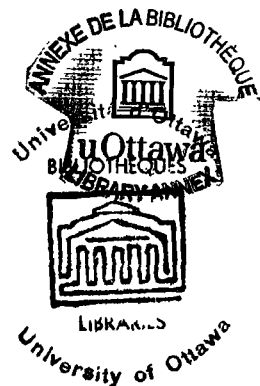


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THE ESKIMOS OF CANADA'S NORTHWEST TERRITORIES -
A PROBLEM OF NORTHERN DEVELOPMENT

by Edward R. Weick

Thesis presented to the Department of Economics,
Faculty of Social Sciences of the University
of Ottawa, as partial fulfillment of the
requirements for the degree of Master of Arts



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CURRICULUM STUDORIUM

Edward R. Weick was born on January 12, 1932 at Yorkton, Saskatchewan. He received a Bachelor of Commerce degree in Economics from the University of British Columbia in 1957. Since 1958, he has been employed as an Economist in a number of Departments of the Government of Canada. For the past seven years he has been with the Department of Indian Affairs and Northern Development. He is currently Acting Chief, Economic Staff Group, in the Northern Program of the Department.

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CHAPTER I

INTRODUCTION

Canada ranks among the most advanced countries of the world. The Canadian economy is "well-rounded" and diversified, and includes a broad range of activities. Capital is used abundantly, and the labour force is skilled and productive. On the average, Canadians enjoy a high per capita income and standard of living. Rostow argues that Canada achieved "take-off" to sustained growth as early as the period 1896-1914, attained "maturity" by about 1950, and is included among the few nations which enjoy the "age of high mass consumption".⁽¹⁾

Yet Canadians face many economic problems. Stabilizing activity and prices in an open economy has posed difficulties for government for some time. Providing an economic and social infrastructure adequate to the needs of a nation which has comparatively small population but occupies a large area has been of concern during much of Canada's history. Developing an efficient manufacturing sector able to withstand foreign competition in the relatively small domestic market has been yet another problem.

(1) W.W. Rostow, The Stages of Economic Growth, New York, Cambridge University Press, 1960, pp. 42, 43 and 59.

Another set of issues has recently gained increasing attention. This focuses on unemployment, underemployment, low productivity, and poverty among a significant proportion of the Canadian population. One aspect of this problem is the main concern of this thesis.

About 20 per cent of the population of Canada has an income which is low by Canadian standards. The people concerned usually lack the skills, education, and mobility (2) which are required by the modern labour market. Most of the indigenous population, the Eskimos, Indians, and Métis, is included in this disadvantaged group. The indigenous peoples are not only poor by ordinary standards, they are usually well below the Canadian poverty line. In their day to day lives, they face hardships which most Canadians would find difficult to imagine. For example:

A few simple statistics tell a brutal story. One is that the average life expectancy of an Indian woman in Canada is 25 years. Another is that the infant mortality rate among Eskimos is about 293 deaths per thousand live births, more than 10 times the infant death rate for the population as a whole. (3)

The problems of the indigenous peoples are not always evident. Eskimos, Indians and Métis are scattered across Canada in small groups which are often hidden from view by the

(2) Economic Council of Canada, The Challenge of Growth and Change, Fifth Annual Review, Ottawa, Queen's Printer, September 1968, p. 109.

(3) Ibid, pp. 121 and 122.

boreal forests or the Arctic wastes. They have comprised a "voiceless minority" which has had little of the political cohesiveness needed to enable it to speak out on issues which concerned it. Low levels of education, skill, and mobility have tended to confine the native peoples to the most marginal sectors of the Canadian economy. As a consequence, incomes are so low that a substantial part of the population depends on public support.

Chronic poverty, low productivity, unemployment and underemployment are undesirable for at least two reasons: Firstly, poverty results in hardship. This is particularly true in a physical environment as harsh as that of the Canadian Arctic and Sub-Arctic. Secondly, low productivity, unemployment and underemployment engender real economic costs in terms of foregone output. Unemployed or unproductively employed human resources mean that the actual output of an economy falls short of its potential output, and that actual income is less than it might be.

Finding a solution to the economic problems of the indigenous population would do more than alleviate hardship. It would yield a real social benefit because an important resource would be more effectively and fully utilized.

It must also be recognized that the indigenous population is not a static one. Among the native peoples, the birth rate has traditionally been high as a counter to the death rate typical of a migratory, hunting population. The death rate among Indians and Eskimos has decreased with the introduction of modern medicine, but the birth rate has tended to remain at its former level. As a consequence, population is now growing rapidly. Unless the indigenous people are lifted out of the "vicious circle of poverty", present problems could become more acute and complex within a generation.

To examine the problems of the indigenous population as a whole would be a large task. The writer therefore restricts the present analysis to a single segment of this population, the Eskimos of the Northwest Territories. The arrival of non-indigenous laws, customs, and techniques in the Arctic regions of Canada's northern territories is a relatively recent phenomenon. Eskimos comprise a population which is still in the process of breaking with many of its old traditions, and undergoing rapid change.

This implies that, in attitude and behaviour, Eskimos are moving from one distinctive set of behavioural patterns to another. If Eskimos are becoming more like other Canadians, they are also becoming less like the people they once were.

The economic problems encountered in this process of cultural adjustment are not well understood. A large body of literature has been developed on the transition of Eskimo society as cultural and social phenomena, but economists have given it little attention.

The Eskimo was, and still continues to be, an ethnically distinct person with roots in his own distant past. To emphasize this point, the next section provides a brief synopsis of Eskimo origins and history as these subjects are understood from archaeological and anthropological records. Much of this is a story of man inter-acting with an environment which was seldom permissive, and which was often brutal. Coping with the Arctic from generation to generation, and century to century, has had a profound effect on Eskimo outlooks, social and economic institutions, and technological development. It has had a strong bearing on the ability of Eskimos to adjust to modern laws, customs and techniques, brought to the Arctic by men who seem so easily to solve the problems which were once the core of the Eskimo's struggle for survival.

Eskimo Cultural Origins

Eskimos have lived in the Canadian Arctic for thousands of years. It is now accepted that they were among the last of many migrants who crossed to North America from Asia via the Bering Strait. However, an alternative theory of their origin was given some credence for a time. This saw them as Indians who adapted to the Arctic after they had migrated or been driven there from more southerly regions. This is an unlikely theory because Eskimos are physically and culturally distinct from Indians. ⁽⁴⁾

Eskimo archaeological remains suggest prolonged migration from the Bering Strait eastward across northern Alaska, Arctic Coastal Canada, and finally Greenland. Several distinctive cultures, culminating with the modern Eskimo, succeeded each other in the Canadian Arctic. One region, the lands surrounding Foxe Basin, has been inhabited ⁽⁵⁾ for about four thousand years. Its earliest occupants, who also probably lived in much of Arctic west of Foxe Basin,

(4) Diamond Jenness, "The Eskimos: Their Past and Future," Queen's Quarterly, Vol. 51, No. 2, 1944, p. 132.

(5) Keith J. Crowe, A Cultural Geography of Northern Foxe Basin, N.W.T., Ottawa, Department of Indian Affairs and Northern Development, October 1969, p. 13.

were the Pre-Dorset or Sarqaq people:

The remnants of Sarqaq material culture indicate origins in the west and affinities with the older Alaskan and Siberian mesolithic cultures. Radio-carbon dating of bones and artifacts shows that they probably arrived in the region about 2,000 B.C., to build three, perhaps four, settlements on tiny emerging islands or on points of land.⁽⁶⁾

The fate of the Sarqaq people is not known. They were succeeded in the Foxe Basin region by the Dorset people in about 800 B.C. Apparently, little of Sarqaq culture was transmitted to the new inhabitants.

The origins of the Dorset culture are obscure. There is conjecture that it "may have evolved with the aid of new ideas and techniques diffused from Alaska, or from the pre-historic Indian cultures of the Great Lakes."⁽⁷⁾ Dorset people were more numerous than their predecessors. Eskimo legends describe them as a physically powerful people who hunted caribou with bone-tipped spears, and seals with harpoons. They had not domesticated the dog, and used manpower to pull sleighs. They lived in permanent settlements. Dwellings were rectangular stone houses with frontal fireplaces, or walled skin tents.

During the period 900 to 1000 A.D., an amelioration of the increasingly severe Arctic climate corresponded with

(6) Ibid, p. 16

(7) Ibid

a new wave of migration from Alaska. This consisted of Thule people, who began to displace Dorset people in Foxe Basin by 1100 to 1200 A.D., and who had probably occupied much of the Arctic west of Foxe Basin well before these dates. These people were the direct ancestors of modern Eskimos. They were vigorous, adaptable and inovative. According to Crowe:

The Thule people had to adapt their culture to an increasingly severe climate in northern Foxe Basin, and appear to have learned the use of snow knives and snow houses from the Dorset hunters. The original Thule technology was rich in itself, including the use of kayak and umiak, harpoon float and droque for whale and walrus, bow and arrow, bow-drill, bird-dart and bolas. Mathiassen found implements of native copper and meteoric iron in the Thule houses of Repulse Bay, probably carried from further west.(8)

Unlike the Dorset people, the Thule people had domesticated the dog and trained it to haul sleighs. Crowe observes that the ".... rapid spread of Thule culture through the Arctic was probably due in large measure to dogteam (9) transportation". Such transportation must also have greatly increased the radius within which hunting was possible around an encampment, and thereby have raised hunting productivity. A larger and/or wealthier population could thus have been supported.

Owing to their common origin in the Thule culture, all of the Eskimos of the Canadian Arctic have similar traditions, values, institutions and techniques. Although

(8) Ibid, p. 21

(9) Ibid

dialects differ greatly from region to region, Eskimos share
(10)
a common language.

However, aboriginal Eskimo culture has been greatly transformed during the present century. Introduction to the Arctic of firearms, and activities such as trapping and commercial whaling, altered the former balance between population and resources. Missionaries and educators brought new ideals. The introduction of money and goods from the south have established new material values. Transportation technology such as the motor boat and snowmobile have enabled greater mobility. Modern medicine has changed the age-old balance between the birth rate and death rate.

Patterns of activity which would once have been beyond the conception of Eskimos have now become part of daily life. Scheduled air services are available in many Arctic communities. Justice is administered by a Territorial Court, and Eskimos, as jurors, may be required to decide the fate of one of their numbers by legal processes which are alien to their own. Children attend schools, and learn facts and values which conflict with what their elders learned by tradition or experience. Among some groups, the old ways are now commemorated mainly by the occasional drum dance performed by middle-aged Eskimos for visiting dignitaries. Many Eskimos no longer

(10) R.A.J. Phillips, Canada's North, Toronto, MacMillan of Canada, 1967, p. 30.

escape from harsh Arctic reality by feasting and dancing. Alcohol has become a principal refuge, and even drugs may soon be added to a long list of social problems.

There is growing scope for conflict between the traditional uses which Eskimos have made of the lands of the Arctic, and the uses to which people from southern Canada (and from other nations) now want to make of them. Hunting and trapping, on the one hand, and oil exploration on the other, require the use of extensive tracts of land. Because the density of Arctic animal populations is low, the native hunter - trapper must cover large areas to harvest enough game and pelts to make his work worthwhile. Similarly, oil companies must undertake tests over thousands of acres to gain an appreciation of the underlying geology. A problem which is increasingly emerging in the Arctic is that lands under exploration for petroleum may coincide with hunting and trapping grounds. One important aspect of this problem is that activities related to oil exploration may frighten animal populations into behaviour patterns inimical to hunting and trapping.

However, a more fundamental problem confronting the modern Eskimo derives from the relationships which prevail between his own growing numbers, a declining traditional resource base, and a shortage of employment opportunities in the modern sector of the Arctic economy. An increasing proportion of the rapidly growing Eskimo population no longer

knows how to hunt and trap effectively. Even if it did, animal resources are now probably too small to support more than a limited number of people. Moreover, the Eskimo population is generally too unskilled and undereducated to participate in such modern jobs as are available. Even if this population were skilled and educated, there are too few job opportunities in the Arctic to support it.

The question of how this situation developed, and how it might be resolved, is the subject of this study. It will not be an easy problem to solve, and will probably grow in magnitude and complexity before positive trends of real consequence are discernable. Solutions will require a genuine understanding of the circumstances of the Arctic and its people, and a desire to implement economic and social programs with much thought and patience.

Outline of Thesis

This thesis has three basic purposes:

1. It describes and examines the economic problems which confront the Eskimos population of the Northwest Territories. In this respect, it presents and inter-

prets available data on demographic trends and other socio-economic variables. It also outlines the overall scope and implications of unemployment, underemployment and poverty among Eskimos.

2. It develops an understanding of how the problems which currently confront Eskimos arose, and of how difficult these may be to resolve. To do this, it describes and analyses economic, social, and cultural changes which have occurred in Eskimo society and the Arctic during past decades. As well, it examines some of the cases in which Eskimos have worked in modern employment, and assesses the degree of success or failure which was achieved.
3. It discusses various options which may be open toward developing solutions to the problems confronting Eskimos. In doing so, it examines broad policies and program alternatives which could affect Eskimos

on a substantial scale. It also looks at more specific steps which might be taken to improve the circumstances of Eskimos without significantly altering their way of life or outlook.

The general framework for the thesis is provided by the economics of development. However, the subject matter is broad in scope, and the study occasionally transcends the usual boundaries of economics. Some of the material examined is drawn from such social sciences as anthropology, archaeology, sociology and geography.

Where it is important for purposes of clarification, the study may pursue a particular issue in some detail. Nevertheless, it is the overall scope of the "Eskimo problem", and the nature of its main components, which are of primary concern. Too many policies, programs and specific actions have dealt with Eskimos in a piecemeal fashion. The integrated nature of the economic and social phenomena which affect the Arctic and its people has been inadequately understood.

This introductory chapter is followed by six others. Chapter II, entitled "Theoretical Background", discusses a variety of general issues and hypotheses concerned with the character of the labour force, unemployment, underemployment, and regional development. The relevance of each issue or hypothesis to the events and phenomena observed in the Arctic is examined.

Chapter III, "The Economic Status of the Eskimo", deals with the circumstances of present day Eskimo life. It discusses changing demographic trends, occupational and income status, and such related aspects as education, health and housing. An appreciation of the overall scope of the economic problems confronting Eskimos is developed. As a whole, the chapter is intended to provide a general insight into key facets of Eskimo poverty, as well as a broader overview.

The processes which led to the present problems of the Eskimos are the subject of Chapter IV, which is entitled, "Economic, Cultural, and Social Change". The Eskimo of today is, essentially, the product of two sets of forces. One is his own traditions, values, beliefs and attitudes; that is, his unique responses to the Arctic environment. The other set of forces emanates from successive incursions into the Arctic by whalers, traders, missionaries and representatives of government. These "agents of change" have greatly altered the Arctic. Chapter IV examines both the traditional society of the Eskimos, and the impact which each agent of change had on it. It also examines the present day Eskimo society of the Arctic communities, which is the end product of many decades of "transition".

Chapter V, "Adaptation to Industrial Employment", examines some of the few instances in which significant numbers of Eskimos found employment in a modern industrial setting. The cases dealt with are the DEW Line, the Great Slave Lake Railway,

and employment in mining. In each, Eskimo labour adjusted to jobs quickly and worked effectively. However, for reasons largely beyond the control of the Eskimos themselves, each venture failed to provide any kind of longer term solution to their economic problems.

In Chapter VI, "Possible Solutions", three methods of resolving the economic problems of the Arctic are discussed. These methods involve the spread of modern industrial and commercial activity, relocation programs, and the concept of "intermediate technology". They are not presented as mutually exclusive alternatives. Some mixture of the three methods, and perhaps others, may be required if development is to get underway and if results are to be achieved which are acceptable both to the Eskimo and Canada as a whole.

In Chapter VII, "Conclusions", the more salient points and issues raised by foregoing chapters are reviewed. Some of the general constraints which limit the amount of attention which government can give to the Eskimo as a problem of development are also discussed. Briefly, these focus on the fact that the problem of Eskimo poverty is only one of a number of complex issues which currently confront government in the northern territories. Nevertheless, more than is currently being achieved might be done with available resources. A number of possible courses of action are therefore put forward for consideration.

In addition to the seven chapters, there are four appendices. Appendix A consists of statistics which are relevant to the discussion in the body of the thesis. Appendix B consists of a set of maps designed to acquaint the reader with the main geographic features of the northern territories and the Arctic. Appendix C suggests some lines of research which might be pursued using issues identified in the present thesis as points of departure. Appendix D is a bibliography.

The limited availability of statistical data has presented some problems with respect to the more quantitative sections of the thesis. The writer has had to place some reliance on sources such as the 1961 Census, which is now ten years old. Data series on Eskimos have been assembled by private research workers and government over the years. However, few of these were developed in a systematic, continuous, comprehensive and sufficiently detailed manner. In the case of government sources, the purpose of data collection usually related to administration, and not research. Often, series which were developed were of doubtful value to either purpose.

However, useful statistical series have been compiled by government agencies on variables relating to a number of aspects of the Eskimo population. As an example, the Northern Health Service of the Department of National Health and Welfare has developed series on population size and growth, and on

the general state of health in the Northwest Territories. The Department of Indian Affairs and Northern Development, and the Government of the Northwest Territories, have accumulated education records. Data on subsistence allowance payments and housing have also been maintained.

Some of the best statistics currently at hand on income and employment among Eskimos derive from a survey of the labour force of the Keewatin undertaken by the Department of Indian Affairs and Northern Development in 1969. Surveys similar to the Keewatin survey have more recently been undertaken in other parts of the Arctic, but data from these have not yet been compiled in satisfactory form. Such statistics will, within the next year or two, provide material for further research on the economic problems which confront Eskimos. Data from the 1971 Census will also provide a firmer basis for quantitative analysis than is presently available.

Because of data limitations, the writer has had to exercise some judgement in examining the trend and significance of events which are of concern to this thesis. However, as an officer of the Department of Indian Affairs and Northern Development, he has had the opportunity to consult with persons familiar with the Arctic in clarifying particular issues. As well, an extensive body of material has been developed on Eskimos by anthropologists, sociologists and geographers, and considerable reliance was placed on this.

On the whole, the writer is satisfied that the substance of this thesis reflects the realities of the Arctic and its Eskimo population fairly accurately.

Restricting the present study to the Eskimos of the Northwest Territories does not mean to imply that the problems encountered by these people are unique. Indeed, much could be learned from comparative studies of other regions such as Nouveau Québec, Labrador, Greenland, Alaska, and Siberia in which Eskimos, or Eskimo-like people, live. Studies comparing Eskimos with various Indian groups would also seem useful. The present focus is on a given people and region not because inter-regional or international comparisons are not needed, but because so little "in-depth" research has been done on the economic problems of the Canadian Arctic to date.

CHAPTER II

THEORETICAL BACKGROUND

This thesis deals with an economically stagnant people who inhabit one of Canada's largest underdeveloped regions. Two major facets of economic theory are therefore at issue in providing a background to the matters which the thesis examines. One of these relates to the factors which account for low productivity and income among a population such as the Eskimos of the Canadian Arctic. The other relates to the causes of regional underdevelopment, and the possible courses of action which may be followed toward overcoming these.

An economically stagnant population seldom lends itself to simple analysis. The factors which underly its behaviour are usually as diverse and complex as those which account for the characteristics of more progressive peoples. Moreover, some of the same economic variables are of general relevance to the analysis of both wealthy and poor populations. These centre on personal attributes such as education, mobility, and employment experience, as well as on more impersonal factors such as the quantity of physical capital per worker. The economic setting in which such attributes and factors are at work is also important to explaining an individual's ability to find employment and earn income. The forces which account

for economically stagnant populations, and the relevance of these forces to the Eskimo, is the subject of the first section of this chapter, entitled "Productivity, Income and Employment".

The second section, "Theories of Backwardness and Development", examines a number of theoretical constructs which deal with the underdevelopment of regions. Some of these derive from experiences in the less developed parts of Asia, Africa and Latin America. Generally, the theories developed by Myrdal, Rosenstein-Rodan, Nurkse, and Hirschman, as well as the non-economic factors which are given brief discussion, fall into this category. Another, the Staple Theory, is more distinctively Canadian. Because the concern of this thesis is the Arctic, the relevance of each theory to the special characteristics and phenomena of this region is examined.

The literature on the economics of development is so large that there is always the possibility that something which might have been included in a chapter such as this has been omitted. However, theories which relate to the growth and development of large modern nations were deliberately excluded because they have little bearing on the phenomena examined in the present study. One example is the Harrod-Domar model (and the large body of work which has

derived from it), which takes Keynesian theory as a point
 of departure. ⁽¹⁾ Another is Rostow's theory of the stages
 of growth, which is essentially historic in its approach. ⁽²⁾
 Such theories provide insights to the growth and development
 of Canada as a whole, or to the more economically mature
 regions of Canada, but are hardly applicable to the Arctic
 at its present stage of development.

Moreover, even the theories which have been included
 are only partly relevant to the Arctic. All of the theories
 focus on relationships, sequences, and variables which are
 central to backwardness and development. However, even though
 they lead to a better understanding of the economic phenomena
 which are encountered in the Arctic, they appear to provide
 only a limited basis for solving some of the region's more
 urgent problems. A final brief section of the chapter,
 entitled "Relevance of Theory", comments on this more fully.

(1) F.H. Hahn and R.C.O. Mathews, "The Theory of
 Economic Growth: A Survey", Economic Journal, Vol. LXXIV,
 No. 269, 1964, pp. 779 - 902.

(2) W.W. Rostow, The Stages of Economic Growth,
 New York, Cambridge University Press, 1960.

Productivity, Income and Employment

An individual worker's income is determined by two broad sets of variables. One of these relates to his capacity to produce goods and services which are required in the market place. The other is concerned with the availability of employment opportunities.

A person's capacity to produce depends on several factors. One is the choice which he makes concerning the allocation of his time between work and leisure. Another consists of institutions governing the performance of work. For example, a worker may belong to a union which proscribes his hours of work or the tasks he may perform. Still another factor is a person's employment experience, which may virtually exclude him from certain activities. Someone who has been a farmer or fisherman for much of his life may not have sufficient occupational mobility to work in industries such as metal fabricating or the manufacture of electronic components.

The amount of capital available to a worker has a strong bearing on his productive capacity. The term "capital" may be understood in two ways. One is in terms of "physical capital" -- plant, machinery and equipment, and raw materials. The availability and diversity of such capital is of substantial importance in determining the level of output per

man-hour of effort. Advanced economies are more productive than backward ones largely because of a greater abundance of physical capital per worker.⁽³⁾

Capital may also be understood as "human capital". Qualities such as education, skills, and even good health can be viewed as productive assets which have become embodied in the labour force. It has become increasingly accepted that a significant proportion of the rising productivity experienced in advanced economies derives from growth in the stock of human capital.⁽⁴⁾

Mobility is another important aspect of productive capacity. It is becoming increasingly common for people who are unable to find employment or sufficient remuneration in their own locality to move several hundred miles, or even thousands of miles, to take jobs. However, geographic movement is only one dimension of mobility. Other important aspects are mobility among occupations and among social classes. An occupationally mobile labour force tends to ensure that workers who have good productive potential will gravitate into jobs in which their capabilities will be realized. Similarly, an absence of significant social class barriers will enable

(3) Simon Kuznets, Modern Economic Growth, New Haven and London, Yale University Press, 1966, Chapters 7 and 8.

(4) Theodore W. Schultz, "Investment in Human Capital," The American Economic Review, Vol. 51, No. 1, 1951.

individuals to rise to levels of responsibility and income commensurate with their innate abilities and training. Thus geographic, occupational and a social mobility are all critical aspects of the degree to which labour, as a productive factor, is able to circulate freely within an economy, and therefore, of the economic efficiency of a society.

Even if the individual worker possesses many of the qualities which comprise a considerable capacity to produce, he may be unemployed, or underemployed in an activity which yields him a low level of income. Unemployment, which tends to be cyclical in character, occurs when the level of effective demand in an economy as a whole is inadequate. This situation arises when a combination of consumer spending, net private investment, government expenditures (less revenues), and net exports is insufficient to provide a level of total income, or rate of income growth, which is adequate to sustain full
(5)
employment.

Unemployment may be aggravated by factors arising from the changing structure of an economy. It may be more pronounced in specific industries or regions, and can effect some segments of the labour force with particular severity. Such situations may derive from the decline of firms whose

(5) The definitive work on the general level of employment is J.M. Keynes, The General Theory of Employment, Interest and Money, London, MacMillan, 1967. (First edition, February, 1936).

products are no longer in demand, or which continue to use an obsolete, high-cost technology. They may also be related to the centralization of industry, and the displacement of workers in activities which have shifted from labour-using to capital-using production techniques. (6)

Seasonal unemployment, which arises in certain industries because of their dependence on climatic factors, may further compound the overall problem. Logging, farming, and many aspects of construction are usually undertaken during certain times of the year. Employment in these industries is highest during the months of peak activity. During much of the year, therefore, a seasonal labour force may be inactive, or partially employed in other industries.

In concept, underemployment is less clear-cut than unemployment. Labour which is underemployed is active in the economy in some manner or another; that is, it is not idle. However, it is often confined to activities which are extra-marginal from the point of view of the individual and the economy. Trapping might be used as an example. Trappers frequently run into

(6) Analyses of unemployment which is related to the changing economic structure of Canada are contained in W.D. Wood and R.S. Thoman, Eds., Areas of Economic Stress in Canada, Kingston, Industrial Relations Centre, Queen's University, 1965. See also T.N. Brewis, "Regional Economic Disparities and Policies", in L.H. Officer and L.B. Smith, Eds., Canadian Economic Problems and Policies, Toronto, McGraw Hill, 1970, pp. 335 - 351.

situations in which even the cash costs of undertaking the activity exceed the cash returns from it. Small scale agriculture is increasingly faced with the same problem. It would be logical for both the trapper and small farmer to abandon their particular activity, and find permanent employment elsewhere. Many have attempted this, but many others, knowing that chances of succeeding in another line of work are limited, prefer to stay with their occupation.⁽⁷⁾

Generally, situations of the foregoing type are encountered in industries in which entry is relatively unrestricted and in which a large measure of uncertainty exists with respect to market demand. The individual, who is usually in the position of a purely competitive producer selling to a monopsonistic or oligopsonistic market, is powerless to prevent others from entering his field. He is thus able to do little toward reducing uncertainty through exercising some control over price and output. Furthermore, he is often too occupationally immobile to get out of the situation. In trapping, these problems are compounded by the fact that the resource base may fluctuate erratically from year to year.

(7) The problems of the trapper are extensively covered in subsequent chapters. The writer is not suggesting that similarities between trapping and small scale farming are particularly significant, but merely that these exist. Unlike farming, there are "common property" aspects to trapping, although these are now limited by the practice of registering trap lines.

Another type of underemployment should be given some recognition, but it is of little concern to the present study. This exists where an individual is in a job which does not fully utilize his talents, or even recognize such talents. The housewife with a university degree is perhaps the classic example. Situations of this kind arise out of a variety of institutional practices and labour market imperfections. They undoubtedly occur in the Arctic, but are a much less significant problem than the fact that a large segment of the region's labour force persists on remaining in low income occupations in which it feels fully at home.

From the issues which have been raised in this section, it is evident that a large variety of different situations can arise in the labour market. Individual income may be relatively high and secure in the case of a worker who is well trained, and whose skills are in considerable demand. If, in contrast, an individual has little to offer employers, and there is considerable "slack" in the economy, he may find that securing continuous employment is virtually impossible. Situations may also arise in which qualified people are unable to get jobs because effective demand is low, or because of factors related to structural change. A proportion of the labour force may be unemployed because of seasonal factors. However, seasonal workers may earn enough during peak activity months to see them through the whole year, or hold other jobs in the off-

season. Owing to a variety of reasons, individuals may remain underemployed in uncertain, unrewarding activities, which they cannot leave because of their immobility.

Some of these situations are observable in the Arctic. Most Eskimos have only a rudimentary education and possess few of the skills required in the modern labour market. Many are in poor health. Geographic and occupational mobility is generally low. Because of such factors, Eskimos cannot usually qualify for better paying, more permanent jobs when these are available. Typically, they may trap during the winter and take employment as unskilled construction workers or stevedores during the summer. Combined income from these seasonal activities is normally insufficient to meet expenses throughout the year, and dependence on subsistence allowances and other forms of transfer income is therefore common.

Structural change has been a significant factor in determining the level of unemployment and underemployment in the Arctic. Trapping has not always been as unrewarding as it is today. Eskimos were once skilled members of a fur economy which provided them with sufficient income to meet their needs much of the time. However, the prices of natural furs declined following the Second World War, and the skills which Eskimos had used to trap white fox and muskrat could not easily be transferred to other activities. Many Eskimos therefore continued to trap despite the fact that earning a living from trapping had become increasingly difficult. Other skills were acquired when some Eskimos participated in projects

such as building the DEW Line, or took jobs in underground mining, and the construction of housing. However, such activities have had a history of being short-lived in the Arctic, and of leaving workers who became dependent on them unemployed.

Unemployment, underemployment, and low income in the Arctic may also be viewed as more general phenomena arising out of the low level of expenditures in the region. Little private investment has taken place because entrepreneurs have typically viewed the Arctic with pessimism. The Arctic has been regarded as remote, unproductive, and risky. The market for consumers' goods and services is small and geographically fragmented. The costs of economic activity are so high as to permit only the occasional venture, or specially adapted organization such as the Hudson Bay Company, to operate successfully. Currently, a wide-spread search for oil, natural gas, and other minerals is underway, but the degree to which Eskimos will benefit from this is uncertain.⁽⁸⁾

A significant proportion of the income and employment generated in the Arctic to date has resulted from capital and operating expenditures arising out of government's responsibilities in administering the region. Yet the ability of government to create jobs and payrolls is constrained. It has many tasks

(9) These and other related matters are treated more fully in subsequent chapters, particularly in Chapters 3 and 6.

to perform in the northern territories. A main concern has been to provide social capital and services as efficiently as possible, and to attempt to find a basis for future development. Government activity has had some impact on the employment of Eskimos, but the overall effect has not been particularly large. Most Eskimos are capable of filling only the less demanding government jobs available in the Arctic at the present time.

In sum, unemployment and underemployment are high among Eskimos because, generally, they lack the skills and other attributes required in a modern labour market, and because there is a scarcity of permanent job opportunities in the Arctic. Income is therefore low, and typically insufficient to provide for year-round needs. As a group, Eskimos comprise a population which is caught in a "vicious circle" of poverty. Because their per capita income is low, savings are insufficient to enable them to invest in the physical or human capital which would provide a basis for a higher level of income, savings, and investment. Most Eskimos are therefore virtually unable to work toward their own economic betterment at the present time.

Theories of Backwardness and Development

The theories examined in this section are all concerned with the problems of underdevelopment. Yet, their approaches to these problems differ in some important respects. The Balanced Growth Theory appears to deal with a relatively closed economy which may have little alternative but to "pull itself up by the boot straps". Others, particularly the Theory of Circular and Cumulative Causation and the Staple Theory, are more concerned with the effects of inter-regional transactions. The theories also differ in what their proponents view as the "scarce factor" in development. According to Rosenstein-Rodan and Nurkse, capital is the strategic variable; to Hirschman, it is managerial and entrepreneurial talent. Such differences notwithstanding, each theory sheds some light on the problems and patterns observable in the Canadian Arctic.

Circular and Cumulative Causation:

Myrdal's Theory of Circular and Cumulative Causation focuses on economic interactions between two countries or regions, one of which is more economically advanced than the other.⁽⁹⁾ In much of the literature, the analysis of such

(9) Gunnar Myrdal, Economic Theory and Underdeveloped Regions, London, Gerald Duckworth and Co. Ltd., 1964, Chapter 2.

interactive processes has occurred within the framework provided by the Law of Comparative Advantage. This Law states that, optimally, each of a number of regions should concentrate on producing those commodities which its peculiar resources enable it to produce at least cost. That is, each country should attempt to maximize its output from given resource endowments. Freedom of trade (which the argument was developed to support) will ensure that specialization on a national or regional basis will be of benefit to all trading partners. The Law of Comparative Advantage implies the attainment of a stable, beneficial, equilibrium relationship among regions or nations. This will persist as long as the parameters which govern factor endowments, factor mobility, and trade, do not change.⁽¹⁰⁾

The Law was first formulated by David Ricardo in the analysis of international trade among countries of nineteenth century Europe. At the time, trade was severely restricted because of the adverse effect which liberalization would have had on politically powerful groups such as landowners. In England, the Corn Laws supported a high cost, inefficient, agriculture, even though foodstuffs could have been purchased more cheaply abroad. Under such circumstances, the Law of

(10) Lorie Tarshis, Introduction to International Trade and Finance, New York, John Wiley, 1955, Chapter 10.

Comparitive Advantage, and the free trade argument it supported,
 (11)
 made sense. It is still basically a sensible theory of the trade relationships which should apply among nations which are similar in their level of development. However, it does not apply to all situations of international trade. Myrdal has been among the foremost of economists to recognize that there are important exceptions to it.

