

The North

Northern Frontier, Northern Homeland

This Inquiry was appointed to consider the social, environmental and economic impact of a gas pipeline and an energy corridor across our northern territories, across a land where four races of people – Indian, Inuit, Metis and white – live, and where seven languages are spoken. The Inquiry was also empowered to recommend terms and conditions that ought to be imposed to protect the people of the North, their environment, and their economy, if the pipeline were to be built.

Today, we realize more fully what was always implicit in the Inquiry's mandate: this is not simply a debate about a gas pipeline and an energy corridor, it is a debate about the future of the North and its peoples.

There are two distinct views of the North: one as frontier, the other as homeland.

We look upon the North as our last frontier. It is natural for us to think of developing it, of subduing the land and extracting its resources to fuel Canada's industry and heat our homes. Our whole inclination is to think of expanding our industrial machine to the limit of our country's frontiers. In this view, the construction of a gas pipeline is seen as the next advance in a series of frontier advances that have been intimately bound up with Canadian history. But the native people say the North is their homeland. They have lived there for thousands of years. They claim it is their land, and they believe they have a right to say what its future ought to be.

The question whether a pipeline shall be built has become the occasion for the joining of these issues.

In the past, Canada has been defined by its frontiers. In the words of Kenneth McNaught:

From the time of the earliest records Canada has been part of a frontier, just as in her own growth she has fostered frontiers. The struggle of men and of metropolitan centres to extend and control those frontiers, as well as to improve life behind them, lies at the heart of Canadian history – and geography determined many of the conditions of that struggle. [*The Pelican History of Canada*, p. 7]

H.A. Innis insisted that it was Canadian geography and Canadian frontiers that made possible and defined the existence of the country. The nation's lines of transportation and communications were based on the St. Lawrence River, the Great Lakes and western waterways. French and British dependence on fish, fur, timber and wheat influenced the course of Canadian history, one staple after another drawing the nation from one frontier to the next. Innis refuted the notion that Canada's economy is simply a series of projections northward from the economic heartland of North America.

The French, the fur trade, British institutions – these have all played a part from the earliest times in the development of a separate community in the northern half of the continent. But it is a northern tradition that in large measure makes Canada distinct from the United States today. We share a mass culture with the United States, but it is Canada that has – and always has had – a distinct northern geography and a special concern with the North.

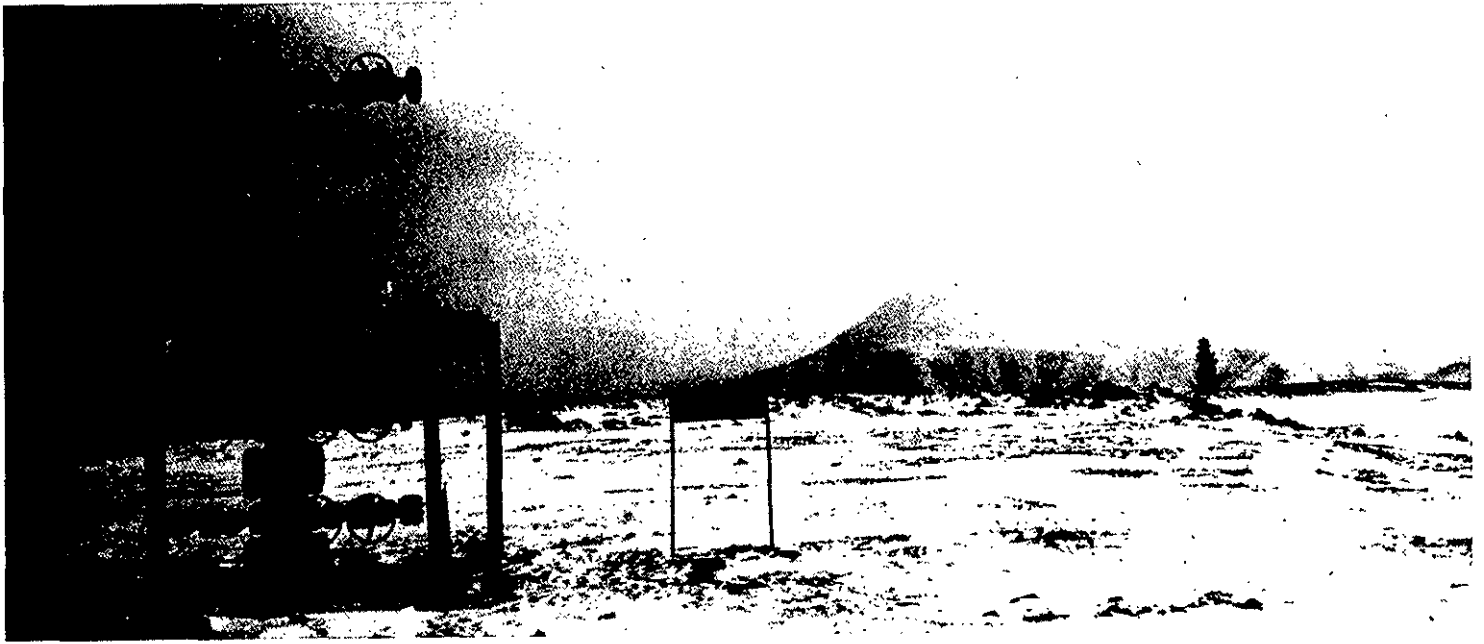
What happens in the North, moreover, will be of great importance to the future of our country; it will tell us what kind of a country Canada is; it will tell us what kind of a people we are. In the past, we have thought of the history of our country as a progression from one frontier to the next.

