MASS COMMUNICATION IN THE CANADIAN ARCTIC

MASS COMMUNICATION AND ESKIMO ADAPTATION IN THE CANADIAN ARCTIC

Robert G. Mayes

ABSTRACT

This is a study of the mass communication system of the Canadian Arctic. Emphasis is placed on enumerating the components of the system and on clarifying both its structure and function in the process of Eskimo adaptation to western society. The components include the senders and receivers of messages, the messages themselves, the channels by which messages are exchanged, and the effects the messages have on their receivers. It is shown that the spatial distribution of available channels is biased, and that the available channels are inaccessible to most residents of the region. The major source of information is government, and most information they transmit is irrelevant to the majority of the receivers, the Eskimos. The mass communication system does not, therefore, act to ease the adaptation of Eskimos to western society.

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INTRODUCTION

> "society can only be understood through a study of the messages and the communication facilities which belong to it...."
>
> Norbert Wiener (1970c1950, 25).

This thesis is a study of the mass communication system that operates within the Canadian Arctic. The emphasis is placed on identifying the components and structure of the system, and on explaining how it functions as a means of information exchange between the Eskimo and agents of western culture.

The Arctic is a socially and economically underdeveloped region within Canada. The average age at death for Eskimos in 1965 was twenty years, while for all Canadians it was about 62. Infant mortality among Eskimos in 1966 was 108.8/1000 live births, while for all Canadians the rate was 23.1/1000 (Economic Council of Canada, 1968, 121). The incidence of tuberculosis, venereal disease, and alcoholism is substantially higher among Eskimos than among Canadians as a group (Northwest Territories, 1971). Jenness (1964, 106) has provided evidence that as much as 50% of the Eskimo population required relief in the mid-1960s to remain financially solvent. The Economic Council of Canada (1968, 122) considers the major reason for these problems to be the Eskimos' difficulty in "...coping with, and adapting to, the problems of the major society, both because of present attitudes within the white community and because of strong cultural differences".

An effective system of mass communication, by providing the Eskimos with the information basic to the process of social change, could make a significant contribution to raising their standard of living and quality of life. To clarify the structure of the mass communication system in the

Canadian Arctic, and to establish how effectively the system functions as an agent of social change, five points are considered: 1) how the mass communication system has evolved over time; 2) what channels (mass media) have been utilized in the system; 3) what spatial biases and variations in channel accessibility exist in the system; 4) who the users of the channels have been; and 5) what the content of the information flowing through the system has been.

It is the spatial arrangement of communication facilities and services combined with the content of the information flowing through the system that determines the degree to which a system will provide what Schramm (1964, ix) has called the "free and adequate" information that must be accessible if the process of social change is to proceed. Rogers (1969, 17) has pointed out specifically how social change and communication are related:

> "Social change is the process by which alteration occurs in the structure and function of a social system. The three steps involved in social change are (1) invention, the process by which new ideas are originated and developed; (2) diffusion, the process by which these new ideas are communicated throughout a social system; and (3) consequence, the sum of the changes occurring within the system as a result of the adoption or rejection of innovations."

This thesis, as a geographic study, focusses primarily on the structure of the system that allows the diffusion of information to take place. The first and third of Rogers' steps are of secondary concern. Both are considered only within the context of manifest information content, and not as part of a psychological process of information conception or impact.

Rogers has also provided a definition of communication. It is "...the process by which messages are transferred from a source to one or more receivers" (Ibid., 7). The process operates in two ways, as mass communication and as intercommunication, the distinction being based on the different characteristics of each. These are summarised in Table 1-1.

Table 1-1

Characteristics of
Mass and Intercommunication

Characteristic	Mass	Inter.
Direction of Message Flow	1-way	2-way
Speed to a plural audience	rapid	slow
Message accuracy to a plural audience	high	low
Ability to select receiver	low	high
Ability to overcome message selectivity by receiver	low	high
Amount of direct feedback	low	high

(Modified after Rogers, 1969, 125, and Borchardt, 1970, 8, 9.)

It is these characteristics which determine the dissimilar functions of the two classes of communication. Rogers (1969, 126) states that inter-communication channels "...provide for two-way interaction and feedback, which make them more effective when the goal is persuasion; whereas mass media channels provide a potent means of spreading information quickly".

It must be emphasised that this is the way in which the two classes of communication operate efficiently. Mass communication, when used alone, is unlikely to effect significant attitude change in an individual because of its operating characteristics. Messages received via mass communication channels are generally impersonal, and can either be entirely ignored or interpreted by a receiver so that they fit in with his previous beliefs. It is for these reasons that the most important role of mass communication in a developing area is to provide the information necessary for the personal discussions among individuals that will directly result in social change.

The services and facilities of the two classes of communication reflect the varying functions of each. The telephone, telegraph, and postal

systems, as well as face-to-face conversation, are intercommunication channels; radio, books, newspapers, television, and film are channels of mass communication. However, it is possible to combine channels of the two classes, as when telephone calls from listeners are broadcast as part of a radio program.

