

CANADA'S ABORIGINAL PEOPLES: SOCIAL INTEGRATION OR DISINTEGRATION?

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Abstract/Résumé

Although Canada ranks highest in the world on the United Nations “Human Development Index,” Aboriginal Canadians rank much lower. This paper reviews current statistical data to demonstrate inequalities and to suggest the extent of negative feedback among poverty, health and social structure. The conclusion notes some of the implications for social development policy.

Bien que le Canada occupe le rang le plus élevé du monde dans “L'Index du développement humain,” les Autochtones canadiens occupent un rang beaucoup inférieur. Cet article réexamine les données statistiques courantes pour décrire les inégalités et pour suggérer le degré de réaction négative dans la pauvreté, la santé et la structure sociale. Pour conclure, on prend note de quelques-unes des implications pour la politique du développement social.

Although Canada is one of the world's most secure and prosperous countries, its Indigenous peoples—who make up nearly 3 percent of its population and who form the numerical majority in the northern half of its territory—are significantly disadvantaged.¹ Canada, *as a whole*, scored the highest of all countries on the United Nations' “Human Development Index” [HDI] last year, but Aboriginal Canadians fell in the “medium” HDI range together with countries such as Albania, Cuba, Paraguay and Iraq (UNDP, 1993). This underscores the need to desegregate measures, such as the HDI, by ethnic and regional groups. It also raises important questions about the efficacy of national development strategies which, like Canada's, rely on large quantities of top-down funding to promote the equalization of conditions of marginalized sectors of society.

Compared to other industrialized Western countries, Canada still relies relatively heavily on extractive industries and exports of raw materials, principally to the United States. Historically, Canadian prosperity has been tied to the existence of an “extractive frontier” where population densities were very low, and natural resources were abundant, untapped and essentially free. The extractive frontier, in turn, has been the cause and result of social and legal discrimination against Aboriginal peoples. Inexpensive access to new lands depended upon a policy of keeping Aboriginal peoples separate and unequal, with neither the rights nor the power to demand full value for their labour and materials. As a result, the Canadian economy and society continue to be *segmentary*, with one segment enriched by the marginalization of the other. The growth of government social-welfare programs in the 1960s has helped reduce the inequality of income and educational levels, but has arguably deepened Aboriginal peoples' feelings of exclusion, self-rejection and powerlessness.

This article surveys current statistical data on the population, economy, health, family integrity, and social conditions of Aboriginal and non-Aboriginal Canadians. The purpose is not only to demonstrate the existence of gross and persistent inequalities, but to suggest the extent to which negative feedback is occurring between poverty, health and social structure. Some implications for social development policy will be raised in the conclusions.

Data Quality

Existing data on Aboriginal peoples must be treated with a degree of caution. The Department of Indian Affairs and Northern Development compiles data on Registered Indians and Inuit; data on Inuit are also collected by the Government of the Northwest Territories using its own criteria. Census data are available for Indians, Inuit and Métis, but are based on self-identification rather than upon legal status. Published data sets are therefore not strictly comparable and do not include the same range of topics (Frideres, 1993:127).² Data on Registered Indians is more extensive overall, but not necessarily more reliable.

One drawback of the use of data from different sources and years is an inability to detect the statistical variance in socio-economic characteristics: how much Aboriginal employment levels fluctuate from year to year, for example. Only the broadest trends over time can be discerned with any confidence.

Another concern is the lack of complete coverage by national censuses due, at least partly, to the reluctance of many Aboriginal communities to

participate in data-collection. Some sense of the magnitude of the problem can be obtained by comparing the number of Registered Indians in Canada according to the Department of Indian Affairs and Northern Development's (1992b) registry—533,461—with the number of persons who self-identified as Indians in the 1991 census: 460,680, or 14 percent fewer (Statistics Canada, 1993a). This renders any kind of quantitative precision illusory. Ratios and percents are presented here to two significant digits only, except in a few instances where a greater level of precision appeared warranted by the data source.³

Canada's Extractive Economy

Canada is one of the world's largest countries in terms of land (9.2 million square kilometres) and a relatively small one in terms of population (just over 27 million). The reason for this is ecological. The Central region (Ontario and Quebec) is mostly covered by a massive rock formation, the Laurentian Shield, which is characterized by poor, thin soils. The Atlantic coastal region, although once extremely rich in fish, also has mostly poor soils and a short growing season, while conditions in the North are sub-arctic to arctic. The western Prairie provinces (Manitoba, Saskatchewan, Alberta) offer good soils but short growing seasons and harsh winters. Most of British Columbia is highly mountainous terrain, and human activity has been focussed on the coast and a few large river valleys for millennia.

As a result, most of Canada's population is concentrated in three small areas: (1) the St. Lawrence Corridor, which includes some small but fertile areas of southernmost Quebec and Ontario, and Canada's two largest urban agglomerations, Montreal and Toronto; (2) the southern, relatively fertile Prairies, including Canada's major petroleum fields and three large cities (Winnipeg, Edmonton, and Calgary); and (3) the Vancouver-Victoria urban agglomeration, Canada's major Pacific ports. Population density throughout the rest of Canada averages less than 2 persons per square kilometre. Like most of Canada's population, most of its secondary and tertiary economic sectors are concentrated in the southernmost part of its territory within 500 kilometres of the United States. Farther north and in the Atlantic region, the economy remains chiefly extractive—minerals, forests, fish, and hydroelectric power.

All sectors of the Canadian economy have grown in real terms over the past thirty years (Table 1), but the strongest growth has been in communications, utilities, finance, and services, which have increased their share of total GDP. Primary industries now account for only 7.0 percent of GDP. However, raw materials still account for nearly half (46.4 percent) of

Canada's exports (Statistics Canada, 1993g). Leading Canada's raw material exports are mineral fuels, metals and ores (23.2 percent) followed by wood, pulp and paper (14.9 percent), agricultural products such as cereals, vegetables, vegetable oils, and meats (6.9 percent), and fish and shellfish (1.4 percent).

Canada's economy has long been closely tied to the economy of the United States. The United States is Canada's largest trading partner, buying 77.0 percent of total Canadian exports in 1992-93 (Statistics Canada, 1993g). A little more than a third of Canadian exports to the United States consists of raw materials, mainly metals and wood, while most imports from the U.S. are manufactured durable goods (Statistics Canada, 1993l). Canadians have CD\$57.8 billion invested in the United States, or 58 percent of all Canadian foreign direct investment, and Americans have CD\$87.3 billion invested in Canada (Statistics Canada, 1993h:53-56).

After strong growth in the 1970s, the Canadian economy stalled in

Table 1: Characteristics of the Canadian National Economy (1962-1992)

	GROSS DOMESTIC PRODUCT (billions of 1986 dollars)			LABOUR	
	1962	1992	annual change	Employment	Earnings
				(thousands)	(average /week)
	1962	1992	annual change	1992	1992
All industries	\$168	\$502	6.1%	11,808	
Percent from					
mining	6.3%	4.1%	2.8	2.1	\$935
fish and forests	1.5	0.8	1.4		701
agriculture	5.0	2.1	0.6	3.5	
manufacturing	20.9	17.0	4.4	14.6	656
construction	8.2	5.8	3.3	5.6	639
transportation	5.0	4.7	5.5		
communication	1.3	3.9	25.8	7.5	705
utilities	2.1	3.4	11.9		
finance	13.0	16.9	8.9	6.2	593
services	20.1	22.8	7.4	36.0	478
trade	10.7	11.9	7.2	17.6	402
government	9.3	6.8	3.6	6.8	723

* Data is from Statistics Canada, 1993e. Finance includes insurance and real estate; services include all business, community and personal services; infrastructure combines transportation, communication and utilities.

1982, and GDP shrank by 3.7 percent. Since then, the economy has been characterized by modest growth, averaging 3 percent per year despite a second, shallow recession in 1990-91. Unemployment rose steadily from 3.4 percent in 1966 to 11.8 percent in 1982, and has remained over 10 percent despite a brief expansion in the late 1980s (Statistics Canada, 1993e). Unemployment is most severe among young adults 15-24 years of age (17.8 percent). Since 1966, the number of claims for unemployment insurance has grown from 1.5 to 3.8 million per year, or from 13 to 27 percent of the labour force. Unemployment is most severe and fastest-growing in the Atlantic region, which is suffering from the exhaustion of its iron and coal deposits, severe depletion of its fisheries, and the inability of its forest industries to compete with forests in more fertile and temperate regions of the world.⁴

Aboriginal Population: Structure and Distribution

The original size of the North American Indigenous population has become a matter of politically-charged dispute. DIAND maintains that there were no more than 100,000 *Indians* in Canada in 1867 (INAC, 1980:15), or about as many as were formally registered in 1929. Estimates of the pre-colonial population of the continent run as high as several millions, however, and it is reasonable to suppose that Canada's 1929 Indian population was only a fraction of what it had once been (Barsh, 1991; Denevan, 1976). Thus, while Aboriginal peoples have remained at just over 2 percent of the total population since the first estimates were made a century ago, it should be borne in mind that the ratio was the reverse at an earlier time, perhaps as recently as the 1820s.

In 1991, 29 percent of Canadians identified themselves as having British origins, and 23 percent as having French or "Acadian" origins (Statistics Canada, 1993k). Half of the former live in Ontario, while four-fifths of the latter live in Quebec. Another 18 per cent of the Canadian population reported mixed British, French, and other origins, and 14 percent reported other Western, Southern, and Eastern European backgrounds. All together, then, 84 percent of Canadians identify as European. Immigration has increasingly been Asian. Canadians of East and Southeast Asian origin currently make up nearly 4 percent of total population—one-half in Ontario, and one-fourth in British Columbia, chiefly in Vancouver. Nearly 2 percent of the national population is now of South Asian ancestry, also with about half in Ontario, and one-fourth in British Columbia.

Although Aboriginal peoples have been a focus of Canadian policy and Canadian consciousness from the start, the broader issue of racism has

only emerged recently, as a result of the emancipation of British colonies and increased migration between former colonies and wealthy, "white" countries of the British Commonwealth such as Canada. Charges of intolerance have become more frequent, and are challenging Canada's cherished self-perception as a peaceful and non-racist society. It is important to recognize that recent Asian immigration has changed the ethnic complexion of major cities, businesses and professions, while Aboriginal peoples were largely isolated in rural areas and the North, outside of the experience of the European majority.