Such, in the main, has been the story of white occupation and settlement of North America. But as the retreating frontier has been occupied and settled, the native people living there have become subservient, their lives moulded to the patterns of another culture.

We think of ourselves as a northern people. We may at last have begun to realize that we have something to learn from the people who for centuries have lived in the North, the people who never sought to alter their environment, but rather to live in harmony with it. This Inquiry has given all Canadians an opportunity to listen to the voices on the frontier.

In the past at each frontier we have encountered the native people. The St. Lawrence Valley was the homeland of the Huron and the Iroquois – they were overwhelmed; the West was the homeland of the Cree – they were displaced; the Pacific Coast was the homeland of the Salish – they were dispossessed. Now, we are told that the North is the homeland of the Dene, the Inuit and the Metis. Today in the North we confront the questions that have confronted Canadians before – questions from which we must not now turn away.

Should the future of the North be determined by the South? The question can, of course, be answered by saying that since 1867 the Government of Canada has had responsibility for the welfare of the native people, and that since 1870 it has had jurisdiction over the Northwest. This is to say that Ottawa is sovereign, and has the power to dispose of the North as it wills. But the Government of Canada has not been satisfied to make such an answer, and has established this Inquiry to make it plain that the goals, aspirations and preferences of the



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northern peoples should be fully explored before any decision is taken.

The choice we make will decide whether the North is to be primarily a frontier for industry or a homeland for its peoples. We shall have the choice only once. Any attempt to beg the question that now faces us, to suggest that a choice has already been made or need never be made will be an inexcusable evasion of responsibility.

The issues we face are profound ones, going beyond the ideological conflicts that have occupied the world for so long, conflicts over who should run the industrial machine, and who should reap the benefits. Now we are being asked: How much energy does it take to run the industrial machine? Where must the energy come from? Where is the machine going? And what happens to the people who live in the path of the machine?

It may be that, in the national interest, the gas pipeline and the energy corridor should be built. It may be that they should not. But we owe to the peoples of the North, and to future generations, a careful consideration of the consequences before we go ahead with such projects. This report is an attempt to set out what those consequences will be.

The Northern Biome

To most Canadians, "the North" is the immense hinterland of Canada that lies beyond the narrow southern strip of our country in which we live and work. Throughout this report, my view of the North is confined largely to Canada's northern territories — the Yukon Territory and the Northwest Territories — and my attention is addressed principally to that part of Canada, including the adjoining sea and islands, that

lies to the north of the provinces of British Columbia and Alberta.

In the course of this Inquiry, I have travelled throughout this region. I have learned how remarkably different the land is in winter and in summer. I have seen the great differences between the forest and the tundra. I have admired the vastness of the land, its variety, its beauty, and the abundance of its wildlife.

I have travelled throughout the Mackenzie Valley, and I have seen the great river in its varied moods. I have crossed the swampy and forested plains and the "great" lakes that extend eastward from the Valley to the edge of the Canadian Shield. I have seen the myriad lakes and ponds and the complex of river channels that form the Mackenzie Delta. I have flown over the Beaufort Sea — in winter covered by ice and snow, in summer by fields of ice floating in the blue water. I have seen the beaches, bars and islands of the Arctic coast, the pingos and lakes around Tuktoyaktuk, the rocky hills at Holman, and the clear rivers of the Yukon Coastal Plain.