Myrdal argues that the whole concept of an equilibrium, in the sense of a counterpoise or counterbalance between opposing forces, is irrelevant in dealing with two nations or regions of differing economic power. Such a situation of counterpoise can only last temporarily. The forces emanating from the more powerful entity will dominate over those emanating from the weaker one. In doing so, they will call into play a sequence of processes, or a chain of "cumulative and circular causation" which drives the two entities ever further from the initial "equilibrium". The terms of trade, and other economic relations, will increasingly favour the more powerful region. This sequence involves not only economic phenomena, but also cultural, social, and political phenomena. In terms of Myrdal's theory, there is really no reason to expect the process to stop. The disparity in income and economic power between the two regions could continue to grow indefinitely.

(11) I.H. Rima, Development of Economic Analysis, Homewood, Ill., Richard D. Irwin, 1967, pp. 122 - 125.

The dynamic sequence of events operative under the process of Circular and Cumulative Causation depends upon two broad sets of mechanisms, "backwash" and "spread" effects. Backwash effects operate in favour of the advanced region and against the backward region. Spread effects operate the other way; that is, in favour of the backward region. It is central to Myrdal's argument that backwash effects dominate over spread effects; if this were not the case, the disparity between the two regions would diminish.

Backwash effects operate through three sets of forces, the migration of labour, the migration of capital, and the terms of trade. Because there is less opportunity to find employment at a satisfactory wage in the backward region, the more mobile and better educated segment of its labour force will migrate to the advanced region. This leaves a residue of people whose productivity is low. Capital is more productive and more highly rewarded in the advanced region as well, and in so far as it is mobile, it will migrate, leaving behind obsolescent and less productive capital. The terms of trade will also work in favour of the advanced region, whose productivity increases as that of the backward region declines. Spread effects emanating from the advanced to the backward region can take several forms. Among the most important are improvements in productive techniques through the imitation of some modern processes, inter-regional aid, and the growth of trade in raw materials and foodstuffs required by the advanced region.

The Theory of Circular and Cumulative Causation is, essentially, a theory of the long run. It is not difficult to perceive the kinds of processes it suggests in operation between regions which have had a long history of development. In Canada, examples of where the theory appears most relevant are the economic interactions between the Maritimes and Central Canada, or between large urban "magnets" such as Montreal and surrounding rural areas. It is more difficult to see its relevance to the Arctic.

Nevertheless, some Arctic phenomena resemble backwash effects. One is the migration of labour. During the past two decades, there has been a widespread movement of Eskimos within the Arctic, and this has accelerated markedly during recent years. Initially, the movement was typically from hunting and fishing camps to smaller permanent communities. More recently, some smaller communities have declined with the growth of towns such as Frobisher Bay and Inuvik.

The fur trade, which was important throughout the Arctic until the later 1940's, and which is still an important source of income in some areas, may offer an example of backwash effects which operate through the terms of trade. Eskimos traded furs for the manufactured goods and foodstuffs offered by the trading companies. This was never really a bargain of equal advantage because the companies were able to dominate whole regions both as monopsonist buyers of furs and as

(12)
monopolist sellers of "imported" goods. The terms of trade, therefore, must have favoured the traders from the outset. Nevertheless, for some initial period, trapping productivity was relatively high because animal populations were large. Moreover, game resources such as marine mammals and caribou were still sufficiently plentiful to permit Eskimos to live independently of the fur trade if they wanted to do so. After a time, however, with a depletion of both fur and game animals, the Eskimo's ability to remain outside of the fur trade decreased. In many areas trapping had become unproductive and unremunerative, yet the Eskimo had little choice but to pursue it. The terms of trade had now shifted almost completely in favour of the trading companies.

Spread effects have also been operative in the Arctic. During his long contact with traders, missionaries, policemen, businessmen, and government officials, the Eskimo has adapted many non-native techniques to his life style. He has been the recipient of substantial "inter-regional aid" in the form of schools, hospitals, houses, and subsistence allowances. Other spread effects have operated within the Eskimo community itself, particularly through the responsibility which the individual Eskimo feels for his kin or tribal group. Eskimos who have made

(12) Diamond Jenness, Eskimo Administration: II Canada, Arctic Institute of North America, Technical Paper No. 14, Montreal, May 1964, p. 41.

successful adjustments to larger northern communities have often ensured that the benefits of their improved circumstances were shared by friends and relatives in smaller communities.

Viewing Myrdal's theory generally, it is possible to discern a broad process resembling "Circular and Cumulative Causation" at work in the Arctic during the past half century. Prior to extensive Eskimo - white contact, Eskimo society was, approximately, in equilibrium with the resources of the Arctic. Many changes have been brought about by the increasing presence of non-indigenous people. Their activities have introduced new technology, such as firearms, depleted the Arctic's animal resources, and greatly altered native economic, social and spiritual values. As a consequence, Eskimo society has undergone a dynamic transformation away from its original equilibrium, and this process is still continuing.

Big Push, Balanced and Unbalanced Growth:

The Theories of the Big Push, Balanced Growth, and Unbalanced Growth were formulated to suggest possible solutions to the problems of backward countries. The Theory of the Big Push was developed by P.N. Rosenstein - Rodan, and provides the basis for work undertaken subsequently by the Balanced
(13)
Growth theorists. Rosenstein - Rodan argued that programs

(13) P.N. Rosenstein - Rodan, Notes on the Theory of the Big Push, Massachusetts Institute of Technology, Centre for International Studies, Cambridge, Mass., March, 1957.

for solving the problems of underdeveloped countries must take account of three sets of indivisibilities. These are the indivisibility of demand; the indivisibility of supply (and particularly the supply of social overhead capital); and the indivisibility of savings.

Indivisibility of demand is based on the observation that individual firms are not willing to risk expansion in poorly developed, low income markets unless they are reasonably certain of some growth in demand for their products. Unless a firm has some specially advantageous position, such growth in demand can only come about through an overall growth of income. In the Big Push argument, this might arise from the simultaneous expansion of several firms. Under such circumstances, each firm would create demand for the products of other firms through wage payments to its employees. It is because of this interdependence among firms in the face of uncertainty that Rosenstein - Rodan argues that demand is indivisible.

Social overhead capital is indivisible because of its "lumpiness". Due to technological constraints and geographic factors, power generating installations, railroads, and highways must be built complete, and cannot be provided in small, discrete units. Yet, because they are costly, the construction of such facilities can be justified only if there is a prospect of usage to a high level of capacity shortly after they are completed. In an underdeveloped region, short

term demand for the output of large social capital projects may be too low to warrant construction. Another problem is that various facets of social overhead capital are interdependent. There is little point to providing power generating facilities unless transmission and distribution facilities are also developed, and unless industrial plants exist to consume the energy which is produced. As another example, the construction of a system of airfields presupposes the existence of a fleet of aircraft. Social overhead capital is, therefore, a complex phenomenon implying indivisibilities of several kinds.

Indivisibilities in the supply of savings derive basically from the other two sets of indivisibilities. Savings are necessary for investment, and investment is essential to the growth of total and per capita income. Where demand and supply indivisibilities present obstacles to the growth of income, savings sufficient to meet the investment requirements of a backward economy will not be realized.

Nurkse accepted Rosenstein - Rodan's basic approach. The conclusion which he drew from it was that indivisibilities of the types described could only be overcome by a simultaneous wave of investment along a broad front. Only a massive effort could ensure that per capita income and savings would rise to a level adequate for sustained growth. In putting forward the Balanced Growth Theory, Nurkse argues for a

..... more or less synchronized application of capital to a wide range of different industries. Here is an escape from the deadlock; here the result is an overall enlargement of markets..... Most industries catering for mass consumption are complementary in the sense that they provide a market for, and thus support, each other..... The case for "balanced growth" rests on the need for a "balanced diet".(14)

The Unbalanced Growth Theory proposed by Hirschman denies the feasibility of such a "balanced diet" in the setting of an underdeveloped region. (15) Hirschman believes that a low capacity to save is usually not a major obstacle to the development of regions or nations which are economically backward. An adequate level of saving may already have been attained, but there may be a scarcity of the managerial and entrepreneurial talent or spirit required to mobilize savings toward development. He points out that the balanced growth theories have neglected the attitudes, institutions, and politics of underdeveloped countries, and remarks that "..... if a country were ready to apply the doctrine of balanced growth, then it would not be underdeveloped in the first place." (16) He proposes that the key to economic development

(14) Ragnar Nurkse, Problems of Capital Formation in Underdeveloped Countries, Oxford, 1953, quoted by Benjamin Higgins, Economic Development, New York, W.W. Norton and Co., 1968, p. 332.

(15) Albert O. Hirschman, The Strategy of Economic Development, New Haven and London, Yale University Press, 1964.

(16) Ibid, pp. 53 and 54.

lies in the creation of economic tensions which force the development of entrepreneurial and managerial skills. The types of investment which will enable this are those which will maximize the creation of production complementarities, external economies, and forward and backward linkages.

To Hirschman it is neither necessary nor desirable that growth should proceed simultaneously along several broad fronts. In his view, growth should be viewed as a "see-saw process" which is pulled forward by concentrating investment in those industries, and aspects of infrastructure, which maximize induced decision making. Development should not be viewed as gradual and harmonious, but as dynamic, jerky and unsettling.

Some aspects of the Theories of the Big Push and Balanced Growth are of consequence to the Arctic. For example, because of low and uncertain demand in the region, few business enterprises catering to local markets have been successful. The Hudson Bay Company is a notable exception to this. However, the ability of "the Bay" to remain viable should be viewed in relation to its original purpose in the Arctic, purchasing furs, and in the context of its national and international trading and retailing operations. It is unlikely that the company could survive for long if it depended solely on retailing within the Arctic.

In the case of social capital, few projects have been undertaken in anticipation of demand. Schools, houses, power generating facilities, and transportation have been built to meet limited existing needs. The stage has not yet been reached when government or private enterprise could risk the construction of large capital projects in the Arctic in the hope that entrepreneurs would respond by locating industrial plants near by.

As total concepts, the Big Push and Balanced Growth Theories seem most applicable to regions in which a central authority can exercise a substantial degree of control over development. The Arctic is very open to influences emanating from the private sector in Canada and the rest of the world. Under such circumstances, government would find it difficult to establish and maintain the "balanced diet" which Nurkse prescribed.

The Unbalanced Growth hypothesis of Hirschman fares little better if viewed as a possible development strategy for the Arctic. That the creation of complementarities, linkages, and external economies are critical aspects of development cannot be denied. Yet these key mechanisms must have something to "catch hold of" and stimulate. An economic medium must exist so that the effects of an initial developmental impetus can spread. Such a medium may be latent in an underdeveloped country which has a large population and a varied institutional structure. It may already exist in

substantially complete form in some parts of the northern territories. However, in the Arctic, where people and activity are found in small isolated pockets, it is likely to be only rudimentary.

Yet some aspects of Hirschman's theory may be of considerable relevance. Generally, Eskimos have not become experienced entrepreneurs because they have never had to make many significant business decisions. This is now changing as some Eskimos are becoming increasingly involved in co-operatives and small private ventures. Perhaps a more concentrated effort along these lines is warranted. At present, Eskimos have little opportunity to learn from their failures because the consequences of failing at a business venture are not particularly great. Recourse to government subsistence payments, or income from "make work" projects, is usually available. The negative effect this may have on the development of entrepreneurial motivation should be carefully considered.

Staple Theory :

The Staple Theory has been described as "Canada's
(17)
most distinctive contribution to political economy."

It is closely linked with the names of Canadian scholars

(17) Melville H. Watkins, "A Staple Theory of Economic Growth", The Canadian Journal of Economics and Political Science, Vol. XXIX, No. 2, 1963, p. 141.

who were particularly influential a generation ago, notably Harold Innis. Although there are questions of its modern relevance, concepts which are central to the theory still appear in the literature on economic development and regional analysis.⁽¹⁸⁾

The Staple Theory is most applicable to the study of nations and regions which are at the earliest stages of development. Thus:

The Staple Theory is not a general theory of economic growth, nor even a general theory about export-oriented economies but rather applicable to the atypical case of a new country.⁽¹⁹⁾

In character, such a new country would initially be devoid of widespread, organized economic activity of any consequence. If there were any aboriginal inhabitants, they would pursue hunting and gathering, primitive agriculture, and only the most limited barter trade. Technically superior immigrants would view the new country as containing virtually unlimited land (and land-based resources such as fur-bearing animals, forests, and minerals) to which their limited manpower and capital could be profitably applied. Under such circumstances, the new country would have a comparative

(18) Morgan D. Thomas, "The Export Base and Development Stages Theories of Regional Economic Growth: An Appraisal," Journal of Land Economics, Vol. 40, 1964, pp.421-432.

(19) Melville H. Watkins, "A Staple Theory of Economic Growth," Op. cit., p. 143.

advantage in land-based staple products in its trade with more developed economies in which the supply of land was more limited, but in which capital and labour were more abundant.

The Staple Theory suggests that a new country of the type described will undergo a sequence of development based on staple exports as the leading sector. Such exports will generate income, permitting the importation of products which the domestic economy cannot produce, and enabling the growth and diversification of domestic industry related to staple production. As exports, income, and domestic markets grow, economic activity will begin to diversify along lines not directly related to the basic staples, and scope for import substitution will increase. Eventually, through the establishment of a mature domestic market, and a variety of linkages and external economies, development will not only have become diversified and self-sustaining, but may no longer depend mainly on the impetus provided by the staple export sector.

Much of the early growth of Canada as a whole followed the kind of pattern described by the Staple Theory. Growth initially depended on off-shore fisheries. Later, the fur trade was instrumental in opening up inland regions and establishing communities such as Montreal and Quebec City as commercial centres. The timber trade followed furs, and agriculture and minerals have played large roles even in

recent decades. As staple followed staple, the Canadian economy became larger, more populous, diverse, and geographically widespread.⁽²⁰⁾

In regional terms, the Staple Theory is relevant to explaining the growth of some parts of northern Canada. In both the southern Yukon and parts of the Mackenzie District of the Northwest Territories, earliest development depended upon the fur trade. At a later stage, mining became of increasing importance, and is still the leading sector of the private economy of both regions. Transportation routes, towns, even cities have become established; population has grown, and activity has become more complex. However, even in these more favourable parts of the northern territories, the process of growth and diversification has been halting and uneven.

The Staple Theory provides a much less satisfactory explanation of the economic processes which have been at work in the Arctic. Whaling and fur were both staple activities in the region over prolonged periods. Each induced economic change, but neither brought about growth and diversification. Limited mining which has appeared in the Arctic to date has left nothing in the way of a permanent economic base. The impact which oil and natural gas may have

(20) Harold A. Innis, The Fur Trade in Canada, Toronto, University of Toronto Press, 1956, pp. 383 - 402.

is uncertain at this early date, but so far few secondary economic effects are evident. Generally, export staple activities have followed each other through the Arctic in waves of varying duration, leaving behind more problems than were encountered before each activity was initiated.

Why has the Arctic not responded to the developmental impetus of staple exports in the manner of other regions of Canada? There are several possible reasons.

One might relate to the ratio of land to labour and capital, which must be favourable if the mechanisms identified by the Staple Theory are to work. The land area of the Arctic is indeed large, but the productive resource base of the region has thus far proven to be quite limited. Resources such as the fur bearing animals were overharvested and depleted within a relatively short period. Because of the Arctic's severe climate and delicate ecology, animal populations will not likely regenerate to former levels, even if they undergo no further disturbances.

Another reason would derive from the limited number of options which have been open in the development of the Arctic. Because there are no forests and arable lands, the region could not have been turned to forestry and agriculture when whaling and the fur trade declined. Options such as mining and petroleum can be exercised only at considerable cost penalties because of isolation and the inhibiting climate.

Other reasons would relate to the fact that staple export activities have not attracted a large, permanent, economically motivated population into the region. Unlike central Canada, the western plains, and even the Mackenzie Valley, the Arctic would not be regarded as a comfortable and attractive place to live by most people of European origin. The white population which has entered the region to date has consisted largely of transients and adventurers.

A final reason must relate to the "thinness" or "sparseness" of the media which are available to transmit economic phenomena in the Arctic. This point was raised in connection with the Unbalanced Growth Theory, but because it is of such significance to the region, it is worth making again in the present context. As isolated whaling stations, trading posts, mining camps, or defence installations, points of economic activity have existed in complete isolation from each other and the surrounding landscape. Communications and transportation links have been almost entirely with centres lying outside of the Arctic, usually in southern Canada. Under such circumstances, "rounding out and filling in" an economy may prove close to impossible.

Technological Dualism ;

The Theory of Technological Dualism focuses on the different character of the production functions found in the advanced and backward sectors of an underdeveloped economy. (21) The theory points out that many activities of the advanced sector use capital intensive productive techniques, in which the elasticity of substitution of labour for capital is low. In contrast, activities of the backward sector generally permit the use of production functions which can employ varying combinations of labour and capital. The elasticity of substitution between labour and capital may, therefore, be relatively high. Oil refining or chemical processing represent leading industries of the advanced sector, while peasant agriculture is typical of the backward sector.

In the Arctic, the advanced sector is represented by transportation, mineral exploration, the generation and distribution of power, and telecommunications. All of these activities demonstrate relatively fixed co-efficients of production and a high use of capital relative to labour. The backward sector consists of native activities such as food gathering and trapping, each of which can be pursued by a variety of means. These range from the absence of capital more complex than fish spears and crude rockfall traps, through

(21) Benjamin Higgins, Economic Development,
Op. cit., pp. 296 - 303.

the use of dog-teams, to the use of skidoos and aircraft. Even some modern sector activities, such as transportation stevedoring, can be undertaken by using either mechanical equipment or human backs.

Closely related to the question of technological dualism is the "Factor Proportions Problem".⁽²²⁾ This relates to the different consequences which either a relatively capital intensive or labour intensive expansion path may have. For example, if an underdeveloped country, in which substantial unemployed labour exists, chooses a capital intensive expansion path, this may raise output rapidly, but may do little directly to absorb unemployment. If, in contrast, a labour intensive expansion path is chosen, output may rise more slowly but unemployment may be absorbed more rapidly. In selecting a particular technology, an underdeveloped country may, therefore, be choosing between maximizing output or employment. Of course, there would probably be a number of other options from which a country could also choose. Most governments would likely try to strike a balance or mix of activities between the output and employment maximizing extremes.

(22) Everett E. Hagen, The Economics of Development, Homewood, Ill., Richard D. Irwin, 1968, pp. 427 and 428. See also R.S. Eckaus, "The Factor Proportions Problem in Underdeveloped Areas", in A.N. Agarwala and S. P. Singh, Eds., The Economics of Underdevelopment, New York, Oxford University Press, 1963, pp. 348 to 378.

The Canadian Arctic is not yet firmly committed to one mode of production or another. There is still considerable latitude for choosing economic objectives and the methods of achieving these. In the recent past, government gave considerable attention to the development of both labour and capital using activities. It thus encouraged the growth of cottage industries, the processing of local foods, and arts and crafts as well as activities based on major resources such as hard rock minerals and petroleum. Latterly, somewhat more emphasis appears to be given to capital using industries which may have relatively small employment effects over the longer term. Petroleum and natural gas are being given particular attention. Perhaps a thorough examination of the economic goals for the northern territories and the Arctic should be undertaken before trends which are now emerging become too firmly established.

Non-Economic Factors ;

Many hypotheses bearing on the causes and nature of underdevelopment have originated in disciplines other than economics. Theories of "environmental determinism" suggest that environmental conditions are of major importance to group and individual behaviour. Such theories may emphasize various facets of the environment such as soil conditions, the effect of climate on physical well being,

(23)
and the presence or absence of natural resources.
Undoubtedly, they point to meaningful correlations, but they appear to give insufficient attention to the fact that man's world is not static. As capital, technical progress, and attitudes conducive to growth spread, climatic, physical or biological barriers which seem insurmountable at one stage of development can be overcome at another.

Other theories focus on culture as the key determinant of social and economic behaviour. McLelland suggests that societies differ considerably in the standards of performance which they expect of their members. (24)
Societies which do not stress high personal achievement will tend, ceteris paribus, not to be as progressive as societies which do.

Hirschman puts some emphasis on cultural factors when he distinguishes between societies whose members have, typically, a "group focused image", on the one hand, and an "ego focused image" on the other. (25) Where the "group focused image" prevails, individuals cannot easily initiate social, political or economic action unless they are certain that their peers will agree to it. In the case

(23) Benjamin Higgins, Economic Development, Op. cit., pp. 209 - 223.

(24) David C. McLelland, The Achieving Society, Princeton, N.J., Princeton University Press, 1962.

(25) Albert O. Hirschman, The Strategy of Economic Development, Op. cit., pp. 10 - 20.

of an "ego focused image", members of a society take action largely in their own interest and rarely have the greater good in mind. Hirschman suggests that, to be effective in furthering development, entrepreneurs must neither be unduly constrained by their peers, nor must they be so self-seeking as to be constantly after the "quick gain" at the expense of others. They must learn to make sound investment decisions which work to their gain, while at the same time imparting benefits to the economy.

Everett Hagen also focuses on the role of the individual juxtaposed against his society as a key growth variable.⁽²⁶⁾ If a society is to grow and progress, its traditional values must often change, yet they must not change so rapidly and radically as to leave individuals in a state of anxiety and frustration.

The "non-economic factors" examined in the foregoing paragraphs raise a number of important issues. Environmental determinism has had a bearing in shaping the attitudes and personality of the Eskimo. His behaviour has in large measure been a product of the harsh environment of the Arctic. The continuing high birth rate among Eskimo women may serve to illustrate this. A high rate of birth was necessary in aboriginal times to counter a high death rate, even if

(26) Everett E. Hagen, The Economics of Development, Op. cit., Chapter 10.

population were only to remain relatively constant. Recently, however, the birth rate has remained high despite the fact that the death rate has been greatly decreased with the introduction of modern medicine and better housing. This situation is not, of course, unique to the Arctic; it also occurs in other more backward parts of the world which are undergoing rapid social and economic change.

Other non-economic factors which continue to play a strong role in Eskimo society centre on high achievement motivation. In the traditional society, great emphasis was placed on hunting successfully, and the best hunters occupied the upper-most stratum of the social hierarchy. This attitude was later transferred to the trapping economy; the most effective trappers were viewed as the most successful men. However, most Eskimos no longer hunt and trap effectively. Even though many of their attitudes still focus on these activities, the opportunity to pursue them as a way of life is now quite limited. This in part has been responsible for the anxiety and frustration which Eskimo men have experienced in the modern Arctic, and may have a bearing on the wide-spread use of alcohol as a means of escape.

As another non-economic factor, the group, or tribe was of great importance to the aboriginal Eskimo. He is still group oriented or "focused" in his approach to economic or social matters. While this is advantageous

in some respects, it can be a hindrance if the Eskimo is to be successful in modern society, which tends to emphasize individualistic behaviour. There are many examples of instances in which Eskimo men have quit good jobs and returned to their home settlements with their families because of subtle pressure exerted by kinship or tribal groups.

As a final point, the Arctic has changed rapidly during the lifetime of many Eskimos alive today. There is some evidence that this change has occurred so rapidly that it has strained the Eskimo's capacity to adapt to it. As a consequence, many Eskimos now appear unresponsive to further change.

Relevance of Theory

The theoretical material which has been examined in this chapter is helpful to an understanding of the causes and nature of economic phenomena observed in the Arctic, but it has its limitations in this respect.

Much of the theory was developed in the context of regions which typically have large populations, well established institutions, and a range of developmental options. The Arctic does not fit this description.

Essentially, the Arctic consists of empty land in which small pockets of people and activity have existed in virtual isolation from each other. The development of economic linkages which transcend the individual settlement or locality has been strongly inhibited by large distances and the severe climate. Yet regional growth and diversification requires that such linkages not only become established, but that they are able to grow stronger with passage of time. Because this has not happened in the Arctic, or seems unable to happen in more than a rudimentary fashion, the concept of regional development may not be meaningful in terms of the Arctic as a whole. The relevance of theory which is rooted in phenomena applying to broad regions is therefore questionable in the context of the present study.

This does not mean to deny the value of some of the theoretical constructs which have been examined. The section on "Productivity, Income and Employment" focused on economic variables which are as relevant to the Eskimo population as to any other. It pointed out that people must be able to find productive and remunerative work if they are to better themselves materially. This in turn requires that economic activity must be of a sufficiently high and sustained level to ensure that an adequate number of jobs is available. However, this is not a sufficient condition. It is also necessary that the labour force should possess such attributes as education, mobility and good health to enable its members to fit into employment roles with relative ease. If critical elements are missing on both the supply and demand sides of the labour market, the result will be the kind of economic stagnation and under-employment which is evident in the Arctic.

The Theory of Circular and Cumulative Causation is also of more than passing relevance to this study. The processes which have been at work in the Arctic correspond only approximately with the kinds of sequences which Myrdal has identified. Nevertheless, since widespread contact between whites and Eskimos began, the history of the Arctic has involved continuous change away from a more or less stable original condition. Eskimo society, with its relatively small numbers, unstable resources, and (by white standards)

inferior technology, has born the brunt of this change. White society has scarcely been affected.

Further progress toward understanding the Eskimos as a developmental phenomenon must now depend on examining their unique experiences and potentialities. Specifically, what are the problems which confront them? How have these problems arisen? What economic options have become available to Eskimos during recent decades and how have these been exercised? What courses of policy action can be taken toward providing a broader range of options in future? The remainder of the thesis is concerned with these questions.

CHAPTER III

ECONOMIC STATUS OF THE ESKIMO

The Eskimo has been able to survive in a harsh environment for thousands of years. However, the Arctic world is now changing rapidly, as are the rules of living in that world. Never in the past has the Eskimo been faced with as large a threat to his cultural identity as now confronts him. Is he sufficiently well off materially, and healthy enough, to meet this threat? Is he being equipped with the kinds of skills and knowledge which enable him to adapt to the changes which are taking place around him? Are there enough jobs in the Arctic to permit him to maintain himself and his family? What are his chances of being able to derive a livelihood from traditional pursuits?

This chapter examines some of the data which bear on these questions. The section which follows discusses changing trends in population, birth rates, death rates, and natural increase. Following this, material on occupational and income status is examined. A third section deals with education, health and housing. A final section outlines the overall pattern of the economic problems which confront Eskimos at the present time.

What the sections reveal, in total, is rather pessimistic. They show that the Eskimo population is increasing rapidly in a land in which jobs are scarce and average income is low. They suggest that educational attainment is, on the average, too low to permit the Eskimo to qualify for better paying jobs. Health is also a continuing problem. Some of the diseases which have been endemic to the Eskimo population during past decades have been counteracted effectively, but others persist. Poor mental health, often manifesting itself in excessive alcoholism and violence, is also characteristic of much of the population.

Nor is this likely to change in the near future. Employment opportunities in the Arctic may not increase rapidly enough to overtake the growth of population, and thus absorb the labour force into employment. Even if a high rate of growth in job opportunities were experienced, the ability of many Eskimos to take advantage of this is doubtful. Probably, a substantial proportion of the Eskimo population will remain dependent on low income activities such as trapping, and on government subsidy, for many years to come.

Demographic Factors

There were 12,300 Eskimos living in the Northwest Territories in 1970.⁽¹⁾ This was only a minute fraction of the population of Canada, roughly .07 per cent. Even in terms of Canada's indigenous population, Eskimos do not comprise a large group. Approximately 300,000 Indians, Eskimos and Métis live in Canada, and the Eskimos of the Northwest Territories account for only about 4 per cent of this population.⁽²⁾ The Eskimo population is more significant in relation to the population of the whole of the Northwest Territories, however, which equaled 34,500 in 1970.⁽³⁾ Eskimos comprise about 36 per cent of this.

Much of the Eskimo population is concentrated in a few areas. One is the Mackenzie Delta, where about 1,700 Eskimos live in the communities of Inuvik, Tuktoyaktuk,

(1) Annual Report of the Commissioner of the Northwest Territories, Yellowknife, Government of the Northwest Territories, 1970, p. 121. Data on the Eskimo population from this and other sources are summarized in Table I, Appendix A.

(2) Data on the total indigenous population of Canada are difficult to obtain, and tend to be unreliable. The principal problem is that few records have been kept on Métis and on Indians not living on reservations. The writer's figure is based on Economic Council of Canada, The Challenge of Growth and Change, Fifth Annual Review, Ottawa, Queen's Printer, September 1968, p. 121.

(3) Annual Report of the Commissioner of the Northwest Territories, Op. cit., p. 121.

and Aklavik. Another group of Eskimos lives in the Keewatin. Approximately 2,500 people reside in settlements such as Baker Lake, Eskimo Point, Rankin Inlet, and Coral Harbour. Relatively large numbers of Eskimos are also located on Baffin Island. The entire Island has an Eskimo population of about 5,000, of which about one-quarter lives at Frobisher Bay. In addition to Frobisher, significant populations center on Cape Dorset and Igloolik on the Island's western coast; Pangnirtung, Broughton Island and Clyde River on the eastern side of the Island; and on Pond Inlet and Arctic Bay on Baffin Island's northern end. Other Eskimos live in many small settlements along the Arctic coast between the Mackenzie Delta and the Boothia Peninsula. Outside the boundaries of the Northwest Territories, Canadian Eskimos are found mainly along the coasts of Nouveau Québec and Labrador. ⁽⁴⁾

Accurate time series on the Eskimo population are available only for recent decades. However, such longer term data as are available suggest that the Eskimo population was once larger than at present. Before there was extensive contact with white people, some 20,000 to 30,000 Eskimos may have lived in Arctic Canada and Labrador. ⁽⁵⁾ At some time

(4) Regional population estimates are based on material available to the writer within the Department of Indian Affairs and Northern Development.

(5) Derek G. Smith, The Mackenzie Delta - Domestic Economy of the Native Peoples, Ottawa, Department of Indian Affairs and Northern Development, 1965, p. 9.

during the initial few decades of the present century, this population appears to have gone into a rapid decline, reaching a low of about 7,000 to 8,000 before 1930.⁽⁶⁾

During the post war era, population growth, at an annual compound rate of approximately 4 per cent, has been among the most rapid in the world.

This growth is reflected in fertility and mortality rates. Data for the years 1961 to 1963 indicate that fertility among Eskimo women of specific age groups is very high. Eskimo women apparently bear children over a greater age range than other Canadian women. For Canadian women as a whole, peak child bearing during the 1961 to 1963 period occurred during the 22nd or 23rd year, when some 233 live births per thousand women were recorded. After this, there was a decline in fertility, and by age 47, virtually all child bearing had ceased. Among Eskimo women, peak child bearing occurred between the ages of 27 and 30, and numbers of live births, at approximately 320 per thousand women, were much higher than the Canadian average. Eskimo women also maintained a more uniform fertility over a greater age range than other Canadian women, and continued to have children at higher ages. Among Eskimo women 47 years old, the number of live

(6) Diamond Jenness, "The Eskimo: Their Past and Future", Queen's Quarterly, Vol. 51, No. 2, 1944, p. 142.

births per thousand was still about 70, whereas it had
(7)
become insignificant for Canadian women as a whole.

While fertility among Eskimos is high, mortality rates are also well above rates experienced in Canada as a whole. The infant mortality rate, averaging approximately 180 deaths per 1,000 children aged 1 year or younger during the 1961-1963 period, was 5.2 times the national average. For children aged 1 to 4, the death rate was 15 per thousand, while the all Canada rate was only 1.1 per thousand. Eskimos who survived the initial few years of life fared somewhat better. The mortality rate for Eskimos aged 5 to 64 was 5.1 per thousand, while for "all-Canadians"
(8)
in these age groups, it was 2.9 per thousand.

With the introduction of better health standards, housing, and sanitation to the Arctic, the Eskimo mortality rate has declined considerably, and is now greatly exceeded by the birth rate. As a consequence, the rate of natural increase is unusually high. In 1968 it stood at 4.74 per cent, or nearly four times the national average of 1.2 per cent.
(9)
A significantly higher proportion of the Eskimo

(7) Department of Northern Affairs and National Resources, The Northwest Territories Today, A Reference Paper for the Advisory Commission on the Development of Government in the Northwest Territories, Ottawa, Queen's Printer, 1965, pp. 19 and 20.

(8) Ibid

(9) Report on Health Conditions in the Northwest Territories, Ottawa, Department of National Health and Welfare, Northern Health Service, 1968. Data on fertility, mortality and natural increase are summarized in Table III, Appendix A.

population therefore falls into younger age groups than for the whole of Canada.

Unless attitudes and institutions which affect procreation among Eskimos change, the natural rate of increase could continue at a high level for many years. This could mean a doubling of the population of the Arctic within the next twenty-five years. Eskimos already rely heavily on subsistence allowances and other forms of government subsidy because their traditional resources have been depleted and the number of job opportunities in the Arctic is small. With continued high population growth, this situation could become more critical. Yet, the natural rate of increase could begin to fall within the near future. Long period analysis of demographic trends suggests that natural increase, and particularly the birth rate, is sensitive to changes to broad socio-economic variables such as education and new attitudes.⁽¹⁰⁾ A better educated, more affluent and more sophisticated Eskimo may not want as many children as his forebears.

(10) Simon Kuznets, Modern Economic Growth, New Haven and London, Yale University Press, 1966, pp. 40-63.

Occupations and Income

Data on occupations and income among Eskimos are of varying age and quality. Nevertheless, they permit some impressions of the employment and earnings patterns which have prevailed in the Arctic during the past decade. Generally, the indications are that Eskimos earn slightly higher incomes than northern Indians, but that both indigenous groups compare quite unfavourably with whites in this respect.

