numerous third party interests.

Notwithstanding these obvious anomalies, it was demonstrated that there was a tendency for the amount of quality land to fall markedly as quantum increase. However, it was questionable whether the variations were a realistic reflection of variations in the geographies of the land claim regions and whether quality and quantity were equated in such a way that the tradeoff between the two was a fair one.

The sub-Arctic region of the Yukon occupies an area well In excess of 100,000 square miles and within it there are both marked ecological and cultural variations. The former are manifest in the variety of ecoregions and attendant implications for carrying capacity (Oswald et al., 1960) and the latter in different attitudes toward traditional resources (Dawson Han vs. Teslin Tlingit) as well as widely differing experience with "industrial" development (Dawson, with a long history of development, contrasted with communities such as Burwash or Pelly that are virtually bereft of commercial enterprise). The eleven bands South of Old Crow would have retained a total of 5,500 square miles of land, less that 6 percent of the sub-Arctic region The difference between maximum and minimum quantum between the eleven bands was .25; an allocation of 25 square miles of land for each one hundred band members would compensate for the most extreme variations in attitudes, experiences and geographies.

In contrast, Old Crow with a population of only 300 obtained some 35 percent of the land available in the entire Yukon Claim. It was argued that the band obtained a high quantum because of its strong traditional character and concomitant land-extensive dependence on wildlife harvesting. Work by Stager in the early 1970s and more recently by Shelagh Murphy (1966) has competently chronicled the land dependence of the Old Crow people. The relative isolation of the Old Crow band combined with the fact that the population is almost exclusively Indian have been other arguments in favour of protecting the Old Crow people through provision of extensive areas of land. The deal given to Old Crow recognised the extensive space economy of the community and was a fair reflection of the territory they required in order to exist. It is when the Old Crow quantum is compared with quantum obtained by other bands that problems become evident

PROBLEMS WITH THE APPROACH

Old Crow is not the only 'exclusively Indian' village in Yukon. Both Pelly Crossing in the central Yukon and Burwash Landing in the Southwest have almost exclusively Indian populations. Old Crow is by no means unique in its dependence on country food. Dimitriov (196S) has indicated a 60 percent dependency on country food in Ross River, while Duerden (1966) indicated a somewhat lesser but still strong dependence on country food in Teslin in the more developed Souther Yukon (up to 37% of food needs). Survey work accompanying the Yukon Indian Lands Mapping project (1965) yielded the information that protection and enhancement of traditional pursuits was the most common single motive for land identification, and recent work by Staples and Usher (1966) has further undefined the preponderance of Native harvesting activity throughout the Yukon.

In reality, the effort required to obtain country food in Old Crow may well be considerably less than in many hybrid communities in the South. In the South there are numerous competing uses for

land, and a generally disruptive pattern of transport corridors and resource access roads, both bringing various environmental pressures to bear on wildlife populations and competition from non-indigenous hunters Land claim blocks associated with Southern bands were fragmented and widely dispersed, meaning that, on the one hand, bands would have to incur high costs of access, while, on the other hand, they would not have the psychological satisfaction of control over consolidated territory. In contrast, old Crow% lands were highly consolidated; moose, caribou, and salmon are all in the Immediate vicinity of the community, and are not affected by competing or disruptive use of the land. Recent work in Alaska by Wolfe et al. (1987) has clearly documented the negative impact of accessibility on Native harvest levels. The latter study and contrasts between harvest levels in Teslin in the Southern Yukon (Duerden, 1986) and other Yukon locations (Murphy, 1986, Dimitriov, 1985), indicate that harvest decline is largely associated with negative externalities generated by modem communications and economies as opposed to the lure of alternative employment opportunities. The Teslin study clearly demonstrated that decline in harvests were not offset by employment in non-traditional economic activity. Thii observation tends to weaken the logical implication of the stated rationale for quantum variations that populations in communities in more highly developed areas would avail themselves of non-traditional employment opportunities. .

Maldistribution of quantum was exacerbated by the impact of the government policy of respecting existing alienations and third part interests which generally had a negative impact on the extent to which land-use potential could be realised and the extent to whii it would really represent potential in the land claim region. Rugged terrain and climatic constraints mean that river valleys are of prime importance in the Yukon as communication corridors, sites for settlement and commercial development, and as relatively hospitable locations for agricultural activity. It is thus within river valleys that development has been concentrated and in which iii the greatest incidence of third party interests, and accordingly it was in these high quality areas that land selection was very limited. Inability to obtain or effectively control good quality land was further reinforced by stipulation in the proposed land claim agreement that a corridor of a quarter of a mile be resewed on each side of a highway for government use and transportation corridors. Indeed, the presence of public access routes could well detract from the apparent high land use potential of some Southern land claim blocks.