On the Old Crow Flats, in the Mackenzie Delta, and along the Beaufort Sea coast I have seen the immense flocks of birds that migrate in their thousands to this arctic area each summer. I have seen the white whales swimming in the shallow coastal waters of the Beaufort Sea around the Mackenzie Delta. I have seen the Porcupine caribou herd in early summer at its calving grounds in the Northern Yukon, and the Bathurst herd at its wintering grounds north of Great Slave Lake. And in every native village I have seen the meat and fish, the fur and hides that the people have harvested from the land and water.

The Boreal Forest and the Tundra

Biologists divide the North into two great regions called "biomes": the boreal forest and the tundra. The boreal forest is characterized in the minds of most people by spruce trees and muskeg. It is the broad band of coniferous forest that extends right across Canada from Newfoundland to Alaska. The tundra, extending from the boreal forest northward to the Arctic Ocean, comprises one-fifth of the land mass of Canada, but most of us who have never seen it, and know of it simply as a land without trees, sometimes call it "the barrens." Yet the tundra biome includes landscapes as varied and as beautiful as any in Canada — plains and mountains, hills and valleys, rivers, lakes and sea coasts. In winter, land and water merge into a white and grey desert, but the summer brings running water, explosively rapid plant growth, and a remarkable influx of migratory birds.

The two northern biomes — the tundra and the boreal forest — meet along the tree line. The tree line is not really a line, but a transitional zone that is commonly many miles in width. This biologically important boundary, which separates forest and tundra, also separates the traditional lands of the Indians and the Inuit. The tree line may also be viewed as the southern limit of the Arctic, the boundary between the Arctic and the sub-Arctic; this is the distinction I shall adopt in this report. Thus, the entire Mackenzie Valley and most of the Mackenzie Delta lie south of the tree line and are described as sub-arctic. In contrast, the land along the coast of the Beaufort Sea and the islands to the north lie beyond the tree line and are described as arctic.

I have learned from experience that, arctic or sub-arctic, this region is one of great

Well head, Pointed Mountain pipeline, NWT.
(GNWT)

Permafrost patterns on the Yukon tundra.
(M. Church)

Landscape of the boreal forest. (C. & M. Hampson)

Hoar frost. (R. Fumoleau)



climatic contrasts. In mid-summer, it is never dark, but in mid-winter the only daylight is a combined sunset and sunrise. Summer weather can be pleasantly warm, and in the Mackenzie Valley temperatures in excess of 80°F are not uncommon. But summer weather can also be raw and damp, particularly near the coast where a switch from an offshore to an onshore wind will cause temperatures to drop rapidly almost to freezing, accompanied by fog and drizzle.

Both rainfall and snowfall are light. In the Mackenzie Valley, the amount of precipitation is similar to that at Saskatoon or Regina, but in the true Arctic, including the lands bordering the Beaufort Sea, precipitation is as low as that in the driest parts of the Canadian prairies. For this reason, the Arctic may be described as desert and semi-desert, and it is remarkable, therefore, that the land surface in summer is predominantly wet and swampy, and dotted with innumerable shallow ponds. This apparent anomaly is caused, in large part, by permafrost, perennially frozen ground, which prevents water from draining downward into the ground. The seasonally thawed active layer of the soil holds the water from rain and melting snow like a sponge.

Permafrost

In much of Southern Canada, the ground freezes downward from the surface every winter and thaws completely again in the spring. But in the northern half of our country, in the sub-arctic and arctic regions, frost has penetrated below the maximum depth of summer thaw, and a layer of frozen ground persists beneath the surface from year to year. This perennially frozen ground, called permafrost, modifies the character of the landscape in the North and profoundly

affects the works of man on and beneath the surface of the land.

In the southern part of the permafrost region, the perennially frozen layer beneath the seasonally thawed "active" layer is only a few feet thick and occurs as patches or islands surrounded by unfrozen ground. Northward, permafrost is more extensive, the layer of frozen ground becomes thicker, and areas of unfrozen ground are smaller and fewer. Farther north still, the permafrost is relatively continuous and may be several hundred to more than a thousand feet thick; but there are areas without permafrost beneath rivers and lakes. To describe the main differences in its distribution, we speak of the continuous and the discontinuous permafrost zones. The proposed pipeline route north of Fort Good Hope lies within the continuous permafrost zone, whereas the route south of Fort Good Hope to around the Alberta border lies in the discontinuous permafrost zone.