In 1961, more than half of the participating labour force of the indigenous population of the Northwest Territories depended on low-income activities such as trapping. Only 42 per cent of the participating labour force among Eskimos consisted of wage earners who derived most of their income from casual, seasonal, and permanent employment. Indians were in a similar position. In marked contrast, 90 per cent of the participating labour force among whites worked for salaries and wages.⁽¹¹⁾

Data by industry also indicate that indigenous people were most active in the low income sectors of the territorial economy in 1961. Thus 93 per cent of the persons engaged in "hunting, trapping and fishing" were Eskimos and Indians. Indigenous people comprised 63 per cent of the people enumerated as

(11) Department of Northern Affairs and National Resources, The Northwest Territories Today, Op.cit., p. 16.

"labourers not elsewhere specified". In the "service and recreation" industry, 31 per cent of the work force consisted of indigenous people. Only small numbers of Eskimos and Indians were employed in occupations having higher income and security status. Thus only 8 per cent of the labour force in each of the "clerical and sales" and "transportation and communications" occupational categories were indigenous people. In "managerial occupations", Eskimos and Indians (12) comprised only 2 per cent of the labour force.

Data developed on a regional basis suggest that the income and occupational status of Eskimos has not changed significantly since 1961. Material assembled by Wolforth in 1965 for the four major settlements of the Mackenzie Delta (Inuvik, Aklavik, Fort McPherson, and Arctic Red River) indicate that:

Far from being the centre of change, where the native has access to a wide range of job opportunities, his role is often that of a by-stander on the economic scene. The majority of the jobs and especially the high paid jobs are occupied by whites from 'outside'. (13)

. A total of 604 persons were employed in the Delta settlements in 1965. Of these, 375, or approximately 62 per cent were white, despite the fact that the population is largely

(12) Ibid, p. 18.

(13) John R. Wolforth, The Mackenzie Delta - Its Economic Base and Development, Ottawa, Department of Indian Affairs and Northern Development, 1966, p. 41.

non-white. Only 102 persons, or 16 per cent of the total number of people employed, were Eskimo. The remaining 22 per cent were either Indian or people of "mixed blood".⁽¹⁴⁾

Moreover, Wolforth suggests that many of the jobs held by indigenous people had little continuing reationale:

A tradition of wage employment was initiated during the construction of the DEW Line sites, and with the construction of Inuvik itself. Unfortunately neither of these activities is self-sustaining. The not altogether unjustified opinion exists today that many jobs are created in order to absorb a labour force which, with the redundancy of DEW Line sites and the completion of major construction in Inuvik, would be largely unemployed.⁽¹⁵⁾

Data on monthly wage incomes provides further evidence of the inferior economic position of the Delta's indigenous people. In the summer of 1965, the majority of Eskimos in wage employment were paid less than \$350 monthly. While some whites earned incomes as low or lower, most were in higher income groups.⁽¹⁶⁾ Of the Department of Northern Affairs, which was the major employer in the Delta at the time, Wolforth

. (14) Ibid, Wolforth does not indicate the proportions in which the jobs were permanent, seasonal and casual. Employment data for the settlement of Inuvik in July, 1965, are contained in Table XII, Appendix A.

(15) Ibid, p. 44.

(16) Ibid, p. 55.

notes the following:

In Inuvik, 90.3 per cent of the (52) Eskimo men on the Department of Northern Affairs' payroll earned between \$300 and \$350 per month. In comparison, 81.3 per cent of the (16) white men on the payroll earned more than this amount. In addition, salary earning civil servants are almost entirely white. Thus, even in the Department of Northern Affairs, although more natives are employed than whites, they generally occupy "prevailing rate" jobs. (17)

Trapping ranks next to wage employment as a source of income and employment in the Delta. Most trappers are Eskimos and Indians, although a few are whites. In 1965, there were 391 trappers in the Delta. Of these, only 15 earned incomes from trapping which exceeded \$2,000 per annum. Of this group, (18) only one had an income approaching \$10,000. Wolforth notes the following concerning the highest income trappers:

These few people alone may be regarded as professional trappers at the present time, but it is significant that many did not trap the Delta at all, but moved further afield to the Anderson or Firth Rivers to trap the more lucrative marten. However, to set up for the winter in these more distant areas requires a cash outlay which few are able to make. (19)

(17) Ibid, p. 45.

(18) Ibid, p. 13.

(19) Ibid.

In view of this, net incomes from trapping could not have been large. Indeed, there is evidence that trapping is a marginal or even sub-marginal activity throughout much of the Arctic. Usher investigated returns from trapping in the Coppermine-Holman region in 1963. He noted that ".... of the almost fifty per cent of regional income derived from hunting and trapping, the same amount or even more must be reinvested simply to maintain the same level of income, or in short, that hunting and trapping are not profitable activities, and may even incur deficits".⁽²⁰⁾

In summary, data on the Mackenzie Delta reveal that the economic position of the Eskimo (and Indian) is one of low income and relatively uncertain job tenure. Trapping offers an alternative to wage employment, but not a satisfactory one as the returns from it are small and perhaps even negative in many instances.

Data on occupational and income status among Eskimos is also available for the Keewatin. In January 1969, the Department of Indian Affairs and Northern Development undertook a survey of the population and labour force of this region. "The purpose of this was to collect information about education and training, skills, linguistic ability, mobility,

(20) Peter Usher, Economic Base and Resource Use of the Coppermine - Holman Region, Ottawa, Department of Indian Affairs and Northern Development, August 1965, p. 224.

employment and income of the residents of the Keewatin Region, especially the Eskimo population".⁽²¹⁾ All Eskimos then resident in the Keewatin, 2,424 people, were enumerated.

The survey obtained data on a full year beginning on July 1, 1967, and ending on June 30, 1968. During this period only 18 per cent of the male labour force (males 14 years and over) were fully employed in wage and salary occupations; only 6.5 per cent were fully occupied with hunting, trapping and fishing; and only 4.9 per cent worked full time at handicrafts production. In contrast, 48.5 per cent of the male labour force engaged in wage and salaried occupations for between 1 to 24 weeks; 18.1 per cent worked 1 to 24 weeks at hunting, trapping and fishing; and 31.1 per cent were employed 1 to 24 weeks at handicraft production. The proportions of the male labour force spending between 24 and 45 weeks in any activity category fell roughly between those fully employed and those working only 1 to 24 weeks.⁽²²⁾

Thus, much of the labour force was "locked into" a pattern of short-term seasonal or casual employment.

(21) D.F. Preston, Economic Analysis of the Human Resources of the Keewatin Region, N.W.T., Ottawa, Department of Indian Affairs and Northern Development, 1969, p. 1.

(22) Ibid, pp. 18 - 20. These data are contained in Tables VII to IX, Appendix A.

Preston noted that:

There was a substantial number of people who spent part of the year in each activity. The greatest number of persons tended to engage in part-time wage and salary employment. This was particularly true of the age groups under 30. In the older age groups time was more evenly divided between the three activities and there are large numbers engaged in two of the three activities or all three activities for 1 - 24 weeks..... The most active part-time workers were in the 35 - 49 age bracket. These age groups tended to combine the three activities. The young did not spend as much time at hunting, trapping or fishing or in handicrafts. (23)

The tendency toward seasonal and casual employment was even more pronounced with the female labour force. Only 3.1 per cent of the latter was fully employed in wage and salaried occupations during the survey period. An even smaller proportion, 1 per cent, was fully employed in handicraft production. This indicated that:

Women acted to supplement the income of men. This was particularly true for part-time production of handicrafts. Throughout the age groups 30-54 years of age; almost three quarters of the women worked part-time in handicrafts. Most of these (90%) worked for less than 25 weeks and most of these for less than 10 weeks. More women worked full-time for wages and salaries than in handicrafts.

The younger age groups were more active part-time in wage and salary employment than their elders. (24)

(23) Ibid, p. 19

(24) Ibid, p. 21

With respect to the level of unemployment, survey data revealed that 21 per cent of the male labour force and 27.1 per cent of the female labour force was inactive during the week of January 6 to 13, 1969.⁽²⁵⁾ However, unemployment is typically higher in the Keewatin in January than during other months. In summer most people wanting jobs can usually find them. The annual "sealift" which brings a year's supply of consumers goods, construction materials, and fuels to Arctic communities, provides temporary work. Other employment is often available from construction or mineral exploration.

The Labour Force Survey obtained some data on the level and sources of income among Keewatin Eskimos. The average level of total earned income during the period July 1, 1967 to June 30, 1968, was \$2,212 per recipient. This did not include income received as transfer payments. The major source of earned income was wage and salary employment, which accounted for 75 per cent. Hunting, trapping and fishing contributed 14 per cent, while handicraft production yielded 11 per cent. Total family earned income; that is, the pooled average income of family units, was \$2,498 during the survey period. Average unearned income per family, received as family allowances, old age pensions, and subsistence payments, amounted to \$559. Earned and unearned income per family

(25) Ibid, p. 26.

therefore totalled \$3,048. This "was substantially lower than the overall Canadian average in 1961 of \$5,449 and the Canadian rural average of \$3,990".⁽²⁶⁾

The Labour Force Survey revealed that 69.6 per cent of the families of the Keewatin received incomes of less than \$4,000 during the survey period. The comparable proportion for all Canada in 1961 was 38.7 per cent.⁽²⁷⁾

The high cost of living in the Arctic places the low income Eskimo in a particularly disadvantageous position. Even in more accessible parts of the northern territories such as the Yellowknife and Whitehorse areas, prices of staples, rents, and fuel may be 30 per cent higher than in southern Canada.⁽²⁸⁾ In regions such as the Mackenzie Delta and the Keewatin, which are remote and dependent on air transport and seasonal water transport, prices would be much higher than in more southerly communities such as Yellowknife. Raising a family on an average income of slightly over \$3,000 per year in such high cost regions would be difficult, and would allow for little more than a "hand-to-mouth existence".

(26) Ibid, p. 32. Data on levels and sources in the Keewatin of income are contained in Tables X and XI, Appendix A.

(27) Ibid, p. 37. The writer appreciates that the Arctic is not the only region exhibiting low per capita income in Canada. Incomes would also deviate significantly from the Canadian average in the outports of Newfoundland, the Lower St. Lawrence region of Quebec, and in the Ontario-Manitoba Interlake region, as examples.

(28) Based on a sample survey of prices which was undertaken in 1966 by the Economic Staff Group, Department of Indian Affairs and Northern Development, in Edmonton, Fort St. John, B.C., Whitehorse and Yellowknife.

Many Eskimo families supplement their cash incomes with food obtained by hunting and fishing. Indications are that such income in kind is not usually a significant component of total income. Most Eskimos now live in settlements, and game resources are no longer abundant in most areas. Caribou, seals, whale, and fish are still taken, but the settlement dweller buys most of his consumer goods at the local store. Nevertheless, game resources are still important in some locations. For example, Usher estimated that game accounted for approximately 30 per cent of total income in the Coppermine-Holman region in 1965. However, the people of the community of Coppermine were much less dependent on such income than (29) were people who were still living in outlying areas.

Education, Health and Housing

The provision of education to Eskimos has encountered many problems. Until recently, most Eskimos did not live in permanent communities, and little formal education could be provided to a dispersed, nomadic population. It was not until the late 1950's that a broad government program of building schools and pupil residences was undertaken in the Arctic. Prior to this, education was largely the responsibility of

(29) Peter J. Usher, Economic Base and Resource Use of the Coppermine - Holman Region, N.W.T., Op. cit., p. 227.

church missions. The education provided by these institutions was not very effective. Their resources were small and they received little government assistance.

Another obstacle is the Eskimo language, which has grammatical forms dissimilar from most European languages. This has had a bearing on how rapidly Eskimos have been able to learn from teachers and textbooks using the English language. Many Eskimo children are now placed in special classes emphasizing language orientation before they begin primary school work. There has been a significant age-grade retardation among Eskimo school children, and this is partly attributable to language problems.

Still other problems derive from what might be termed "cultural defensiveness". Many Eskimo parents appreciate the benefits of education for their children, but they realize that it is part of a process which is eroding their own beliefs and values. They hold negative as well as positive attitudes toward education. Negative attitudes are probably re-inforced by two factors. One is the residential school system. It is uneconomic to provide schools beyond the primary level in each Arctic settlement. Older children are therefore placed in residential schools which are often several hundred miles from their homes. Parents have little knowledge of what goes on in these schools and have no control over their children for much of the year. The other factor is that few Eskimos have benefited from education. In the

Arctic communities there is often little visible correlation between getting an education and getting a better job. Many young people who have been to school can neither hunt nor find work, and are often disruptive to the values and institutions of the settlement.

Despite such problems, and others, Eskimo school enrolment has grown impressively. In the 1949-50 school year, only 141 Eskimo children were in school in the Northwest Territories. By 1967-68, enrolment had risen to 2,795, and virtually all children of school age were attending classes on a regular basis.⁽³⁰⁾ However, the large majority of these children are concentrated in the primary grades. Only a few Eskimos have reached secondary and post secondary levels of education to date. There is a more pronounced tendency for Eskimos to leave school at an early age than in the case of students in the rest of Canada.

A growing number of adult Eskimos have taken vocational training since the early 1950's. Thus, during the 1953-54 fiscal year, only three Eskimos were listed as vocational trainees. By 1968 - 69, this had risen to 518.

(30) Records of the Department of Indian Affairs and Northern Development. The writer is grateful to Miss S.K. MacBain, Economic Staff Group, Department of Indian Affairs and Northern Development, for assistance given him in assembling material on education. Data on school enrolment growth are contained in Table XIII, Appendix A.

Training has focused on a wide variety of fields, including heavy equipment operation, carpentry, plumbing, and commercial subjects, and government has borne its full costs. (31)

However, courses were often of a short, introductory nature, and few Eskimos have become skilled tradesmen or clerical workers. Moreover, many of the skills which were absorbed could be put into practice for only brief periods (if at all), because of the temporary and fluctuating nature of wage employment in the Arctic settlements.

Health is also a continuing problem in the Arctic. Poor health among Eskimos has been closely associated with badly constructed and overcrowded housing, exposure to cold and dampness, and low sanitation standards. As a consequence, the most important diseases afflicting the Eskimo have been influenza, tuberculosis, infectious hepatitis, and venereal diseases. Eye and ear defects among children have also been common. Mental health is also a problem, often manifesting (32) itself in alcoholism and violence.

(31) Ibid. Data on growth of vocational education are contained in Table XIV, Appendix A.

(32) Report on Health Conditions in the Northwest Territories, op.cit., 1960 to 1969. Data on infant mortality and causes of death among Eskimos are contained in Tables IV and V, Appendix A.

It may take many years to raise the standard of health among Eskimos. The infant mortality rate is still well above the Canadian average. The incidence of new active cases of tuberculosis dropped sharply to 1965, but has risen since. The incidence of gonorrhoea increased some six-fold between 1961 and 1968.⁽³³⁾ Moreover, problems of mental health seem partly related to changing patterns of activity, settlement and migration, and could persist as long as these patterns continue.

Somewhat more progress is apparent in the area of housing. The first federal housing program for Eskimos, known as the "Resale and Welfare Housing Program", was initiated in 1959.⁽³⁴⁾ It provided for the construction of small, single room houses with floor areas of 256 square feet and was aimed especially at Eskimo families living on welfare allowances. The houses were either provided rent free, or at a small rental. Concurrently, the Federal Government also offered the single room "rigid frame" houses to Eskimos who could afford to buy them. Annual payments were intended to

(33). Ibid, 1968.

(34) Material on housing on this and following pages is based on memoranda and unpublished reports on file with the Department of Indian Affairs and Northern Development. The writer is grateful to Mr. A. Krolewski, Economic Staff Group, D.I.A.N.D., for assistance given him in assembling the material. Data on one housing program, the "Northern Rental Housing Program", are contained in Table XVII, Appendix A.

cover the costs of materials only, and Eskimos were able to erect the houses by using their own labour. Larger houses were offered to Eskimos with bigger families. During the 1959-1965 period, approximately 150 houses were provided in the eastern Arctic at a cost, to government, of \$1.7 million. In the western Arctic, some \$600,000 was spent (35) during the same period for about 220 housing units.

The 1959-1965 program only partly solved the Arctic's housing problems, and many Eskimos did not benefit from it. A survey was conducted in 1965 to determine the need for housing in the Northwest Territories as a whole. The survey included a total of 8,394 Eskimos living in 1,458 housing units of various types. It was found that, of these people, 1,966 occupied 386 igloos or tents. Another 1,866 were living in 362 houses deemed "completely unacceptable". Most of the remaining Eskimos were living in 710 units of the rigid frame type built during the 1959-1965 program. On the basis of criteria that were based more on structural condition

(35) Costs per housing unit have been substantially higher in the eastern Arctic than in the western Arctic because of the more rudimentary development of transportation in the east. Transportation to western Arctic settlements has been closely linked with the western DEW Line re-supply operations conducted in a well organized, efficient, manner by the Northern Transportation Company. In the east, most settlements rely on the annual "Arctic Sea-lift", a low volume, high cost, and at times uncertain operation undertaken by the Canadian Coast Guard.

than overcrowding, it was established that an urgent need existed for 1,137 new housing units to meet minimal requirements.

A new public housing program, known as the "Eskimo Rental Housing Program" was initiated in the Arctic in 1965. The basic unit of this program was a prefabricated three bedroom house with a floor area of 700 square feet. During the 1966-1968 period, 806 units were provided at a cost of approximately \$8 million. Rental charges are based on ability to pay and can be as low as \$2 per month. In some localities, Eskimos can purchase homes under the "Northern Purchase Housing Program", or the "Eskimo Re-establishment Housing Program", but with inexpensive rental accommodation available, these programs have met with very limited success.

While the task of providing adequate shelter in the Arctic is incomplete, many of the basic accommodation needs of Eskimos have now been met. The incidence of mortality related to exposure and dampness has, correspondingly, decreased. Nevertheless existing housing is still overcrowded and sanitation is often inadequate. Moreover, a rather obvious double standard exists in the Arctic. Housing provided for white administrative personnel is similar in appearance and standard of comfort to that of suburban southern Canada. Even though there has been a significant improvement over former standards, Eskimo housing appears distinctly inferior in comparison.

Scope of the Problem

The material examined in this chapter has given an indication of the overall nature of the economic and social problems of Eskimos. The following broad patterns are apparent:

1. The Eskimo population is currently growing rapidly. If the natural rate of increase were to remain at the present compound rate of about four per cent per annum, the 1970 population of 12,300 would grow to 18,200 by 1980, and to 26,950 by 1990, less than twenty years hence. Much of this population would be concentrated in younger age groups. However, the natural rate of increase should fall as attitudes governing family size change. Population growth should therefore be somewhat slower in future than at present.
2. Because population is growing rapidly, the labour force is also experiencing a high rate of growth. Persons of labour force age currently comprise only about half of
(36)
the total Eskimo population.

(36) In 1961, the proportion of the Eskimo population between the ages of 14 and 65 was 51.1 per cent. (D.B.S., Census of Canada, 1961). Staff studies within the D.I.A.N.D. indicate that this had not changed significantly by 1966, and that it still represents an accurate labour force population ratio at present. (D.E.C. Mathurin, Indian and Eskimo Labour Force Projections to 1981, N.W.T., Ottawa, Department of Indian Affairs and Northern Development, August, 1968.)

Numerically, therefore, the labour force equals about 6,000 people. Little is known about participation rates among Eskimos. These are difficult to derive because of the strongly seasonal and casual employment patterns which prevail in the Arctic. However, estimates indicate that approximately 42 per cent of the 1970 labour force, or about 2,500 people, was either working or actively seeking work.⁽³⁷⁾

3. As much as 50 per cent of the participating labour force may be employed mainly or largely in trapping, an activity which generally yields a low return.⁽³⁸⁾ The remaining 50 per cent would rely mainly on wage employment, or sources such as handicraft production, for cash income. However,

(37) The participation rate estimate is based on data developed for a study on northern employment which is currently underway within the Economic Staff Group, Department of Indian Affairs and Northern Development, Ottawa.

(38) The estimated proportion of the participating labour force engaged in trapping is based on data which were discussed on page 66 of this chapter. There it was indicated that considerably more than half of the participating labour force depended on activities such as trapping in 1961. While a somewhat larger proportion of the Eskimo labour force might now be classed as "wage earners", there is little reason to believe that the allocation of labour between "traditional" and "modern" activities in the Arctic has changed much during the past decade.

only a small proportion of these people would hold permanent jobs. The rest would probably shift from one occupation to another, including trapping, in the manner revealed by the Keewatin Survey.

4. Because of its strong dependence on trapping, and seasonal and casual employment, the level of per capita or family earned income among Eskimos is considerably lower than the national average. Even when transfer payments are taken into account, cash resources are small. Moreover, the purchasing power of cash incomes received in the Arctic would be significantly lower than in southern Canada because of the high cost of living in the region. In many parts of the Arctic, cash incomes are still supplemented by incomes in kind, but the overall effect of this is relatively minor.
5. Because per capita income is low, and too many people depend on too few resources and employment opportunities, Eskimos are virtually in no position to better themselves materially, or to bear more than an insignificant proportion of the costs

of the services which they receive from government. At most, they are able to look after some of their basic needs, such as food and clothing.

6. This situation is aggravated by low levels of educational attainment, and problems of physical and mental health. Eskimos are excluded from many of the better paying seasonal or permanent jobs in the Arctic because they are not equipped to compete in the modern labour market. Moreover, some jobs in which they have encountered some success have not lasted long enough to provide a longer term source of income.

In effect, a combination of factors keeps a large proportion of the Eskimo population locked in a "vicious circle" of dependence on trapping, low income seasonal and casual employment, and government subsidy. Real economic costs arise out of this situation. These relate not only to the resources which are required to support an unemployed and underemployed population, but also to the output which this population could produce if it were gainfully employed.

Developing solutions to these problems requires an understanding of their principal causes. It also requires an appreciation of how effectively Eskimos have been able to respond to the economic opportunities which have been available to them. These subjects form the substance of the next two chapters. Chapter 4 analyses the long sequence of events which transformed Eskimos from an independent, semi-nomadic people to a sedentary population dependent largely on government assistance. Chapter 5 then goes on to examine some of the more notable cases in which Eskimos have worked in wage employment to date.

CHAPTER IV

ECONOMIC, CULTURAL AND SOCIAL CHANGE

The Eskimo of the traditional culture was strongly dependent on his environment. The timing of production and consumption were determined by the seasonal migratory patterns of marine mammals and caribou. People located their encampments where game was abundant, and avoided regions where animals were scarce. Long run growth or decline in population depended most basically on changes in climate, which was the foremost parameter governing the quantity of animal life in any region.

The changes which permeated and disrupted Eskimo society during the past century derived from increasing and more widespread contact between Eskimos and whites. Since about 1850, whites have entered the Arctic in pursuit of whales and fur, to spread their religion, to introduce their concepts of law, order and sovereignty, and to implant their technology. The traditional society of the Eskimos was too loosely and diffusely organized to withstand these incursions. From the original balance, or equilibrium, which prevailed between the people and their environment, Eskimo society underwent a process of cumulative change.

Gradually at times, more rapidly at others, Eskimos shifted from direct dependence on land and sea animals to dependence on cash incomes from trapping, wage employment, and the welfare cheque. The geographic patterns of the traditional culture became altered. Originally, individual bands of Eskimos were dispersed throughout the Arctic. Now, almost all Eskimos are concentrated into permanent communities. The once independent Eskimo is now, often, a chronic recipient of government subsistence payments.

This chapter examines the major facets of the process of change described above. Against the background of the traditional culture, the first section examines, briefly, the economic attitudes which the Eskimo inherited from his aboriginal past. These attitudes are still important in terms of how the Eskimo views the modern Arctic. The second section deals with the factors which disrupted and altered the traditional society. It focuses on various exogenously introduced forces, such as missionaries, traders, and government, and the impact which these had on the Eskimo. The final section looks at the end product of past change - present day Eskimos. These people live in settlements ranging in size from a few families to thousands of people. Modern Eskimos are in various stages of transition from the traditional culture to modern society. The population therefore presents a range of problems to the policy maker and administrator, and each of these must be

understood in at least their broader details if solutions to the human problems of the modern Arctic are to be developed.

Traditional Culture

Jenness describes the traditional economy of the Eskimo in the following terms:

To the pre-European Eskimos trade meant only the simplest barter, and in Canada even that occurred but rarely. A man was expected to support his wife and children by his own efforts from the sea and land around him. Food he obtained by hunting and fishing; with his own hands he made all his tools and weapons. Snow..... furnished the building blocks with which he erected his winter dwelling, and the skins of caribou and seals supplied the covering for his summer tent. The same skins or furs.... provided clothing..... For food, clothing, and shelter, therefore, he depended on no(1) man; he was completely self-supporting...

The foregoing passage points to several significant characteristics of the Eskimo's traditional culture. In this culture, individuals did not play strongly differentiated economic roles. They were simultaneously producers and consumers of their products. Such division of labour as existed was based on the family unit. Men were hunters and women carried out domestic pursuits. Men, as hunters and providers, were both savers and investors. A hunt which

(1) Diamond Jenness, Eskimo Administration: II Canada, Arctic Institute of North America, Technical Paper No. 14, Montreal, May 1964, p. 99.

provided food beyond immediate needs allowed them time to repair and replace sleighs, weapons and the skins which women made into garments. It provided time to barter "capital" such as dogs. The same individual was thus hunter and provider, saver, investor, and trader. People whose roots lie in such an undifferentiated economy would have difficulty understanding a modern society in which economic roles are strongly differentiated, and which requires a variety of organizational forms to channel economic efforts.

The social, cultural, and economic life of traditional Eskimo society exhibited a distinct seasonal pattern. During the short summer, Eskimos hunted and saved, and had time for little else. During the winter they consumed their food and produced sleighs, boats, tools and garments. Winter also provided an opportunity to reaffirm cultural values, renew and extend social contacts, and barter. Many modern Eskimos are still closely attuned to this seasonal pattern. Because of this, Eskimos may find it difficult to understand economic aspirations and expectations which extend over periods of several years.

Yet the Eskimo was concerned about his future, and had a means of providing for it. To be old or sick and alone in the Arctic often meant death. The Eskimo overcame the problem of diminished productivity in illness or old age by means which were essentially social. His survival depended on belonging to a closely knit group which included productive

individuals, and which cared sufficiently about his welfare to keep him when he was unproductive.

To minimize individual risks, the Eskimo devoted considerable attention to extending, or strengthening, his group and kinship bonds. Various institutions were used. Prominent among them was the exchange of children, an act which would bind families together. Arranged marriage was also important. Fathers would attempt to marry daughters to young men who showed potential as hunters. The young men would then be under some obligation to provide for their fathers-in-law and their extended families. Another device used to ensure against hardship was hospitality. The Eskimos were known for their hospitality and generosity, but these traits were underlain by practical considerations. They bound people into a pervasive system of social debts and obligations.

Thus it would seem that the individual Eskimo was not as self-sufficient as Jenness suggests. He appears to have been of the type which Hirschman refers to as the "group
(2)
focused ego". Because the Eskimo depended strongly on his group, it would be difficult for him to understand the self-interested behaviour which is characteristic of modern industrial societies.

(2) Albert O. Hirschman, The Strategy of Economic Development, New Haven and London, Yale University Press, 1964, pp. 11-24.

The basic socio-economic unit of traditional Eskimo culture was the family, which typically consisted of three generations, and included adopted children. Coastal Eskimo families had their individual fishing and sealing preserves which were respected by others. Among inland Eskimos, individual family units typically hunted in dispersed groups over relatively large areas of up to 500 square miles.⁽³⁾ It was important that the density of population was kept to a level which the resources of an area could support. Families would therefore refrain from violating each others hunting lands. Referring to more hospitable climes than the Canadian Arctic, Cipolla notes that "The general concensus is that density among hunting and food gathering peoples is far too great if it is as much as one per square kilometer or some 2.5 per square mile".⁽⁴⁾ The reasoning underlying this statement is that hunting and gathering peoples do not control or improve their environment. They merely take what it offers. It is only when a stage of reliance on agricultural development has been reached that innovations affecting food production permit denser population.

(3) F.G. Vallee, Kabloona and Eskimo in the Central Keewatin, Ottawa, Department of Northern Affairs and National Resources, 1962, p. 72.

(4) C.M. Cipolla, The Economic History of World Population, Penguin Books, 1964, p. 73.

Related Eskimo families would identify themselves as a kinship group, or tribe, but this broader form of social organization was somewhat tenuous. At certain times of the year, for example, during prime hunting periods, or during the coldest months of winter when isolation was dangerous, kinship groups would assemble at traditional locations. More typically, they were scattered over the land or along the sea coast as individual families.'

The small group orientation of the Eskimo was a logical adaptation to the Arctic environment. The Arctic is large, but its food resources were always small and unevenly distributed. The inland Eskimo depended primarily on the caribou. The caribou is a migrating animal. In spring, it moves northward to its calving grounds on the Arctic Coast. In autumn it returns southward to winter in the northern boreal forests. It was the hunting custom of inland Eskimo to intercept the migrating caribou herds at water crossings and kill as many as possible. During favourable years, the kill was abundant, and little additional hunting was required. Usually, however, Eskimo families followed the caribou herds over considerable distances, hunting as they did so. Coastal Eskimos followed similar patterns with respect to whales, seals and walruses. Families would merge when sea mammals were abundant in an area, and disperse to their individual hunting reserves at other times.

The Eskimo's "group focused image" has had a number of consequences for his ability to adapt to white laws, customs, and techniques. Four of these would appear to be particularly important:

1. The Eskimo developed few assertive or domineering leaders. Leadership tended to be quiet and unobtrusive, and was gained by the tacit agreement of a family or kinship group. It depended on demonstration and example rather than aspirations for power or privilege. Eskimos who led, and whose advice was sought, were those who hunted and provided most effectively. They were aware of their roles and responsibilities as leaders, but rarely turned these (5) to personal advantage.
2. Eskimos did not have a strong acquisitive motive. Their approach to possessions was utilitarian. Many goods were common property. Sharing extended to dogs, children, wives, and virtually all goods and chattels. Self-interest was undoubtedly a factor in this. It was an aspect

(5) This is brought out well in several passages in Farley Mowat, The Desperate People, Boston and Toronto, Little, Brown and Co., 1959. In this book, Owliktuk is perhaps an ideal example of leadership among Eskimos. For a more rigorous discussion of Eskimo leadership and changing institutions, see John J. and Irma Honigman, Eskimo Townsmen, Ottawa, University of Ottawa, 1965.

of building-up the system of social debts and obligations described previously.

3. The Eskimo lacked a broader social and political structure. This has probably impaired his ability to understand the modern world. Perhaps the closest thing to a leader having power beyond the immediate group was the "shaman", or the intermediary between daily reality and the spirit world. Shamen exercised some measure of control over groups of Eskimos through playing on a common fear of evil spirits, but this served no broader social or political purpose. Often, the intent was to exact tribute. The shaman protected Eskimos from evil spirits in return for income in kind or chattels.⁽⁶⁾
4. Obligations to a family or kinship group were strong. They have tended to restrict the individual's ability to undertake modern employment when he personally was ready to do so. Eskimos value their families greatly, and dislike being separated from

(6) Farely Mowat, The Desperate People, Op.cit., Pommela, a principal character, is an example of a shaman working to his own advantage.

them. These families are more inclusive than white families. Often, it is not enough to move a man, his wife and children to the locale of a new job. In-laws may come too, and perhaps other relatives as well. If such relatives are not brought along, the family may move back to the home settlement within a short period. Moreover, in the Arctic settlements, wage earners often distribute their earnings among relatives and friends as well as providing for their immediate family.

Another salient feature of traditional Eskimo culture, though one not necessarily related to his group orientation, was a "non-scientific" outlook. Eskimos did not explain life, death and natural phenomena in rational terms, or in terms suggesting that they had a measure of control over their environment and fate. Their behaviour was governed by many taboos. They viewed themselves as living in a world in which reality was not strongly differentiated from spirits and dreams. This was the source of the shaman's power.⁽⁷⁾ Even today, ghosts and spirits walk the Arctic. There are

(7) John Ayaruaq, "The Story of John Ayaruaq", North, Ottawa, Department of Indian Affairs and Northern Development, March-April 1969, p. 3

regions which Eskimos avoid because strong taboos have been cast on them. There may be sound reasons for not venturing into such areas, for example, game may be scarce, but this is not always the case.

Causes and Effects of Change

Undisturbed, and isolated from external influences, Eskimo society was in approximate equilibrium with its physical and biological environment. Life in the Arctic was difficult, and mortality was high. To compensate, the birth rate was also high. Population probably remained more or less stable over prolonged periods, although there would have been some limited variations because climate and food resources fluctuated from time to time.

However, the Eskimo could not remain isolated. Several agents of economic, social and cultural change have been active in the Arctic for the past three centuries. Initially, these consisted of occasional exploratory voyages from Europe, and later, the establishment of isolated trading posts and forts. These early influences were only marginally disruptive to the pattern of Eskimo life. More recently, influences toward change have become complex, and have had a larger and more permanent impact.

This section is concerned only with these more recent influences. Particularly important among them are whaling, the fur trade, church missions, and the varied activities of government. Each of these forces introduced new elements into the Eskimo's economic, social, and cultural life, and thus led to dynamic, cumulative changes away from traditional socio-economic patterns.