Population Size and Growth

Although Aboriginal fertility today is much lower than it was two to three generations ago, Aboriginal infant mortality has been falling faster since the 1960s, creating a "baby boom." It has been estimated that Aboriginal women born in the 1920s-1930s had an average of 6.3 children; by 1986, the average Aboriginal woman had 3.8 children and the average non-Aboriginal woman had 2.5 children (Frideres, 1993:134; Siggner, 1986). Aboriginal fertility rates are highest in the Prairies and the North, and lowest in the Atlantic region.

Canada's birth rate has been falling for decades and is currently 14.6 per thousand (Statistics Canada, 1993j:16). Canada's growth rate in 1992-93 was 1.51, 0.74 percent from natural increase and 0.77 from immigration. The birth rate for Registered Indians, by contrast, was more than 27 per thousand in the 1980s (Health and Welfare, 1992a:10), an annual population growth rate of more than 2 percent. Inuit birth rates may have increased slightly since villagization in the 1950s and were as high as 36 per thousand in the 1980s.⁵

As a result, the Aboriginal population continues to grow faster than other segments of Canada's population, and Aboriginal households tend to be somewhat larger than other Canadian households. During the 1980s, the average Aboriginal household was *one-half* person larger than the national average; among Inuit and Reserve Indians one person larger (Frideres, 1993:158). The effect of household size on standard-of-living will be discussed below.

Age Structure

The population of Canada as a whole is aging rapidly, the same as other highly industrialized countries. Canada's Aboriginal population remains relatively younger (Table 2), although it is also beginning to age. About one-third of Indians, and two-fifths of Inuit are under 15 years of age (Health and Welfare 1991a:10)⁶ compared with 21 percent of all Canadians

who are less than 15 years of age (Statistics Canada, 1992a). Hence while the Canadian “baby boom” generation is aging into retirement, the Aboriginal “baby boom” generation is just beginning to age into the labour force (Frideres, 1993:143). In effect, Aboriginal people are “aging more slowly than the Canadian population” as a whole (Siggner, 1986:6), particularly in the North (Maslove and Hawkes, 1989).

Geographic Distribution

Moving northwards through any part of Canada except the Atlantic coast, population density decreases, and the proportion of Aboriginal peoples increases (Map 1). Nearly all Canadians live within 500 kilometres of the U.S. border, chiefly in the St. Lawrence River corridor, the southern Prairies, and the southernmost part of British Columbia. A large part of Canada’s Indians live farther north, in a belt running midway across the country to Alaska. This also marks the demographic boundary between the southern part of Canada that has a non-Aboriginal majority and the North-

Table 2: Demographic Characteristics of Aboriginal Peoples (1991)

	REGIONS					TOTAL
	Atlantic	Central	Prairie	Pacific	North	
Aboriginal population	24,720	171,190	289,570	101,135	39,105	625,710
Ethnic structure (percent)						
Indians	72	85	66	92	36	73
Métis	9	11	34	9	10	22
Inuit	19	4	1	--	54	6
Children 0-14 years (percent)						
All Aboriginal peoples	38	35	41	35	39	38
Indians	37	34	41	35	35	37
Métis	34	33	39	34	34	38
Inuit	41	42	--	--	43	43
Residence patterns (percent)						
Indians, dispersed*	49	70	57	67	96	64

* Data is from Statistics Canada, 1993a. Based upon self-identification. "Dispersed" refers to persons not living on Indian Reserves, or in officially-designated Indian settlements.

ern region that has an Aboriginal majority.⁷ As a result of the outmigration of non-Aboriginal people, especially from Northern Quebec and Labrador, the Aboriginal majority in the North has been increasing rapidly (Maslove and Hawkes, 1989).

In southern Canada, Aboriginal people form the largest proportion of the total population in the Prairie provinces. The Prairie region is home to nearly half (46 percent) of all Aboriginal people including 41 percent of all Indians and 73 percent of Métis.

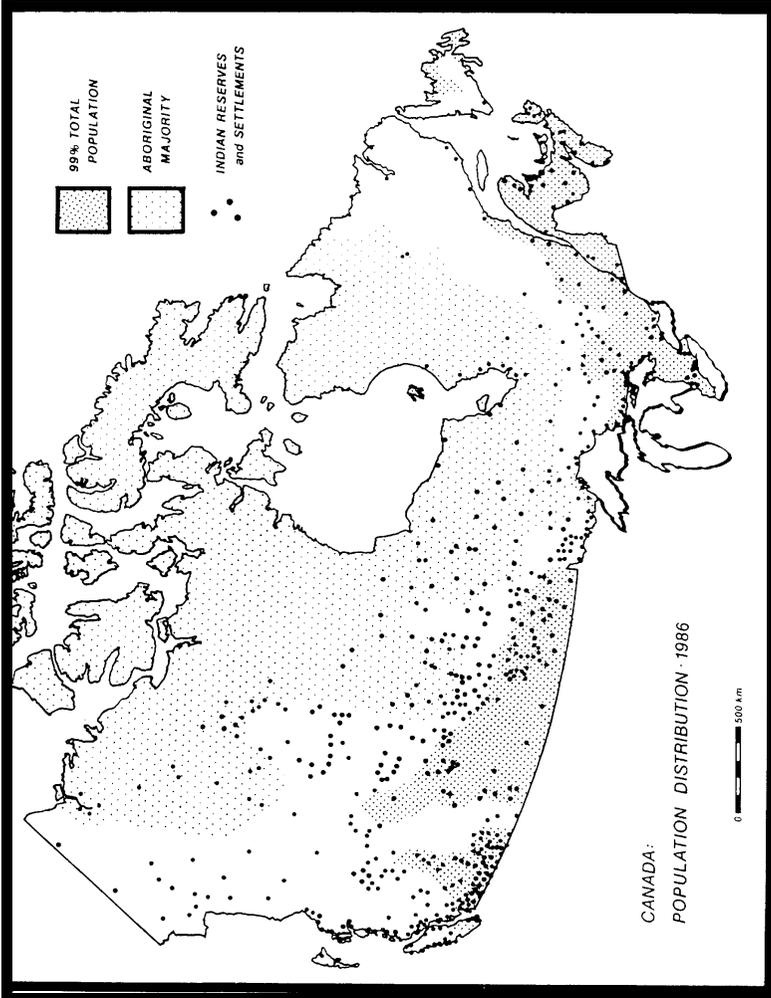
There are regional differences in the number and average sizes of Indian Bands. In British Columbia, where about one-third of all Bands are found, half of them number fewer than 100 persons. In the Central region, one-third of the Bands number fewer than 100 persons, while in the Prairies only one-sixth of all Bands are that small. This pattern reflects differences of history. In the Central and Prairies regions, a history of war, diplomacy, and treaties with relatively large tribal confederacies resulted both in large land concessions, and a policy of displacement and containment of Aboriginal nations. Europeans settled along the Pacific coast without treaties, however, interspersed among small, autonomous Aboriginal villages which were rarely displaced. In consequence, Pacific Bands remain small and numerous.

Migration and Urbanization

Migration to urban areas increased rapidly in the 1960s. As late as 1966, 70 percent of Registered Indians still lived on Reserves, but this has declined to 59 percent (Siggner, 1986; Table 2). People from the small, job-poor Reserves of southern Canada have tended to move to existing Aboriginal enclaves in Canada's larger cities or neighbouring U.S. cities such as Boston, Detroit and Seattle where—at least in the past—there were plentiful jobs for unskilled or semi-skilled workers. Urban migrants tend to be young (20-29 years of age) and have children (Frideres, 1993:149).

About 25 percent of Aboriginal people today can be found in one of Canada's 11 largest cities⁸ today (Statistics Canada, 1993a). Most (69 percent) of these city-dwellers are Indians, and nearly all of the rest are Métis. The largest concentrations are in Winnipeg, Edmonton, and Vancouver but nowhere do Aboriginal people comprise more than five percent of a city's population.

Although urban Aboriginal communities have grown, urban residence is a temporary economic strategy for many individuals. A study of the Mikmaq enclave in Boston found that most people returned to their home Reserves after obtaining a post-secondary education, or accumulating some savings (Guillemain, 1978). Net migration statistics also indicate



frequent circulation between urban areas and Reserves (McDonald, 1989; Siggner, 1986), rather than permanent urbanization.

Aboriginal Resource Endowments

As shown in Table 2, a very large proportion of Canada's Indians no longer live on lands reserved by law for their use. This reflects the inadequate size, minimal resources and isolation of most Reserves.

In the 10 provinces that make up the southern half of Canada, the government has by treaty or legislation set aside 2.7 million hectares as Indian Reserves (INAC, 1990). Reserves are small, averaging about 10 square kilometres, and many offer little more than housing sites.⁹ Reserve lands average less than 6 hectares per capita.¹⁰ This compares with nearly 20 hectares per capita for all Canadians living in the ten provinces of southern Canada. Hence while Indians comprise about two percent of the population of Canada's ten provinces, they have rights to only one-half percent of the land in those provinces.

Indian Reserves are not only small, they are relatively resource-poor. Good agricultural land appears to be about equally available on a *per capita* basis between Reserves and non-Reserve areas in all parts of Canada except Manitoba and Saskatchewan, where the non-Indian share is four to five times greater, (Nicholson and MacMillan, 1986:200). The distribution of good grazing land is considerably less equal, however; in all regions, there is two to three times as much good grazing land *per capita* for non-Indians than Indians on Reserves. Although several Reserves in Alberta have profitable petroleum fields, nationwide fewer than 10 percent of Indian Reserves have good mineral potential. None of Canada's best forest land is located on Reserves.

The situation is somewhat different in the North, where a process of negotiating large-scale settlements of Indian and Inuit land claims only began in the 1970s. In the North, Aboriginal peoples have been able to retain about one-sixth of their territories, or as much as 32 square kilometres per person (Crowe, 1990).¹¹ In addition, Canada paid cash compensation equivalent to \$20,000-\$40,000 *per capita*, and agreed to joint management of the environment. The largest and most recent agreement covers the central Arctic (INAC, 1993a), recognizing as Inuit Owned Lands approximately 352,000 square kilometres or about one-fifth of the sub-region concerned, where Inuit still comprise more than half the population. Under Article 17 of the agreement, these Inuit lands are to include areas of particular importance for hunting and fishing, cultural resources, and natural resources—although over most of these lands the national govern-

ment will enjoy mineral rights.