Permafrost also occurs offshore beneath the Beaufort Sea, but little is yet known about it there. We believe most of the undersea permafrost was formed on land and has since been inundated by a rising sea level and shoreline erosion.

All of this, of course, is not obvious, but has been learned through a great deal of study. But what is obvious in travelling in the North is the presence of surface features that accompany permafrost. In the discontinuous permafrost zone, there are peat mounds or palsas, speckled and string bogs, and drunken forests with trees tilted in various directions. Farther north, there are pingos, frost-crack patterns, exposed masses of ice, thermokarst depressions caused by the melting of underground ice, as well as characteristic slump features and other signs of thawing soil along the sea coast and river

banks, and around lakes and ponds. In summer, there is the all-pervading wetness of the ground surface. In a region that, under warmer conditions, would be desert or semi-desert, ponds, swamps, fens and water-filled frost cracks all bear witness to the inability of water to drain downward through the frozen ground. Permafrost keeps the ground in the North moist, and it profoundly affects the vegetation, insects, birds and other forms of life.

Tundra has been described as land floating on ice. This conception aptly emphasizes the fact that frozen water within the ground gives the terrain unique qualities and creates problems for engineers. Thus, in the permafrost region, rock (which contains little water) is normally no different from rock in temperate regions, but the unconsolidated earth material — the soil — changes radically when the water in it freezes to form ice. The frozen soil will not absorb more water nor can water pass through it: water must therefore remain on the ground surface. Soil cemented together by ice is not easy to dig or to use in construction projects, because it has taken on rock-like properties. True, so long as it is frozen, it provides a solid foundation. But, not uncommonly, when frozen soil thaws, particularly if it is a fine-grained soil, it loses its strength: the soil may flow under its own weight, and the ground surface may subside as water escapes. In ice-rich soils, the effect may be compared with the melting of ice cream. This drastic change in properties occurs whenever the melting of ice in the soil releases more water than the soil can absorb. Such soil is described as containing excess ice.

Thawing of permafrost is only one cause of frost-induced engineering problems in the Arctic and sub-Arctic. Seasonal frost action in the active layer above the perennially



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frozen ground also causes problems. In winter, moisture in the active layer freezes, producing an upward displacement of the ground, called frost heave; in summer, there is a loss of bearing strength as the active layer thaws and the excess water is released. In some situations, engineering projects can lead to perennial freezing of areas where the ground is unfrozen or to the thickening of (existing) permafrost. When such changes take place in fine soil with abundant water, ice can build up and may cause frost heave. As we shall see later in this report, frost heave represents a serious problem for the proposed buried, chilled pipeline.

When roads, buildings or pipelines must be built where permafrost occurs, the engineers usually try to avoid disturbing the natural temperature regime in the ground. Disturbance of the ground surface is, therefore, kept to a minimum, particularly where peat or other organic material serves as a natural insulating blanket over the frozen ground. Frequently, where the thawing of permafrost would cause engineering or environmental difficulties, the structures are built above the ground on piles to permit air to circulate under them. The trans-Alaska oil pipeline is built on piles for this purpose. A common alternative is to place the structure on a pad of gravel, or of gravel plus insulation, thick enough to prevent heat from reaching the frozen ground. Compressor stations for the proposed Mackenzie Valley gas pipeline would be built on such pads. On the other hand, if a structure must disturb the ground or must be placed underground, then more complex techniques are required to avoid frost problems. The proposal to refrigerate the buried Mackenzie Valley gas pipeline is an example of such techniques.

The Northern Ecosystem

I have heard hundreds of hours of evidence from experts and laymen alike on the nature of the northern environment. Soil scientists and geotechnical engineers have explained the environmental problems associated with permafrost. Experts on vegetation have described the flora and the measures that can be taken to reestablish plant cover on disturbed areas. Biologists, hunters, trappers and fishermen have told me about the northern animals and fishes — their life cycles, habitat requirements and susceptibilities to disturbance. Throughout all this evidence, I have heard detailed expressions of concern for the northern ecosystem and of the measures that might be used to preserve it in the face of industrial development.