Whaling and the fur trade preceeded the church missions and government into much of the Arctic. Moreover, traders, missionaries, and police officers appear to have followed each other into the Arctic in an order which varied little from region to region:

.....traders and missionaries expanded over the Arctic, the trader blazing the trail and the missionary and police following after him, a sequence that lead to the interpretation of the letters H.B.C. (Hudson Bay Company) as "Here Before Christ". By 1920 all three organizations were well represented in Arctic Canada, both east and west;....."(8)

Whaling:

• Whaling, responding to the world demand for oil and whale bone, was the first commercial activity pursued on a broad basis in the Arctic. Fleets of whaling vessels were active

(8) Diamond Jenness, Eskimo Administration: II Canada, Op. cit., pp. 22 and 23.

in the Arctic Ocean from approximately 1850 to 1900. Whaling was multi-national in character. Fleets from the British Isles, particularly Scotland, dominated whaling in Baffin Bay. American fleets were particularly active in the waters of Foxe Basin and in the vicinity of Southampton Island. Both British and American interests erected small whaling stations on the shores of Cumberland Sound. These stations employed a significant number of Eskimos, perhaps as many as 500. In the western Arctic, the pursuit of whaling was left entirely to Americans. For half a century the American fleets in the west had confined their activities to the Berring and Chuckchi Seas. However, following a rapid decline of whales in these areas, the fleets moved around Point Barrow and into the Beaufort Sea, wintering at Herschel Island near the Mackenzie Delta. "The demand for baleen ('whalebone') fell away soon after 1900. Whaling in the North American Arctic, already declining, became unprofitable, and by 1910
(9)
virtually ceased".

The prolonged activities of the whalers lead to a large decline in the whale population, which was one of the principle food resources of the Coastal Eskimo. No accurate records exist of the annual rate of slaughter, but it appears

(9) Ibid, p. 10

to have exceeded the reproductive capabilities of the sea mammals by a considerable margin. Whaling also brought other changes to the Eskimos. In the areas principally affected, the southern half of Baffin Island and the Keewatin coast of Hudson Bay, the whalers

"....forced the aboriginal culture to buckle. Metal pots and pans ousted the cooking pots of stone; garments of cotton and wool overlay and underlay the native garments of fur; and summer tents of canvas replaced the tents made from seal and caribou hides. The Eskimo hunters threw away their self made bows and arrows to equip themselves with fire-arms, abandoned their hunting kayaks, and their umiaks or travelling boats, and adopted the clinker-built whaleboats that the ships' captains left behind when they sailed away. A new generation of Eskimos arose that lacked the ancient skills and hunting lore of its parents, a generation that had lost its autarchy and could hardly survive without contact with the civilized world." (10)

Fur Trade:

In terms of the overall history of the industry, the fur trade came late to the Arctic. For more than two centuries, the trade had moved westward and northward from Hudson Bay and the St. Lawrence River. During the late eighteenth and early nineteenth centuries, it entered the Mackenzie Valley. For nearly a century after the merger of the Northwest Company and the Hudson Bay Company in 1821, the fur trade in the north

(10) Ibid, pp. 11 and 12

remained largely within the boreal forests. Although a few individuals, notably whaling captains, traded for furs in the Arctic during the latter part of the nineteenth century, the industry did not enter the region in force until the early decades of the twentieth century. By this time, settlement and agriculture were already altering the economy of the western plains, and the boreal forests had been depleted of a significant proportion of their commercial fur animals.⁽¹¹⁾

Throughout Canada, the history of fur was linked closely to the activities of the Hudson Bay Company. This was also the case in the Arctic. In the western Arctic, the Hudson Bay Company established its first trading post at Aklavik in 1912, and followed this with another at Herschel Island in 1915. In the east, the first post was built at Wolstenholme at the northern tip of Ungava in 1909. This was followed, during the next few years, by posts at Lake Harbour, Cape Dorset and Frobisher. The rapid construction of trading posts continued into the late nineteenth twenties and early nineteen thirties. Posts were built at many locations, including Pond Inlet, Clyde River, Southampton Island, and

(11) K.J. Rea, The Political Economy of the Canadian North, Toronto, University of Toronto Press, 1968, pp. 68-70.

Padlei. In some cases they have survived to the present; (12)
in others they were closed down after only brief operation.

A major long-run effect of the fur trade was that it led to a severe decline in the caribou, which was a vital resource to all Eskimos, and especially those who lived inland. The magnitude of this decline is indicated by research undertaken by Kelsall, who estimates that the caribou, which now stands at some 200,000 animals, once numbered in the (13) millions.

The caribou provided trappers with a readily available source of bait and dog food. During the height of the Arctic fur trade, the operation of several thousand miles of trap-lines with overworked, ravenous dogs, required large quantities of bait and meat. Added to this was the problem of wanton slaughter, in which the Eskimos participated once they had acquired firearms.

Phillip Godsell, a long-time Arctic employee of the Hudson Bay Company, describes the effect which the slaughter of caribou had on one group of Eskimos:

".... the indiscriminate sale of rifles and ammunition had led to such a slaughter of the caribou that they had become quite scarce. Not only that, but they had forsaken their customary paths of migration to and from Victoria Land to have their

(12) R.A.J. Phillips, Canada's North, Toronto, Macmillan of Canada, 1967, pp. 74-76

(13) J.P. Kelsall, The Caribou, Ottawa, Queen's Printer, 1968, pp. 143-150.

young. Now the natives waited in vain at the crossroads which the caribou had used as far back as the oldest man in the tribe remembered, and they could not understand.⁽¹⁴⁾

Another long-run consequence of the fur trade was that it drew Eskimos increasingly into a monetary economy. This was in part the result of the growing scarcity of caribou. With a decline in the caribou herds, hunting became less productive, and Eskimos were forced to purchase more of their supplies at trading posts. To do so, they had to earn cash or obtain credit by trapping.

Many traders dealt fairly with Eskimos, but their economic powers were considerable, and this led to some abuses. Typically, the individual trading post was in a completely monopsonistic position in the purchase of fur. Posts were located several hundred miles from each other, and it was usually impossible for trappers to go from trader to trader to obtain the best price for their furs. Similarly, the individual trader was almost invariably a complete monopolist in the sale of consumer goods and trapping supplies.⁽¹⁵⁾

The practice of "grubstaking", or financing trappers for the season, further bound Eskimos into a position of

(14) Quoted in R.A.J. Phillips, Canada's North, Op.cit., pp. 75-76. Phillips does not give the source of the quotation, but it would appear to be from Godsell's personal papers.

(15) Diamond Jenness, Eskimo Administration: II Canada, Op.cit., p. 41.

servitude to the trader. Often, it led to situations in which trappers were perpetually indebted. Because of his monopoly position, the trader could "charge" Eskimos considerably more for "grubstakes" than he could have under more competitive conditions. Thus he could withstand the occasional forfeiture or repayment at less than amounts which had been contracted. Eskimos usually repaid their "grubstake" in furs, which ultimately fetched prices several times as great as the credits or payments they received. The benefits of granting credit to Eskimos thus accrued largely to the trader.

The Hudson Bay Company has abandoned "grubstaking". However, individual private traders still pursue it in some parts of the Arctic. As a specific example of how grubstaking works, Smith noted the following incident in the Mackenzie Delta in 1965:

When the trapping season ends, the trapper brings his furs to the trader to put on account. If any cash is left over (which is not always the case), the trapper will buy the things he needs to hunt and fish for the rest of the year. Some may be squandered. The trapper is indissolubly bound to the trader in this system, and is seldom, if ever, out of debt. Cash loans are sometimes given by the traders and these are put on account. After the 1965 trapping season one man of my acquaintance was \$100 in debt to a trader. He was paid \$40 for a casual job in July which he gave to the trader. However, at the time of repayment the trader pointed out a pair of "white man's" shoes to my friend saying they

were a "deal". The trapper took the shoes after finding they were a good fit, without as much as asking the price. He also bought a primus stove from the trader (without asking the price) and one hour after being paid he was \$105 in debt to the trader. (16)

Viewed broadly, the Arctic fur trade was a composite of variables which interacted to the disadvantage of the Eskimo. As mentioned, its main secular features were the depletion of the Eskimo's traditional resources, and the process of increasingly drawing him into a monetary economy. However, the trade also had short-run effects which at times resulted in hardship. These arose out of interactions among cycles in animal population, fur prices, and the number of trappers which were active at a particular time. (17)

White fox was the most important fur harvested in the Arctic. Both because of a natural cycle, and depletion through trapping, the white fox population grew and declined over a ten year period. Thus furs were scarce at times, and readily available at others. Fur prices tended to fluctuate partly with this scarcity or availability. They also varied

(16) Derek G. Smith, The Mackenzie Delta - Domestic Economy of the Native Peoples, Ottawa, Department of Indian Affairs and Northern Development, 1965, p. 34.

(17) K.J. Rea, The Political Economy of the Canadian North, Op.cit., p. 80.

with changing preferences in fashion markets, which are notorious for shifts from one material to another. Numbers of trappers entering or leaving the fur industry in the Arctic coincided with changes in fur prices and animal populations. When prices and fur yields were high, non-resident trappers entered the Arctic in considerable numbers, and trapping incomes accruing to Eskimos decreased as a proportion of total trapping income. During more meagre times, the field was left to the Eskimos, but they could realize little income because prices were low and/or animals scarce.

Eventually, steps were taken to regulate some aspects of trapping. Beginning in the 1920's, large wildlife preserves were established in the Arctic. During the next two decades, restrictions were imposed on who could hunt and trap in these preserves. Generally, these favoured Eskimos, but they did not exclude non-resident trappers entirely. In 1949, the practice of registering trap lines was introduced. The purpose of this

..... was primarily to encourage trappers to manage fur resources carefully by giving them exclusive trapping privileges in limited areas. It also made possible, of course, much more thorough supervision and administration of trapping by public authorities. (18)

(18) Ibid, p. 78.

While these steps, and others, had some beneficial effects on the Eskimos, they came too late to reverse the trends which had been set in motion earlier. It might also be noted that government took no steps toward regulating traders, or initiating price supports for furs.

If the fur trade has had negative consequences for the Eskimo, it has also worked to his benefit. A small number of Eskimos still earn a substantial income from trapping. In some areas, of which Banks Island is the outstanding example, trapping must be regarded as a successful industry. (19) The trader was also a mixed blessing. Often, traders were among the first to help Eskimos in times of distress. As a more general point, for better or worse, the fur trade was a principle medium through which the Arctic and its people adapted to the twentieth century.

Phillips suggests that a balanced view should be taken:

The coming of the trader into the Canadian Arctic has had good results as well as bad. It would be grossly unfair to regard all traders as ruthless exploiters, or indeed to apply the standards of the late twentieth century's relative

(19) Peter J. Usher, The Bankslanders: Economy and Ecology of a Frontier Trapping Community, doctoral thesis submitted to the Department of Geography, University of British Columbia, March, 1970.

enlightenment to human relations of an earlier age - even the 1920's and 1930's. (20)

After World War II, the fur trade declined as an activity and source of income in the Arctic. Prices, particularly those realized for white fox pelts, decreased to levels which could sustain only the most prolific trappers operating in areas where animals were relatively abundant. The price decline was due mainly to decreasing demand for costly natural furs and a shift to various new synthetic fibres. By the mid-1950's, government had virtually abandoned any hope that the northern fur industry had future potential. To illustrate:

For the long term, the outlook for fur trapping in the Northwest Territories seems limited. It is a static industry capable of little or no expansion. It is not inconceivable that the future may see some further decline brought about by developments in the fields of low-priced synthetic fur fabrics. These may serve to reduce the demand for some types of natural furs. (21)

Even so, a substantial proportion of the indigenous population of the Northwest Territories is still wholly or partially dependent on trapping. Because much of this

(20) R.A.J. Phillips, Canada's North, Op.cit., p. 76.

(21) R.G. Robertson, The Northwest Territories, Its Economic Prospects, a brief presented to the Royal Commission on Canada's Economic Prospects, Ottawa, Queen's Printer, 1955, pp. 11 and 12.

population is occupationally and geographically immobile, this is likely to continue for some time into the future. This suggests that thought should be given to rationalizing and stabilizing the natural fur industry. Price supports, and income supplements related more directly to trapping as an activity than are subsistence allowances, should be considered. The northern trapper has been a victim of market forces lying beyond his control, and is now urgently in need of assistance in coping with the changed circumstances surrounding his occupation.

The Missions:

Missionaries appeared in the Arctic at about the same time as the traders, and the relationship between missions and trading posts appears to have been symbiotic in character. On the one hand, the growing dependence on a fur economy altered the beliefs and values of the Eskimos. This provided fertile ground for spreading new doctrines and values, which was the missionaries' role. On the other hand, the missions absorbed some of the social costs of the fur trade through their various activities. They therefore prevented these costs from falling as severely upon the Eskimo as they might have.

The missions did much to alleviate the hardships faced by Eskimos during the transition from a traditional society to a monetary economy based on fur. Later, when the fur trade declined, the mission was often the only agency to which Eskimos could turn for support. As well as introducing new beliefs and values, missionaries gave the Eskimo food, clothing, shelter, education, and medical attention. Through the introduction of the syllabic script, they provided a literacy which served the Eskimo well for some two or three generations. The script is still widely used throughout the Arctic, particularly by older people who cannot read English.

However, the activities of the missions were constrained by budgets which were small relative to needs. More might have been achieved if portions of these budgets had not been used in a competitive "struggle for souls" by the two denominations active in the Arctic, Roman Catholicism and Anglicanism:

- Government subsidies for schools and hospitals intensified an unconcealed rivalry between the two church organizations, and sincere, self-sacrificing missionaries often became silent pawns trapped by the strategic manoeuvres of distant supervisors. Whenever one denomination planted a mission in an Eskimo outpost the other sought means to plant a rival mission beside it, or in another Eskimo community in the same general area and when one erected a hospital in the Arctic, the other matched it with a competing hospital. By 1930 their missions were

wrestling with one another for control of six widely separated settlements or districts, of which only one could count more than 200 inhabitants.⁽²²⁾

This rivalry not only interfered with the work of "sincere, self-sacrificing missionaries", it was wasteful and inefficient in terms of meeting the needs of Eskimos. Before World War II, no part of Canada was as deficient in social capital as the Arctic. Because government was inactive in education, health, and welfare, the services provided by the missions were badly needed. Diverting budgets and energies into competitive rivalry, no matter how justifiable in terms of theology, was not in the Eskimos' interest.

A legacy of this rivalry is that it has added an element of divisiveness to Eskimo society. Many present day Arctic settlements have both Catholic and Anglican populations. Even in death, these people are usually no longer "just Eskimos". They are buried in separate (but from all appearances, equal) cemeteries often no more than a few hundred feet apart.

Government:

Government is now the major agent of change among the Eskimos. However, its emergence in this role is quite recent. For a long time, the attitude of government was one

(22) Diamond Jenness, Eskimo Administration: II Canada, Op.cit., p. 45.

of indifference toward the Arctic and its inhabitants. Until approximately 1950, the Royal Canadian Mounted Police was the only government agency of consequence in the Arctic.

In carrying out its responsibilities, the Police had duties which carried them well beyond "maintaining law and order". These are enumerated in the following passage:

Firstly, to uphold and enforce Canada's Sovereignty of her Arctic Islands; to act as administrators for the Northwest Territories Council; maintaining game laws; making general checkups of Eskimos living conditions; compiling vital statistics; authorizing the issuing of rations for the destitute, aged and infirm Eskimos; taking of census; settling of any disputes which might arise; conveying children to and from the residential schools at Aklavik; and transferring sick Eskimos for treatment and hospitalization at Aklavik. Sometimes we assist in securing suitable Eskimos, with their families, whom we transport to the Mackenzie Delta to learn to herd and look after the reindeer herd provided by the Canadian Government for the Eskimos in that area. (23)

It is doubtful that the Police were equipped to perform more than a few of these roles adequately. Moreover, the powers they were given appear to have been entirely too broad and sweeping. If nothing else, putting the police so squarely on the "line of contact" between white and Eskimo cultures was rather tactless. While the police could help

(23) H.A. Larsen, Patrolling the Arctic and the Northwest Passage in the R.C.M.P. Ship - St. Roch - 1944, manuscript in Library, Department of Indian Affairs and Northern Development, Ottawa, p. 2.

the Eskimo, they nevertheless carried the threat of sanctions and punishment with them wherever they went.

Following World War II, government took a larger and more varied interest in the Arctic. Many factors accounted for this. The war itself created circumstances in which a greater number of whites entered the Arctic more frequently, and stayed longer. Construction of the "Crimson" air route to Europe via northern Quebec and Baffin Island brought government officials into more direct contact with Eskimos. World War II was followed by the "Cold War", and, again, through the construction of Arctic defence installations, an increasing exposure of whites to Eskimos occurred. Popular writers such as Farley Mowat dramatized the problems of some Eskimo groups, and this had a considerable impact on public opinion.⁽²⁴⁾ Moreover, Canada was affluent after the war, and could more readily afford to turn its resources to the solution of problems in its remote regions.

In 1949, James Cantley was appointed by government to undertake a survey of economic conditions among the Eskimos. The tenor of his report, issued in 1950, was pessimistic. Cantley saw no resources which could be exploited for the Eskimos' benefit except white fox, and in the Mackenzie Delta, muskrat. He foresaw no potential for the development of

(24) Farley Mowat, The Desperate People, Op. cit.

mineral resources. Moreover, he argued for a continuation of the limited role which government had historically taken in the Arctic. Nevertheless, the Cantley report provided valuable information which was of potential assistance in developing programs for the social and economic development of the Arctic. (25)

Despite Cantley's pessimism, government was in a mood to act. Beginning in 1947 with the settlement of Tuktoyaktuk, a school construction program was launched which "gradually and painlessly" withdrew the function of providing education from the mission. (26) Even earlier, a greater effort had been made toward providing adequate health services. "Since 1945", writes Jenness, "when it drew the Department of National Health and Welfare into the administration of the Arctic, the government has consistently followed a clear and enlightened program in its struggle for Eskimo health". (27) Housing programs of substantial magnitude were also initiated during the early 1950's to overcome one of the most serious problems of the Arctic, the low standard of shelter.

(25) James Cantley, Survey of Economic Conditions Among the Eskimos of the Canadian Arctic, 1950, manuscript in Library, Department of Indian Affairs and Northern Development, Ottawa.

(26) Diamond Jenness, Eskimo Administration: II Canada, p. 79.

(27) Ibid, p. 83.

Before the housing programs of the past two decades were undertaken, most Eskimos had abandoned the traditional igloo and skin tent, and lived the year round in canvas tents or poorly insulated shacks. This posed enormous problems for health. As an example:

'Inhuman' - is the way a public health nurse described, in the course of a conversation, the living conditions of the Eskimos in her community. An apt description indeed. To realize this one has to shed the romantic ideas of Eskimo life, derived from children's books and movies, and walk through a settlement of Eskimo tents on a cold September night with the wind and rain lashing against the flimsy tents, babies crying and whimpering and children and adults alike coughing inside. Outside is the stench of human and dog excretion and of rotton food scraps. The tent houses not only the family, but all their belongings and implements.

This is the environment in which families spend not a week-end (as campers and scouts would in much more substantial tents), but a lifetime, and this is where babies are born and reared and the sick cared for. (28)

During the past two decades, then, government has had a large impact on the Eskimo. The initial government effort following World War II, resembled a "rescue operation". Government realized that Eskimos could no longer depend upon

(28) Government of Canada, Report of the Royal Commission on Health Services, Ottawa, Queen's Printer, 1964 Vol. 1, p. 224.

the fur trade in many areas, and that they had few other resources to fall back on. This was particularly true in 1949, and the early nineteen fifties, when white fox fur prices fell to unprecedentedly low levels. Eskimos affected by the decline in fur prices, or by the scarcity of traditional resources, were relocated to existing settlements or to new ones established to receive them.

Following this initial phase, government and the Eskimo became inextricably bound to each other. The Eskimo came to depend on government, and the wages and subsistence allowances it offered, as closely as he had previously depended on the trader and missionary. In turn, government became more aware of its obligations and responsibilities toward Eskimos. Quite rapidly, the official attitude toward the Arctic changed from a remote and passive interest in maintaining law, order, and sovereignty, such as had prevailed before World War II, to the "concern in action" which now prevails. Government programs have become so diverse that they now touch virtually all aspects of Arctic life.

Other Influences:

The foregoing paragraphs have examined the broader, longer term exogenous forces at work in the Arctic during much of the past century. However, these were not the only influences present. Three others of more recent origin should

be given brief mention, namely military construction, mining, and exploration for oil and natural gas.

A variety of military construction projects have been undertaken in the Arctic since the beginning of World War II. Many of these employed Eskimos as casual labour and therefore had some bearing on their adaptation to the modern world. Construction of the DEW Line was by far the largest of these projects. It will not be dealt with in detail here because its impact on Eskimos is examined in the next chapter. This impact was experienced mainly through the provision of employment of limited duration. While the DEW Line accelerated some of the longer-term trends which were already underway in the Arctic, it did not determine or alter the course of events in the same manner as whaling, fur, missions, and government.

Mining had an even more limited effect on broad socio-economic change. Like military construction, it is noteworthy mainly for the short-term employment it provided. Only one mine has operated in the Arctic to date, but Eskimos have also been employed in mines outside the Arctic, and in the construction and operation of the Great Slave Lake Railroad, built largely as infrastructural support to the Pine Point Mine. Again, these matters are discussed in the next chapter.

Exploration for oil and gas is the most recent influence bearing on the social and economic transition of the Eskimo. An exploration boom has been underway in the Arctic for the past three years. Much of this has taken place in uninhabited land, far from settlements. While the full impact which oil and gas exploration will have on Eskimos cannot be comprehended at this early date, one trend is becoming apparent. This arises out of the fact that petroleum exploration and native activities such as trapping and hunting occasionally overlap geographically, and do not appear to be fully compatible when they do so. Eskimos fear that seismic activity will damage the natural ecological balances upon which they depend, and further deplete animal populations.

As a consequence, a new political cohesiveness appears to be developing and gaining momentum in the Arctic. This has already led to the formation of one native organization, the Committee for Original People's Entitlement (COPE), which has several hundred members, including some highly articulate spokesmen.

COPE includes Indians and Métis as well as Eskimos, and draws its support mainly from residents of the Mackenzie Delta. Its aims are to establish that indigenous peoples have first claim to the lands which they originally occupied in the

northern territories. It argues that the use of these lands by non-natives requires some form of compensation to the indigenous people. The stance of COPE is, in part, based on actions which have been taken in Alaska. There, native claims have frozen the disposition of federal lands, interrupted work on the Trans Alaska Pipeline, and generally curtailed mineral development.

It would be difficult to predict how far this new and still tenuous political cohesiveness will take the Canadian Eskimo along the path to well-organized and effective political and economic action. To date, it has affected only a small proportion of the northern indigenous population and only a limited geographic area. However, its importance cannot be overlooked. It is a distinct departure from the Eskimo's own traditions, which were based on relatively isolated groups and family units which took little interest in each others problems.

Implications of Settlement Living

With a depletion of traditional resources and the decline of fur prices, by the early 1950's it had become evident to most Eskimos that continued nomadic life meant hardship. The growing towns and villages had much to offer by way of security. Increasingly, if ambivalently, Eskimos edged closer to the settlements. Initially, many preferred

to live in "camps" consisting of a few families and lying within reach of a larger community. Gradually, virtually all chose an urban life. The attractions of some employment, better housing, welfare assistance, education for children, and medical attention were strong. Today, few camps remain.

How have the Eskimos fared in the settlements?

In winter, when snow hides the mud and garbage, the Arctic villages, with their straight rows of houses, appear to be untroubled places. Under the surface, serious problems such as overcrowding, poor health, and alcoholism persist.

Some of the settlements contain diverse groups of Eskimos who have few common traditions. Eskimo Point in the Keewatin is an example. Its population consists of two groups, inland "Caribou" Eskimos, who are in the majority, and a small number of coastal Eskimos. The latter were more sophisticated in their knowledge of white laws, customs and techniques, and were originally native to the area. They resent being identified with the inland people, whom they consider backward. Acceptance of each group by the other is not complete even though they have lived together for more than a decade.

With the exception of a few full time jobs and some seasonal work, there is often little work in the Arctic villages. The local government administrator may encourage Eskimos to hunt and trap so that they do not become too

dependent on subsistence allowance payments. Yet fur and game resources have often been depleted within a considerable radius. To be effective, a hunter-trapper must now work areas far from the settlement. This is costly, and may mean prolonged absences from families. Wives have become accustomed to the convenience of village life, and children must attend school regularly, so the Eskimo husband usually hunts and traps alone, or in the company of a group of male hunters. This tends to discourage prolonged and vigorous hunting.

Migrations to the Arctic villages brought about some significant cleavages within Eskimo society. Vallee, writing in 1962, identified two groups in and around the community of Baker Lake in the central Keewatin. One was the "Nunamuit", or "people of the land", who were still pursuing traditional activities, and teaching Eskimo values to their children. The other group was the "Kabloona-muit", or "people of the white man", who preferred settlement life.
(29)

Vallee suggested that 14 per cent of the households of the central Keewatin were fully "Kabloonamuit", 31 per cent could be classed as marginally "Kabloonamuit"; 22 per cent could be termed as marginally "Nunamuit"; and 33

(29) F.G. Vallee, Kabloona and Eskimo in the Central Keewatin, Op.cit., p. 134.

(30)
 per cent could be regarded as fully "Nunamuit". People who had migrated from inland hinterlands tended to be less orientated to white laws, customs and techniques than people who had lived near or within a community for some time.

A rapid change in values appears to have accompanied an increased reliance on a more sedentary way of life. As an example:

While it is true that the successful hunter and trapper is highly esteemed by his fellowmen, our impression is that the prestige which goes with the position of Nunamuit is being undermined by the emergence of a sedentary settlement population. it appears that the status of Nunamuit is being compared unfavourably in terms of prestige to the status of Kabloonamuit. Some Eskimos at the settlement refer to the land people as backward and behind the times, in the same way as city people might refer to those from remote regions of the countryside as "hicks".(31)

Differences in life style and socio-economic status were evident between "Kabloonamuit" and "Nunamuit". "Kabloonamuit" most commonly lived in wooden dwellings, ranging from small shacks to comparatively large three room houses. Most lived in the settlements, although they would often hunt in surrounding countryside. All "Kabloonamuit" heads of households at Baker Lake worked for the government, and derived

(30) Ibid, pp. 135 and 136.

(31) Ibid, pp. 136 and 137.

most of their livelihood from wage employment. Several were better hunters and fishermen than the Nunamuit because, with their wage incomes, they were able to afford superior hunting and fishing equipment.

One problem stressed by Vallee was a growing inequality in the distribution of income among Eskimos of the central Keewatin:

What we are witnessing is the consequence of a socio-economic class system among the Eskimos of the Baker Lake region. Economically, a class system exists when a stratum of people possesses a larger share of wealth than other strata and where there is unequal access to the facilities and resources which are economically valuable almost half of the income flowing into the eighty-three households goes to the households of fifteen settlement families. If fulltime jobs are to be considered a scarce but valuable resource, then these families have a kind of monopoly on that resource. While no Eskimo family would be considered wealthy by standards of the south, the gap between the average Kabloonamuit family and the average land family is very wide.(32)

This suggests the emergence of a dual, or perhaps better, "triple", economy in the Keewatin. A primary distinction may be drawn between Eskimos who are willing and able to adapt to white culture and those who are not. Yet, even Eskimos who had adapted significantly to white culture could not compete with whites for more sophisticated and

(32) Ibid, p. 142

intellectually demanding jobs available in the settlements because they lacked the education and skills required.

Writing in 1965, Smith identified three broad groups of Eskimos in the Mackenzie Delta.⁽³³⁾ The first corresponds to Vallee's "Nunamuit", or people who live within the traditional culture and shun white activities and values. "The group attempts to teach their sons how to be good hunters and fishers and their daughters to be good cooks, seamstresses, and housekeepers."⁽³⁴⁾

The other two groups correspond generally with Vallee's "Kabloonamuit". One consists of people who are active members of the labour force on a year-round basis. The other includes people who live in the settlements, but also hunt marginally, and work only casually. This latter group consists of the people usually referred to as being "in transition" between hunting and trapping, and full integration into the modern sector. Yet Smith casts doubts on whether such a transition is actually taking place. While these people work for wages as brush cutters or carpenters' helpers when such work is available, they appear not to want to be employed on a full time basis. They seem

(33) Derek G. Smith, The Mackenzie Delta - Domestic Economy of the Native Peoples, Op. cit.

(34) Ibid, p. 23

to prefer to fall back on welfare, and occasional hunting and trapping, as it suits their purposes.

These people may thus have made a distinctive and persisting adjustment to life in the settlement. They may comprise an emerging sub-culture which is rooted in both the traditional and white cultures. Elements of each parent culture which are considered undesirable have been rejected. In the case of the traditional culture, rejected elements would include full-time dependence on hunting and trapping, and values concerning food, clothing and other aspects of daily life. For example, some foods which are distinctly Eskimo, such as blubber and seal meat, are shunned. Rejected in the case of white culture has been the concept of full time wage employment. Smith notes the following of the younger people of this group:

Nearly everyone to whom I spoke praised the man who could live on the land, but when asked why he did not attempt it himself, confessed that he could not. They equally esteem the man who can keep a steady job. In their ways they are not unlike their counterparts in the rest of Canada -- black leather jackets, jet boots, and bizarre haircuts all occur in the Delta, as well as fantastic hopes of "striking it rich" with minimal effort. (35)

Settlement dwellers who are active members of the labour force throughout the year are more fully integrated into

(35) Ibid, p. 26

white society. While heads of households are occasionally unemployed, this is not by choice. Generally, they are either working or actively seeking work. Most of the goods used by these people are bought at the local store, but they do not shun Eskimo foods obtained from relatives or by occasional hunting or fishing. Taken as a whole, this group is the most active among the natives of the Mackenzie Delta, participating in local politics and community affairs. These people are proud of their Eskimo heritage. Many continue to speak Eskimo, and attempt to perpetuate native songs, dances and traditions. However, they are fairly fluent in English, and use it almost exclusively at work and in business.

In the Mackenzie Delta, native people have been exposed to white culture longer than in most other parts of the North. As a consequence, the adaptations to white society which Smith has mentioned may be more pronounced in the Delta than elsewhere. Yet, the point that the responses of Eskimos to white laws, customs, and techniques have not been homogeneous would seem more generally valid. Throughout the Arctic, some Eskimos have accepted and adopted white ways. Others have rejected them and have persisted to use old values and skills as much as possible. Still others appear to straddle both white and Eskimo society.

Which group is dominant in any region would, as Vallee suggests, seem to depend on the length and intensity of contact with whites. However, settlement dwellers dependent on full time employment are not numerically greater than the other groups anywhere.

In the Mackenzie Delta, the casually employed settlement dweller comprises the largest group. This group appears to exemplify the unfavourable stereotypes which are often applied to Eskimos and Indians. However, Smith ventures an interesting explanation for the group's behaviour:

The Delta people are often characterized as improvident and lacking in foresight, polemic terms which obscure understanding. The short-range decision making of at least the people on the land and the settlement dwellers without steady jobs should be seen in relation to an unstable environment and rapidly changing social milieu, both of which could too easily make long-range decision making an act of folly rather than wisdom. In a certain sense this represents a kind of adaptation to the environment.⁽³⁶⁾

Viewed against the rapid and cumulative change which has confronted the Eskimo, this would seem to be a most valid point. Since at least the 1850's, Eskimos have had to adjust frequently to new and often radically different sets of intrusions into their lives. In the course of all of this, they have shown an almost remarkable ability to adapt to new

(36) Ibid, p. 32.

circumstances, and indeed to survive as distinctive cultural beings. Yet too much change, too rapidly, would leave people with a reduced capacity for further adjustment. They would prefer to remain "where they are" for a time, perhaps out of an exhaustion of spirit. This appears to have happened in the case of at least some Eskimos.

CHAPTER V

ADAPTATION TO INDUSTRIAL EMPLOYMENT

As the fur trade declined in the Arctic, and the size and importance of the settlements increased, other events were also influencing the development of the region. Following World War II, industrial activities of kinds not previously experienced by Eskimos became prevalent. Some of these, such as mining exploration, appeared quite unobtrusively. They employed relatively few people, most of whom were from southern Canada. These people worked over extensive areas as individual prospectors or exploration crews. They relied on "bush" aircraft to achieve high mobility, and usually had only a transitory impact on any locality. Other activities had a larger and more lasting impact. The construction of the DEW Line, which affected much of the Arctic coastline for a four year period, is the outstanding example.

As modern activity moved into the Arctic, some Eskimos began to venture out. At first, few left as a matter of choice. Usually, they were evacuated as medical cases requiring treatment for illnesses such as tuberculosis. Yet, when these people returned to the settlements and camps, they were able to pass on first hand information about their

experiences in the "outside" world. While convalescing in southern hospitals, some younger and more able Eskimos acquired clerical, building construction, or mechanical skills which cast them into a position of prominence in the growing Arctic communities. In the increasingly urban and monetary Arctic economy, modern technical competence was soon recognized as being more valuable than the traditional skills which the Eskimo required as a nomadic hunter-trapper and barter trader.