Aboriginal Income and Occupations

From 1965 to 1985 Aboriginal peoples' per capita income increased from one-fifth to one-half of Canada's national per capita income, and their average family income increased to 76 percent of the average for Canadians nationwide (INAC, 1989:38). Although a larger proportion of Aboriginal people were employed in the 1980s, this was offset by lower average earnings (Table 3). Average earnings were lowest for Indians on Reserves (\$9,300) in 1985, and the gap between Aboriginal and other Canadians' earnings was about 10 percent greater in the Prairies than elsewhere in the country (Larocque and Gauvin, 1989).

Only 7 percent of Aboriginal families had incomes over \$60,000 in 1985, compared to 15 percent of all Canadian families. Indians living on Reserves were the poorest, with only half (54 percent) the average family income of other Canadians (INAC, 1989:40). Half (51 percent) of the Reserve Indians employed in 1980 earned less than \$5,000, compared to 28 percent of other workers (Nicholson and MacMillan, 1986:86). The situation of Aboriginal families in urban areas was little better. In 1985, the *median* income of off-Reserve Aboriginal men was \$9,800, less than half the median income (\$20,800) of Canadian men generally, while the median income for off-Reserve Aboriginal women, \$7,200, was barely two-thirds of the median for Canadian women (McDonald, 1991).

Labour Force, Unemployment and Underemployment

A smaller proportion of Aboriginal people is employed, or seeking employment (Table 3), reflecting isolation and discouragement, as well as continued greater reliance on hunting, fishing, trapping, and other subsistence-level activities. Many also depend on migrant farm labour for their cash needs,¹² which may not be fully reflected in government labour force statistics. Participation rates for Reserves were about 20 percent lower in the 1980s than the rates for off-Reserve Indians; in 1980, 56 percent of the *women* living on Reserves had *never* worked, compared to 31 percent of all Canadian women (Nicholson and MacMillan, 1986:72).

An analysis of the 1981 census found that, in the critical child-rearing 25-44 age-group, only 60 percent of on-Reserve Indian men, and 34 percent of on-Reserve Indian women were employed, compared with 91 percent and 61 percent in the non-Aboriginal population (Nicholson and MacMillan, 1986:58). Young and elderly Indians were even less likely to be employed. Even Indians living in urban centres have experienced high

unemployment. In western cities,¹³ Aboriginal unemployment rates in 1986 were roughly three times the average for each city as a whole; in eastern cities, 50 to 100 percent greater (McDonald, 1989:6).

In 1985, the Aboriginal unemployment rate was more than twice as high as the national rate (Table 3). Only one-third of those employed were able to work full-time, moreover, compared with half of all other Canadian workers. In 1980, 39 percent of employed Reserve Indians and 43 percent of employed off-Reserve Indians worked full-time; the rate for other Canadians was 60 percent (Nicholson and MacMillan, 1986:68). One-third (34 percent) of the Indians who were employed in 1980 worked *less than six months*, compared to 18 percent of other workers.

The proportion of the Aboriginal population that is in the labour force fell by about one-fifth during the early 1980s, and the percent of Aboriginal people who are unemployed nearly doubled. Participation and unemployment rates for other Canadians changed little. Hence, the North American recession of the past decade has had a disproportionate impact on Aboriginal peoples, as might be predicted from the fact that they continue to be employed in less skilled and more expendable jobs.

As noted above, the number of Aboriginal people in the Canadian labour force is growing rapidly, while the North American economy is stagnating, and Canada's population as a whole is gradually aging into retirement. This means that Aboriginal people will face increasingly tight competition for employment, and bear the burden of rising taxes to support the swelling ranks of non-Aboriginal retirees. In terms of "dependency ratios," the average Canadian of working age (25-64 years) must now support 1.1 persons too young or too old to work (Statistics Canada, 1992a), while for Aboriginal peoples this ratio is 1.4 and will continue to grow, albeit slowly, if fertility remains high and average age at death continues to rise.¹⁴

Occupations and Wage Parity

Like other Canadians, the largest proportion of Aboriginal people find employment in the clerical, sales and service sectors (39 percent in 1985). Employment in mining, fishing, forestry and agriculture was higher among Aboriginal people (8.3 percent) than other Canadians, and highest on Indian Reserves (15.5 percent), understandably due to their isolation.¹⁵ Manufacturing and processing employment was notably lower among Aboriginal peoples, also a function of geography.¹⁶ High levels of employment in the construction trades partly explains the part-time and seasonal character of the Aboriginal workforce.

Although there is little difference in unemployment rates between

Table 3: Employment, Skills and Earnings of Aboriginal and Non-Aboriginal Adults (1985)

	Indians	Inuit	Canada
Some postsecondary training	21.5%	13.0%	31.9%
Percent in			
education	9.1	12.7	10.1
business	21.4	19.7	22.5
life sciences*	5.4	4.7	4.9
engineering	1.4	1.4	3.6
health professions	9.9	5.9	11.5
skilled trades	29.2	37.0	23.6
Participation in the labour force	60.3%	55.6%	66.0%
Unemployment			
15-24 years old	31.6%	35.7%	16.4%
25 years or older	18.8	21.4	8.7
Employed, and working full-time	37.3%	32.6%	51.1%
Employment, by type of work			
primary industries	8.3%	5.5%	5.2%
sales, services, clerical	38.5	37.6	40.1
managerial, administrative	22.2	22.8	26.8
manufacturing, processing	5.7	9.2	12.9
construction	8.8	9.9	5.8
Average income	\$13,021	11,867	\$18,733

* Data is from Statistics Canada, 1989b, 1989c; INAC, 1989, Larocque and Gauvin, 1989. All data is for persons 15 years of age or older. "Life sciences" include agriculture and biological sciences.

Aboriginal men and women, proportionally fewer Aboriginal women are in the workforce—50.9 percent compared to 70.4 percent among Indians and 47.2 percent compared to 63.7 among Inuit, in 1985 (Statistics Canada, 1989b). Aboriginal women are also more heavily concentrated in sales, services and clerical work—59.6 percent of employed women compared to 22.1 percent of employed men. Aboriginal men are more concentrated in manufacturing and construction—30.9 percent, compared to 6.4 percent of women. These differences are slightly less pronounced among Inuit, and generally mirror differences in the Canadian workforce as a whole.

Half of the 35 Indian communities surveyed by Hawthorne (1966:49) owed one-fourth or more of their employment to casual, unskilled work.

Four-fifths of the communities surveyed reported average employment of less than nine months yearly. This is consistent with a recent study of Mikmaq households in Nova Scotia (Wien, 1986:66-72). Mikmaq workers were under-represented in nearly every occupational category in 1980, except for logging and construction. These occupations accounted for *five times* the employment base of Mikmaq compared with other Canadians in the province. Nearly half (45.1 percent) of Mikmaq workers fell in the category of unskilled or semi-skilled labour. Significantly, over half (56.1 percent) were employed by their own communities, or Federal short-term public-works and job-training programs. Only about a third (32.9 percent) were employed by private industry, compared with 72 percent for Nova Scotians as a whole.

These surveys, while dated and based on small samples of Canada's total Aboriginal population, indicate that Aboriginal peoples' incomes and employment are much less secure than less-sensitive measures (such as total employment by sector) suggest. This is confirmed by data on comparative wages and earnings.

Indians earned substantially less than other Canadians in 1980 in all sectors—27 percent less in primary industries, 22 percent less in manufacturing and assembly, 39 percent less in service occupations and 43 percent less in managerial work (Nicholson and MacMillan, 1986:152). Earnings by Indians living on Reserves, were roughly 10 percent lower, in each occupation, than earnings by off-Reserve Indians, and earnings by Indian women were even lower.¹⁷

Government administration is pervasive in Aboriginal communities. In 1980 public service provided 36 percent of Indian employment in the Atlantic region and 33 percent in the North, compared with 19 percent of Canadian employment nationwide (Nicholson and MacMillan, 1986:134). By 1985 this fell to 15 percent of Indian employment and 21 percent of Inuit employment (Statistics Canada, 1989b), although the decrease may simply reflect the reprogramming of DIAND aid from Band administration into jobs projects. A comparison of Indians' reported incomes with federal fiscal flows (including transfers to individuals and to Indian "bands") suggests that more than half of contemporary Indians' incomes have a direct or indirect federal source. Aboriginal people comprise 20 percent of DIAND's own staff, compared to 1.8 percent of the public service as a whole, although they account for only 9 percent of senior DIAND management (INAC, 1991).

DIAND maintains that there are 3,000 Indian-owned businesses on Reserves (Statistics Canada, 1991:71), but a breakdown by size, sectors and revenue is lacking. Field studies of Reserves in Ontario and Nova Scotia have moreover identified a large "informal" sector, principally local services (Wolfe *et al.*, 1989; Wien, 1986:125). The total value of the Indian

private sector has yet to be studied.

Trends in Growth and Poverty

Although the proportion of Aboriginal people earning some income from employment grew during the 1980s, so has the proportion receiving transfer payments; dependency on low-income assistance rose twice as fast among Indians than Canadians nationwide (Frideres, 1993:160, 200). While an estimated 22 percent of all Canadians have received some kind of low-income assistance during their lifetimes, the proportion among Indians is about 90 percent, and in 1991, 46 percent of the Indians on Reserves relied on transfer payments for their basic needs (Statistics Canada, 1991:71).¹⁸ The apparent "development" of Aboriginal people in the 1980s has largely consisted of greater access to aid, rather than increased capital investment and production.

DIAND has estimated that 24 percent of Registered Indians live in communities that are at least 350 kilometres from a service centre, or which lack year-round road connections (Frideres, 1993:152; cf. Bobet, 1989). Half of these can only be reached by air or water. Isolation is related to northerliness and low population densities, and has implications for cost-of-living, access to health care, and access to higher education.

Aboriginal Peoples' Health Status

Since the 1960s, Aboriginal peoples have been able to participate in the same provincially-administered health-insurance programs as all other Canadians. Due to the geographical isolation of most Aboriginal communities, however, physical access to mainstream health facilities is still a serious problem, and efforts have been made increasingly in the 1980s to promote the development of community-controlled programs to strengthen primary health care, and assume local responsibility for environmental and preventive measures formerly managed by the Federal government.