To understand the impact of industrial development on the northern ecosystem and the appropriateness of mitigative measures, it is essential first to understand its general nature and the features that set it apart from more familiar ecosystems in the South. Merely to characterize the North as sensitive, vulnerable or even fragile will not help. Granted, certain species are sensitive: falcons, for example, cannot tolerate disturbances near their nesting sites. The massing of some species such as caribou, white whales and snow geese in certain areas at certain times will make whole populations of them vulnerable. And the response of permafrost to disturbance suggests that its very existence is fragile. But anyone who has visited the North during the long winters and the short mosquito-infested summers will know that northern species must be hardy to survive.

Every ecosystem is built on both living and non-living elements. The two are inextricably linked, and the characteristics of the

one are reflected in those of the other. It is not surprising that the combinations of climate and topography in the northern biomes have produced plant and animal populations unique to the North. The relations within the northern ecosystems are not well understood, but at least three characteristics appear to distinguish them: the simplicity of the food chains, the wide oscillations in populations, and the slow growth rates. Dr. Max Dunbar, a marine biologist of international repute, provides an overview of these features in his book *Environment and Good Sense*:

Arctic ecosystems are simple compared with those in temperate and tropical regions; that is to say, they consist of a comparatively small number of species. There are about 8,600 species of birds in the world; of these only some 56 breed in Greenland, and perhaps a little over 80 in Labrador-Ungava. Colombia, on the other hand, has 1,395, Venezuela 1,150. Of the 3,200 species of mammals known in the world, only 9 are found in the high Arctic, on land, and only 23 in the Cape Thompson area of Alaska. The world is full of fish; well over 23,000 are known. But only about 25 live in arctic waters. The same proportions, approximately, are shown in other groups of animals and plants.

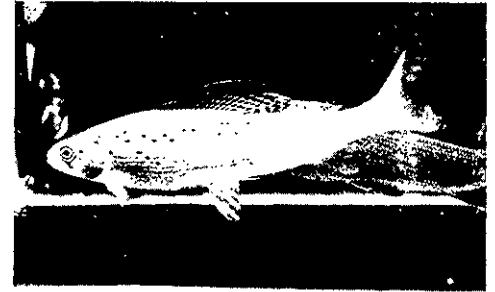
As an example of such simple systems: the lemmings (there are two species in the North, but with fairly separate distributions, so that they are seldom found together) form the herbivore link between the mosses and grasses (the primary producers) and the foxes, snowy owls, and weasels. Here we have only one dominant herbivore, three common predators, and a few species of plants: so far only four species of mammals and birds in any one region. In certain areas, add two more predators: the rough-legged hawk and the gyrfalcon; elsewhere, add caribou and ground squirrels, two other herbivores; here and there, a wolf. In more southerly regions of the North another fox, the red fox, is also found; and a few herbivorous and insectivorous birds,

The Mackenzie Delta. (CAGPL)

Caribou on the move. (G. Calcif)

Arctic ground squirrel. (C. & M. Hampson)

Arctic grayling. (R. Read)



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perhaps five species. This gives only 15 species of homotherms or warm-blooded animals, and it is rare to find all of them in one "system" or restricted region. To these must be added the invertebrates and the plants, but this is enough to show how simple the pattern is when compared with the variety of birds and mammals found together in temperate parklands, or, even more so, in the tropical rain forest. In arctic lakes the number of species is very small indeed, and in the sea the same general proportion of species numbers is maintained in comparison with lower latitudes. Other similar examples could be given for coastal communities and for islands.

The cause of this simplicity is not the low temperatures themselves, contrary to common belief. Living organisms can adapt very easily to low temperature as such: this is true not only of the warm-blooded forms but of the poikilotherms ("cold-blooded" species) as well. The limiting factor is the ability of the system to produce life in abundance. In the sea, at least, and in lakes, this means that the limiting factor is the supply of inorganic nutrients. . . . On land the limiting factors may be both this lack of nutrients and the long frozen winter when the food supply is very greatly, though not entirely, reduced. In either instance it is food supply rather than low temperature. . . .

One important result of the simplicity of arctic systems is that the component species oscillate in abundance over periods of time. In the example given above, the period of oscillation is controlled by the length of life and reproductive capacity of the lemming, and is maintained at from three to five years with quite remarkable regularity. These oscillations are severe in amplitude, so that they give rise frequently to what amounts to local extinction of species; the populations then have to be built up again by immigration from adjacent areas. The upsetting of this already rather shaky equilibrium by man's activity is probably very easy to do, and hence one must suppose that the North is more, rather than less, sensitive to pollutants and other environmental dislocations. This is the sort of thing

upon which we need more precise information than we have at present, and which we need time to obtain.