Modern skills could be obtained only by experience on the job or through attending trade or vocational schools. Vocational education and on-the-job training programmes were initiated by government and many Eskimos were able to take advantage of these. Many of these programmes were conducted outside the Arctic. This increased the Eskimo's exposure to, and awareness of, the modern industrial world. However, as the number of skilled or semi-skilled Eskimos grew, a new problem arose: not enough jobs were available in the Arctic towns and villages to absorb the new labour force.

A growing number of Eskimos began to seek employment outside the Arctic. Some of these people now live permanently in southern Canada or in the sub-Arctic parts of the Northwest Territories. However, in most cases, employment outside the Arctic has been regarded as a temporary expedient. Often, jobs in the South are held only seasonally, and the incumbent returns to the Arctic during the winter months.

The remainder of this chapter documents some of the more significant cases in which Eskimos have been employed in modern industrial activity. While such cases are few in number, they nevertheless provide insight into the Eskimo's capability to adapt to the modern labour market, and the problems he has encountered in such adaptation.

The first case deals with the construction of the DEW Line. This large project, comparable in scale with the construction of the St. Lawrence Seaway, had a pervasive but short-lived impact on the Arctic and its people. It hastened the economic, social and cultural changes which transformed Eskimos from a nomadic hunting population to a sedentary population dependent on government support. However, construction of the DEW Line cannot be regarded as a root cause of this transformation, except for some isolated Eskimo groups. For the most part, the pattern which change was to take had already been determined by the time DEW Line construction was initiated.

The second case deals with mining. To date, only a single mine, the North Rankin Nickel Mine at Rankin Inlet in the Keewatin, has operated with any success in the Arctic.

Yet this mine was a short lived venture which, for a five year period, rode the crest of unusually high metal prices resulting from strategic stockpiling programs which were initiated in the United States during the Korean War. After the Rankin Nickel Mine closed, a relatively large and skilled Eskimo labour force was again left without a firm economic base. Subsequently, some of the Eskimos who had worked at the Rankin Mine found jobs in other mines for short periods, but, to date, the Eskimos' experience with mining has not been particularly satisfactory.

The third case discusses Eskimo employment in the construction and operation of the Great Slave Lake Railway. The experience here is somewhat different from the other cases because employment on the GSLR required Eskimos to relocate seasonally or permanently over distances of more than a thousand miles. Thus they were not only brought into contact with new work roles, but also with a new and significantly different cultural, social and physical environment.

The experiences examined in the three cases can offer some guidance to government and industry in establishing employment programmes for Eskimos in future. A final section therefore raises questions of what might be learned from past

errors or successes. It also discusses the circumstances under which Eskimos might be willing and able to participate more fully in modern labour markets than has been the case to date.

Construction of the DEW Line

By any standard, building the DEW Line was a project of massive proportions. It was a "crash program" undertaken for defence purposes, and some estimates place its costs as high as \$500 million. Construction was authorized by President Truman in 1952, but planning proceeded slowly until late in 1954, when it was decided that the entire project should be completed by July, 1957.⁽¹⁾ Rea describes the magnitude of this task:

The basic elements of the programme were the 50 odd radar stations to be strung out along the Arctic coast of North America from Alaska to the east coast of Baffin Island - a distance of some 3,000 miles. These stations consisted of large electronic installations, structures to house the equipment and the men to operate it, electric power generating units, heating plants, fuel storage systems, and an air strip. The main stations were to be staffed by about forty civilian workers and a number of military men. The creation of these stations involved the designing of suitable structures to withstand the Arctic climate, the transportation of these

(1) K.J. Rea, The Political Economy of the Canadian North, Toronto, University of Toronto Press, 1968, p. 308.

buildings, the necessary personnel, the equipment, and the stores of operating supplies into the Arctic; and, finally, the erection of the stations on what were often extremely difficult building sites. The actual construction was undertaken by a large United States firm which built the stations in the western Arctic, and two Canadian firms, which built the eastern two-thirds of the system.⁽²⁾

DEW Line construction created "boom" conditions throughout the Canadian Arctic,"and raised the levels of employment and income there to unprecedented levels".⁽³⁾

Much of the labour employed on the project came from the south; and local Eskimos accounted for only a small proportion of the total. During the project's peak construction period, the summer of 1956, approximately 7,000 persons were employed throughout the system. Only two to three hundred of these were Eskimos.⁽⁴⁾ In total, however, much of the population of the entire Arctic coastline was affected by the project. This included people who had previously had only infrequent contact with the modern world.⁽⁵⁾

(2) Ibid, pp. 308 and 309.

(3) Ibid, p. 310.

(4) Ibid

(5) J.D. Ferguson, A Study of the Effects of the Distant Early Warning Line Upon the Eskimo of the Western Arctic of Canada, April 1957, manuscript in Library, Department of Indian Affairs and Northern Development, Ottawa, p. 9.

Whether they were considered permanent employees or temporary labour, the employment of Eskimos on DEW Line construction was conducted quite casually. The average Eskimo employee at one site, Cambridge Bay, worked only slightly more than half the time he could have. Experience (6)

at other sites was similar. Married Eskimo employees who had families to support usually spent considerable time hunting. They ate lunch at the company mess, but were expected to look after their other food requirements, as well as those of their families. Typically, they took four days off to hunt every two weeks, except during spring fishing and fall sealing, when they were absent from work much longer. Several hunters would often be absent from work at the same time because of the Eskimo tradition of hunting in groups.

These prolonged absences from the job did not affect construction schedules because only a few Eskimos were doing important work. Most were employed on labour gangs. Usually, it mattered little if the work of these gangs had to be postponed for a few days. Moreover, Eskimo and, in some areas, Indian labour was plentiful. Replacements for people out hunting could be found if necessary.

(6) Ibid, p. 16.

Accommodation standards for Eskimos differed from one area to another, and depended on whether men were on single status or had their families with them. Typically, single men were housed in company bunkhouses, along with other employees. Housing for married people at sites which were distant from settlements posed problems. To avoid the costs of housing families, the construction companies relied on the Eskimos to provide their own shelter. Along the eastern sector of the DEW Line, every site had an Eskimo "camp", located from one-half to two and a half miles from the place of work, in which married employees and their families lived.⁽⁷⁾ These camps usually consisted of canvas tents erected on wooden floors, and were banked with snow in winter for insulation.

Work on the DEW Line was not too strenuous or demanding, but the work day was long. Typically, an Eskimo employee rose at 6:00 a.m., began work at 7:00 a.m., broke for lunch in the company dining hall at 12:30 p.m., and finished work at 6:00 p.m.

No Eskimo was forced to work beyond the speed which he set himself since in the words of a European employee, "Nobody works hard here". Eskimos worked in pairs rather than in larger groups since the white employer found there was a tendency to talk less and work more under such an arrangement. Supervision was strict in

(7). Ibid, p. 33.

jobs which were not routine but no more so than with the white employees. Routine jobs were left unsupervised since the Eskimo reacts similarly to the white man if kept in too close a rein. The employer said the Eskimos are like unskilled white labour; most suitable for routine jobs.⁽⁸⁾

Earnings from DEW Line employment were much higher than most Eskimos had experienced previously. Annual income of steadily employed men averaged between \$3,000 and \$4,000. However, such employees usually comprised only about half the total Eskimo labour force. Many Eskimos worked on only a short term basis, and their earnings were not particularly high.⁽⁹⁾

Some Eskimos acquired substantial bank accounts during the course of their employment. This may partly have reflected conscious decisions on the part of individuals. It probably also reflected the method used by contractors to pay DEW Line employees. Normally, part of the wage was paid into a bank account, and the Eskimos may simply not have had the opportunity to draw these accounts down. Yet some individuals were known to have deliberately saved toward major purchases such as sealing boats or trapping equipment. Many Eskimos probably understood that the DEW Line project was temporary, and that they would soon have to

(8) Ibid, p. 16.

(9) Ibid, pp. 36 and 37.

return to their former way of life. Others did not appear to recognize this, or perhaps refused to do so. Many individuals gambled their incomes as rapidly as they earned them or filled their tents and shacks with expensive luxury goods.

Single men were in a better position with respect to income, employment, and savings than married men. They could remain on the job continuously because they did not have to look after their own food requirements. They were housed in company accommodation along with other permanent employees. They were able to adapt more rapidly to their jobs, and were given preferential treatment in promotions.

Labour turnover and absenteeism not connected with hunting appears to have been high:

The Eskimos did not stay away from their jobs; they simply quit them, moved to another site, or returned to their homes in the Mackenzie Delta. The fact that other wage employment was available at Tuktoyaktuk and "East 3" undoubtedly contributed to the situation. (10)

Generally, the reaction of Eskimos to wage employment on the DEW Line was mixed. Single men, who had no family responsibilities, and who were housed and fed by the construction companies, viewed wage employment more positively

(10) Ibid, pp. 28 and 29.

than married men with families. Older employees appear to have remained unconvinced that wage employment offered a superior alternative to their previous way of life. This is suggested by the following passage:

Every Eskimo employee at Cambridge Bay was asked..... if he liked working at his new job. Almost all replied in the affirmative. However, when the older men were asked whether they would rather remain at wage employment or go back to their former occupations, doubt immediately was apparent, and most of them finally said that they would prefer to return to hunting and trapping.⁽¹¹⁾

Employment on the DEW Line had some important effects on the Eskimo social hierarchy. In the pre-DEW Line Arctic, the highest incomes and social prestige belonged to the most successful hunters and trappers. These people were emulated and looked up to as leaders. The DEW Line contractors did not recognize this in their dealings with Eskimos. Their interest lay mainly in obtaining labour, and the social background of an employee was of no practical importance. Ferguson comments on how casual, average, and skilled trappers fared under DEW Line employment:

Not only have incomes been levelled to a certain extent between the three types of trappers, but the uniformity of work has tended to upset the former social order. Casual, average, and skilled

(11) Ibid, p. 32.

trappers often work side by side on a labour gang performing the same tasks and receiving the same pay..... this has come into conflict with the former social order in the sense that the "leaders" of the community no longer have their status conferred through their superior performance of occupations. (12)

Construction of the DEW Line was virtually complete by 1957 target date. In the years which followed, the system became operational and required not only less labour, but more specialized labour. Some Eskimos remained as part of the civilian labour force at various stations, or succeeded in finding other employment. Many attempted to return to hunting and trapping. This was not easy because the DEW Line had altered their lives and values significantly.

The DEW Line also had some lasting effects on the location of Eskimo groups. It drew inland people to the coast, and coastal people to areas which had few resources to support them. Many of these people did not return to their homelands, but instead migrated to the nearest larger community in search of employment. Few employment opportunities existed in most of the settlements, and many Eskimos became welfare cases.

Even so, whether the overall impact of the DEW Line was beneficial or detrimental to Eskimos must remain a moot point. The

(12) Ibid, pp. 38 and 39.

project provided many Eskimos with their first experience of wage employment and modern technology, and taught them some important skills. However, it added little in the way of permanent employment to the Arctic economy. Its short term economic effects on the Arctic may not have been particularly large. Many of the funds spent on the project represented payments to contractors in the south, and to transportation companies based in Montreal, Winnipeg, and Edmonton. The payrolls of white employees were typically banked in southern Canada and the United States. The earnings of Eskimos were spent judiciously in some cases. In others, they were squandered at the local trading post on items which had meaning only in terms of conspicuous consumption.

Employment in Mining

Eskimos have been employed in four mines, the North Rankin Nickel Mine at Rankin Inlet, the Giant Yellowknife and Con-Ryron-Vol Mines at Yellowknife, and the Sherrit Gordon Mine at Lynn Lake, Manitoba. The most important of these in terms of numbers of people employed and tenure of employment was the North Rankin Nickel Mine.

Both mining and concentrating were undertaken at Rankin Inlet. (13) The product of the mine was mainly nickel, but small quantities of copper, gold, silver and platinum were also produced. The ore body, though small, was of an extremely high grade. It was first discovered in 1928, but lay dormant until the United States began its strategic materials stockpiling program during the Korean War. This program raised the price of some metals significantly, enabling high cost mines such as Rankin Inlet, which ordinarily would have been extra-marginal, to enter production.

A permanent mining camp was built at Rankin Inlet in 1953, and a vertical shaft was sunk the same year. The development of the ore body, and construction of a concentrating plant, took an additional four years, and production did not get underway until 1957. Transportation was a factor inhibiting the project from the outset. Rankin Inlet is located on tidewater, but the shipping season is only six weeks to two months long. As a consequence, the products of the mine had to be stored in bulk for some ten months of the year. Each summer they were shipped via Hudson Bay to Churchill, Manitoba, and from there by rail to the Sheritt Gordon refinery at Fort Saskatchewan, Alberta. The mine operated until 1962, when the United States Government decided that further additions to stockpiles of strategic materials were unnecessary.

(13) R.C. and L.A. Dailey, The Eskimo of Rankin Inlet: A Preliminary Report, Ottawa, Department of Northern Affairs and National Resources, June 1961, p. 1.

Before the development of the mine, the Eskimo population of Rankin Inlet was small. The number of families living in the area rarely exceeded ten:

These families 'lived off the land' by hunting and fishing or trapping, or a combination of both. Though they lived at Rankin Inlet and exploited its local resources, they identified themselves with the larger settlement at Chesterfield Inlet. (14)

Eskimo labour was first used by the mining company in the spring of 1956, when five men were employed. By November 1956, the Eskimo labour force had risen to 14 men. During the following spring it had risen to 20 men, and by the end of 1957, when production was already underway, Eskimo employees numbered 70 persons. During the ensuing five years, the mine provided steady employment for approximately 80 Eskimo men and a few women. In addition, it provided some 40 casual jobs each year. The steadily employed Eskimo labour force comprised approximately one-half of the total personnel at the mine. The Eskimos had come to Rankin Inlet from a number of coastal settlements as well as inland areas. (15)

• Because Eskimos were completely inexperienced in mining and concentrating, and few had held steady jobs of any kind previously, the company took some risks in employing

(14) Ibid, p. 4.

(15) Ibid

them. The high cost of hiring an experienced labour force, and moving it to Rankin Inlet, probably played a role in the decision to use Eskimos. Altruistic motives may also have been a factor. The desire to avoid labour problems may have provided yet another reason. There is a possibility that company officials believed that an Eskimo labour force would be more resistant to unionization than would white employees.
(16)

Eskimos performed a wide range of tasks at the Rankin Inlet Mine. These varied from menial labour to jobs requiring a relatively high degree of skill. Underground, they handled power, operated muckers and drilling equipment, and ran the "cage", or elevator, which is the life-line of any underground mine. Commenting on having Eskimos operate the "cage", Northern Affairs files note:

....this latter indicates the high degree of trust which the company has in them because any serious mistake here could force a shutdown for a year or permanently of the entire operation...(17)

On the surface, Eskimos operated crushers, dryers, and bagging equipment; drove trucks and caterpillar tractors; and handled weighing, sorting, and storage operations. Altogether, they were employed in 24 different classifications of a skilled and semi-skilled nature.

(16) Material on file with the Department of Indian Affairs and Northern Development, Ottawa.

(17) Ibid

Mine management was apparently satisfied with the performance of the Eskimos. Particularly gratifying, from management's point of view, was that the high turnover rate typical of isolated mines was not a factor present among the Eskimos at Rankin Inlet. White employees came and went, but Eskimos tended to remain. The company's 1958 annual report noted that:

The labour force tended to stabilize due to the further incorporation of Eskimos into the labour pool.(18)

Other sources, particularly the press, waxed eloquent about the Eskimo labour force. For example:

The utilization of Eskimo labour has proven a complete success.... astounding ability to master mechanical skills, great intelligence, willingness to work, and dependability.(19)

While there were some problems of personal and social adjustment, there is agreement among people familiar with the Rankin Inlet case that Eskimos adapted well to mining. However, they were not able to master all of the jobs undertaken at the Rankin Mine. The following comment is indicative of what they could, and could not, achieve:

..... the Eskimo has a natural capacity to carry out any sort of skilled or semi-skilled job which can be learned through

(18) North Rankin Nickel Mines Limited, Annual Report, Toronto, December 31, 1958.

(19) Northern Miner, May 7, 1959.

copying. On the other hand, operations which require technical knowledge..... are in most cases beyond their present abilities because they lack the necessary education. As a result, they can undertake, extremely efficiently, virtually all kinds of underground labour, but in mill work they are mostly used as helpers and need technical education before being able to handle the better jobs. (20)

About a year after the Rankin Mine closed in 1962, some of the Eskimos who had worked there were relocated to the mines of Yellowknife. Initially, three men were selected by the management of the Con-Rycon-Vol Mine and government officials from Rankin Inlet and Ottawa. Over the next few years, eight Eskimo families were moved to Yellowknife. An additional nine single men were relocated subsequently. (21)

The Yellowknife relocation project appears to have been poorly undertaken. Owing to a variety of factors, all of the Eskimos returned to the Keewatin. Stevenson suggests the following as reasons for this:

..... a decline in confidence in the government with regard to how many families were relocated, the near impossibility of acquiring suitable accommodation, absence of viable social

(20) Material on file with the Department of Indian Affairs and Northern Development, Ottawa.

(21) D.S. Stevenson, Problems of Eskimo Relocation for Industrial Employment, Ottawa, Department of Indian Affairs and Northern Development, May 1968, p. 13.

life as well as the more elusive reasons such as the lack of opportunities to hunt and fish, too many spiders, the unaccustomed heat of the summer, and the ambiguous demands of kinsmen in the home settlements. (22)

In Yellowknife, there is still some local opinion that the Eskimos who moved from Rankin Inlet were irresponsible "bums". This may reflect a certain measure of prejudice, but there is some possibility that the screening of candidates for relocation was inadequate. However, the following comment on the performance of the Eskimos in the Yellowknife mines is noteworthy:

Employer expectations were met without fail, at least until the period immediately prior to the departure of the last few families. Work attendance, interest in the job, and productivity, were all high, and adherence to the company regulations were consistent. The few cases of deviance had no appreciable effect on the satisfaction of the employers. (23)

Following Yellowknife, yet another relocation experiment was attempted at Lynn Lake, Manitoba. (24) This again involved Eskimos from the Keewatin who had previous mining experience. Work performance and general deportment were similar to that evident in Yellowknife. Despite this, the

(22) Ibid, p. 14.

(23) Ibid,

(24) Ibid, pp. 17 and 18.

Lynn Lake project also failed. Again, the reasons for this were inconclusive, although they appeared to focus on the dissatisfaction of wives. At Lynn Lake, the role of wives was more passive than it had been in the Keewatin, where they were not only important and productive members of the family, but also led active social lives in their own milieu.

All of the Lynn Lake Eskimos have now returned to the Keewatin. For the present, with the exception of a few individuals here and there, Eskimos are virtually inactive as miners. The promising start made at Rankin Inlet some fifteen years ago has not fulfilled expectations.

Great Slave Lake Railroad

Parliament authorized the construction of the Great Slave Lake Railway (GSLR) to achieve two purposes. Firstly, the railway was to serve as an instrument for the development of northern Alberta and the Mackenzie Valley of the Northwest Territories. Secondly, it was to provide the outhaul route for concentrate from the Pine Point lead-zinc mine.

Construction and operation were undertaken on behalf of the Federal Government by the CNR. Work on the roadbed began in 1961, and trains began regular operations by 1966. The capital cost of the railway, including rolling stock,

freight yards, and maintenance shops, probably exceeded
\$80 million. (25) The line is about 430 miles long. There
are two northern terminals, one at Pine Point, N.W.T.,
and the other at Hay River, N.W.T., where the railway
connects with tug-barge transport on the Mackenzie River.
The single southern terminal lies near Peace River, Alberta,
where the railway connects with the Northern Alberta Rail-
road. The first traffic of any significance carried by the
railroad moved well before ballasting had been completed.
This consisted of the concentrating plant required for
the operation of the Pine Point Mine.

By 1966, lead-zinc ores and concentrates were
already being shipped from Pine Point to Peace River, and
from there to the Consolidated Mining and Smelting Company's
smelter at Trail, B.C. Such traffic has since grown to
annual volumes of about 400,000 tons. Other southbound
flows consist of lumber and wheat from northern Alberta.

(25) The amount authorized by Parliament was \$75.6
million. It is generally accepted that the railway cost
more than this. Funds in excess of the authorized amount
were apparently obtained through ploughing back earnings
from freight traffic moving on the line during the
prolonged construction period.

Northbound, the railway provides the principle route for freight shipments to northern Alberta and the Northwest Territories. Traffic currently moves north at annual levels of 400,000 tons. (26)

Until very recently, the railway was still considered as being "under construction" for purposes of regulation. This status was advantageous to the CNR because it meant that trains could be operated by non-union "construction" crews. Wage payments to such crews were lower than would have been possible under collective agreements with operating and non-operating unions. The fact that the CNR employed a varied and relatively unsophisticated construction labour force consisting of Anglo Canadians, Portuguese immigrants, Eskimos, Indians, and Métis was probably a factor in forestalling pressures for higher wages before the railway became a common carrier.

The concept of employing Eskimos on the GSLR was first advanced by the CNR early in 1965. A modest program, requiring only eight Eskimos, was initially envisaged. Considerable caution was used in approaching the question of hiring an Eskimo labour force:

Young men just out of school or
more mature men with proven work

(26) Traffic data are based on material on file with the Department of Indian Affairs and Northern Development, Ottawa.

records could be recruited. Since success was the "watchword" it was decided that more mature men would be selected. Concern was expressed over problems arising from transferring families to Hay River. (27)

Within a fairly short period, however, the number of Eskimos employed rose well beyond the initial eight persons. Eskimos were hired both as year-round and seasonal (summer) employees, and mostly in the latter category. Recruitment initially involved the co-operation of the CNR and the Department of Northern Affairs and National Resources, but friction soon developed between these agencies. Within a year or so, the CNR was by-passing Northern Affairs regional staff, and recruiting on its own at several locations in the western Arctic. The following passage suggests possible reasons for this:

Initially, recruitment of Eskimos... was carried out as a joint effort between representatives of the railway and local government administrators..... This arrangement proved unsatisfactory to the railway personnel who felt that the local government representatives were too often negatively selective. That is, they are thought to have recommended men for employment, not on the basis of qualifications, but on more personal grounds.... or because they wanted to rid their settlement of undesirables. (28)

(27) Material on file with the Department of Indian Affairs and Northern Development.

(28) D.S. Stevenson, Problems of Eskimo Relocation for Industrial Employment, Op.cit., p. 5.

Such problems notwithstanding, numbers of Eskimos employed on the railway grew rapidly.⁽²⁹⁾ From the beginning of recruitment in 1965, to the summer of 1967, one hundred and thirty-six men and one woman had been hired. Several of these probably spent only a short period with the railway, but most remained for at least a full summer. In the summer of 1967, the total number of Eskimos employed stood at 79. A few of these were employed permanently, but the majority were seasonal labourers on line gangs.

Within the ethnically varied labour force of the GSLR, the largest groups consisted of Portuguese and Eskimos. These were followed by white Anglo-Canadians, Indians and Métis. The relative numbers of Eskimos and Portuguese varied seasonally, Eskimos being more numerous in summer, and Portuguese in winter. The fact that the labour force spoke several languages presented some problems of communication. To overcome these, GSLR management attempted to divide line gangs into linguistically homogeneous groups, insofar as possible. Thus Eskimos could usually expect to work on gangs consisting largely of Eskimos; Portuguese on "Portuguese gangs", and so forth.

Eskimos competed well with the other ethnic groups in terms of holding responsible jobs. Managerial and top supervisory positions were occupied exclusively by English-

(29) Ibid

speaking Canadians, but several Eskimos were employed at the "foreman" level. Several filled skilled-trades positions, such as mechanic and locomotive operator, and were at times the largest group in such jobs. However, the majority worked only as seasonal labour on line gangs.

Eskimos permanently employed with the railway in 1967 earned yearly incomes ranging from a low of \$8,000 to a high of \$15,000. The highest earnings, \$15,000, accrued to the single Eskimo switchman. The four or five Eskimo locomotive engineers earned less than this, but their salaries, at \$10,000 to \$13,000 were nevertheless still quite high. (30)

However, while annual earnings were often considerable, hourly rates of pay were low, ranging from \$1.65 to \$2.00, with only minimal provisions for overtime pay. (31) To obtain their high annual earnings, Eskimos therefore had to work abnormally long hours. One source suggests that Eskimos frequently worked 15 to 20 hours a day. (32) Another states that "line gangs could expect to work up to twelve hours a day, while the train operators might be on the job longer". (33)

(30) Material on file with the Department of Indian Affairs and Northern Development, Ottawa.

(31) D.S. Stevenson, Problems of Eskimo Relocation for Industrial Employment, Op.cit., p. 6.

(32) Material on file with the Department of Indian Affairs and Northern Development, Ottawa.

(33) D.S. Stevenson, Problems of Eskimo Relocation for Industrial Employment, Op. cit., p. 6.

Moreover, employees were often required to work several weeks in succession without regular or compensating time off. A few Eskimos were on a fixed annual salary. While they also worked long hours, their monthly and annual earnings did not vary with time spent on the job. Altogether, working conditions on the GSLR were unusually demanding. Such conditions would probably not have been tolerated if the labour force had been represented by unions.

Placement of individuals on permanent status depended on their performances as seasonal employees. Eskimos who worked most ably on the railway, and who were usually offered permanent positions, were those who had previous employment experience elsewhere. Individuals who only had trades school training performed no better than persons who had neither such training nor previous job experience. The most unsatisfactory workers were those who had never been exposed to wage employment and had less than grade eight
(34)
education.

The most effective employees of all were individuals who made conscious and rational decisions to find work outside the Arctic. Thus, Stevenson notes:

There is still another type of man that deserves describing. This is the man, generally married, adult

(34) Ibid, p. 7.

(22-30 years), who has learned English by himself and has achieved a reputation for some skill or skills in his home community. As a group, these men present the most eagerly aware and ambitious attitudes of all groups encountered. Their acquisition of southern employment has been prompted not by either government or employers' inducements, but by a personal decision based upon information gleaned from a number of sources. (35)

Eskimos were fired only under extreme provocation. Normally, even unsatisfactory employees were retained until the end of the summer, but they would not be re-hired the following year. Transportation costs were paid both from and back to the Arctic settlements by the Company, unless a worker quit or was fired before the end of the summer. In such cases transportation costs were usually allowed only as far north as Yellowknife.

Social conditions surrounding employment on the railway were less than ideal. Most seasonal employees were housed in "bunk cars" which were moved up and down the track as required. These men were physically comfortable, but they worked long hours and had little by way of recreation to break the monotony of their daily routine. Often, the "bunk car" was stationed far from a community, and access to shopping facilities or taverns was impossible. Where crews consisted of mixed groups, friction and tension would often

(35) Ibid

develop along ethnic lines. Because other means of recreation were not available, gambling was commonplace. Liquor was difficult to obtain, but when it was available, drinking (36) was often excessive.

Permanent employees had problems of other kinds. Most were married, and providing adequate housing for their families proved difficult. The CNR provided trailer accommodation at nominal cost, but such housing was not viewed as satisfactory. Several permanent employees wanted to buy houses, but, despite high earnings, they were ineligible for housing loans because the CNR could not give assurance that they would (37) remain employed when the GSLR became a common carrier. More formal labour-management relationships would prevail under common carrier status, and union seniority lists, on which Eskimos would rank low, would have to be recognized.

Other problems arose out of the social adjustment of permanent employees' wives. Some adapted well to the different environment of the south, but others could not. For example:

- Two of the families who had past experience on the DEW Line or in other southern areas, use their accommodation in a reasonable manner. The other two are totally unassimilated into the usual

(36) Ibid, p. 9.

(37) Material on file with the Department of Indian Affairs and Northern Development, Ottawa.

behaviour required for southern living. Facilities, e.g. washing machines, are only infrequently used, children are neglected by southern standards, and the places can only be described as filthy. In short, the women are still attempting to operate as if they were in a northern situation The women say they are bored, even though their children are neglected and their houses are in a mess One serious consequence of this situation is that the women have taken to excessive drinking. (38)

The fact that husbands often worked fifteen hours or more a day, six or seven days a week, must have been a factor underlying the inability of wives to adjust. If some wives were lonely, this may have been loneliness for the company of husbands as much as for the Arctic settlements.

At present, only a few Eskimos are still employed with the GSLR. These are permanent employees who will likely remain with the railway now that it has become a common carrier. Seasonal recruitment in the settlements of the western Arctic has ceased. GSLR management will henceforth have to deal with operating and non-operating unions. It will no longer be able to obtain a wage-cost advantage by hiring Eskimos and other relatively unsophisticated labour. Moreover, even before it became a common carrier, Eskimos were no longer as willing to work for the railroad as during

(38) D.S. Stevenson, Problems of Industrial Relocation for Industrial Employment, Op. cit., p. 10.

earlier years. This is indicated by the following incident, which took place at Hay River during the summer of 1969:

With the rise of Petroleum Exploration activity in the area together with the practice of hiring locally by the various drilling and geophysical contractors, local Indians and Métis had no difficulty in securing employment at wages from \$2.10 to over \$3.00 per hour with the usual provisions for overtime. When the Eskimos working on the railroad became aware of what the local residents were obtaining, they confronted the local management of the GSLR and requested an increase in their hourly wage rate. When no increase materialized, all the Eskimos (over the period from March 1 to May 17) voluntarily left their employment with the railway.

They have since found employment in a variety of activities ranging from oilwell drilling to employment with Pine Point Mines. (39)

Employment on the GSLR has had both positive and negative effects on the Eskimo. Positively, the availability of jobs and income, which are scarce in the Arctic, gave Eskimos an opportunity to better themselves materially. Experience with the railway sharpened the Eskimos' awareness of their worth in the labour market, and of opportunities available to them. That Eskimos quit their jobs with the GSLR, and took on more remunerative employment is indicative of this. The fact that new skills were acquired on the railroad must also be viewed as beneficial. Negatively, the severe and demanding working conditions which prevailed on the

(39) Material on file with the Department of Indian Affairs and Northern Development, Ottawa.

railway must have given many Eskimos a distorted picture of wage employment.

Implications

The three cases discussed in the previous sections have a number of common features. In each, many of the Eskimos employed in the particular situation worked energetically and capably and were able to perform responsible and complex tasks.

The performance of the employers does not appear to have been quite as satisfactory. In the case of the DEW Line, the contractors viewed the Eskimos as a readily available, low-cost pool of supplementary labour. Eskimo men were treated fairly on the job, but little concern was shown about their families, or their traditions. Neither the contractors, nor government, which presumably had some control over the situation, appear to have appreciated some of the consequences of DEW Line employment. No steps were taken toward preparing Eskimos to handle the cash incomes which the DEW Line generated, or to make sensible decisions on consumption expenditures and savings. Although it was known that DEW Line construction was to last only four or five years, little provision was made for the subsequent employment of Eskimos elsewhere, or toward assisting them to return to hunting and trapping.

The North Rankin Nickel Mine exposed Keewatin Eskimos to the benefits of a regular work week and a steady income. It raised expectations about the kind of life which might be possible in the Arctic. Mining was not an easy job, but it was preferable to the rigours and uncertainties of hunting and trapping in a land where animals had become scarce. Yet, because the mine was short-lived, many families were left unemployed, and with little recourse but to hunt, trap, and live on government subsidy. The experience with this particular venture demonstrates the hazards of staking the life of a community on an activity as marginal as small-scale mining.

On the GSLR, Eskimos, and other relatively unsophisticated ethnic groups were used by the CNR as a source of low cost labour. Such labour may have been used partly as a means of keeping the overall cost of the railway within the limits established by Parliament. Repeated extension of the railway's "construction" status, which was continued even after freight movements had grown to considerable annual volumes, prevented operating and non-operating unions from becoming established and driving wage costs up. Hours of work were exceptionally long, and social and cultural amenities were few. The railway made some efforts to providing housing for the families of married permanent employees, but the broader needs of family life in a new and strange environment were largely ignored.

None of the three cases provided Eskimos with sustained, long-term employment. Yet, in each case, the Eskimos learned much about modern skills and techniques. They also developed some appreciation of their worth in the labour market. This emerges most clearly in the case of the GSLR, where, by 1969, most of the Eskimos who still remained with the railway quit to find more remunerative work.

Experience with the DEW Line, mining, and the GSLR offers some guidelines on how the employment of Eskimos in industry might be conducted in future. A first guideline should perhaps relate to the probable tenure of a venture. Ventures which are terminal, or so risky that a short life is probable, should not be ruled out as a source of employment because Eskimos badly need cash income. However, care should be taken to ensure that Eskimos are not exploited as convenient or low cost labour and then abandoned. They should be paid the going wage for a particular kind of work, and carefully cautioned about becoming too depended on a doubtful venture. Training courses should be established at the site of work to prepare the Eskimos for other employment when the particular project is terminated. Opportunities for educational upgrading should also be provided wherever sufficient interest is shown. Hours of work should be sufficiently flexible to enable Eskimo employees to take full advantage of academic and vocational courses. On-the-job training should be a regular aspect of the work routine.

A second guideline should refer to the motives and actions of employers. Business enterprises are not basically altruistic organizations. Management is mainly interested in maximizing profits, minimizing private costs, and perpetuating the life of the firm. These ends are deeply imbedded in a private enterprise philosophy. To achieve them, firms will often endeavour to transfer some of their costs to society as a whole. Government must ensure that such "social costs" are kept to a minimum, and that business behaves responsibly within the broader social framework.