Aboriginal mortality rates have been falling steadily,¹⁹ and are now slightly lower than for other Canadians.²⁰ This does not mean that Aboriginal people are healthier, but that on average they are younger. Indians' life expectancy at birth in 1990 was 66.9 years for males and 74.0 for females (INAC, 1992a:23), compared to 73.6 for Canadian males, and 80.3 for Canadian females (Statistics Canada, 1993j:15).²¹ Although Aboriginal peoples appear to be "catching up" with other Canadians in these gross terms, a careful examination of Aboriginal health patterns suggests that the benefits of greater access to health facilities are offset by new health problems associated with land loss and poverty.

Infant Mortality

Registered Indian infant mortality rate has fallen from 82.0 per thousand in 1960 to 10.2 per thousand in 1990 (INAC, 1992a:27). In the same period, Inuit infant mortality dropped from 111.0 per thousand to 12.0 per thousand. This compares with 7.1 per thousand for all Canada (Statistics Canada, 1992c:38). Stillbirth rates are 1.5 times greater for Indians and Inuit than other Canadians, and Indian and Inuit are twice as likely to die during or immediately after birth (Health and Welfare, 1991a:15). While most Canadian infants' risk of death falls with age, it remains high for Aboriginal children, reflecting problems of poverty and malnutrition.

Breastfeeding is widespread in the North; it has increased in the Pacific region and to a lesser extent the Prairies and Ontario (Health and Welfare, 1991a:51). About half of Indian mothers and three-fourths of Inuit smoke during pregnancy, however, compared with one-fourth of Canadian mothers nationwide, increasing the risks of complications and low birth weight. Fetal Alcohol Syndrome (FAS) has been estimated as high as 25 percent of all Aboriginal births (Health and Welfare, 1991b:33). In northwestern British Columbia and the Yukon, where about one-sixth of the population is Aboriginal, 67 percent of the children with developmental problems in 1983-84 were Aboriginal; a majority of their conditions were diagnosed as alcohol-related. The devastating toll of FAS on Indian children in the United States described by Dorris (1989) suggests the situation which may also exist in Canada.

Adult Mortality and Morbidity Patterns

Indians' mortality rates from all causes have fallen by more than half since the 1970s, but the pattern of Indian mortality continues to differ from that of other Canadians (Siggner, 1986; Table 6).²² Indian deaths are much more likely to be caused by accidents,²³ and much less likely to result from cancer. Heart disease is on the increase among Indians, however. This pattern is consistent with improved access to medical facilities, decreased access to "bush" foods, greater stress, and cultural disruption. Although deaths from gastrointestinal and respiratory disease are only slightly higher for Aboriginal people than non-Aboriginal Canadians, *chronic illness* from these causes is *much* higher, indicating nutritional and water-quality problems (Table 5; Barsh, 1991).

Aboriginal peoples report rates of chronic illness that are very high in comparison with average national hospitalization rates. Since 1985, for example, the hospital separation rate for all cardiovascular disease has remained about 17 per thousand; for all respiratory system complaints, about 15 per thousand (Statistics Canada, 1993b and 1989a). Aboriginal

self-reported rates of chronic hypertension and bronchitis (see Table 5) are equivalent to 115 and 84 per thousand, respectively. The fact that chronic, non-fatal illness is a much larger problem than high mortality for Aboriginal peoples indicates that underlying health status remains poor, but symptomatic medical care has improved.

A 1986-87 study found that respiratory diseases and complications of pregnancy were the leading causes for hospitalization of Indians in Manitoba (Health and Welfare, 1991a:23). Compared to other Manitobans, Indians were four times more likely to be hospitalized for respiratory disease or for infectious or parasitic disease; three more likely to be hospitalized with perinatal complications or for trauma; and twice as likely to be hospitalized for gastrointestinal infections. Only the rate for cancer was lower for Aboriginal people. The same pattern was found in a 1987-88 study of Indian hospitalizations in Saskatchewan.

Diabetes mellitus, hypertension and rheumatoid arthritis were the most widespread chronic complaints for Indians in Saskatchewan in 1986 and Indians in British Columbia in 1990 (Health and Welfare, 1991a:26). In Saskatchewan, Indians were twice as likely to suffer some degree of disability—chiefly sensory impairment and limited mobility. The toll of chronic illness and disability on the integrity of Indian families, their productivity, and their mental health can easily be imagined.

Infectious Diseases

Tuberculosis was long considered a problem of epidemic importance for Indians and Inuit, and was the target of health campaigns as early as the 1910s. When Inuit were being resettled in central townsites in the 1960s one percent of all Inuit developed tuberculosis *every year*. In 1991, the rate of new active and reactivated cases of tuberculosis among Aboriginal peoples was still 53.4 per 100,000, compared with 7.5 per 100,000 for other Canadians, and 3.0 percent of Aboriginal people reported having had tuberculosis (Statistics Canada, 1993a, 1993d; INAC, 1980:21).²⁴ Tuberculosis rates are 8-10 times greater among Aboriginal peoples in the North than in the Atlantic region; within urban areas, rates are greatest for poorer Aboriginal households. This indicates a relationship with crowding and/or poor nutrition.

Aboriginal deaths from other infectious and parasitic diseases also remain disproportionately high, at about 10 per 100,000, compared with 4 per 100,000 for other Canadians (Health and Welfare, 1991a:19). This reflects differences in nutrition, sanitation and water supplies, since traditional food-preparation practices are effective in managing the parasites found in "bush food" (*Ibid.*, 27). Vaccination rates are still low for Aboriginal

Table 4: Linguistic Status of Aboriginal Peoples (1991)

	Regions								TOTAL
	Atlantic	Central	Prairie	Pacific	North	Cities	Reserves		
Percent Adults (15+ years) who:									
speak Native language at home	34	28	39	15	64	11	63	33	
...and can also write it	9	12	5	4	38	20	21	9	
Never spoke a Native language	58	61	50	67	26	71	28	55	
Learned to speak it in school	13	25	9	9	31	1	15	16	
Percent Children (0-14 years) who:									
Speak Native language at home	22	25	18	7	54	-	43	21	
...and can also write it	21	45	15	70	62	-	25	35	
Learned to speak it in school	52	67	39	63	73	-	52	55	

* Data is from Statistics Canada, 1993a. Based on self-identification. "Reserve" refers to persons living on Indian Reserves, or in officially-designated Indian Settlements.

Table 5: Health, Nutrition, and Safety of Aboriginal Peoples and Communities (1991)

	Regions							TOTAL	
	Atlantic	Central	Prairie	Pacific	North	Inuit	Cities		Reserve
Percent of Adults (15+ years)									
Who suffer from:									
diabetes	5.5	7.7	7.7	3.9	2.0	1.9	3.6	8.5	6.6
high blood pressure	15.2	11.7	11.9	10.3	8.8	9.6	11.5	12.8	11.5
bronchitis	7.2	9.9	8.8	8.1	4.8	5.0	10.2	6.1	8.4
Obtain half or more of meat and fish by hunting/fishing	21	15	19	21	66	66	4	32	21
Were assaulted (attacked) within the previous year	7.1	6.8	7.6	6.8	8.0	9.1	6.8	7.2	7.3
Think family violence is a problem in their community	38	35	41	39	47	43	36	44	39
Think alcohol abuse is a problem in their community	61	56	40	61	64	58	43	73	61

* Data is from Statistics Canada, 1993a. Based on self-identification. "Reserve" refers to persons living on Indian Reserves, or in officially-designated Indian settlements.

Table 6: Mortality Rates by Cause, Status Indians and All Canadians

	Indians (1982)	Indians (1990)	Canada (1991)
Deaths per 100,000 caused by:			
Neoplasms	62.0	52.1	197.4
Cardiovascular disease	159.2	105.0	274.1
Respiratory system	44.3	30.8	60.6
Digestive system	34.4	16.8	26.3
Trauma	205.3	107.2	37.7
All causes	616.9	379.9	704.9
Percent of all deaths caused by:			
Neoplasms	10.1	13.7	28.0
Cardiovascular disease	9.6	27.6	38.9
Respiratory system	7.2	8.1	8.6
Digestive system	5.6	4.4	3.7
Trauma	33.3	28.2	5.3

* Data is from INAC, 1992:29 and Statistics Canada, 1993c. Between 1982 and 1990, responsibility for the health of Indians living in the Northwest Territories was transferred to the N.W.T. Government, and they are not represented in the 1990 data. As they comprise fewer than 5 percent of Registered Indians, the distortion is minimal.

communities, moreover, as was highlighted by a severe outbreak of pertussis among Alberta Indians in 1989, where as few as one-fourth of preschool-age children had been immunized.

Health and Changing Lifestyles

Studies of dietary change among Indigenous peoples indicate that, as hunting and fishing opportunities decline, store-bought starch, fat and processed sugar replace protein-rich "bush" foods to such a degree that iron-deficiency anemia, obesity and cardiovascular disease become widespread and chronic problems (Barsh, 1987, 1991). Malnutrition from dietary change weakens resistance to respiratory and gastrointestinal infections, and elevated rates of diabetes mellitus among Indians and Aboriginal Australians may also have dietary origins. Cardiovascular problems, chronic lung diseases, and diabetes can be indicators of the adverse impacts of villagization, reduced foraging and poverty.

Diabetes is predictably least frequent in the North, where "bush" food is still consumed to a greater extent than anywhere else; and is most

frequent on Reserves, where Indians can least afford high-quality store-bought substitutes for “bush” foods.²⁵ Diabetes increases near the Great Lakes, where urbanization and industrialization have had the greatest impact on the availability of “bush” food (Health and Welfare Canada, 1991a:35). Self-reported diabetes among all Canadians is just 2.4 percent, or one-third the rate among Aboriginal peoples.²⁶ Diabetes, hypertension, and heart disease are related to obesity. In some recent regional health surveys, Indian men were twice as obese as non-Aboriginal men, and Indian women were five times as obese, with obesity greatest among younger Indian women (Health and Welfare, 1991a:36). Obesity, in turn, is related to diets high in sugar, starch, and fats—the least expensive store-bought foods. Another major factor in hypertension and heart disease is smoking. A 1982-87 survey conducted in the Northwest Territories found higher rates of smoking among Inuit and Indians, though smoking among all groups was declining (Health and Welfare, 1991a:42). Predictably, cardiovascular disease is increasing among Aboriginal people, especially Inuit, while declining among other Canadians. Cancer is also increasing rapidly among Indians and Inuit, especially lung and cervical cancer (Health and Welfare, 1991a:34).²⁷ Violence can be a symptom of social and cultural distress. It is the greatest killer of Aboriginal people *at every age* to 65 years, and accounts for the fact that Indians today are 4.7 times more likely to die between the ages of 20-24 than other Canadians (Health and Welfare, 1991a:21).