One important ecological factor that may well be dependent both upon food supply and temperature is growth, the rate at which animals reach maturity. This is especially true of the poikilothermal animals and of plants. This means that damage done to populations of animals and plants takes a long time to repair. One may, for instance, come upon a remote lake full of arctic char, or lake trout, and thrill at the prospect of such excellent fishing. This has happened not infrequently in the North. After two years of fishing by Eskimos, or by visitors, the lake appears to be devoid of fish; the reproductive rate and the growth rate of the fish have not come near to making up for the fishing take, and it may in fact require a rest of many decades before the fish population is restored. The arctic char of the Sylvia Grinnell River, at Frobisher Bay in Baffin Island, take twelve years' growth in the female before ripe eggs are produced, and even then each female spawns only every second or third year. Small wonder that such resources are soon fished out and destroyed. . . .

The factors of population oscillation, then, and of slow growth rates, appear to give the northern ecosystems a quality of sensitivity, a knife-edge balance. A third factor is the simplicity of the system itself, for where so few species are involved the extinction of just one must be a serious matter. Yet one cannot at the moment be dogmatic on this point, because the situation has not been experimentally tested; we do not know how much stress the systems will bear and still survive. [p. 56ff.]

In the North, a certain number of species thrive. They are tough — they have to be to survive — but at the same time they are vulnerable. And in the North, man has the capability to cause irreparable injury to the environment.

Francis Bacon wrote, "Nature to be commanded must be obeyed." The northern

environment requires us to obey its rules. Where necessary, we must establish and follow new approaches. That is why we must on this, our last frontier, proceed only with the most complete knowledge of and concern for the flora and fauna of the North, for the biomes of the forest and the tundra.

Northern Peoples

The North is the homeland of a complex of indigenous cultures. We in the South may speak airily of "native people," and thereby convey the impression that there is a single culture, a single social system that occupies the vast arctic and sub-arctic terrain. But the term "native" is an inheritance from the European colonists, who usually regarded the original inhabitants of the lands they sought to subdue and settle, as a single group unified by "primitive" customs, and by their political relationship to the colonial powers themselves. In this way, the term "native" obscures essential differences between the cultures encountered in the course of European expansion.

The landscapes of the North have been shaped only marginally by the activities of man. The northern peoples have always been hunters and gatherers, and most have lived with a high degree of mobility. Small groups travelled over large areas, hunting and gathering what they needed, but without altering the environment itself. It is not always easy to remember, as one flies over the unbroken boreal forest, the tundra, or the sea ice, that the Canadian North has been inhabited for many thousands of years. The populations that have used this great area were never large by European standards, but their skills as travellers and hunters made it



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possible for them to occupy virtually all of the land. Extremely slow rates of northern plant growth and of decay mean that it is possible to see almost everywhere in the North signs of ancient occupation — old house remains, tent rings, fire-cracked rocks — and for archaeologists to find, on or close to the surface, a wealth of artifacts and other evidence to show the richness, diversity and wide extent of northern aboriginal society.

In the North, there are not just “native peoples,” but a network of social systems. The Indians of the Mackenzie Valley and Western Arctic are part of the Athabaskan language and culture group. They are separated into the Kutchin (or Loucheux), Hare, Slavey, Dogrib and Chipewyan. The Athabaskan people are one of the most widely dispersed groups of Indians in North America. In addition to the Indians of the Northwest Territories and the Northern Yukon, they include the Koyukon and Tanana of Alaska, the Tutchone of the Southern Yukon, the Beaver and Carrier of British Columbia, the Navaho and Apache of the Southwest United States, and still others in California and Oregon. All these Indians, with whatever dialectical variation in their languages, regard themselves as *the people*. To the Slavey they are the *Dene*, to the Navaho *Dine*; in Kutchin the word is *Dindjie*; in Apache it is *Nde*. Today, in the North, the Indian people collectively call themselves the *Dene*.

The native peoples of the Western Arctic also include the Eskimos or, as they are now widely known, the Inuit; they occupy part of the Mackenzie Delta and the shores of the Beaufort Sea. Although all of the Inuit, from Siberia to eastern Greenland, speak closely related dialects of the same language, regionally there are differences in technology and

social organization that even today complicate anthropological generalizations about them. Certainly the Inuit themselves perceive major differences between their various groups: the Inuvialuit of the Delta see themselves as distinct from the Copper Eskimos, who are their neighbours to the east; and the Copper Eskimos — or Qurdlurturmiut — emphasize that they are unlike the Netsilik, the Aivilik or the Igloodik people, who live still farther east. And, within each of these broad groups, there are yet finer divisions and distinctions that reflect different patterns of land use and are represented by changes in dialect and in hunting techniques.