During past decades, private capital was scarce in the North, and few activities capable of providing employment and income emerged. Out of frustration with rising welfare expenditures, government tended to view almost any private capital which entered the region as beneficial. The possibility that business ventures might do more harm than good on a local or regional scale was not always given adequate recognition. Thus local inflation, which falls with particular severity on the low income native, or the dislocation of people from their hunting and trapping grounds, were too often viewed by government as little more than unfortunate adjuncts of "progress". The fact that native people were drawn into employment with short-lived ventures, occasionally exploited, and then released to pursue marginal hunting and trapping, or to live on subsidy, was also rationalized as being part of "what development is all about".

Government is now examining the responsibilities of private enterprise to the northern community more critically. For example, increasing use is being made of "employment agreements" between government and private companies. These are contracts which specify the terms under which companies can hire indigenous people, numbers of people to be employed, and other conditions. However, much damage has already been done, and there is evidence that some northern natives have become deeply resentful of both government and private enterprise.⁽⁴⁰⁾

A third guideline should be concerned with social and cultural factors. One facet of this should relate to the provision of an adequate social milieu for the Eskimo employee's family. The kinds of conditions which prevailed on the GSLR, where the husband worked long hours and the wife had to cope with a strange environment virtually alone, should not be repeated. Another facet relates to greater recognition of the Eskimo's own social and economic heritage. Few Eskimos have completely abandoned life by the "calendar of

(40) The writer recently attended a "Conference on Communications in the North", which was held at Yellowknife in late 1970. In comparison with past standards, an unusually large number of native people challenged speakers from the floor. The motives and actions of private enterprise and Crown companies were repeatedly questioned. Government fared no better. The Commissioner and Government of the Northwest Territories were severely criticized at one of the sessions. An Eskimo who was asked to thank the Minister of Indian Affairs and Northern Development following the latter's banquet speech, used the opportunity to embarrass the Minister before a large gathering.

the seasons". Even the most conscientious employees will periodically want time-off for hunting and fishing to supplement their earnings with traditional foods. Eskimos least integrated into white culture have difficulty understanding the year round punctuality and regularity which that culture requires. White employers have often interpreted the native's inability to understand their concept of work as a sign of chronic laziness. Such a view should no longer be acceptable.

Even if guidelines such as the foregoing were implemented, not all instances of employing Eskimos in industry would be successful. However, employment programs would probably be more effective than has been the case to date. Moreover, employers would not be as able to reduce their own costs by burdening the Eskimo and society with them.

In the long run, effective participation by Eskimos in industry requires that they must become better equipped to cope with the industrial environment and the social circumstances surrounding it. Education will have to play an essential role in this. In each of the three cases of industrial employment which this chapter examined, techniques and skills were quickly mastered. Yet, problems of social adjustment encountered by the Eskimo and his family went unresolved. The question of how Eskimos might maintain their identity and self respect as distinctive cultural beings in a milieu which offers them little support were usually not even raised.

Currently, a large effort is being devoted to the education of Eskimo children. Yet much of this appears to be based on the premise that these children should learn the same academic and vocational subjects that white children in southern Canada are taught. Curricula in the Arctic are based directly on curricula in the Provinces.

This raises the question of whether Eskimos are getting the kind of education they most need. Specifically, how useful might their education be in terms of providing them with the social flexibility and adaptability they may need to live in Peace River, Hay River, Yellowknife or Lynn Lake, and still remain Eskimos? While learning Canadian history, English grammar, or motor mechanics may be important, it would seem equally important that Eskimo children learn something substantive about their own cultural background and values. Once young Eskimos have acquired a sense of pride in being Eskimo, they will have a firmer base from which to approach the modern world. They should then be in a better position to be selective in what they want out of both the modern and traditional societies in which they live.

CHAPTER VI

POSSIBLE SOLUTIONS

The introduction of modern medicine, better housing, and a greater certainty of income to the Arctic have lead to a rapid increase in the Eskimo population. Yet the availability of employment has not kept pace. Increasingly, large segments of the Eskimo population are becoming part of a "welfare economy" which is heavily dependent on government subsidy. This raises a number of questions.

One relates to the long-term social and economic consequences of a "welfare orientation". In the traditional culture, Eskimos were self-reliant. During the fur trade, they came to depend less on traditional pursuits and resources, but still led relatively independent lives. Generally, they were able to support themselves, even though they required some assistance from missions and the government. In the new society of the Arctic settlements, the self-reliance of the Eskimo seems to have become seriously impaired. Knowing that food, shelter, and other necessities will be provided, many Eskimos have virtually "opted out" of both traditional and modern pursuits. Men still hunt and trap, but they now stay closer to the settlements, often seriously depleting local fur and game resources.

The writer has heard the suggestion that much of the Eskimos' "hunting instinct" has now been transferred to a pursuit of subsistence allowance cheques. While there is some cynicism in such a view, it may also reflect an emerging truth. If meaningful, remunerative work remains the exception in the Arctic, Eskimos may increasingly become neither willing nor able to cope with their economic problems.

Increasing government assistance to Eskimos also raises the question of costs to the Canadian economy. Providing health, education, housing, and subsistence in the Arctic is expensive. Expenditures are offset only insignificantly by tax revenues because few Eskimos earn incomes high enough to be taxable.

As another aspect of cost, unemployed and underemployed people produce little or nothing. An economic loss, or "foregone output", occurs in terms of what these people could accomplish if their productive potential were more fully realized. As the Eskimo population grows, and increasing numbers of idle or underemployed people are added to the Arctic labour force, this gap between potential and actual productivity will increase.

Still another consideration relates to the effectiveness of government subsidy in terms of its ability to offset want and suffering. Government assistance is large in the aggregate, but services extended to individuals and families are often minimal in relation to need. Low rental

housing is of a standard which would be unacceptable to most southern Canadians. In many Arctic settlements, only the most essential medical services are provided. Little attention is given to the probability of wide-spread malnutrition among Eskimos, or to the likely extensive need for psychiatric services. Subsistence allowance payments are barely sufficient to tide Eskimos over difficult periods.

Granted that the current situation in the Arctic is undesirable, what options are open toward resolving it? Three possibilities are discussed in this Chapter. One relates to the expansion of modern industrial activity into the Arctic. This topic is particularly relevant at present because an extensive search for minerals (oil and natural gas in particular) is underway in the region. However, activities such as small scale secondary manufacturing, tourism, and commerce, also warrant some attention.

A second possibility involves relocation of a portion of the Arctic's Eskimo people. Many Eskimos now live in regions which offer little prospect of economic self-sufficiency. The argument has been advanced that these people should be induced to move to areas of greater opportunity. Relocation schemes must be carefully examined because they could have a number of important social and economic consequences not only for the people who undertook to move, but also for those who elected to remain behind.

Most proposals toward increasing employment among Eskimos view them as eventually becoming conventional blue or white collar workers, either in the Arctic or "outside". This raises the question of whether solutions which are more compatible with the Eskimos' own traditions, or present circumstances, might not be found. A number of possible "alternative production functions" have been proposed in the literature, and warrant examination.

Expansion of industrial activity, relocation, and "alternative production functions" are dealt with in the following three sections of this Chapter. A fourth and final section offers some general comments on these subjects, and also on the manner in which programs for the economic betterment of Eskimos have been conducted to date.

Expansion of Industrial Activity

There are many obstacles to the development of manufacturing and commercial activity in the Arctic. Some of these are locational and environmental in nature. The Arctic is cold, covered by ice and snow for much of the year, and distant from supply centres and markets. The Arctic market is too small to permit the achievement of economies of scale by regionally oriented manufacturing and commerce. It is geographically fragmented into small clusters of population. These are generally so remote from each other that the inter-regional movement of goods is inhibited by high transport costs.

Manufacturing processes which have developed in the Arctic to date have almost exclusively been oriented to markets outside the region. Typically, they have been based on local resources and skills, and have produced luxury products able to absorb high transport costs. The fur garment industry of the Mackenzie Delta is an example. Processing and canning local foods such as arctic char and whale is another. While not strictly manufacturing, carving in soapstone might serve as another example. Such activities provide some employment and income on a local scale, but their markets are small and their impact on the northern economy has been minor.

Tourism is an industry which deserves some special attention because of its potential. The Arctic landscape has special and unique characteristics not found elsewhere. With population growing rapidly in more densely populated regions, the Arctic may soon become one of North America's last wilderness areas. However, to date the Arctic has not attracted tourists in significant numbers. A few wealthy Canadians and Americans enter the region each year to fish for lake trout or char, but the Arctic is beyond the economic reach of most individuals. That tourism is a highly competitive industry is also an inhibiting factor. Air charter services and travel agents offering "package tours" are now able to fly

people to many parts of the world at relatively low cost. Until the costs of touring in the Arctic fall, and better tourist facilities are provided on a more extensive scale, only hardy, and wealthy vacationers will prefer it to Europe or Hawaii.

From time to time, schemes have been suggested toward establishing "exotic" labour-using manufacturing industries in Arctic communities. Such industries would rely on the Arctic for labour only. Raw materials would be imported from southern Canada. Both material inputs and outputs would necessarily have to be of high value relative to weight and cubage to withstand transport costs. Activities of this kind have been successful in other underdeveloped parts of the world in which pools of labour exist, for example, Hong Kong and Malaysia.

Some proposed schemes have seen the Eskimo as a worker in exotic wood; others have suggested that he should become
(1)
a watchmaker or toymaker. None of these schemes has been carried out. Even though they may appear unrealistic, they have at least some economic rationale. The productivity of the Eskimo is currently low and in some instances, zero. Yet as a recipient of various government subsidies, he is paid the equivalent of a subsistence wage.

(1) Material on file with the Department of Indian Affairs and Northern Development, Ottawa.

A gain could result if he were turned to producing anything of value to offset some of the social costs of supporting him.

However, entrepreneurs have generally been skeptical about the profitability of "exotic" Arctic industries. Canadian minimum wage laws apply to the Arctic as to other regions of Canada. While a manufacturer might initially avoid pressures from labour unions, these would eventually develop. Moreover, while transportation costs might represent a small proportion of total costs in cases of luxury products, they would still be higher than in the case of more favourably located areas. Government subsidization of transportation costs would probably not be a sufficient inducement, because transportation into regions such as the Atlantic provinces is also subsidized. Moreover, provincial and municipal governments offer a variety of incentives to industry. Given the political problems of the day, the federal government is also more inclined to attract industry into the depressed regions of southern Canada than into the remote Arctic.

Commercial activities such as trading posts, stores and shops are now oriented toward supplying the consumption needs of small local markets. This was not always the case. During much of the history of the trading companies, catering to local markets was less important than buying fur. The Hudson Bay Company, and small independent traders, still trade for furs, but this has now become of secondary importance to

retailing. At present, the volume of retail trade in any locality is usually not sufficiently large to support more than a single store. As a rule, these outlets do not specialize in the lines of goods they carry, but offer a broad range of merchandise. In most instances, they employ a few local Eskimos as store clerks, but prospects for expanding employment are small.

In the case of some service activities, opportunities are missed in the Arctic. The dog team has been rapidly displaced by the motorized toboggan in many areas. The Arctic now contains several hundred of these vehicles, yet facilities for maintaining them are scarce. The Hudson Bay Company is the usual marketing agent for motorized toboggans, but maintenance service and availability of spare parts through "the Bay" provides inroads for competition. Yet little competition has appeared. Given time, however, Eskimo entrepreneurs may establish dealerships and service depots for motorized toboggans in areas in which their use is widespread.

The economic future of the Arctic may depend on major mineral development. Currently, there is high interest in the region's non-renewable resources, particularly oil and natural gas. Oil and gas may exist in substantial quantities, particularly in the Arctic Archipelago. Much of the western Arctic, including parts of Banks, Prince Patrick, and several

other Islands, as well as the continental shelf, is an extension of sediments which, in Alaska, contain the Prudhoe Bay oil field.⁽²⁾ Virtually all Arctic lands which may have oil and gas potential are now under exploration permit, and oil companies have made firm commitments to spend an average of about \$35 million annually to 1974.⁽³⁾ Current optimism was recently fanned by the discovery of oil at Atkinson Point, near Tuktoyaktuk, and of major gas reservoirs on Melville and King Christian Islands.⁽⁴⁾

The current exploration boom is closely related to a growing shortage of fuels for industrial and domestic use in the United States. Readily available supplies of low sulphur content fuels for household furnaces and power generating plants have been depleted to low levels as population and activity have grown.⁽⁵⁾ Sources of supply in the Middle East and Latin America are politically unstable, or increasingly committed to markets in Europe or the Far

(2) Department of Indian Affairs and Northern Development, "Geology of the Arctic Islands", Panarctic Oil Operations in the Far North, Ottawa, August 1968.

(3) Department of Indian Affairs and Northern Development, Freighter Aircraft Requirements in Northern Canada as Indicated by a Forecast of Oil and Gas Exploratory Expenditures, 1970-1974, Ottawa, May 31, 1970, pp. 48 and 53.

(4) "Imperial Discovers Oil in the Arctic", Globe and Mail, Toronto, January 16, 1970.

(5) "The Energy Shortage Worsens", Time Magazine, August 31, 1970, and "Vice Chairman of F.P.C. favours Coal, Oil Reciprocity with Canada", Globe and Mail, Toronto, September 30, 1970.

East. Moreover, as a matter of national security, the United States Government requires that no more than 12 per cent of its energy fuels can move to domestic markets (6) by ocean trade routes.

Under these circumstances, the prospects for continued oil and gas exploration and perhaps eventual production in the Canadian Arctic are favourable. However, the possibility that extensive petroleum reserves will be discovered in off-shore areas such as the Atlantic coast, or that more economic methods of producing oil from oil sands and shales will be developed, must not be overlooked. Such sources could provide additional reserves as an alternative to oil and natural gas from the Arctic.

The Arctic contains other minerals which may also offer some possibilities as sources of income and employment. A large, high grade iron deposit is located in northern Baffin Island, within easy access to tidewater. Other iron ore reserves have been located on the Melville Peninsula, (7) along the northwestern coast of Hudson Bay. However, even if mining and transporting these deposits proved

(6) Regulations pursuant to the United States Trade Agreements Extension Act, 1953. For a discussion of the subject see Daily Oil Bulletin, July 28, 1969.

(7) Material on file with the Department of Indian Affairs and Northern Development, Ottawa.

technically feasible, iron is not a commodity which is currently in short supply in world markets. Extensive reserves have been developed during recent decades in regions such as Quebec, Labrador, Liberia, and Australia, and these are now supplying markets in the United States, Western Europe, and Japan. (8) Because of cost disadvantages, it might be difficult for mines in the Arctic to compete in world markets without substantial public support.

Lead, zinc, uranium, and copper deposits have recently been under investigation in the Arctic. The demand for some of these metals in world markets is currently quite strong. If sufficient quantities of high grade ore were found, small mines similar to the North Rankin Nickel Mine could perhaps be developed. There is some possibility that a small lead-zinc mine will go into production at Strathcona Sound, on northern Baffin Island, by 1972. (9) Generally, however, the prospects for metal production in the Arctic are uncertain and probably unfavourable at present.

Difficult transportation and construction problems would have to be solved if Arctic minerals were to enter production. Distances from markets are great. Sea lanes

(8) Economist Intelligence Unit Ltd., The World Market for Iron Ore, Report prepared for the Department of Indian Affairs and Northern Development, London, November 1969.

(9) Material on file with the Department of Indian Affairs and Northern Development, Ottawa.

are frozen over by several feet of ice during much of the year. Continuous permafrost makes the erection of buildings, and the development of open pits, shafts, and stopes, difficult. The severe climate inhibits physical activity. Such problems suggest that large scale production of Arctic minerals may not take place until there has been a considerable depletion of reserves in more favourable regions, unless political factors (10) force the use of the Arctic's resources.

What effect might continued mineral exploration, and perhaps eventual production, have on the Arctic's Eskimo population? In some instances, the impact might be considerable. The northern end of Baffin Island has a relatively large Eskimo population, perhaps 2,000 people. Production of iron ore in this area at annual volumes of two to four million tons could lead to the employment of some 200 or 300 native people. (11) Other mines in the mineral rich region, such as the small lead-zinc mine mentioned previously, could provide additional jobs. Apart from direct employment, some

(10) Political factors which might have a decisive bearing on oil and gas production might derive from an increase in hostilities in the Middle East, or continued efforts by the Organization of Petroleum Exporting Countries (OPEC) to raise production royalties. An increasing shortage of tanker capacity, and resulting pressures on trans-ocean shipping rates, has also heightened North American interest in continental sources of petroleum.

(11) Material on file with the Department of Indian Affairs and Northern Development, Ottawa.

jobs might be created through regional multiplier effects. However, the impact of such effects would probably not be very large because, like the Rankin Mine, mines on Baffin Island would likely depend almost entirely on southern Canada for supplies and other needs.

Whether oil and natural gas activity in the Arctic will provide a significant number of jobs for Eskimos is questionable. Geological considerations suggest that marketable quantities of oil and gas will most likely be found in areas far from the more populous Arctic areas. Exploration is increasingly concentrating on areas such as the more isolated Arctic Islands, where major pockets of gas have already been discovered. Only a few Eskimo settlements exist so far north. Another consideration is that oil exploration and production require substantial capital inputs and limited quantities of skilled labour. Usually, there is little need for relatively unskilled labour, and most Eskimos currently fall into this category. The few Eskimos who have found employment with the oil industry to date work mostly as labourers at supply bases or on seismic crews. Wages paid are low, even by southern standards. Because their headquarters and employment offices are located in cities such

as Edmonton and Calgary, oil companies, and firms providing services to these companies, prefer to recruit labour in southern Canada rather than in the Arctic. (12)

Jobs for Eskimos could become available through activities supporting oil production: the construction of supply depots, harbours, airstrips, townsites, and pipelines. The discovery and development of marketable oil and gas reserves could generate something of a prolonged construction boom.

Yet even here, Eskimos might fare no better than they did on the DEW Line. Construction would likely take place on a "crash" basis in order to bring resources to markets as quickly as possible so that revenues, from which high exploration and development costs could be recovered, would be generated at the earliest possible time. Great reliance would likely be placed on prefabrication and rapid assembly, using skilled personnel and costly equipment such as "sky crane" helicopters. Unskilled natives from near-by settlements might be hired temporarily, but permanent jobs in any location would be unlikely because construction activity would be quite mobile. The Alaskan oil boom has now been in

(12) Based on personal discussions with officers responsible for employment programs for northern indigenous people, Department of Indian Affairs and Northern Development, Ottawa.

effect for about two years, but to date few Eskimos have
(13)
benefited from it directly.

To sum up, the expansion of industrial activity would not appear to provide much of a basis for the sustained employment of significant numbers of Eskimos. Few primary or secondary activities could flourish in the remote, high-cost, and harsh environment of the Arctic. Activities which have some prospect of materializing would probably not require large pools of unskilled or semi-skilled labour. With some exceptions, such as mining on Northern Baffin Island, industrialization offers only a partial solution to the problems of the Arctic and its people.

Relocation

During the past two decades, Eskimos have shown a tendency to migrate. Initially, with the decline of traditional animal resources, they abandoned nomadic life on the tundra and at hunting camps along the coast. Latterly, many have migrated from smaller Arctic settlements to larger communities such as Frobisher Bay, Coppermine, Baker Lake, and Inuvik.

(13) "The Great Land: Boom or Doom?" Time Magazine, July 27, 1970.

While these migrations have been a consequence of economic, social and cultural change, they took place within a general milieu which remained identifiably Eskimo. Usually, relatives and friends had preceeded migrants to a small community or a larger centre.

Yet, beyond knowing that they wanted to join friends or family, migrants were often unclear about their motives in moving. For example:

Our data suggest that immigration often followed from the Eskimos' readiness to take advantage of economic opportunities offered in town compared to the relatively marginal patterns of existence extant in the settlement, out of which the people pursued hunting and trapping. Nevertheless, we must honestly say that very few informants whom we interviewed specifically gave greater economic security or physical comfort as a goal they had in mind when they settled in town. Many people who replied to this question simply said that they had accompanied other relatives or came to join a sibbling or grown child who had already chosen Frobisher Bay as home. Many respondents gave no satisfactory explanation at all for coming.(14)

Even the largest communities now inhabited by Eskimos do not offer much prospect of permanent employment. Large regions of the Arctic are not self-supporting, and there is little chance that they will become economically viable in future. Communities such as Frobisher Bay, Coppermine, Baker

(14) John and Irma Honigman, Eskimo Townsmen, Ottawa, University of Ottawa, 1965, p. 97.

Lake, and Eskimo Point consist largely of unemployed and under-employed people. Government expenditures on subsistence allowances and wage payments arising out of "make-work" jobs comprise a substantial proportion of personal income. In some of these communities, alcoholism, crime, and other social problems have become significant phenomena.

One solution which might be applied toward such "problem regions" or localities is mass relocation. This concept is not without some merit. A resettlement program affecting people who live in sub-marginal outports in Newfoundland is presently underway, and this has met with some (15) success. On economic grounds, the argument that stagnating communities which have little future should be phased out, and their populations resettled in more viable areas, makes some sense.

Yet, the relocation of significant Eskimo populations would raise administrative and socio-economic issues of a complex nature. For example:

.....arrested southward migration
and resettlement in southern industrial
communities, presents the most complex
problems and sub-possibilities.

(15) Based on research material assembled in 1970 by Mr. Henry Rucker on the Newfoundland resettlement program for the Economic Staff Group, Department of Indian Affairs and Northern Development, Ottawa.

.....both training and education are necessary but not sufficient conditions for successful relocation of individuals and families into other cultural situations. This being the case, then any attempts to implement or bring about (this) possibility must be based upon a tightly organized and well-run program whose aim is solely to prepare individuals for the eventual assumption of full-time employment and life in the south. The immediate financial costs of such a program to the Federal Government will be high, and the re-orientation toward this step, perhaps traumatic but certainly difficult, particularly since the emotional content of arguments against such programming will be persuasive. (16)

If relocation programs were not comprehensive, well organized, and of sufficient duration, social costs could be great. The resettlement of significant numbers of unskilled, unsophisticated Eskimos could aggravate the social problems encountered in the larger Arctic communities. Many Eskimos might take years to acquire the kind of orientation and outlook needed to cope with a more densely populated and complex environment. Significant proportions of the population might never adjust.

A more moderate solution would be to encourage carefully selected persons to emigrate from the Arctic settlements. This was attempted in the cases of people who were moved from the Keewatin to mines at Yellowknife and Lynn Lake,

(16) D.S. Stevenson, Problems of Eskimo Relocation for Industrial Employment, Ottawa, Department of Indian Affairs and Northern Development, May 1968, p. 21.

Manitoba, and to the Great Slave Lake Railway. Yet, these examples of relocation suggest that even careful selection may not ensure that migrants will successfully adapt to new circumstances. The fact that a breadwinner possesses skills and is able to adjust to a job will not mean that his wife and family will easily fit into a new community and cultural environment. Because of their emphasis on the "kinship group", Eskimos find it difficult to leave families and friends for extended periods.

Another problem is the effect which selective relocation might have on the "home" community. Usually, the most capable and adaptable people in a particular settlement would be selected to move. These people should perhaps be encouraged to migrate from areas which offer little prospect for personal betterment. Yet their skills and leadership could be real assets to many Arctic communities if suitable opportunities for exercising these capacities were available.

In sum, the issues raised by relocation, whether on a mass or selective scale, are far from clear. Each relocation proposal would have to be subjected to careful scrutiny. Cost-benefit analysis might prove useful to this purpose. Yet, the analyst would have to be most careful about its application. Where social issues are involved, and these would always be significant in relocation schemes, costs and benefits could be difficult, if not impossible, to quantify.

Variables which are readily quantifiable, such as monetary costs and incomes, might only be a relatively small proportion of total gains and losses. Another problem arises out of whether costs and benefits should be measured from the point of view of the individual, the community, or the national economy. It is unlikely that these diverse entities would view the outcome of a particular event in the same way, or that there would be a simple basis for comparing the different points of view. Finally, there is the question of the emphasis to be given to the certainty of achieving desired results. Social processes such as relocation are dynamic and cumulative in character, and contain many unforeseen pitfalls.

Alternative Production Functions

Proposals toward raising the level of employment among Eskimos often assume that technology, production, and organizational methods that are current in white industrial society can apply pari-passu to Eskimos. There is a presumption that Eskimos can and should be integrated into wage employment as "white or blue collar" workers similar to other Canadians. Special problems which may arise because Eskimos have no tradition of "clock-time" or machine technology are usually not given much consideration. However, proposals have occasionally been made which suggest that people of different work traditions, such as Eskimos, might be more

productive if unorthodox forms of technology and organization were employed.

Rea suggests that large construction projects in the North might employ labour-using instead of capital using techniques. Eskimos and Indians, who are unemployed or underemployed, would serve as the source of labour. He reasons as follows:

Because most of this labour is unable or unwilling to seek employment outside the Territories..... it has no economic cost when employed in any projects which might be undertaken in the Territories. That is, insofar as projects created employment for such labour, the labour costs of the projects to society would be zero.....(17)

This argument is similar to one used for underdeveloped countries. In the latter context, the basic premise is that, in a backward sector (usually agriculture), the marginal product of labour is apparently zero or even negative. The conclusion drawn from this is that, ordinarily, a social gain would occur if labour were transferred from the backward sector to modern activities which could employ either labour or capital using production functions. (18)

(17) K. J. Rea, The Political Economy of the Canadian North, Toronto, University of Toronto Press, 1968, pp. 370 and 371.

(18) Theories based on the premise of zero or negative marginal productivity of labour are particularly associated with the names of W. Arthur Lewis, J.C.H. Fei, and G. Ranis. For a summary of the main concepts see Everett E. Hagen, The Economics of Development, Homewood, Ill., Richard D. Irwin, 1968, pp. 302 - 309.

The proponents of this theory may be overlooking the possibility that the organization of work could differ considerably between the modern and backward sectors. In the latter, work may be specialized along caste lines, or may depend on a group cohesiveness which the outside observer may not appreciate. The observer may perceive marginal productivity in the backward sector to be zero because he assumes that the individual unit performing work is the single labourer. In actuality, it may take a number of individuals, or a collective, to undertake routine economic tasks. Workers may not be unemployed or underemployed in terms of the special "rules" which apply within the backward sector, even though they would be in modern sector terms.

Rea's suggestion not only begs the question of whether apparently idle Eskimos and Indians are really unemployed, it also raises a larger issue. This is whether there would be a gain to society as a whole by employing the Eskimos and Indians in the kinds of projects he proposes. In cross-cultural situation, is there a meaningful concept of "society as a whole"? Anthropological and sociological data suggest that the native peoples still comprise relatively distinctive societies. This implies that they may not only have their own technology and organizational methods, but also their own ways of appraising economic gains and losses. What appears from a white Canadian viewpoint to be idleness may

be a desired pause between hunting and fishing seasons to the "unaculturated" Eskimo or Indian. What whites may interpret as improvidence, or "living from day to day", may also be a functional and reasonable aspect of an indigenous society. While this argument should not be pressed too far or too strongly, it is possible that a net gain in terms of Canadian "society as a whole" could be a net loss as viewed by Indians or Eskimos.

Rea's proposal has other, more practical, drawbacks. A resource road or railroad, or power dam, is often an integral part of the infrastructure required to bring a mine or other resource project into production in a "frontier" region. This infrastructure must be available when a particular venture is ready for production. Using labour in place of machinery would probably result in prolonged construction periods. This might delay the introduction of activities which could yield substantial regional and national benefits.

Problems also arise out of the institutions governing construction, or any economic activity, in Canada. The construction industry uses a given range of production functions not only because it is geared to a peculiar technology, and is required to produce a specified output, but also because it is limited in its choices by unions and political factors. Even if it were technically feasible

and economically desirable to do so, constraints which unions, politics, and the broader community impose might make it difficult to shift to more labour intensive methods.

Government now usually takes the position that as much local labour "as possible" should be used by contractors undertaking major construction in the North. This is a minimal type of imposition and does not require contractors to depart from standard construction techniques specifically to accommodate local labour. While, therefore, some Eskimos and Indians find employment with the construction industry, their numbers are not large. Contractors continue to rely mainly on their own skilled crews brought in from the south.

An alternative solution, which differs in spirit and character to Rea's proposal, is that of "intermediate technology". McRobie defines this as follows:

The concept of intermediate technology is, in essence, that technology is not a fixed or given factor in economic development but rather an instrument capable of being adapted and adjusted to harmonize with the economic, social and cultural environment into which it is being introduced. (19)

Guemple notes that the concept requires a commitment to planned or engineered change, a continuity in programs, and

(19) G. McRobie, "The Need for Intermediate Technology", in Milton M.R. Freeman, Ed., Intermediate Adaptation in Newfoundland and the Arctic, Newfoundland Social and Economic Papers, No. 4, St. John's, Institute of Social and Economic Research, Memorial University, 1969, p. 8.

changes which must have relatively stable outcomes. What is sought is not something rigidly static, but nonetheless orderly and "free of major fluctuations in direction, scale, and (20) committment of energy and resources". Guemple elaborates:

.....intermediate adaptation pre-supposes a compromise adjustment - a kind of cultural half-way house. On the one side we have new activities, ideas, and items which are introduced into the culture in those areas where the native economy is attached or "grafted" into the larger socio-economic community. On the other, we have the obligation to the natives to make the accommodation as painless as possible and to see that those ideas, beliefs and values which have worth to him are preserved. (21)

What the foregoing suggests is not necessarily providing large and immediate opportunities. Rather, the approach is one of fostering an orientation toward change. Once change has been accepted by a population, new opportunities may be foreseen and seized upon. Initial change would lead to further experimentation and change, and a sequence might become established which would eventually lead to a broadening and diversification of economic activity, and the absorption of a population within such activity. Intermediate technology

(20) D.L. Guemple, "The Eskimo and Intermediate Adaptation in the Arctic", in Milton M.R. Freeman, Ed., Intermediate Adaptation in Newfoundland and the Arctic, Op.cit., pp. 40 - 42.

(21) Ibid, p. 43.

arguments focus on new methods of production, alternative uses for given resources, the use of new resources, learning, and experimentation.

Programs have been introduced in the Arctic which may have been rooted in principles similar to intermediate technology. Arts and crafts programs, manufacturing tinned foodstuffs from whalemeat, and fur garment industries are examples. These programs have benefited only a few communities. To date, none have matured into economically viable enterprises. Nevertheless, on a local basis, they have been effective in some instances. Small canneries and arts and crafts shops have been run as co-operatives by Eskimos, and have been the source of new managerial and technical skills. Learning and experimentation have often been emphasized, with positive results.

Some programs have been complete failures. The outstanding example is the Reindeer Project which has operated in the Mackenzie Delta from the nineteen thirties to the present.⁽²²⁾ Introduction of reindeer to the Canadian Arctic by government was based on the notions that reindeer would provide a substitute for depleted caribou herds and a resource for a native foodstuffs and leather goods industry.

(22) K.J. Rea, The Political Economy of the Canadian North, Op.cit., pp. 301 - 304. See also R.M. Hill, Mackenzie Reindeer Operations, Ottawa, Department of Indian Affairs and Northern Development, August 1967.

In 1933, three thousand animals were purchased in Alaska and herded to the Mackenzie Delta, arriving there in 1935. From then to the present, the reindeer industry has had a varied history. The reindeer thrived and multiplied for some years, but thereafter herd numbers fluctuated greatly. Some local sales of meat took place, and limited commercial use was made of hides, but expenditures always greatly exceeded revenues. Very few Eskimos were ever employed either in herding reindeer or related activities.

The Reindeer Project exemplifies some of the dangers implicit in the "intermediate technology" approach. In retrospect, it appears to have been wrongly assumed by government that Eskimos would be willing to become reindeer herders. Some Eskimos worked with the reindeer intermittently, but quit when trapping was good, or better jobs were available.

Exogenous forces bearing on the Arctic, and the dynamic response of the Eskimos to these forces, were inadequately foreseen. Government proponents of reindeer herding could not, in the 1920's and 30's, have forecast particular events like DEW Line construction. However, they might have realized that rather large intrusions of some form would affect the Arctic in future. The Reindeer Project might have been effective if the Arctic had remained sufficiently static and isolated to permit the project to evolve and mature. As events transpired, this did not occur.

This is perhaps the most basic weakness of "intermediate technology" proposals. Their common sense cannot be denied. Development, and the introduction of new activities should proceed in an orderly fashion at a pace which can be absorbed by a backward or culturally different people. However, development is seldom orderly, and programs which are too firmly rooted in principles of gradual, planned evolution are often insufficiently flexible in the face of rapid change.

General Observations

There remains the question of which of the foregoing solutions, or perhaps others, might best serve to deal with the economic problems facing the Eskimos. Each solution has some merits and disadvantages. Industrial employment could be a feasible objective for Eskimos who have already been exposed to the modern economy, or who have acquired a technical or academic education. However, many Eskimos are simply not ready to fit into modern employment. For these, a more gradual approach might be appropriate, perhaps along the lines suggested by the proponents of "intermediate technology". Similarly, some Eskimos would be able to relocate over large distances to take advantage of economic opportunities, while others could not.