Whether variations in quantum throughout the Yukon were realty an attempt to distribute land in a fair manner, as opposed to a reflection of government concern about the impact of a land claim on existing and future land-use patterns, is debatable. Those areas with the greatest 'development potential' and third party interests were also those areas with the greatest Indian populations, and thus it was in the government's interest to restrict the size of land claims in such regions by reducing per

capita allocations. Relating quantum to economic opportunity conveniently served to minimise the spatial impacts of land claims in such regions. The observation made by Murray Coolican that, "Some Aboriginal groups in the north are able to pursue traditional activities over vast areas of land precisely because third party interests in those lands is limited" is as good an explanation as any for the greatly increased quantum in the Old Crow region (Task Force on Native Claims, 1985). It is understandably far easier for government to allow large land claims in isolated regions where there are few third party interests or alienations.

One school of thought is that the quantum approach to land allocation is culturally flawed, in that it reflects the biases of the numerically dominant culture in Canada, and is inappropriate for indigenous populations. This approach was taken by Yukon bands pursuant to the collapse of the claim in 1984. Numerous studies (Freeman, Brody, Berger, etc.) have indicated that to Native peoples, land is immediately and consciously the source of sustenance and their action space. Retention of land-use information, excellent mental maps and the identification of landscape features regarded to be of marginal relevance by non-Indian society are symptomatic of this (Cruikshank, 1982 and Freeman et al., 1976), and are indicative of the importance and vitality of Native perspectives on land and land use. Such perspectives are generally alien to the Western intellectual tradition and defy quantification. Although the Yukon has, more than any other part of the North, been transformed by industrial society, traditional values are still strong, and are reflected in attitudes toward land. Contrasts between sycophantic European toponomy and Indian navigational toponomy are a major indicator of this, as is the priority placed on land as source of food, as opposed to a source of industrial and quasi-industrial resources. In the eyes of the numerically dominant society, non-Indian society--which sets the rules for land selection--land is perceived to be something which is outside, or scenery, or the basis for generating profit. The very idea that land can be abstracted from all other aspects of life and has measurable qualities is symptomatic of this world view, and runs counter to the more holistic perspective of Native populations. An approach to land allocation that sees quality and quantity as measurable is thus incompatible with traditional attitudes.

CONCLUSION

A more tangible, less phenomenological objection to the quantum approach is that it was incompatible with the land claims process. In order to accept the mechanism for allocating quantum that was used in the Yukon, one has to accept the argument that the amount of land to be retained by a First Nation should depend on the quality of land, that control over land should not be based upon arguments revolving around legality of occupancy, but rather in terms of the "reward that can be

obtained from use of that land," and that quality and quantity are interchangeable. The question becomes one not of "are you legally entitled to that land?" but rather "what useareyw going to make of that land? Whatvaiue does it have.. .?"–all of course defined in the terms of the numerically dominant culture. The repudiation of this approach by Yukon Indians was central to the collapse of the 1984 aim: theyargued thatiand to be retainedby them should be identified on the basis of need. Bands would identify the lands they required for a secure future and would surrender the balance in the land claims process.

Proponents of the quantum approach could, with some justification, argue that culturally based opposition to the approach is too purist, that it fails to recognise that Yukon Indians have enunciated a variety of aspirations, by no means all of them related to traditional pursuits (Yukon Indian Brotherhood 1973 and Duerden, 1986). Furthermore, Yukon Indians have had greater exposure to commercial type development than any other Northern group, and exposure to the value system of non-indigenous North American society. The ambiguous aspirations of Yukon Indians are reflective of a demographic split in rural Indian society generally, a split between an older generation with undeniably strong ties to the land and a younger generation with aspirations more reflective of an industrial/commercial economy. Alienations and population pressures, commercial pressures and the fact that land is a finite resource all combine to make the quantum approach necessary.

If this argument is accepted, then it was incumbent on the proponents to develop a rigorous and fair process. As a prerequisite to the quantum approach, a comprehensive land classification exercise should have been conducted at the outset, and the types of tradeoffs implicit in the process clearly outlined. As it was, there was a marked discrepancy between the arguments in favour of the quantum approach and the actual application of the approach. The end product was a land claim that was insensitive both to the geography of the Yukon and to the land-use requirements of Yukon Indians.

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