This brief elaboration of social systems may seem to lie at the periphery of this Inquiry, but it indicates that the Dene and the Inuit — as well as the Metis, to whom I shall return — are distinct peoples in history. They have common interests in relation to the proposed Mackenzie Valley pipeline, and they therefore share many concerns. But the intensity of their feelings, no less than the vigour with which they are now expressing their hopes and fears, reflect historical and cultural depths that cannot be comprehended by the term “native.” The North has become our frontier during the past few decades; it has been a homeland of the Dene and Inuit peoples for many thousands of years.

Earliest Known Migrations

The last glaciation affected occupation of the arctic regions of North America in two ways. Covered by a vast ice-sheet, much of the area was uninhabitable, but the lowered sea level exposed the continental shelf and provided a land-bridge for migrants across what is now the Bering Strait, and the interior of Alaska and parts of the Yukon remained free of ice.

The earliest of these migrations occurred probably between 25,000 and 30,000 years ago. Some of the people who crossed the land-bridge at that time seem to have continued south, giving rise to many early Indian cultures. A later migration from eastern Asia, perhaps 10,000 to 14,000 years ago, is believed to have taken place just before the final melting of the ice-sheets. These were the ancestors of the Athabaskan Indians, and their later arrival is evidenced by their occupation of large blocks of land in northwestern North America. Yet a third migration, around 5,000 years ago, is thought to have brought the predecessors of the Eskimo peoples to the New World.

The people of the Thule culture, famous for their skills as whale hunters, are probably the descendants of these earlier Palaeo-Eskimo people. About a thousand years ago, they spread throughout the Arctic, displacing the Dorset culture, which had developed in Northern Canada in about 1,000 B.C. Superbly equipped for life on the barrens and on the sea ice, the range of the Thule people in what is now Canada eventually included all the coastal areas, practically all of the islands of the Arctic Archipelago, and reached as far east as the Gulf of St. Lawrence and Newfoundland. The Inuit of today are their direct descendants.

It must, of course, be recognized that all models of early Arctic occupation remain speculative, and that the full historical extent of occupation of Northern Canada is only beginning to be documented. As archaeological work advances, however, so we will more and more realize the cultural heritage of which the Inuit and Dene are a part. But it is already evident that Indians were established in the forestlands of Western and Northern Canada, and Palaeo-Eskimos inhabited the northern rim of the “New

Dogrib Indians at Great Slave Lake, unloading canoes, 19th century. (Alberta Archives)

Eskimos, 1893. (Public Archives)

"Before they lived in houses." (Alberta Archives)

Joseph (King) Beaulieu, 1836-1916, son of Old Man Beaulieu who built the first trading post at Fort Smith. Ancestor of one of the largest NWT Metis families. (NWT Metis Association)



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World" some 5,000 years before Alexander Mackenzie reached the Arctic coast.

Distinctive Material and Intellectual Cultures

The specialized skills and knowledge of the Dene and Inuit corresponded, of course, to the different terrains that each people has so long inhabited. The dog team, for example, was the principal means of travel, although the sledge styles and hitches varied regionally. The relationship between these variations and the kinds of terrain in which they were used can be illustrated by a comparison between the fan-hitch of the Inuit of the Central and Eastern Arctic and the tandem- or line-hitch used by the Dene and the Inuit of the Western Arctic. The former was ideal for travel on rough ice and the barrens; the latter was suited for travel over snowy lakes and through trees. The range of each broadly corresponds to the two kinds of landscape.

Both Inuit and Dene societies used caribou skin for clothing. The density of the fur and the fact that the hairs are hollow make the skin both light and extremely effective insulation, so it is ideal for arctic garments. Despite many conventions of style and varieties of sewing, differences that have given each group or society its distinctive clothing, both the Dene and Inuit regarded the caribou as their most important source of winter clothing.

Inuit and Dene cultures are not merely a response to environmental conditions. Each society, armed with its own skills and perceptions, found and used the North in its own distinctive way. One example of a distinctive and essential element of material culture is the Inuit harpoon. This brilliantly successful device, with its detachable head and turning blade, is found throughout Inuit

territory, and it evidently came with them from Asia.