Thus there is no single, overall solution. Eskimo groups and individuals must be dealt with in accordance with their particular adaptation to white culture, and their economic and social needs. For many, this could mean prolonged government subsidy and continued low productivity; for others it could lead to relatively rapid adaptation to modern jobs in the Arctic or elsewhere.

What is most important is that economic programs devised for Eskimos are carefully planned on the basis of valid data, and are of sufficient scale and duration to resolve the problems at hand. A characteristic weakness of programs undertaken to date has been the ad hoc, changeable, manner in which they have been conducted. Promising efforts have at times been curtailed just as they began to show some results, while others were continued long after it was clear that they would fail.

Insufficient analysis of populations and their readiness to take one step or another has been a chronic problem. Inadequate follow-up counselling and research has also been apparent. Perhaps, as a general principle, the content of a program (provided it makes some sense in the first place) may be less important than the sustained effort which the program is given. Continually changing or abandoning programs, forever introducing new ones, or committing Eskimos to one course or another without consulting them, are not sound methods of solving economic and social problems or building trust between Eskimos and whites.

CHAPTER VII

CONCLUSIONS

The foregoing chapters examined the origins and present nature of the economic problems confronting Eskimos. Attempts to alleviate these problems, through the provision of employment, health-care, housing, education, and subsistence allowance were described. Studies were made of cases in which Eskimos were employed in modern industrial settings both inside and outside of the Arctic. Proposals toward overcoming unemployment, underemployment and poverty among Eskimos were assessed.

Yet, after all this has been said, the question remains of whether the problems confronting the Eskimos are any closer to being resolved. Are any broad and substantive conclusions which could enhance policy decision-making or program formulation possible from the material which has been examined? To appraise this, a review of the more fundamental issues which have been raised would seem in order. These focus on three crucial and inter-related aspects of the Arctic: the environment, the people, and modern economic realities.

The environment has several dimensions. The most basic among these is physical. The Arctic is a harsh, bleak, cold, almost abstract, land which is frozen over for much of the year. These physical characteristics constrain and determine the region's biological environment. The Arctic is capable of supporting little plant and animal life, and regenerative cycles are long.

The physical and biological environments have limited the activities which man has been able to undertake, have conditioned his social and institutional patterns, and have coloured his outlook. Some ways in which environmental factors have constrained Eskimos are obvious. As one example, they provided little basis for the development of an indigenous agriculture and the accumulation of surplus foodstuffs. These were basic steps to the development of a less environmentally dependent order of culture and civilization in other parts of the world.

Environmental factors have also shaped and conditioned the behaviour of Eskimos in a more subtle manner. Socially, these factors had a bearing on the way in which Eskimo society developed a small group orientation, and emphasized close kinship ties. Geographically, the low density of animal populations required that people live in small clusters far apart from each other. The seasonality of the physical environment, and the migratory and fluctuating nature of animal populations, determined the timing and frequency with

which small groups of people could get together into larger tribal groups. By and large, they prevented more than a minimal amount of "banding together". This was of significance in preventing Eskimos from developing the broader and more comprehensive social, political and economic institutions found in more advanced societies.

In the long run, shifts in climate, and consequent changes in flora and fauna, determined human migratory patterns. In past eras, the Arctic was both warmer and colder than currently. Waves of migration from Alaska eastward probably coincided with "warming" phases of the Arctic climate. Migrants, such as the Thule people, brought with them a new and superior technology better able to cope with the Arctic environment. It was probably during the "cooling" and "cold" phases of the Arctic climate that this technology, out of necessity, became honed into a superb instrument for survival.

Environmental factors, and social and cultural institutions, had a strong bearing on the Eskimos' economic outlook. The Eskimo tended toward fatalism about the future. Because of an ever-present uncertainty, future income was heavily "discounted". As a group, Eskimos compensated for high mortality by a high birth rate. In doing so, they were able to accomplish little more than maintain a static population. Because of their "small group" orientation, the

distances which had to be maintained between groups, and the ever pressing need to provide for day to day survival, Eskimos achieved only a minimal specialization and division of labour. Economic decision-making was collective rather than individual in nature because of the serious consequences which any action might have for the group. Technology, though in some instances quite ingenious, was largely geared to basic matters such as keeping warm and providing food.

Such considerations suggest that the economic motivations of Eskimos differed considerably from those of people living in a populous, wealthy, economically specialized, and technologically advanced society. In the latter, motives would reflect elements such as career choice, life style, earnings ambitions, savings-investment decisions, and locational preferences. Eskimos had few conceptions of such matters. In their world, "career choices" depended largely on whether the individual was male or female; life style was environmentally and culturally determined; economic actions could gain little income beyond consumption needs; and location was determined by the availability of land and sea mammals. In brief, the economic motivation of the Eskimo was severely constrained, and his main concern was personal and group survival.

The fur trade represents something of a bridge between the traditional economic concerns of Eskimos and the kinds of economic choices which now face them. Through

trapping, Eskimos were introduced to a broader, essentially monetary, economy. At the same time, many of their traditional resources were depleted. New technology, in the form of rifles and steel traps, was introduced and absorbed. Decision-making shifted away from a milieu in which environmental and biological factors were prime determinants of economic actions.

The Eskimo has had to change rapidly with the advent of modern, complex activity in the Arctic, and an increasing exposure to ideas and values differing from his own. He has learned that survival need not be the only reason for economic action. He has had to accept an increasing concentration of his people into settlements, and a curtailment of hunting. Technology and work methods alien to his own cultural background have been imposed on him.

In recent decades, change has come about so quickly in the Arctic that not all of it could be assimilated successfully. Some Eskimos have adapted to change; many others appear to be stuck in a "limbo of transition" which may represent a more or less permanent adjustment to conflicting cultural forces. Many still attempt to pursue traditional hunting and trapping despite evidence that this way of life has a limited future.

Meanwhile, because of rising housing and health standards, the population is increasing rapidly. Mortality rates have fallen to a small proportion of former levels; widespread famine and disease are no longer serious factors.

However, birth rates continue at their former high level. As a consequence, a disproportionate number of Eskimos are now in the younger age groups. These young people will soon enter the labour force, which is already much larger than available job opportunities.

The values of the young differ significantly from those of their elders. Most young Eskimos are now being educated. They are being systematically exposed to concepts and ideas originating outside of their own culture. Some of the brighter, better educated, and more vocal Eskimos are beginning to realize the value of group political action. With an increasing level of oil and natural gas exploration in the Arctic, scope for conflict between native activities such as hunting and trapping and modern activity is increasing. Native organizations such as COPE are pressing claims to aboriginal rights and compensation similar to the Alaskan Native Claims now being considered by the United States Congress.

Whether courses of action similar to Alaskan Native Claims are feasible in Canada must remain open to conjecture for the present. To date, government has taken the stand that aboriginal rights, as distinct from obligations under Indian Treaties, do not exist in this country. Yet the pressures toward claiming such rights are not likely to diminish unless some of the more pressing aspects of unemployment, underemployment and poverty in the Arctic are resolved.

The private sector offers limited hope of being able to resolve these problems. As private activity in the Arctic grows, Eskimos will find an increasing number of job opportunities. Nevertheless, unless matters change considerably, and take directions which cannot be foreseen at present, the number of jobs will likely continue to fall far short of anything resembling full employment. Many native peoples will continue to be locked into sub-marginal activities such as trapping, and to rely heavily on subsidy.

While it must continue to take the lead in the matter, government is also limited in its ability to resolve the problems of the Eskimos. Finding solutions to the socio-economic problems of the north ranks high among government priorities. Yet there are limits to the quantity of the nation's resources which can be devoted to this end. There are many other priorities of national importance to consider, as for example minimizing regional disparities in the provinces, converting Canada to a truly bicultural nation, combating pollution and urban decay, and preventing an excessive foreign influence over Canadian institutions.

National budgetary considerations aside, there is severe competition for resources even within the established government budget for the north. Such resources must serve a blend of national and regional objectives. The Federal Government is committed to the political development of the northern territories, an objective which has required the

establishment and maintenance of an expensive legislative and administrative machinery at Whitehorse and Yellowknife. Government is actively encouraging the development of the territories' natural resources not only to achieve regional ends, but also because of the potential effect this could have on the Gross National Product and Balance of Payments. Responding to popular pressures, an increasing proportion of the northern budget is being devoted to ensuring that economic development does not excessively damage the ecology of the north, which is one of delicate balance. Increasing effort is being devoted to preserving the unique features of the northern landscape and to establishing national parks in the territories. Economic and even political sovereignty are of growing concern as the realization grows that the Canadian northland may contain large mineral deposits which are essential to the survival of modern industrial nations, and as large foreign or multi-national corporations become increasingly active in the region.

Yet such resources as government is able to devote to Eskimos could perhaps be used to greater effect. Some of the material examined in foregoing chapters suggests that government has at times misapplied the efforts it has directed to solving the

problems of the northern native. It has not always had a sufficiently accurate understanding of the problem being dealt with. Simplistic solutions have sometimes been pursued in attempts to resolve complex questions. Opportunities which should have been seized were not followed-up adequately. Too little effort was put forward at times; perhaps too much at others. The approach taken toward northern natives was often one of paternalism rather than one of dealing with persons from a unique and distinctive culture, having their own values and perceptions of the world.

Belabouring the past shortcomings of government policy and programs is not the purpose of this study. Providing something of a basis for minimizing such inadequacies in future is a more worthy endeavour. As difficult a problem as it may seem, the circumstances in which Eskimos now find themselves could be ameliorated, if not resolved, if a number of positive steps were taken and some programs which already exist were strengthened. The following would seem to be among the most important matters which could be pursued at the present time:

1. Every effort should be made to integrate any Eskimos who are willing, and capable of it, into employment in the modern economy. This could be accomplished by an intensification

of programs bearing on vocational education, on-the-job training, and employment. Placement should be made in both permanent jobs and in remunerative seasonal employment associated with activities such as transportation, mineral exploration, and construction.

Companies in these fields should be persuaded to re-arrange their hiring practices to include more northern natives.

2. Eskimos must be given a greater opportunity to participate in the administrative and professional life of the Arctic. The large majority of the government officials in administrative, professional and clerical roles in day to day contact with Eskimos are whites from southern Canada. Only rarely does one encounter an Eskimo nursing or teaching assistant, let alone a nurse or a teacher. The absence of Eskimos in these fields is due to the fact that few can meet the required academic standards, which are the same as those for southern Canada. The need to maintain such standards is recognized, but it is nevertheless relevant to question whether alternative standards might not be more suited to the cross-cultural realities of the

Arctic. Much might be accomplished if the authorities were able to accept lower qualifications, and as a consequence, more Eskimos could enter administrative and para-professional (if not professional) fields.

3. The foundations of education programs administered to Eskimos should be questioned and perhaps reconstructed. Much of the present educational effort has a technical and vocational orientation. While this may be a proper approach, more thought might be given to the development of curricula which emphasize mobility, and equip people to make the transition to the modern economy more easily.
4. One facet which is almost totally lacking in education in the Arctic at present is that of instilling a pride of their own culture into Eskimo children. These children are instructed in the English language, by a staff mostly recruited in southern Canada. Curricula are based on those of the provinces, and school buildings resemble those of the urban south. Even though some commendable efforts in this direction have been made, very little that the Eskimo child encounters

in the classroom (or outside of it) suggests that being an Eskimo is worthwhile. Yet a sense of personal worth is a basic requirement to virtually all successful endeavours. Attempts to convince the child that he is part of a broader northern or Canadian community may be futile unless he is first convinced that being an Eskimo in that community is somehow of unique and positive significance.

5. While efforts to integrate Eskimos into the modern economy must be encouraged, government has a special responsibility to ensure that the terms and conditions of employment with industry are not harmful to the longer term interests of Eskimos. Exploitative situations, such as appear to have existed on the Great Slave Lake Railway, should be avoided. Short term employment with marginal ventures such as high cost mines should be encouraged because Eskimos badly need cash income. However, government should always bear in mind that - in a sense - it must serve as the bargaining agent for the Eskimo. As "union representative", it must strike the toughest bargain which can be negotiated on the Eskimos' behalf.

- 6.. Groups of Eskimos who are largely or wholly self sufficient at present, such as the people of Banks Island, and some of the people of northern Baffin Island, should be encouraged in their endeavours and, if necessary, protected from intrusion by modern industrial activity. Such people stand as living, if isolated, examples that Eskimos can "make a go of it" in a work milieu which many of them still prefer. The symbolic importance of such situations should not be underestimated.
7. Many Eskimos will probably neither become self sufficient nor integrated into the modern economy during the foreseeable future. These people will require continued government assistance. However, as much as possible, recourse to outright welfare payments should be avoided. Assistance should take forms which foster the development of economic attitudes and entrepreneurial skills. Considerably more thought should be given to the kind of approach suggested by the proponents of "intermediate technology". Programs should be developed which extend the Eskimos' ability to use the resources of the Arctic in new and more technically advanced ways, and to find outlets for products which are unique to the region. However, such programs

might have to be of considerable duration to have an appreciable impact, and would require a stable economic milieu to be effective. Launching programs based on a concept of gradual change in a continually shifting social and economic environment would likely result in failure and disappointment.

8. Native organizations such as COPE, or groups more representative of Eskimo interests, should be encouraged. Often, the attitude of government toward such groups has been too quickly defensive. A more positive view should be taken. While such groups may not fully, or always accurately, represent native peoples, they may nevertheless provide government with a better understanding of how these people view their present world, and the efforts of government toward providing a better one.

Although it has accomplished a great deal, much of the government effort in the Arctic to date has been of a rather singular nature. While Eskimos have correctly been viewed as being in transition between one way of life and another, it has rarely been recognized that there are many alternative possibilities within such a process of change. The Eskimo has too often been viewed as moving, at a rather steady rate of progress, from being a primitive hunter to being a blue collar worker in a northern mine, or a government clerk or technician. Implicitly, the concept of "developing" the Arctic has meant converting it to something resembling industrial and bureaucratic southern Canada. Economic, social and

political actions have tended to reflect the cultural backgrounds of government officials and corporate executives. The unique traditions, experiences, and preferences of the Eskimos have not always been taken into account adequately.

Not only must the present realities of the Eskimo and the Arctic be more clearly understood, account will have to be taken of dynamic forces brought into play by changes in individual or group preferences as levels of education change, and awareness of what the "outside" world has to offer becomes more widespread. Government will have to accept that many of the problems now current in the Arctic will take a great deal of patience and effort to resolve and that new problems will continually arise. Even so, the situation is far from hopeless provided that public and private officials who deal with the Eskimo people recognize that they are involved in a multi-dimensional process, and that they are not merely "on a one-way street".

APPENDIX A

SUPPLEMENTARY STATISTICS

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T A B L E I

ESKIMO POPULATION,
NORTHWEST TERRITORIES, 1961 to 1970

<u>YEAR</u>		
1961		8,207
1962		8,282
1963		8,565
1964		8,928
1965		9,382
1966		9,792
1967		10,278
1968		10,736
1969		11,175
1970		12,300

Source: Report on Health Conditions in the Northwest Territories, Ottawa, Department of National Health and Welfare, Northern Health Service, 1961 to 1968, and Annual Report of the Commissioner of the Northwest Territories, Yellowknife, Government of the Northwest Territories, 1970.

ESKIMO POPULATION BY AGE AND SEX
NORTHWEST TERRITORIES, 1961

<u>AGE GROUP</u>	<u>MALE</u>	<u>FEMALE</u>	<u>TOTAL</u>	<u>PER CENT</u>	
				<u>Eskimos</u>	<u>All Canada*</u>
0 - 4	806	774	1,580	19.8	12.4
5 - 9	579	549	1,128	14.1	11.4
10 - 14	539	512	1,051	13.2	10.2
15 - 19	372	382	754	9.5	7.8
20 - 24	348	364	712	8.9	6.5
25 - 34	578	519	1,097	13.8	13.6
35 - 44	418	347	765	9.6	13.1
45-- 54	280	218	498	6.2	10.3
55 - 64	127	118	245	3.1	7.1
65 - 59	35	38	73	0.9	2.6
70 +	41	33	74	0.9	5.0
TOTAL	4,123	3,854	7,977	100.0	100.0

Source: Dominion Bureau of Statics, Census of Canada, 1961,
Ottawa.

* Percentage breakdown, by age group, of entire population
of Canada. Column included for purpose of comparison.

T A B L E I I I

BIRTH RATES, DEATH RATES AND NATURAL INCREASE
PER THOUSAND PEOPLE, ESKIMOS,
NORTHWEST TERRITORIES, 1932 to 1968

<u>YEAR</u>	<u>LIVEBIRTHS</u> (per 1,000)	<u>CRUDE DEATH</u> <u>RATE</u> (per 1,000)	<u>NATURAL</u> <u>INCREASE</u> (per 1,000)
1932	20.0	13.0	7.0
1936	21.0	15.0	5.0
1940	20.0	17.0	3.0
1944	31.0	29.0	2.0
1948	43.0	22.0	21.0
1952	42.0	21.0	21.0
1956	47.0	16.0	31.0
1960	51.0	15.0	36.0
1962	61.0	23.0	38.0
1963	59.8	17.4	42.4
1964	62.2	14.4	47.8
1965	65.8	11.1	44.7
1966	54.4	12.6	41.9
1967	53.4	10.3	43.1
1968	53.3	10.6	47.4

Source: Report on Health Conditions in the Northwest Territories, Ottawa, Department of National Health and Welfare, Northern Health Service, 1961 to 1968.

Note: Figures for the years 1932 to 1960 are approximate.

INFANT MORTALITY RATE,
ESKIMOS, NORTHWEST TERRITORIES, COMPARED WITH
AVERAGE FOR ALL CANADA

<u>YEAR</u>	<u>ESKIMOS</u>	<u>ALL CANADA</u>
1951	131	39
1952	175	38
1953	197	36
1954	155	32
1955	208	31
1956	250	32
1957	228	31
1958	240	30
1959	206	28
1960	211	27
1961	193	
1962	194	28
1963	157	
1964	94	24
1965	95	
1966	109	23
1967	84	
1968	89	

Source: Report on Health Conditions in the Northwest Territories, Ottawa, Department of National Health and Welfare, Northern Health Service.

Note: Infant mortality refers to number of deaths of children, aged 0 to 365 days, per 1,000 live births.

T A B L E V

CAUSES OF DEATH, ESKIMO POPULATION,
NORTHWEST TERRITORIES,
1963 to 1968

<u>CAUSES</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
Injuries and Accidents	22	31	15	17	21	32
Pneumonia	30	35	23	33	23	30
Diseases of Infancy and Malformations	31	12	10	20	12	17
All other causes	59	51	56	53	50	35
	—	—	—	—	—	—
TOTAL	142	129	104	123	106	114
	—	—	—	—	—	—

Source: Report on Health Conditions in the Northwest Territories, Ottawa, Department of National Health and Welfare, Northern Health Service, 1963 to 1968.

ESKIMO LABOUR FORCE BY OCCUPATION,
NORTHWEST TERRITORIES, 1961

	<u>MALE</u>	<u>FEMALE</u>	<u>TOTAL</u>	<u>PER CENT</u>	
				<u>Eskimo</u>	<u>All Canada¹</u>
Managerial	6		6	0.3	8.3
Professional and Technical	25	2	27	1.5	9.7
Clerical	5	3	8	0.5	12.9
Sales	9	3	12	0.7	6.3
Service and Recreation	121	70	191	10.8	12.3
Transportation and Communication	23		23	1.3	6.1
Farmers and Farm Workers	14		14	0.8	10.0
Loggers and Related Workers	1		1	0.1	1.2
Fishermen, Trappers and Hunters	1,015	5	1,020	57.8	0.5
Miners, Quarrymen and Related Workers	43		43	2.4	1.0
Craftmen, Production Process and Related Workers	123	18	141	8.0	24.2
Labourers, n.o.s.	232	2	234	13.3	4.9
Occupation not stated	43	2	45	2.5	2.6
TOTAL, ALL OCCUPATIONS	1,660	105	1,765	100.0	100.0

Source: Dominion Bureau of Statistics, Census of Canada, 1961,
Ottawa.

* Percentage breakdown, by occupation, of entire population of
Canada. Column included for purposes of comparison.

PERCENTAGE OF SPECIFIC AGE GROUPS IN OCCUPATIONAL
CATEGORIES, FULLY EMPLOYED MALE ESKIMO LABOUR FORCE,
KEEWATIN, NORTHWEST TERRITORIES,
JULY 1, 1967 to JUNE 30, 1968

AGE GROUP	WAGE AND SALARY EMPLOYMENT (per cent)	HUNTING, TRAPPING, FISHING (per cent)	HANDICRAFT PRODUCTION (per cent)
14	0	0	0
15 - 19	8.2	2.1	0
20 - 24	21.7	6.6	0
25 - 29	24.7	6.8	2.7
30 - 34	32.3	9.7	4.8
35 - 39	16.1	9.7	9.7
40 - 44	24.1	6.9	8.6
45 - 49	16.7	13.9	13.9
50 - 54	22.6	9.7	9.7
55 - 59	3.8	3.8	15.4
60 - 64	15.0	5.0	5.0
65	0	0	5.6
TOTAL	18.0	6.5	4.9

Source: D.F. Preston, Economic Analysis of the Human Resources of the Keewatin Region, Northwest Territories, Ottawa, Department of Indian Affairs and Northern Development, 1969, p. 18.

PERCENTAGE OF SPECIFIC AGE GROUPS IN OCCUPATIONAL
CATEGORIES, MALE ESKIMO LABOUR FORCE EMPLOYED
25 to 45 WEEKS, KEEWATIN, NORTHWEST TERRITORIES,
JULY 1, 1967 to JUNE 30, 1968

AGE GROUP	WAGE AND SALARY EMPLOYMENT (per cent)	HUNTING, TRAPPING, FISHING (per cent)	HANDICRAFT PRODUCTION (per cent)
14	0	0	0
15 - 19	4.2	4.1	1.0
20 - 24	16.1	12.3	2.8
25 - 29	11.0	20.6	2.8
30 - 34	14.5	14.5	4.8
35 - 39	12.8	29.0	6.4
40 - 44	10.3	27.6	6.8
45 - 49	8.4	30.6	0
50 - 54	9.7	16.1	6.4
55 - 59	3.8	23.1	23.0
60 - 64	0	15.0	0
65	0	5.6	11.2
TOTAL	9.8	16.6	4.4

Source: D.F. Preston, Economic Analysis of the Human Resources of the Keewatin Region, Northwest Territories, Ottawa, Department of Indian Affairs and Northern Development, 1969, p. 20.

T A B L E IX

PERCENTAGE OF SPECIFIC AGE GROUPS IN OCCUPATIONAL
CATEGORIES, MALE ESKIMO LABOUR FORCE EMPLOYED
1 to 24 WEEKS, KEEWATIN, NORTHWEST TERRITORIES,
JULY 1, 1967 to JUNE 30, 1968

<u>AGE GROUP</u>	<u>WAGE AND SALARY EMPLOYMENT</u> (per cent)	<u>HUNTING, TRAPPING, FISHING</u> (per cent)	<u>HANDICRAFT PRODUCTION</u> (per cent)
14	13.0	0	8.7
15 - 19	45.5	6.2	14.5
20 - 24	53.8	17.9	23.4
25 - 29	56.2	15.1	34.3
30 - 34	45.1	27.4	40.3
35 - 39	64.6	24.2	38.6
40 - 44	53.5	24.1	39.6
45 - 49	44.4	25.0	44.5
50 - 54	38.7	22.6	45.1
55 - 59	46.1	26.9	38.5
60 - 64	50.0	30.0	45.0
65	16.7	0	16.8
TOTAL	48.5	18.1	31.1

Source: D.F. Preston, Economic Analysis of the Human Resources of the Keewatin Region, N.W.T., Ottawa, Department of Indian Affairs and Northern Development, 1969, p. 20.

T A B L E X

AVERAGE EARNED AND UNEARNED INCOME PER FAMILY,
KEEWATIN, NORTHWEST TERRITORIES,
JULY 1, 1967 TO JUNE 30, 1968

	<u>EARNED</u> <u>INCOME</u>	<u>UNEARNED</u> <u>INCOME</u>	<u>TOTAL</u> <u>INCOME</u>
	\$	\$	\$
Eskimo Point	1,336	503	1,839
Whale Cove	3,178	384	3,562
Rankin Inlet	3,464	333	3,797
Chesterfield Inlet	2,917	649	3,566
Coral Harbour	2,543	347	2,990
Repulse Bay	1,256	399	1,655
Baker Lake	2,966	1,004	3,970
All Settlements	2,489	559	3,048

Source: D. F. Preston, Economic Analysis of the Human Resources of the Keewatin Region, N.W.T., Ottawa, Department of Indian Affairs and Northern Development, 1969, p. 34.

T A B L E X I

AVERAGE EARNINGS PER ESKIMO FAMILY BY SOURCE,
KEEWATIN, NORTHWEST TERRITORIES,
JULY 1, 1967 TO JUNE 30, 1968

	WAGE AND SALARY EMPLOYMENT	HUNTING TRAPPING, FISHING	HANDICRAFT PRODUCTION	TOTAL
	\$	\$	\$	\$
Eskimo Point	1,087	106	143	1,336
Whale Cove	2,665	211	302	3,178
Rankin Inlet	2,615	152	697	3,464
Chesterfield Inlet	2,739	12	166	2,917
Coral Harbour	2,107	333	106	2,543
Repulse Bay*	392	600	264	1,256
Baker Lake	2,502	109	357	2,968
All Settlements	1,999	180	310	2,498

Source: D. F. Preston, Economic Analysis of the Human Resources of the Keewatin Region, N.W.T., Ottawa, Department of Indian Affairs and Northern Development, 1969, p. 33.

*Repulse Bay is one of the most inaccessible settlements of the Arctic. Much of the population's food is still obtained by hunting, and a larger than usual proportion of cash income derives from trapping.

T A B L E X I I

INUVIK EMPLOYMENT BY INCOME AND ETHNIC STATUS,
JULY, 1965

<u>MONTHLY INCOME</u>	<u>WHITE</u>	<u>ESKIMO</u>	<u>INDIAN</u>	<u>OTHER*</u>
\$				
Under 250	14	11	13	4
250 - 300	28	11	9	3
300 - 350	19	64	18	25
350 - 400	47	5	2	2
400 - 450	32	4	6	4
Over 450	81	3	1	2
TOTAL	221	98	49	40

Source: John R. Wolforth, The Mackenzie Delta - Its Economic Base and Development, Ottawa, Department of Indian Affairs and Northern Development, 1966, p. 54.

*"Other" refers to people of mixed ethnic status; that is, Indian-white, Eskimo-white, Eskimo-Indian.

PUPIL ENROLMENT IN SCHOOLS
INSIDE THE NORTHWEST TERRITORIES
SCHOOL YEAR 1949-50 to 1967-68

<u>SCHOOL YEAR</u>	<u>ESKIMO ENROLMENT</u>	<u>INDIAN ENROLMENT</u>	<u>OTHER ENROLMENT</u>	<u>TOTAL ENROLMENT</u>
1949-50	141	365	609	1,115
1950-51	Accurate Information not available			
1951-52	Accurate Information not available			
1952-53	N/Av.	N/Av.	N/Av.	1,491
1953-54	N/Av.	N/Av.	N/Av.	1,792
1954-55	374	618	1,037	2,029
1955-56	454	716	1,103	2,278
1956-57	556	695	1,188	2,439
1957-58	783	812	1,323	2,918
1958-59	930	948	1,522	3,400
1959-60	1,205	1,100	1,787	4,092
1960-61	1,397	1,097	1,966	4,460
1961-62	1,526	1,152	2,147	4,825
1962-63	1,806	1,188	2,318	5,312
1963-64	1,879	1,146	2,500	5,525
1964-65	1,932	1,247	2,715	5,894
1965-66	2,148	1,280	2,890	6,318
1966-67	2,500	1,340	3,053	6,893
1967-68	2,795	1,486	3,350	7,631

Sources: Annual Reports, Department of Northern Affairs and
National Resources;

Annual Reports, Government of the Northwest Territories.

T A B L E XIV

ENROLMENT OF RESIDENTS OF THE NORTHWEST TERRITORIES
IN VOCATIONAL COURSES,
FISCAL YEAR 1959-60 to 1968-69

<u>FISCAL YEAR</u>	<u>COURSES IN THE N.W.T.</u>			<u>COURSES IN THE PROVINCES</u>			
	<u>Eskimo</u>	<u>Indian</u>	<u>Other</u>	<u>Eskimo</u>	<u>Indian</u>	<u>Other</u>	<u>TOTAL</u>
1959-1960	59	92	122	43	27	33	376
1960-1961	53	68	108	35	18	51	333
1961-1962	51	89	96	32	9	39	327
1962-1963	94	123	93	51	9	42	412
1963-1964	89	89	174	103	14	45	519
1964-1965	94	94	193	95	6	51	533
1965-1966	147	113	277	104	27	91	759
1966-1967	150	145	343	77	22	117	864
1967-1968	160	154	361	120	30	100	925
1968-1969	400	220	292	181	43	69	1,205

Source: Material on file with the Department of Indian Affairs and Northern Development, Ottawa.

T A B L E X V

HIGHEST GRADE COMPLETED
 ESKIMOS 14 YEARS OF AGE AND OVER
 KEEWATIN, N.W.T.
 JANUARY, 1969

	<u>MALE</u> (per cent)	<u>FEMALE</u> (per cent)
Never attended school	55.4	56.2
Grade 2 or higher	34.4	33.4
Grade 4 or higher	25.1	22.2
Grade 6 or higher	9.1	8.7
Grade 8 or higher	-	-

Source: D.F. Preston, Economic Analysis of the Human Resources of the Keewatin Region, N.W.T., Ottawa, Department of Indian Affairs and Northern Development, 1969, p.8.

T A B L E X V I .

PERSONS ABLE TO SPEAK BOTH ESKIMO AND ENGLISH,
KEEWATIN, N.W.T., 1969

<u>AGE GROUP</u>	<u>MALE</u> (per cent)	<u>FEMALE</u> (per cent)
14-24	92.9	86.3
25-39	39.6	22.1
40-99	16.4	4.9
All ages	52.1	40.9

Source: D.F. Preston, Economic Analysis of the Human Resources of the Keewatin Region, N.W.T., Ottawa, Department of Indian Affairs and Northern Development, 1969, p. 6.