Access to Health Facilities

Health Canada (1990a:11) reports that nearly one-tenth of Indian and Inuit communities are either more than 90 kilometres by road from the nearest physician, or lack scheduled air connections to towns with medical services. About one-fourth of Indian communities rely on air or water transport for medical evacuation; only 14 percent have their own ambulance services (Bobet, 1989). Statistics on actual, as opposed to ideal evacuation times are not available.

Frequency of physician visits tends to reflect the accessibility of health-care facilities more than the prevalence of serious illness. In 1991, 74 percent of the Aboriginal adults living in cities reported visiting a physician in the previous year, compared with 61 percent of Indians living on Reserves, and 48 percent of Inuit (Statistics Canada, 1993a). Reported visits were also high for Métis (72 percent) who did not report more serious health problems than other Aboriginal groups, but are relatively more urbanized. By comparison, 80 percent of adult Canadians as a whole reported seeing a physician at least once in 1985 (Statistics Canada, 1987:83).

Housing and Water Supply

DIAND pays subsidies to individuals and Bands building new houses on Indian Reserves, and the number of houses on Reserves has more than doubled over the past twenty years (Frideres, 1993:194). The number of Indians entitled to live on Reserves²⁸ has increased more than threefold during the same period, however (INAC, 1992b). Houses on Reserves have been built to lower physical standards than privately-owned homes in Canada. They reportedly have half the life-span of other Canadian houses, and have, on average, twice the number of occupants (Frideres, 1993:195). Since the early 1960s the proportion of houses with running water has increased from 12 percent to 85 percent, however. About 75 percent of houses on Reserves now have central heating,²⁹ and about 90 percent are electrified (Statistics Canada, 1991:71). On the average, then, Reserve houses are more “modern” than a generation ago, but the total housing stock is inadequate and aging very rapidly.³⁰

Overcrowding remains a problem. In 1986, 11.3 percent of Indians off-Reserve, 28.9 percent of Indians on Reserves, and 31.1 percent of Inuit were living in housing with more than one person per room. This compares with 1.8 percent of Canadians as a whole (Health and Welfare, 1991b:15). Water and sanitation also require improvement. In roughly one-quarter of Indian communities, some or all of the residents depend on hauled water, and nearly one-third of Indian Reserve households use outdoor privies (Bobet, 1989). The number of communities with capacity to monitor the integrity of their own water supplies is unreported.

Health and Environmental Hazards

DIAND (1980:35) identified several Aboriginal communities in the Northwest Territories, Ontario and British Columbia that were at risk from arsenic, mercury and/or radionucleotide contamination from mining activities, and several others bordering the St. Lawrence River which were experiencing fluoride and organochlorine contamination from nearby U.S. and Canadian factories. Shkilnyk's (1985) graphic description of the disintegration of the community of Grassy Narrows, first burdened with poverty, and then overwhelmed by industrial mercury contamination (Minamata syndrome), indicates just how devastating pollution problems can be for people who are already severely marginalized and alienated. A recent United Nations report (UNCTC, 1992) describes two other Indian communities which have been severely affected by pollution—St. Regis, which straddles the Ontario-New York border in a highly-industrialized and pol-

luted part of the St. Lawrence River, and the Crees of northern Quebec, displaced by flooding from hydroelectric dams in the 1970s and then affected by mercury pollution of their fisheries. Several Indian communities in northern Alberta have elevated levels of heavy metals, traced to two nearby oil-sands petroleum extraction plants (Health and Welfare, 1991a:54).

In addition, there has been concern for some time about the level of organochlorines in the marine mammals harvested by Inuit, and fish and waterfowl harvested by Indians near the industrialized Great Lakes (Health and Welfare, 1991a:54; Cameron and Weiss, 1993). Bordering the Great Lakes and, for the past few years, the Pacific seacoast, public health authorities have warned people to limit consumption of fish and shellfish. This is more difficult for Aboriginal peoples than others, because their isolation and poverty—as well as cultural traditions—mean a much greater reliance on hunting and fishing for food security. Aboriginal people in many parts of the country accordingly continue to consume “bush foods” at unsafe levels. They also consume organ meats, such as liver, which concentrate toxic organic compounds, while these portions are avoided (or wasted) by other Canadians. Fortunately, the use of organochlorines has been declining in North America, and levels should begin to fall. The planned expansion of hydroelectric dams in northern Canada will expose Aboriginal peoples to increased levels of mercury in fish and wildlife, however (UNCTC, 1992).

There has been no nationwide evaluation of environmental hazards, on Indian Reserves or bordering Aboriginal communities, nor the extent to which Aboriginal peoples may be subjected to greater environmental hazards than non-Aboriginal people because they lack the political and economic power to oppose hazardous activities. The United States has recently found evidence of “environmental racism,” that is, the siting of hazards such as chemical plants and toxic disposal near Indigenous or non-White communities (U.S.EPA, 1992), and it would be surprising if the same problem did not exist in Canada.

Linguistic and Cultural Integrity

Inuit are the most geographically isolated of Aboriginal peoples; Inuktitut is an official language in the Northwest Territories, and in Inuit communities primary schools are generally bilingual. Inuit have the highest rate of language retention (72 percent) of any Aboriginal group in Canada as a result. They are also the most literate in their own language. Although the Native language with the largest number of speakers is Cree, only 16 percent of those who can speak Cree can also write it. By comparison,

literacy in Inuktitut is 80 percent (Table 3 and Statistics Canada, 1993a).

Language use has changed considerably in structure and frequency within the last generation (Table 4). Children today are less likely to speak their Native language, but more likely to have learned it in school, and to be able to write it. Direct transmission and routine use of Native languages is declining, replaced by schooled knowledge. This loss has been rapid. As recently as 1941, fewer than 10 percent of Aboriginal peoples spoke English or French as their mother tongue, but in 1991 the proportion who had never spoken an Aboriginal language had risen to 55 percent (Table 4; Frideres, 1993:154). Native language has virtually disappeared in urban areas where fewer than 1 percent of Aboriginal children reported speaking their native languages at home. Language loss is even occurring among Inuit; 72 percent of adult Inuit speak Inuktitut at home, but only 66 percent of their children.³¹

Interestingly, nearly all regional groups reported that they were able to find Native-language programming on television, although about half of the respondents in all regions *except the North* (where Native-language programming is strongly subsidized) complained that available programming was inadequate (Statistics Canada, 1993a). Television use could be a good indicator of cultural change, in light of the powerful effect of television on children's values and desires. Unfortunately, Canadian television-viewing data is not broken down by ethnicity.

In a 1991 survey of Aboriginal peoples, Statistics Canada (1993a) asked respondents whether they continued to participate in *traditional* activities. Roughly as many responded affirmatively (51 percent), as negatively (47 percent), with the highest affirmative response rate on Indian Reserves (65 percent). Responses by children (0-14 years) were considerably lower, with 44 percent reporting that they participate in traditional activities. The meaning of these figures depends upon how respondents interpreted the term ("traditional") used in the question, however. Similarly, the proportion of respondents who reported having consulted a *traditional healer* within the past year ranged from as low as 1 percent in the Atlantic provinces to 7 percent on Reserves, with a nationwide average of 6 percent (Table 4).

Aboriginal Schooling

Until the 1960s, Indian schooling was dominated by "residential schools" operated by religious organizations under contracts with the Federal government. Geographically isolated and racially-segregated, these schools were noted for their cruel disciplinary methods and poor

academic quality (Barman *et al.*, 1986). In 1945, pupils were permitted to enrol in off-Reserve public schools, and in 1964 DIAND began to pay local school boards a subsidy for each Aboriginal pupil served. Along with the construction of more Federally-operated day schools on Indian Reserves, this contributed to boosting Indian enrolment rates from 72 percent in 1960-61 to more than 90 percent today (Frideres, 1993:178). Cutbacks in Federal payments to individual students in the 1980s have resulted in a slight decline in enrolment between 1980 and 1990.

DIAND is in the process of transferring control of Indian schools and education to Indian communities. The proportion of Indian pupils attending Indian-controlled schools has increased from just 4 percent in 1975-76 to 47 percent today (INAC, 1992a:43). Most of the remaining pupils (45 percent in 1991-92) attend public schools, operated by the education departments of the provinces. Federal spending on education for Aboriginal peoples increased substantially in the 1980s; education accounts for about two-fifths of all DIAND expenditures.

While the majority of Indian students complete the *primary grades* in either Indian-controlled or predominantly-Indian schools, most must continue their education in integrated schools which are controlled by non-Aboriginal school boards. This has been blamed for high drop-out rates, especially in Grades 9-12, and has led to efforts to develop more Indian-control of school boards, Indian content in curricula, and culturally-sensitive teaching practices in schools attended by Indian children.

In the early 1960s, only 4 percent of Indian students on Reserves remained in school through Grade 12. This has increased to nearly 54 percent (INAC, 1992a:37), compared to 59 percent of all Canadians aged 15-24 who have completed secondary school (Statistics Canada, 1993i). The proportion of Aboriginal people with less than Grade 12 education has been falling, and was 26 percent in 1986, compared with 18 percent for all Canadians (INAC, 1989:27). This is mainly due to urbanization however: the proportion of Indians *on Reserves* who have not completed Grade 12 is still 44.7 percent. In urban centres, where 6-11 percent of Canadians have university degrees, fewer than 3 percent of Indians have university degrees (McDonald, 1989:4).

Inuit schooling levels remain even lower, largely because so few Inuit lived in centralized settlements until the 1960s. In 1986, only one-fifth of Inuit had completed secondary school, and 54 percent had less than a Grade 9 education. This reflects the older generation of Inuit who grew to maturity before villagization.