The Inuit and Dene also speak different languages. Some thousands of years separate their ancestors' departures from Asia, and it is not surprising, therefore, that the Eskimoan and Athabaskan languages have no more in common than do English and Hungarian. Indeed, the linguistic contact between them even today is so limited that virtually no words have been borrowed from one by the other, despite the fact that the hunting grounds of some Athabaskan groups overlapped with those of some Inuit. Because there are no longer any Asiatic peoples (with the exception of some 1,500 Siberian Inuit, who represent a back-migration across the Bering Strait), who speak versions of either of the two language families, it is not possible to establish a link between the two even in ancient times.

The various Athabaskan languages spoken in Northern Canada bear the same kind of relation to one another that exists among the Romance languages of Europe. The structure of Athabaskan grammar is noted for its use of prefixes, and its vocabulary is finely tuned to descriptions of the environment. Moreover, the nature of its word-forming system equips it well for the task of inventing new terms.

The Inuit language is agglutinative and very regular. Each word-like expression is composed of several items, and a word can be as intricate as a whole sentence in English. This agglutination is found in all of the Inuit dialects and, although the dialects most remote from one another are not readily mutually intelligible, the single language, with comparatively minor variations, reaches from Siberia to eastern Greenland — a spread of some 5,000 miles.

The specialized material and intellectual

culture of the Inuit and Dene obviously cannot be elaborated in this report, but I wish to emphasize that each of these peoples had its own way of hunting, of making clothes, of raising children, of dealing with one another, and of regarding the environment and the spiritual powers they saw as integral to their world. Their knowledge of the land and its life constitute distinctive ethno-scientific traditions.

The Metis

During the past 150 years, the Metis have joined the Dene and Inuit of the Mackenzie Valley as one of the groups now included in the category of "northern native people." The first Metis who moved into the North in the early 19th century settled around Great Slave Lake, and they trace their ancestry to the unions between *coureurs de bois* and Indian women in the early days of the fur trade. Richard Slobodin, in *Metis of the Mackenzie District*, has described their heritage:

The Metis nationality or ethnic group ... evolved in Quebec and Ontario during a period from the late 17th to the early 19th centuries, through the activities of *coureurs de bois* and other fur trade functionaries who, with their offspring by Indian women, developed a way of life partly Indian, partly marginal European, but in time distinct from both. ... On the prairies and the high plains, the Metis way of life underwent a further ecological adaptation. It was here, among Metis centering on the Red and Saskatchewan River Valleys, that consciousness of kind was heightened to the level of incipient nationality, a tendency culminating in the declaration of Metis nationhood and the consequent insurrections of 1870 and 1885. [p. 12]

In the aftermath of the Northwest Rebellion of 1885, many Metis moved North and settled in what is now the Northwest Territories.



Indians and whites in Fort Resolution. (National Museums)

8 NORTHERN FRONTIER, NORTHERN HOMELAND

Other Metis are the descendants of unions between Hudson's Bay Company men — mainly of Scottish origin — and Dene women. The children of these unions usually intermarried with the original Dene inhabitants, so that in most native communities in the North there are close family ties between the Metis and the Dene.

The Metis culture has been patterned after that of the Dene. In *Our Metis Heritage . . . A Portrayal*, produced by the Metis Association of the Northwest Territories, we are given this account of the location of the Metis between the Dene and white worlds:

For most Metis families in the present Northwest Territories, it would appear that the

woman passed on to her children all that she knew of her own culture, which was the Indian culture, and the man's influence though significant, played a secondary role in the emergent Metis way of life. This may account in part for the fact that the Metis lifestyle was very closely patterned after the Indian.

The Metis were equipped with survival mechanisms to operate in both worlds: they could hunt, trap and live off the land like their Indian ancestors, or they could take advantage of their white ancestors' technology through education.

Although the N.W.T. Metis seem to have chosen to maintain the traditional relationship with the Indian, they have creatively

succeeded in building and sustaining a unique way of life. [p. 95]

Discussion of the Metis brings us to changes that have occurred in recent times. These are matters to which I shall return, and they need not be more than adumbrated here. I have tried to indicate the depth and richness of aboriginal cultures; I urge that we not lose sight of their historical reality, their values, and their right to command our respect. The North has been a homeland to the native people for thousands of years; it has been a frontier only since the fur trade, and a major oil and gas frontier only since the 1960s.