T A B L E XVII

NORTHERN RENTAL HOUSING PROGRAM, 1966 to 1968

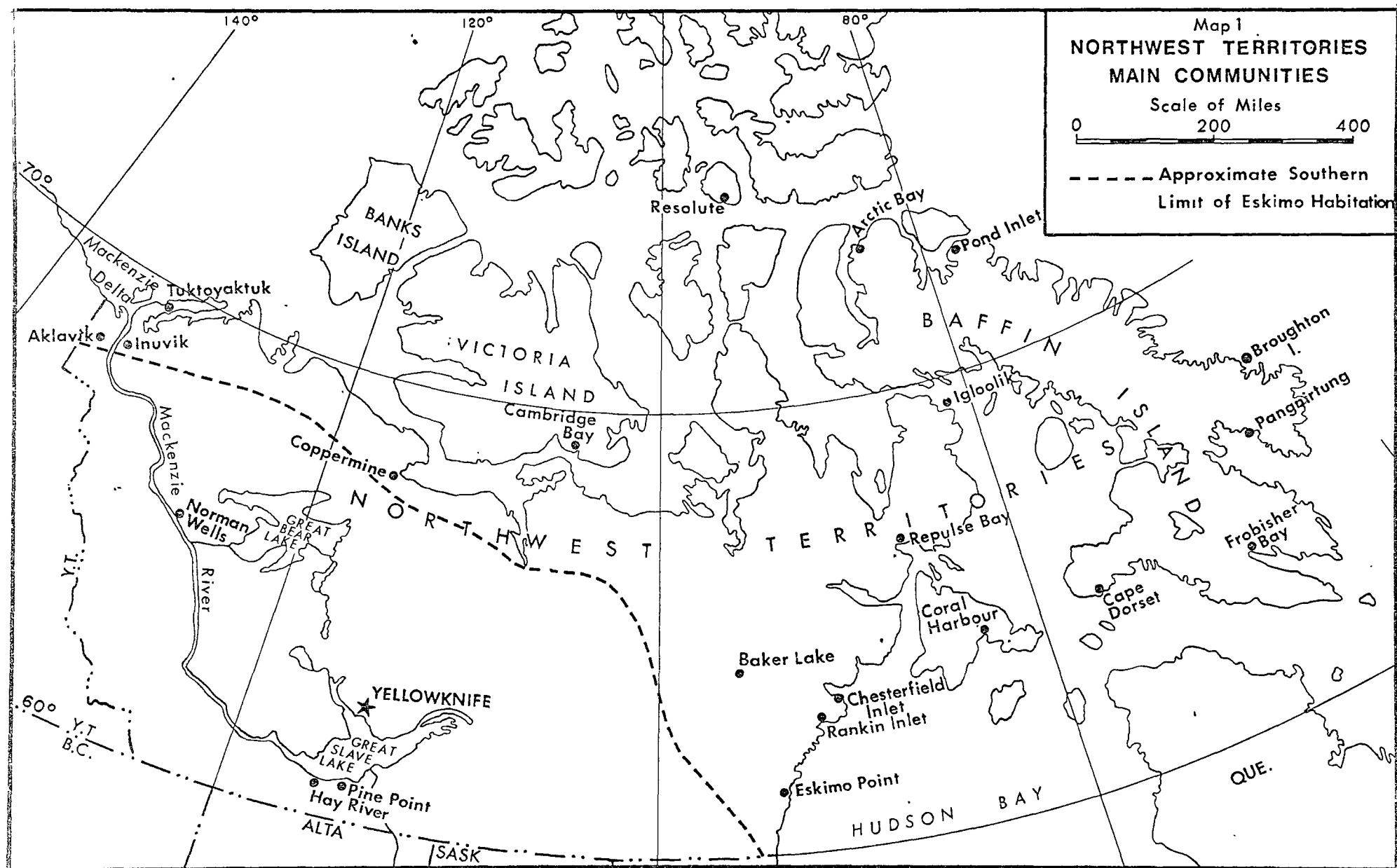
	<u>FROBISHER REGION</u>		<u>KEEWATIN REGION</u>		<u>FORT SMITH REGION</u>		<u>TOTAL</u>	
	<u>Units</u>	<u>Cost</u>	<u>Units</u>	<u>Cost</u>	<u>Units</u>	<u>Cost</u>	<u>Units</u>	<u>Cost</u>
		\$		\$		\$		\$
1966	197	1,773,000	5	45,000			202	1,818,000
1967	154	1,493,800	157	1,522,900	48	465,600	359	3,482,300
1968	24	264,000	141	1,551,000	80	880,000	245	2,695,000

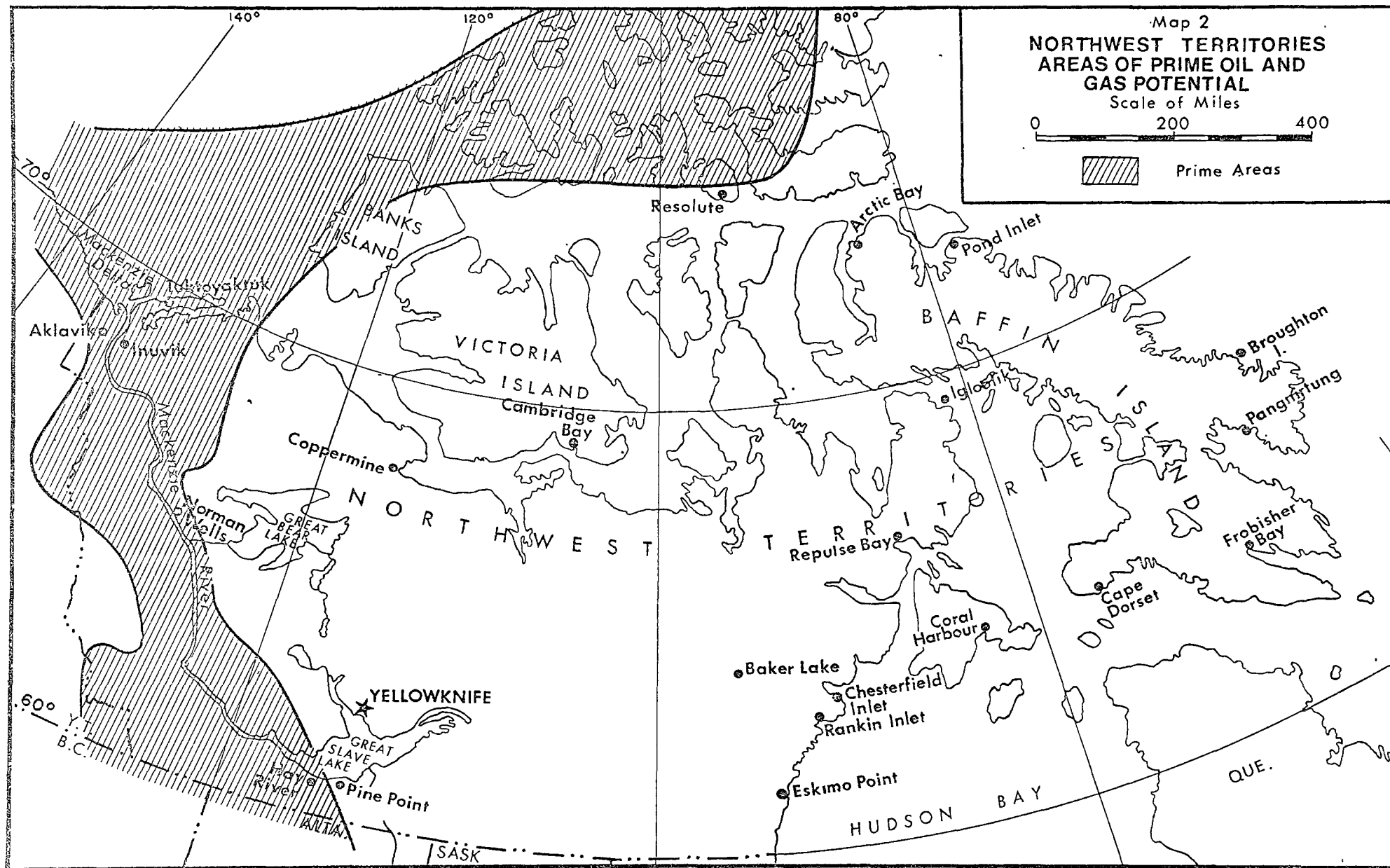
Source: Material on file with the Department of Indian Affairs and Northern Development, Ottawa.

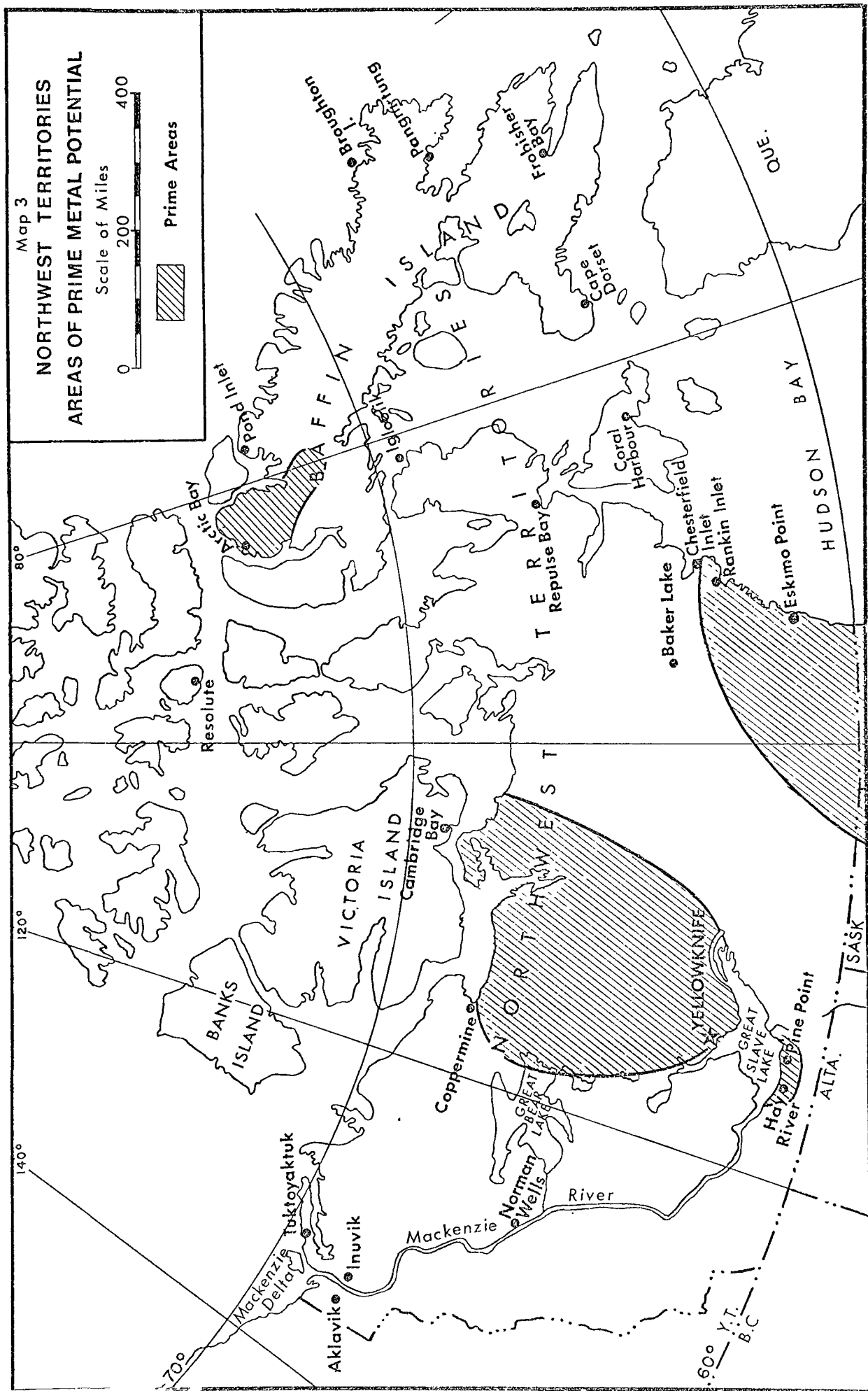
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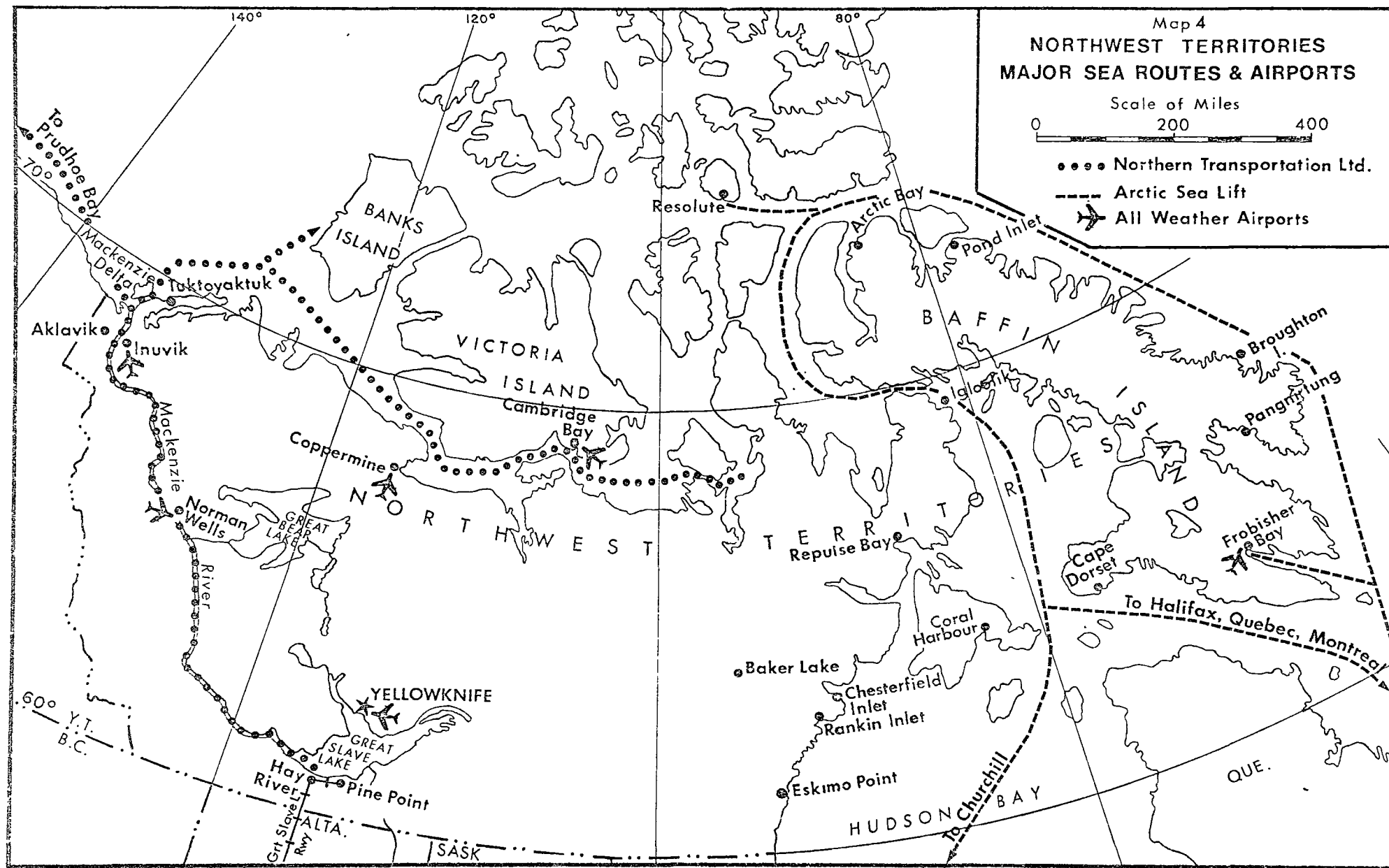
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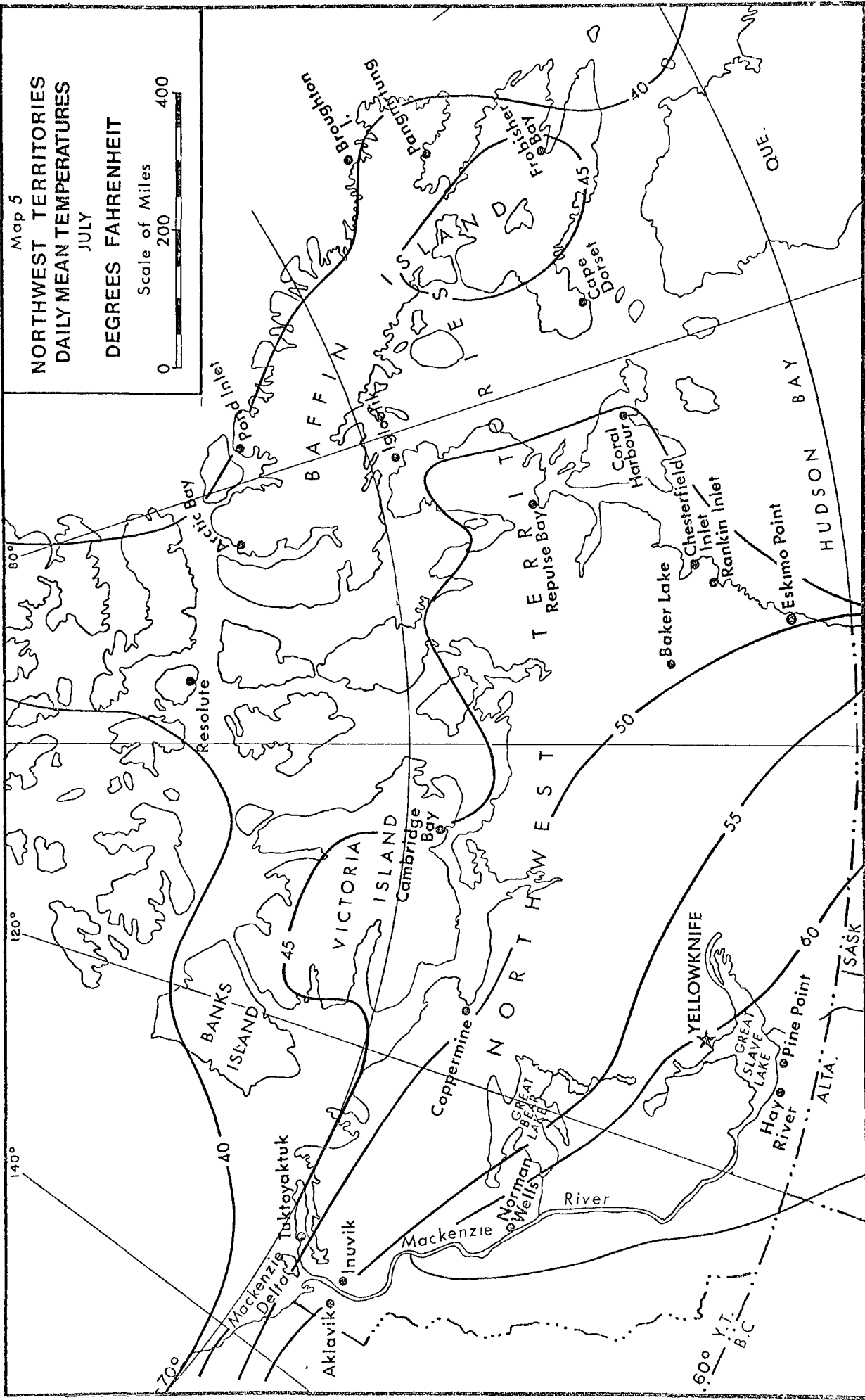
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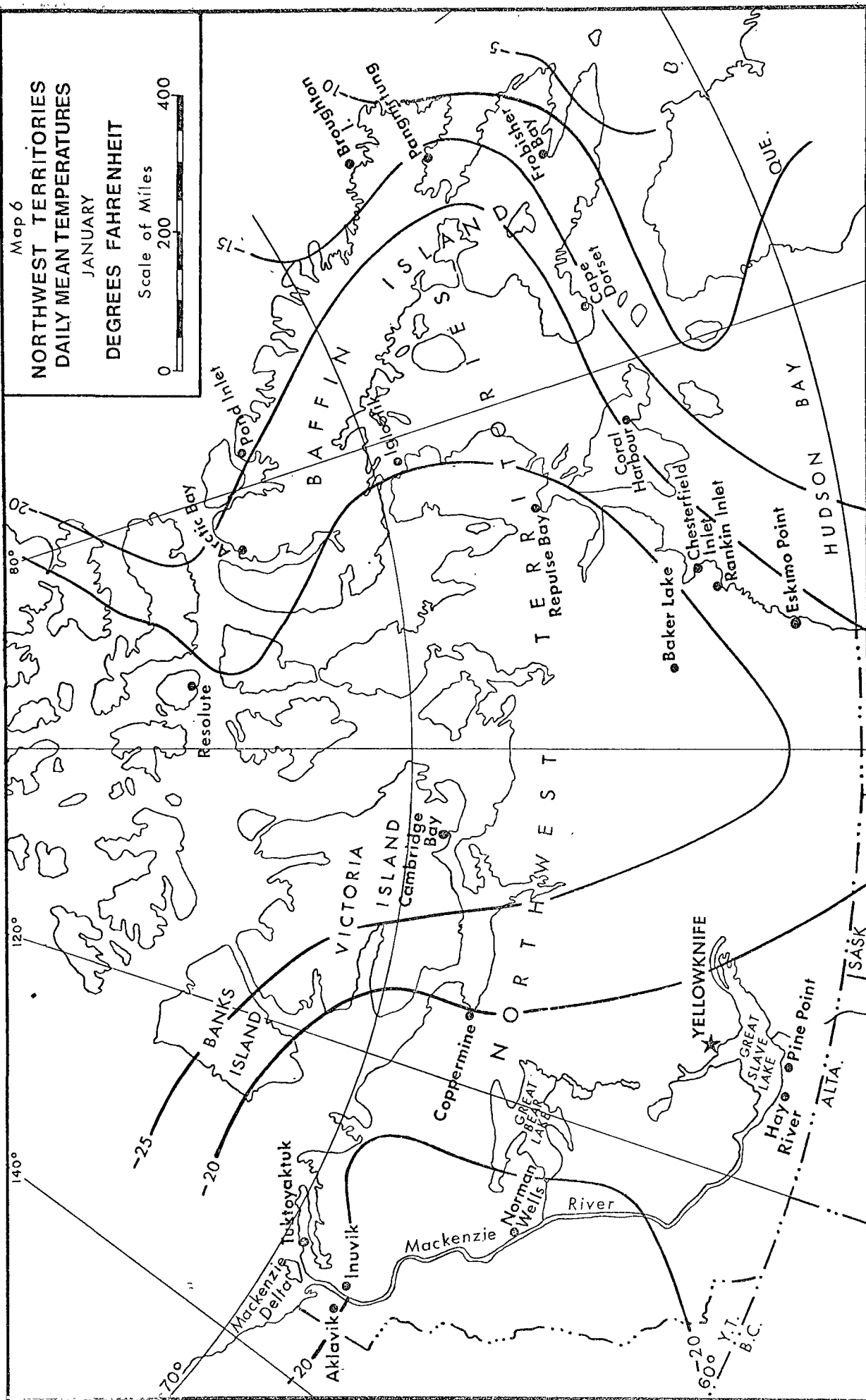












Notes on Maps

The purpose of the maps is to provide the reader with a general geographic orientation to the Arctic regions which are discussed in this thesis. The author is grateful to Mr. R. Norgren and the staff of the Drafting Services, Northern Economic Development Branch, Department of Indian Affairs and Northern Development, Ottawa, for the valuable assistance which was rendered to him.

The following points should be noted in reviewing the maps:

- Map 1 - Northwest Territories, Main Communities: Only the most important Eskimo communities are shown. A few of the major non-Eskimo communities; for example, Yellowknife and Hay River, are shown for general orientation. The line showing the approximate southern limit of Eskimo habitation was drawn on the basis of much of the material used by the writer, and generally indicates the region in which Eskimos have hunted and trapped during historic times.
- Map 2 - Northwest Territories, Areas of Prime Oil and Gas Potential: The map shows only those areas which are considered to have the very best potential from the point of oil and natural gas exploration. The region which has been shaded follows the main part of the Western Sedimentary Basin and includes areas in which sediments are believed to be particularly thick.

Exploration is now underway throughout the shaded area, to either side of it, and also in areas such as Hudson Bay, where prospects of finding significant quantities of oil and gas are distinctly poorer. Data from which the map was developed are based on material available to the writer within the Northern Economic Development Branch, Department of Indian Affairs and Northern Development.

Map 3 - Northwest Territories, Areas of Prime Metal Potential:

This map also shows only the very best prospective areas known to date. Data from which the map was developed are based on material available to the writer within the Northern Economic Development Branch, Department of Indian Affairs and Northern Development.

Map 4 - Northwest Territories, Major Sea Routes and Airports:

Only the main transportation routes and facilities are shown. Most small Arctic villages have airports, but in most cases these are of a poor quality, and cannot be used during fall freeze-up and spring break-up. All water transport is seasonal. In the Eastern Arctic and Hudson Bay, surface transportation is provided by the annual Arctic Sea Lift operated by the Canadian Coast Guard. In the Western Arctic, coasting services are provided by the Northern Transportation Company Limited as an extension of its

Mackenzie River services. The map is based on material available within the Department of Indian Affairs and Northern Development, Ottawa.

Maps 5 and 6 - Northwest Territories, Daily Mean Temperatures, July and January: The isotherms were derived from the compilations of the Meteorological Service of the Ministry of Transport. The two maps are based on Department of Northern Affairs and National Resources, The Northwest Territories Today, Ottawa, Queen's Printer, 1965, pp. 6 - 8.

APPENDIX C

SUGGESTIONS FOR FURTHER RESEARCH

SUGGESTIONS FOR FURTHER RESEARCH

This thesis has dealt with the complex process of economic, social and cultural change. It has provided some insights into the problems confronting the Eskimos, and particularly the economic aspects of these problems. Yet many issues which were identified during the course of the study have necessarily had to be given only partial treatment, or left in complete abeyance. There is, therefore, substantial scope for further research into the phenomena of unemployment, underemployment, low productivity, and low income in the Canadian Arctic.

Such research might perhaps follow three broad lines: research directed toward the Eskimos themselves; research into the developmental problems of the Arctic; and research into experiences in other parts of the world which could throw some light into problems encountered in Arctic Canada.

Research on Eskimos

As was mentioned in Chapter I, a great deal of research has been undertaken on Eskimos by scholars from a variety of social disciplines. On a per capita basis, Eskimos have been given more than their fair share of attention by the sociologist, anthropologist and geographer. Yet, perhaps not enough of the research effort has focused with sufficient directness on the core problem with which

the Eskimo is faced: that of being able to earn a consistent livelihood in a milieu which offers little optimism about the future. If this problem is to be understood and resolved, research along several fronts is urgently needed:

Data Gathering:

The data base necessary to research on the economic and social problems of the Eskimos is currently inadequate. However, a large body of data is known to be scattered throughout the files of government departments. Data must also exist in the records of private companies such as the Hudson Bay Company, North Rankin Nickel Mines, and the Canadian National Railway. Data will also soon be available from the 1971 Census and the Labour Force Surveys of Baffin Island and the western Arctic. A primary research task would therefore be the collation and preparation of more complete data series on the Eskimos than are currently available.

Economic Research:

Several economic phenomena observed among Eskimos would be worth examining once a firmer data base had been established. The characteristics of the Eskimo population itself need further study. Material reviewed in this thesis suggests that a number of relatively distinctive sub-populations have developed within the overall population.

A significant proportion of the population may now form a "sub-culture" which is largely dependent on government subsidy. What is the significance of this in terms of the Eskimo's ability to provide for his own livelihood in future and in terms of mounting public costs? The fact that a considerable part of the Eskimo population is unresponsive to both traditional pursuits and modern employment indicates that a search is required for work methods and incentives which are more appropriate to this population.

Another area requiring more study is the demographic nature of the Eskimo population. Many Eskimo women are currently bearing children at a rate which approaches the biological maximum. In Chapter III, it was assumed that this was attributable to the high birth rate traditional to a hunting-gathering population, and the increased availability of modern medicine, better housing, and higher sanitation standards in the Arctic. Yet this may be only a partial explanation, and other factors may be at work. One possibility is that the rigorous life which women formerly led in small hunting-fishing camps and on traplines inhibited pregnancy. Now that Eskimo women live in the much more comfortable surroundings of the "urban" Arctic, natural barriers to high fertility no longer exist, and attitudes leading to the widespread use of artificial contraception have not yet developed.

What this suggests is that a possible key to dampening the "population explosion" underway in the Arctic may be the development of a much more active female labour force.

Other aspects of the demographic question also warrant further examination. While some statistics on fertility, mortality and longevity have been compiled, little is known about the factors which underly these variables. There is insufficient knowledge of how attitudes toward having large families may differ with age, location and degree of acculturation to white society. In view of the importance of the demographic problem to the development of the Arctic, much more must be known about these subjects if meaningful programs of population control are to be initiated.

Much additional research is required on the Eskimo as a participant in the modern labour market. As one example, more study must be given to the correlations which may exist among key labour market variables such as income, occupation, education, mobility and employment experience. A number of sources have suggested that little of the vocational education effort expended on Eskimos to date has been useful. Nevertheless, some programs must have been more useful than others both because they were directly related to the demand for labour in the Arctic, and because Eskimos have been more receptive to them. It is particularly important that programs

which have achieved some degree of success should be carefully examined so that successful elements might be incorporated into other programs.

Studies accounting for the mobility or immobility of individuals and families are also needed. Why have some Eskimos been able to make the transition from the traditional to the modern sector of the Arctic economy, but not others? What elements are essential to the successful relocation of Eskimo families? Questions of skill transfer also need study. There have been suggestions that highly skilled and motivated trappers are able to master the work routines of the modern sector with relative ease, but little concerning this has been documented.

Social Research :

Several matters falling into a social or cultural sphere of interest rather than an economic one require further examination. Considerably more study is needed of the "interface" between Eskimo and white cultures. Within this interface, which factors inhibit inter-cultural mobility, and which reinforce it? How does the Eskimo typically view white society, and how soundly based are these views? Probably, many Eskimos feel that a white milieu (such as jobs in the modern sector) is heavily "loaded" against them. By what demonstrable acts can such feelings be overcome?

Education is a key variable in socio-economic change. The degree to which it is a constructive variable must depend on the perceptiveness and sensitivity with which it is applied. It would appear that the sensitivity with which at least a considerable proportion of the educational effort in the Arctic has been applied is open to question. Eskimos have been taught in a language other than their own by people of another culture in conventional schools located in their own largely artificial settlements, or at residential schools far from home. Parents have been typically unaware (but suspicious) of what goes on in the settlement school house or residential school. Products of the school system have been neither identifiably Eskimo nor white. Surely education can, and must, be handled better than this. Research into educational methods and curricula in the Arctic is urgently needed if education is to be a meaningful variable in the development of the region and its people.

Study should also be given to how Eskimos might be encouraged to take a broader interest in the social and economic welfare of their own people. The tradition of a broader "society" is alien to Eskimos. However, a promising start has been made toward the recognition of responsibilities which transcend the family or group through the formation of community councils in many of the Arctic settlements, and in the development of organizations such as the Committee

for Original Peoples' Entitlement (COPE). To date, COPE has affected only a relatively small part of the Eskimo population, and it may not be the appropriate group to deal with the interests of people living east of the Mackenzie Delta. Nevertheless, it could serve as a model for the development of broader groups elsewhere.

Research on the Arctic Economy

Several of the main characteristics of the Arctic economy have been given some discussion in this thesis. These centre on the undiversified nature of activity in the Arctic; the region's openness to external influences; instability and uncertainty surrounding economic activity; a preponderance of public activity and subsidy; the absence of regional linkages among points of activity and population; and the limitations of the resource base. Each of these characteristics is only very poorly understood and requires substantial research.

The undiversified nature of activity may in part reflect the nature of the effort government has made in encouraging private enterprise to enter the region. This effort may be both too small and too restricted in its scope. It has very largely focused on the Arctic's extractive resources. Perhaps mining, and oil and natural gas, are the only modern

sector activities which may prove viable in the Arctic. However, their ability to provide a sufficiently broad employment base is questionable. Other activities should therefore be given at least some consideration. Three categories which deserve more attention are tourism and recreation; "exotic" manufacturing industries; and activities which apply an "intermediate technology" to the resource base of the traditional sector.

The uncertainty and instability encountered in the Arctic economy are in considerable measure related to its openness to external influences. A rudimentary economy largely dependent on the rest of the world for markets, capital and technology should be expected to behave erratically. The important question which arises out of this is how the external dependence of the Arctic might be reduced or redirected so that activity becomes more stable. Specifically, what can be done to tie primary production in the Arctic to secondary and tertiary production within the region itself or in southern Canada? How can a greater measure of Canadian control over the economy of the Arctic be established?

Another source of uncertainty and instability arises out of the resource base. The mineral inputs to modern activity are difficult to find, and substantial amounts of money have to be spent on widespread exploration programs

before a marketable discovery is made. Production depends on finding solutions to complex technical problems which are in many respects unique to the region. Engineers can therefore draw on few precedents in approaching these problems. However, the mineral resources of the Arctic are not unique; many still occur in abundance in more favourably located parts of the world. How to set production of the region's major resources in motion under such unfavourable circumstances is a most difficult question to resolve.

The resource base of the traditional sector also demonstrates instability and uncertainty. Animal populations are erratic in both number and location. They can be easily overharvested and take a long time to regenerate. Considerable attention has already been given to research on northern animal populations. However, species are now particularly endangered because of the rapidly increasing level of mineral exploration in the Arctic. Research will have to be accelerated if some of the important species upon which Eskimos depend are to survive in sufficient numbers to provide a continuing resource.

Little research has been undertaken to date on the question of increasing and "thickening" the linkages which now exist in only rudimentary form among Arctic communities and points of activity. The degree to which inter-community and inter-industry linkages exist is important to the develop-

ment of any region. What types of inter-community transfers of goods, people and income might be realized in the Arctic as a basis for regional growth? Can such transfers be channeled and directed in such a manner that communities in any given area begin to specialize along complementary lines, and a broader market and division of labour begins to emerge? These and similar questions will require extensive study because answers are by no means readily apparent.

Research on Experience Elsewhere

This thesis has been restricted to a study of Eskimos of the Northwest Territories. It would be useful to broaden the scope of the enquiry and examine the experiences and problems encountered by Eskimo populations living in other regions.

Additional insights to the problems of Canadian Eskimos would be gained by a detailed examination of the populations of Nouveau Québec and Labrador. Generally, problems encountered by Eskimos in these regions have been similar to those of the Northwest Territories, but undoubtedly there are unique features.

Alaskan experience is known to resemble the experience in Canada in some important respects. Yet there are many exceptional aspects to it. A principal one is that Alaskan Eskimos have for many years been members of the Alaskan

Native Brotherhood, an organization which has become increasingly sophisticated and politically potent. Recently, the Brotherhood has been an effective force in preventing the commencement of construction of the Trans Alaska (Aleyska) Pipeline, freezing the disposition of federal lands in Alaska, and, generally, curtailing economic development within the State. The issue at question is the settlement of native claims to Alaskan lands, and legislation is currently under consideration within the United States Congress on this and other issues.

Greenland would seem to be an area which is particularly worthy of study by Canadians. In Greenland, the Danish Government has now pursued a policy of Eskimo development for many decades. A substantial proportion of the Eskimo population is educated, literate, skilled, and employed. Even so, a variety of social and inter-cultural problems are still encountered. Both positive and negative facets of the Greenlandic experience would be worth knowing in detail.

The circumstances of the people of northern and eastern Siberia should also be examined. However, these people are more numerous than Canadian Eskimos and are probably at a more advanced stage of development. It might be difficult to develop meaningful comparisons between the Soviet and Canadian Arctic because of the diverse political and economic traditions of the two regions, as well as other special factors.

As a final point, the problems discussed in this study, low income, unemployment, and underemployment, are by no means unique to Eskimos. Studies focusing on these problems, wherever they occur, could yield insights to the problems of the Canadian Arctic. Comparative research focusing on Canadian Indian groups which are at approximately the same stage of development as Eskimos would seem particularly useful in this respect.

APPENDIX D
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