Despite the narrowing gap in years of schooling, it is not clear whether Aboriginal students are receiving the same quantity or quality of instruction. Nor is it clear how schooling affects employment and income. In 1980, off-

Reserve Registered Indians who had earned a high school diploma or higher degree were about as likely to be employed as other Canadians at the same levels of educational attainment. Indians who had not completed secondary school were less likely to be employed than non-Indians with the *same* levels of schooling, however (Nicholson and MacMillan, 1986:176). Reserve Indians who dropped out of secondary school had a 45 percent chance of employment in 1980, for example, but non-Indian drop-outs had a 58 percent chance.³²

The number of Indian students enrolled in university programmes and other post-secondary institutions has increased from 60 in 1960-61 to 21,442 (INAC, 1992a:39) or 4.6 percent, which, taking account of the fact that the Indian population is more youthful, compares favourably with the 3.1 percent of Canadians nationwide enrolled in post-secondary institutions (Statistics Canada, 1992e). Aboriginal students who enrol in universities are still only about half as likely to earn a degree however (Frideres, 1993:192). This may be due to poor preparation, as well as continuing problems with language, culture and discrimination. In addition, Aboriginal post-secondary students tend to be about five years older than their non-Aboriginal classmates, and are more likely to have children and wider family obligations.

Compared to other Canadians, Aboriginal people are less likely to have any post-secondary training, and more likely to attend vocational, technical or trade schools than degree-granting universities (Table 3; Statistics Canada, 1989b). Aboriginal people are under-represented in science and engineering, moreover, which can have serious consequences for the development potential of isolated communities that must depend on agricultural, fisheries, forestry, mining and processing for growth in the future.

Cultural disruption—whether pursued as a matter of social policy or condoned as a symptom of poverty and marginalization—is associated with the breakdown of reciprocity and kinship obligations, the loss of individual self-esteem and self-discipline, and the disintegration of traditional mechanisms for setting disputes and renewing social order. Severe frustration, alienation and self-rejection can lead to various forms of self-destructiveness (alcohol and/or drug abuse, recklessness and suicides), and displaced violence against others (family, violence, sexual abuse, quarrelling). Although the manifestations of alienation are culturally-mediated and therefore cannot be compared statistically across cultures,³³ rates of drinking, suicide, accidents, and assaults are certainly indicative of severe stresses, and can be used to follow trends within particular societies.

Family Breakup, Childcare and Adoption

Divorce rates, although readily available, are very poor measures of family stability; since obtaining a divorce can be costly, divorce rates are strongly influenced by *income*. A more meaningful measure is the proportion of households headed by a single parent. In 1986, this was 19 percent among Inuit, 24 percent for Indians on Reserves, and 30 percent for Indians living off-Reserve, compared with only 13 percent among Canadians as a whole (Health and Welfare, 1991b:13). Off-Reserve single-parent Indian families were chiefly (92 percent) female-headed. These figures indicate a very high frequency of family breakup, which has been accelerated by urbanization.

There is little useful data on the survival and contemporary role of extended families or clans, e.g., as support networks for single or unemployed parents. Aboriginal peoples are about as likely to call on a relative as a non-related friend when they need help, judging from responses to a recent survey (Statistics Canada, 1993a).³⁴

Aboriginal children are more likely to be placed in foster homes or other forms of substitute care, suggesting a widespread problem of dysfunctional, violent, or broken families—although it probably also reflects bias in the frequency with which non-Aboriginal professionals intervene.³⁵ About 3 percent of children from Indian Reserves are now in substitute care, down from 5 percent ten years ago (INAC, 1992a:47), three times the rate (0.8 percent) for other Canadian children.

In the 1960s and 1970s, furthermore, adoptions of Indian children increased five-fold, and the proportion of these children adopted by non-Indians grew from about half to three-fourths (INAC, 1980:25; INAC, 1982: Appendix IV). In 1980 alone, 1 percent of all Indian children 10 years of age or younger were adopted, mostly by non-Indians. This can have a severe adverse impact on the survival of Indian communities and Indian culture, in addition to adversely affecting the development and mental health of the adopted children (Blanchard and Barsh, 1980).

Chemical Dependencies and Mental Illness

It is difficult to find any reliable way of measuring alcohol and drug abuse. Arrest rates depend too much on the “tolerance” policies of local law-enforcement officials, which may be biased in favour of punishing Aboriginal people,³⁶ and self-reports of abuse are unlikely to be entirely candid. An average of 3.0 percent of Aboriginal people reported drinking 4 times or more per week in 1991, ranging from a low of 1.8 percent among Indians on Reserves, to 3.9 and 4.2 percent among the Aboriginal people of the Central and Pacific regions, respectively (Statistics Canada, 1993a).

This compares favourably with 7.7 percent of all adult Canadians who reported consuming 14 or more drinks weekly in 1985 (Statistics Canada, 1987:48). On the other hand a 1985-86 study found that 8 percent of persons in Ontario alcohol and drug treatment programs were Aboriginal, although Aboriginal people comprise scarcely 2 percent of the population of Ontario (Health and Welfare, 1991a:41).

There is no reliable comparable data on rates of clinical mental illness, although it is clear from high suicide and trauma rates that depression is severe and widespread. On the contrary, there is reason to believe that Aboriginal peoples are disproportionately committed to psychiatric institutions without adequate diagnoses or justifications. A 1990 study of admissions to one psychiatric hospital discovered that 51 percent of the Aboriginal patients had not been diagnosed as having a specific major mental illness, compared with 23 percent of all other patients (Health and Welfare, 1991b:27). Aboriginal people were often admitted for drug or alcohol abuse (31 percent, compared to 11 percent for non-Aboriginal patients); even those who were diagnosed as having a major mental illness were often committed because of alcohol-or-drug related behaviour. Aboriginal patients were kept in hospital twice as long, on average, as other patients. If this study is representative, it could indicate not only an inappropriate use of psychiatric commitment, but a very ineffective response to the inter-related problems of depression, alcohol-and-drug abuse, and violence.

Violence Against Self and Others

Self-reported assault rates among Aboriginal peoples are high, equivalent to 7,100 per 100,000, and they are highest among Inuit and in the North, where imposed socio-economic changes have been the most recent (Table 5). Nationwide, by comparison, the rate of assault³⁷ is only 982 per 100,000, while the rate of all violent crimes combined is 1,158 per 100,000 (Statistics Canada, 1992d). Absent biases in the reporting of violence by different populations, these data reflect an alarming degree of violence within Aboriginal communities. Aboriginal peoples' subjective assessment of family violence and alcohol abuse in their communities is consistent with this analysis (Table 5), although there are no comparable data for other Canadians. A survey of Indian women in Ontario concluded that 80 percent had been victims of family violence (Health and Welfare, 1991a:50).

Suicide is one way that people can express hopelessness, loss of self-esteem, and alienation, and contemporary Aboriginal suicide rates indicate "alarming" levels of depression (Health and Welfare 1991b:31, 45-46). In 1988 the overall Indian suicide rate was 40.4 per 100,000, compared with

an average Canadian national rate over the past 10 years of 14.1 per 100,000. Nationwide, suicide does not vary significantly with age among adults, but among Indians suicide peaks sharply in the 20-29 years age group at 80.8 per 100,000 (1984-1988 average). Indians are also 5.6 times more likely than other Canadians to commit suicide during adolescence.³⁸ The suicide rate for Aboriginal as well as non-Aboriginal people is greatest in the Prairies and the North, but among Aboriginal people in these regions it is increasing, while for others, it is decreasing (Health and Welfare, 1991a:40).

Among non-Aboriginal Canadians, men are four times more likely to commit suicide than women, and this ratio does not vary much with age (Statistics Canada, 1993c). Among Indians, the difference between male and female suicide rates is only half as great, suggesting a different pattern of underlying causes (Health and Welfare, 1991b:49). Moreover, suicide rates do not vary as much with age among Indian women as among Indian men, although the most vulnerable period for both Indian women and men is the same: 20-29 years of age.

Homicide rates are also indicative of social breakdown. On 1988, Aboriginal people were 10 times more likely than other Canadians to be charged with murder (Health and Welfare, 1991b:29). Although this rate may be inflated by police bias, as discussed below, Aboriginal people are also currently about 6.3 times more likely to be murdered (Health and Welfare, 1991b:43). Unfortunately, no data exist to determine what proportion of these homicides take place within Aboriginal communities or (alternatively) may be the racially-motivated actions of others.

Accident rates provide another measure of personal alienation and social disruption. Accidents are a much more important cause of death among Indians than Canadians as a whole (Table 6)—indeed, the leading cause of Indian deaths, while cancer and heart disease are the largest killers of Canadians generally. (Comparable data is not available for Métis or Inuit.) A study in British Columbia found that Indians were twice as likely as others to require hospitalization for accidents and other trauma (30.5 per thousand), and Saskatchewan study found an even higher ratio—2.5 times—at 43.7 hospitalizations per thousand Indians (Health and Welfare, 1991b:26). Aboriginal death rates from accidents and violence have fallen by 40 percent since 1978, about twice as fast as the decline in trauma deaths in the Canadian population as a whole, but at this rate it will take another century to achieve parity.

A breakdown of Indian trauma deaths by cause and region (Table 7) shows that Indians are nearly twice as likely to die from violence in the North than in Quebec or Manitoba, and motor-vehicle accidents are particularly frequent and lethal in Manitoba and Alberta. The higher Aboriginal

rates for burns, drowning, and exposure are important since they are strongly indicative of poor housing, isolation, and frequency of alcohol abuse.

The frequency of Aboriginal trauma deaths is partly a function of alcohol and drug abuse. In Alberta and Manitoba, 14-18 percent of all Aboriginal deaths in 1987 were connected with alcohol or drugs (Health and Welfare, 1991b:33). In Saskatchewan, alcohol abuse was involved in 92 percent of traffic deaths, 80 percent of deaths from exposure, half the deaths from burns and drowning, 46 percent of the suicides, and 38 percent of homicides.

Criminalization

Aboriginal people are far more likely to be arrested, charged and convicted of offenses under the Criminal Code of Canada than Canadians generally, and likely to serve more time in prison (Alberta Government, 1991; Harding, 1991; LaPrairie, 1990). Over-representation in prisons, expressed as a ratio of the Aboriginal proportion of persons in prison to the Aboriginal proportion of the population, is 4.6 in the federal prison system and 6.8 in provincial prisons (Health and Welfare, 1991b:28). Over-representation is the greatest in Ontario and the Prairies, where it is about the same as the national average, and lowest in the Atlantic region, Quebec and the North, where it is between 1.5 to 2.2.

Over-representation in prisons reflects poverty, frustration, and the disruption of families and communities. There is also evidence of insensitivity and racism among police, the courts, and prison systems, which employ few Aboriginal people (Nova Scotia Government, 1989). In Alberta, for example, where about 3 percent of the total population is Aboriginal, there is only one Aboriginal judge and only six Aboriginal people on the parole-board. Nationwide, Aboriginal constables serving in community programs or RCMP detachments constitute only 0.8 percent of all fully-sworn police officers (Statistics Canada, 1992f).

A thorough study of the criminalization of Aboriginal peoples in Alberta was undertaken in 1989 (Alberta Government, 1991). The rate of new commitments to prison were 91 per thousand for Aboriginal peoples, but only 11 per thousand for others. Aboriginal men were likely to be given longer prison terms, and to serve more time in prison, than non-Aboriginal men. Aboriginal people were also more likely to serve time in detention before trial because they could not afford bail, or to be imprisoned after conviction because they could not afford to pay fines (*Ibid.*, 91, 93).

Significantly, Aboriginal people sentenced to Alberta prisons are more likely to have at least Grade VIII education—58.6 percent of the Aboriginal

Table 7: Detailed Analysis of Trauma Rates, Aboriginal People and All Canadians (1991)

ABORIGINAL (1984-88 AVERAGE)

Provinces or Regions

	Atlantic	Que	Ont	Man	Sask	Alta	Pacific	Yukon	N.W.T.	CANADA
Trauma deaths per 1,000 deaths	152.3	131.6	189.7	137.0	165.9	249.5	225.1	266.7	292.5	67.7
Percent due to										
motor vehicles	30.9	29.0	28.5	44.4	23.0	41.3	27.0	14.3	23.1	27.1
burns	7.7	4.9	9.2	12.6	7.8	4.2	5.1	8.9	12.3	2.4
drowning	11.6	15.3	12.9	7.0	5.8	4.6	3.6	10.7	9.2	2.9
exposure	2.6	0.8	5.7	5.0	5.5	3.7	2.2	10.7	12.3	0.9
firearms	15.4	10.5	10.5	12.1	13.4	10.2	7.3	23.2	13.8	13.1
drug overdose	10.3	3.2	6.1	5.3	8.4	10.7	7.3	12.5	9.2	4.4

* Data is from Health and Welfare, 1991b and Statistics Canada, 1993c.

inmates compared with 7.5 percent of non-Aboriginal inmates (Alberta Government, 1991:82). This reflects the fact, noted earlier, that education attainment has less of an impact on Aboriginal peoples' economic status or opportunities, except at the university level.

The Alberta data on youth offenders were particularly disturbing. Compared to other young offenders, Aboriginal youth were nearly twice as likely to be committed to a correctional facility, as opposed to a community-based programme. Aboriginal youth make up nearly one-third (31.1 percent) of the youth sentenced to Alberta correctional centres, although they are fewer than 4 percent of all Alberta youth, and this ratio has been *increasing*. Aboriginal youth are also more likely to be placed in secure custody, and receive on average 11 percent longer sentences (Alberta Government, 1991:59, 63, 130, 139, 164).

Government Services and Transfer Payments

Canada currently spends just under \$2.8 billion on the Indian and Inuit programs administered by DIAND, ten times what it spent in 1971-72 when assimilation rather than self-government was its official goal (INAC, 1992a:71). This represents 1.8 percent of all Federal government expenditures, comparable to Canada's annual expenditure on foreign aid (Statistics Canada, 1991:235). Transfer payments to Indians, Inuit and their communities averaged \$3,700 *per capita* in 1991-92, compared with the \$1,510 *per capita* Canada spent on transfer payments to individual Canadians under all other programs, 39 and \$740 *per capita* that Canada transferred to provincial governments (Treasury Board, 1992).

Most (77.3 percent) Indian and Inuit program funding is delegated to Band councils and other community-controlled bodies (INAC, 1992a:71) to be spent in accordance with DIAND guidelines and local priorities. With this funding, Band councils administer their own social security programs, and employ some 16,000 people (Statistics Canada, 1991:71). DIAND continued to employ 3,853 persons, or 1.8 percent of all Federal government employees, in 1989 (Statistics Canada, 1991:242). Increased devolution of control over DIAND funding is anticipated, however (INAC, 1993).

A number of other Federal agencies provide special program funds and services for Aboriginal peoples. Chief among these is Health and Welfare, Canada, with roughly \$500 million spent annually on community-level and community-controlled health facilities, which supplement the hospitals and programs otherwise available to Indians and Inuit under Canada's universal medical-insurance scheme. This is roughly the same as Health and Welfare, Canada's *per capita* spending on community-level health programs

for other Canadians.

In 1990-91 an estimated 40 percent of Registered Indians received low-income assistance, averaging \$2,400 per person (INAC, 1992a:55-57). The total cost of this to the Canadian government was \$502.1 million. This compares with the 7 percent of all Canadians receiving low-income assistance in 1990, at an average of \$3,700 per person, and total cost of \$7,146.3 million (Statistics Canada, 1991:235).

Political Rights and Empowerment

Participation in the national political process was limited until recently. Inuit were admitted to vote in national elections in 1950; Registered Indians in 1960 (Frank, 1992). Three Aboriginal people were elected to Parliament in 1993—1 percent of the members—and two were elected from the Northwest Territories where Indians and Inuit are an absolute majority of the electorate.

Although Canadian voting rates are not reported by ethnicity, the published counts for polling stations located on Reserves can be used to estimate Registered Indians' participation. Inuit voting rates can be estimated for the eastern Arctic by deleting DEW-Line and military bases from total votes for the Nunatsiak region. Table 8 shows voting patterns for a representative sample of Indian Reserves and Inuit for the 1984 Federal election and 1992 constitutional referendum, based on data reported by the Chief Electoral Officer (1984, 1992).

It is immediately apparent that participation rates vary greatly, not only between cultures and regions, but even among closely-related communities, such as the four Mikmaq Reserves shown for Nova Scotia. On the whole, however, voter participation was low. At least one very low turnout (Caughnawaga) represented a formal boycott of the process; others may reflect poor confidence in the parliamentary system, and a lack of interest in non-Aboriginal candidates. National voter turnout in 1984 was 75 percent, for comparison, with a range of 60-90 percent across polling stations, and in 1992 it was 72 percent with a range of 47-83 percent. The national vote was 50.03 percent Tory in 1984, and 54.29 percent No in 1992.

Interestingly, the *direction* of voting varied considerably in the sample as well. Nova Scotia and Alberta Reserves favoured the Tories in 1984, and mostly voted against the Charlottetown Accord; Inuit and Ontario Anishinawbe people voted Liberal in 1984 and strongly favoured the constitutional accord eight years later. These results illustrate the dangers of generalizing broadly about Aboriginal politics. At the same time, they suggest that Aboriginal peoples neither feel they have much of a stake in

Table 8: Aboriginal Participation in Federal Elections (Representative Sample)

Percent of Aboriginal electors who...	1984 GENERAL ELECTION		1992 REFERENDUM	
	voted	voted Tory	voted	voted NO
Sample communities				
Alberta				
Blood Reserve	5.8	45.3	11.8	69.8
Piegan Reserve	13.2	49.6	18.4	68.4
Four Nations ^a	12.8	43.4	2.7	75.4
Nova Scotia				
Afton	59.7	43.2	47.8	90.9
Eskasoni	44.0	52.1	36.4	48.2
Pictou Landing	58.6	54.4	50.0	66.2
Whyococomagh	86.5	56.1	35.4	78.4
Ontario				
Kenora Region ^b	46.8	18.2	69.4	26.6
Tyendinaga	28.8	49.4	46.1	84.3
Quebec				
James Bay Cree ^c	28.9	20.4	--	--
Inukjuak Inuit	65.7	28.4	--	--
Povungnituk Inuit	49.7	36.6	--	--
Caughnawaga	0.3	18.2	--	--
Northwest Territories				
Nunatsiag Inuit	68.5	31.8	75.1	23.7

* Data from Chief Electoral Officer (1985, 1993). Note that Quebec did not participate in the 1992 constitutional referendum. Data for 1985 represents 14,824 Indian electors and 9,976 Inuit electors (persons on electoral lists).

^a Sanson, Louis Bull, Montana and Ermineskin Bands of Crees. A large number of ballots in the 1992 referendum were spoiled, partly explaining the very low voter participation.

^b Many small Anishnawbe (Ojibway) Reserves including Grassy Narrows, Shoal Lake, Rat Portage, Wabigoon, Whitefog, and Whitefish Bay, more Reserves were polled separately in 1992.

^c Waswanipi, Obedjiwan, Lac Simon and Amos communities.

national political contests, nor do they vote in a united fashion.

Conclusions

Canada's Aboriginal peoples have made substantial gains since the 1960s in areas where national fiscal efforts can have a direct effect on social conditions, e.g., school enrolment, modernization of housing and physical infrastructure, access to medical facilities, and income levels. If these conditions formed the only measures of progress made by Aboriginal Canadians, the gap between Aboriginal peoples and other Canadians would seem to be disappearing rapidly. A different picture emerges from data on the manifestations of social disintegration, such as self-destructive behaviour and family violence, family breakup, and health patterns attributable to poor nutrition, chemical dependencies, and profound depression. These problems are growing quickly enough to offset gains of an institutional nature, such as greater availability of schools, hospitals, and capital. While Aboriginal infant and adult *mortality* rates are falling because of better access to medical care for example, chronic illnesses and disability remain high. Aboriginal people are receiving more health services, and living somewhat longer, but they are leading much less healthy and productive lives than their neighbours.

These conditions create feedback effects. On average, Aboriginal people experience a much greater amount of deprivation, loss of family and friends, illness and disability, than the non-Aboriginal Canadians who surround them and intrude daily, via television, into their homes. The resulting sense of marginalization, alienation, and worthlessness manifests itself in high rates of self-destructive behaviour, such as alcohol abuse, family violence and suicide, which undermine trust and kinship, discredit culture, and contribute to the distress and poverty of succeeding generations.

Many government programs simply exacerbate the vicious circle of self-rejection and further social disruption. Aboriginal peoples see public expenditures on their communities grow, frequently accompanied by the resentment of other Canadians. At the same time they witness a deterioration in the quality and meaningfulness of their lives. They blame government, and they also blame themselves. The experience is fundamentally *disempowering* because it instills dependency, feelings of inferiority, and a sense of perpetual and inevitable powerlessness.

Culture and political freedom are important mediating factors in this process. A strong sense of community, reinforced by the use of a distinct language and opportunities for collective action can increase a peoples'

ability to withstand physical hardships, including poverty. Unrelenting adversity begins to undermine people's confidence in their own identities and cultures, however, and they yield to the emulation of more prosperous or powerful neighbours. If they are also oppressed politically, they may emulate their oppressors. Observing the loss of their languages, the disappearance of their religions, and disruption of their families, and the resentment of their children, they may lose all hope of renewal. While it may be possible to maintain life under these conditions, through programmes of income- assistance, health care and other social supports, it is very difficult to restore a people's initiative, creativity, and self-sufficiency.

In Canada, the breakdown of Aboriginal families and cultures has been accelerated by integration policies: involuntary enfranchisement of Indian women under the *Indian Act*, compulsory segregated education in "residential schools," and replacing traditional local institutions with Canadian-style elected councils under DIAND supervision. Sins of omission have also weighed heavily against cultural survival, e.g. the greatly disproportionate removal of children from their own families, and criminalization of Aboriginal children and adults by the criminal justice system. These disruptive forces may not have been matters of policy, but were long tolerated. Although they have been studied and decried, moreover, they have still not been mitigated.

For these reasons, it would be hazardous merely to project trends in Aboriginal Canadians' mortality, life expectancy, or schooling into the future. Powerful counter-currents are operating from the level of the family to communities, cultures, and nations. Government spending on top-down programmes will produce diminishing returns, unless people are afforded the time, freedom and encouragement to restore confidence in themselves—from the bottom up. A large part of this would need to be the settlement of land claims and implementation of effective self-government, so that Aboriginal communities can restore their economies and local institutions in culturally-compatible ways. Another element must be reducing the removal of Aboriginal people from their families and communities by child-welfare and criminal-justice agencies so that a process of healing and community re-integration can begin. Finally, it is important to restore Aboriginal peoples' self-respect, by giving them a distinct and meaningful role in governing Canada, and no longer administering them as internal colonies.

Aboriginal peoples are the historical foundation on which Canada was erected, and which distinguish Canada from other Western European states. They continue to dominate a large part of Canada's territory, and could make a significant contribution to achieving sustainability, especially in the challenging and fragile Arctic ecosystem. It should not be enough to

preserve the people physically, for the loss of their cultures would diminish the human capital of Canada irretrievably. If “social integration” means strengthening a diverse country's capacity for sustainable development, it must equalize all groups' enjoyment of freedom and resources, without sacrificing their underlying diversity in the process.

Notes

1. Associate Professor of Native American Studies at the University of Lethbridge. An earlier and more extensive version of this article was prepared under contract to the United Nations Development Programme's Human Development Report Office in 1993. The support and encouragement of Inge Kaul, director of the Office, is gratefully acknowledged.
2. Much of the data published by DIAND in the 1980s consisted of this agency's own estimates and projections, based upon the 1981 census and other sources, and must now be revised based upon analyses of the 1991 census—which are, as yet, only partially available.
3. The census sample appears more dispersed off-Reserve than the INAC registry data—64 percent versus 41 percent, a considerable difference which suggests that cooperation with the census was particularly poor on Reserves.
4. Since 1966, labour participation rates have increased from 57.3 to 65.5 percent of the working-age population. The greatest increase has been among women over 25 years of age (from 31.2 to 56.6 percent), and there has actually been a decline in participation among men over 25 years of age (from 84.9 to 75.4 percent). This reflects improvements in women's access to all forms of employment, and an increase in two-income families in response to declining growth in real wages.
5. Despite these differences in growth rates, Aboriginal peoples will not double their *proportion* of Canada's national population until the end of the next century (all other factors being equal).
6. There is no significant difference in fertility between Reserves, and Aboriginal peoples who are urbanized or dispersed, for any region.
7. In preparing Map 1 from 1986 census data, I shaded census divisions or sub-divisions where more than half the people identified themselves as Aboriginal. This is not entirely satisfactory for Labrador and the Yukon, where there are a few non-Aboriginal towns dispersed among

- many smaller Aboriginal settlements. Omitting the towns, these large areas are also predominantly Aboriginal.
8. These cities are Halifax, Montreal, Ottawa-Hull, Toronto, Winnipeg, Regina, Saskatoon, Calgary, Edmonton, Vancouver, and Victoria. Almost half of all Canadians live in these metropolitan areas.
 9. The exceptions are the large Blackfoot, Blood, and Piegan Reserves in southern Alberta, which extend over hundreds of square kilometres. At the other end of the scale are hundreds of Reserves no larger than a city block. A few, such as the Huron-Wendat Reserve in Quebec City, the Squamish Reserve in Vancouver and the Membretou Reserve in Sydney, Nova Scotia, are merely neighbourhoods within an urban area. British Columbia, with its large number of small Bands, contains 71 percent of all of Canada's Reserves, many of only a few hectares.
 10. This varies from 3 hectares *per capita* in the Atlantic region, to nearly 10 hectares *per capita* in the Prairies.
 11. Aboriginal people also won exclusive hunting, fishing and trapping rights over somewhat larger areas, but must accept some development of these areas, which may in turn affect wildlife abundance.
 12. For example, Mikmaq travel yearly to the blueberry farms of Maine and many Pacific Indians to pick fruit in British Columbia or Washington State. Seasonal work in canneries, tourism, and handicrafts is also difficult to trace through official statistics.
 13. For example, Winnipeg, Regina, Saskatoon, Calgary, Edmonton and Vancouver.
 14. Average 1986 family size for Reserve Indians was 4.2 persons, for Inuit 4.3 persons, and for all Canadians 3.1 persons (INAC, 1989:29).
 15. In 1981, the clerical, sales and services sector employed 26.0 percent of experienced Aboriginal workers on Reserves and 40.5 percent in urban areas, compared to 39.9 percent of Canadians (Siggner, 1986).
 16. The proportion of Aboriginal people employed in the manufacturing/processing sector was twice as great in Ontario and British Columbia, due to the large Aboriginal enclaves in Toronto and Vancouver.
 17. The ratio between the earnings of Indian men and Indian women was about the same in each sector as the ratio between the earnings of men and women generally, i.e., roughly 2.0 in every sector except clerical and construction.

18. In the Northwest Territories, dependence on transfer payments has been lower for all groups, but the disproportion remains: 16 percent of Aboriginal peoples' income derived from transfer payments in 1985, as opposed to 3.3 percent for other residents of that region (INAC, 1989).
19. Mortality rates for adult Registered Indians have fallen from 10.5 per thousand in 1955, to 3.8 per thousand in 1990 (INAC, 1992a:25).
20. Crude 1988 death rates were 5.4 per thousand for Indians, 5.5 per thousand for Inuit, and 7.3 per thousand for Canada as a whole (Health and Welfare, 1991a).
21. A decade ago, Indian life expectancies were about five years lower (Siggner, 1986:5). In 1991 the average *age at death* was 54.0 years for Indians, and 72.1 years for all Canadians (Frideres, 1993:136). Unlike life expectancy at birth, this measure reflects the poorer health of older generations of Indians who are still living.
22. Total death rates per 100,000 are not strictly comparable, between Indians and others, because children form a much larger proportion of the Indian population. Adequate data for computing age-adjusted rates was not available. Mortality rates for all Canadians fell from nearly 1,200 per 100,000 in the 1920s, to their present levels of between 700 and 730 per 100,000 by the 1970s (Statistics Canada, 1992c).
23. Data in Table 6 is for trauma, which includes accidents, suicides, homicides, and complications from medical procedures. Nationwide, at least, 94 percent of trauma is accidental or self-inflicted as opposed to homicide or medical causes (Statistics Canada, 1992c).
24. Twice as many (7.0 percent) Aboriginal people report tuberculosis problems in the North, where the effects of the tuberculosis outbreaks 30 years ago are still being felt (Statistics Canada, 1993a).
25. Métis, not shown separately in Table 5, report about the same rate of illness as the average for all Aboriginal peoples, but rely less on hunting and fishing—only 13 percent derive half or more of their meat and fish from hunting, fishing and foraging.
26. Hypertension shows the same geographical pattern, but respiratory disease is most frequent among Indians in *urban* areas, which may show the effects of poor housing, air pollution, and greater stress.
27. Tobacco use appears to have increased, for example, and it must be

- borne in mind that commercial cigarette tobacco is not botanically the same as *kinnick-kinnick* or traditional Indian tobacco.
28. That is, due either to natural increase or to the reinstatement of persons who had been enfranchised involuntarily.
 29. In 1986, the proportion of homes without central heating was 37.5 percent for Indians living on Reserves, 9.4 percent for Indians living off-Reserve, 16.7 percent for Inuit, and 5.4 percent for all Canadians (INAC, 1989:32).
 30. Some sense of the extremely poor condition of housing on Reserves barely a generation ago can be gleaned from Hawthorne (1966:81), which showed that in a sample of 35 Indian communities, fewer than one-tenth of the houses in 24 communities had indoor toilets; in 16 communities few if any houses were electrified; and in 18 communities, ten percent or fewer of the houses had telephones.
 31. In 1981, two-thirds of Indians spoke English at home, compared to 39 percent of Aboriginal people in the North, 26 percent of all Inuit and 5 percent of Inuit in Northern Quebec (Siggner, 1986:9; Maslove and Hawkes, 1989).
 32. Nationwide, adult literacy has been reported as 62 to 84 percent, depending on levels of reading ability (Statistics Canada, 1991:118). Literacy data for Aboriginal peoples is not available.
 33. Even among Indigenous North American societies alienation tends to manifest itself differently, e.g., developing body pains among Navajos compared with high levels suicide and violence in the North (Devereux, 1978; Kiev, 1965; Health and Welfare, 1991b:26).
 34. There were no statistically significant differences in this regard between Aboriginal people living in cities and those living elsewhere, although a slightly greater proportion of city-dwellers did not report having *anyone* to contact (11 percent compared to 8 percent).
 35. Evidence of disproportionate intervention in American Indian homes resulted in special legislation in the United States to protect Indian families (Barsh, 1980). This continues to be a policy issue in Canada as well (Johnston, 1983)
 36. As suggested by Nova Scotia Government (1989), Alberta Government (1991), and other recent studies of criminalization, discussed below.

37. Including attempted murder but excluding assaults by or on police. Based on reports by victims or others. This is higher than the number of assaults which are considered "actual," and which result in charges or convictions.

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