Geographic Considerations

Basic to either class of communication, and fundamental to a geographic study of communication, is the flow of information through the spatial structure of the communication system. While it is obvious that flows are inherently spatial phenomena, with distance, direction, and movement always involved, human geographers have previously devoted little effort to studies of communication, concentrating instead on transportation (Abler, 1968, ix and 14). Abler notes that the majority of communication studies carried out in geography have been concerned with

> "...the utility of message flow as indices of interaction. Communications are used as an available metric rather than being considered as intrinsically worthy of research" (Ibid., 21).

Examples of such work are Sauer's studies of cultural origin and spread, and, more recently, the many diffusion and behavioural studies, which consider the effects of information, but only rarely the system through which it is exchanged. Abler's own study is concerned with the structure of the U. S. postal and telephone systems per se, and as such is a departure from earlier work.

As was noted above, both the spatial structure of a communication system and the information that is diffused through it are equally important in a geographic study. Hägerstrand concurs with Rogers that diffusion is a function of communication, and notes its spatial implications:

> "The analysis of diffusion...may, for the sake of convenience, be broken into two parts: the study of links and the study of nodes. The links are the routes along which information and influence flow. The nodes are the individuals in their reactions to information" (Hägerstrand, 1966, 27).

Including as nodes those individuals who send, as well as receive, messages would make the statement complete.

How the diffusion process will operate depends on "...the speed, direction, and effectiveness of the flow" of information over the links connecting the nodes (McDaniel et al, 1968, 17). In preelectronic times, communication and transportation were virtually indistinguishable as elements of a circulation system which served to diffuse both information and goods. Prior to 1844, when the telegraph came into use,

> "...movement of news and information was synonymous with human spatial interaction. Even the information contained in newspapers, journals, books and other printed matter could only circulate from place to place if borne by foot or horse, or carried in vehicles or vessels" (Pred, 1971b, 499).

This resulted in a pattern of spatial biases developing in the network of links and nodes. The spatial biases were of two types: time-lag and contact-array. According to Pred, the former resulted from the unequal amount of time that was necessary to transport information to various receivers at a given distance from the sender. Such factors as climate, topography, and the vehicles and routes of transportation used could all affect the time necessary to move information to a given place. A contact-array bias resulted from the irregularity of intercourse between senders and receivers; some receivers were contacted more often than others, for such reasons as economic, kinship, or religious ties. The overall effect of the time and contact biases was to create an irregularity in the quantity and quality of information exchanged within a society or region.

The development of electronic communication channels has dramatically altered functional distances, in some cases to the point of elimination.

For instance, a radio or television transmitter can emit a signal that is carried a certain distance in every direction from the transmitter almost instantaneously, permitting what has been termed a "one point society". It must, however, be recalled that not all communication channels are electronic. Some still depend on transportation for their carriage, examples being the distribution means of newspapers, books, and movies.

The existence of spatial biases is often reflected in variations in accessibility to channels (mass media). This factor has an important role in determining the effectiveness of information flow. Accessibility is a direct function of the numbers of channels utilized at a given place, and must be considered as distinct from availability. The latter refers to the simple existence of channels, and is usually a function of the economic, technological, and political ability of a society. Accessibility to channels generally depends on there being a sufficient social and/or political motivation to utilize availability in given locations. As an example, television is available in Canada, but it is not accessible to those persons living outside the broadcast range of a transmitter or to those who do not possess a receiving set.

If the level of accessibility to information via channels of mass communication is high, another factor may come into play. This is information overload, a factor resulting from the receipt of an amount of information that is excessive in quantity or irrelevancy. When such information arrives at its destination, receivers will be so overwhelmed or so preoccupied with other interests that, effectively, no information is received. Messages will be either ignored or modified, leading to a blockage in the flow of information, a situation which may be difficult to recognize and/or overcome given the absence of direct feedback in the mass communication process.

Assuming that channels are accessible, and that information overload is not present, mass communication will serve to provide its receivers with knowledge of new ideas, and work to change their cognitions (Rogers, 1969, 126). This will in effect create and maintain a subjective view of the world that Boulding (1968c1956) has called the "Image". It is obvious that this image will depend directly on the content of the information that passes through the mass communication system to the receivers. Both quantity and quality of information in turn depend directly on the inputs of senders, as well as the number and type of channels they use to transmit the information. Pred (1967) and Wolpert (1964), among others, have provided evidence in geography of the effects of these elements on receivers. Both conclude that variations in information for any or all of the above reasons result in measurable differences in behaviour.

A better understanding of the communication process may be achieved by utilizing a model designed to illuminate its structure and function. There is in current usage among communication researchers a model called S-M-C-R-E, where a source (S) sends a message (M) over a channel (C) to a receiver (R) with a subsequent effect (E) (Rogers, 1969, 49). This can be shown diagrammatically as:

S	M	C	R	E
who	says what	how	to whom	with what effect.

While it is acknowledged that this model is a simplification of the communication process, it serves as a suitable framework within which to consider the five points noted on page two. The S and R components of the model may be equated with Hägerstrand's nodes, and the C component to his links. Together they form the spatial structure over which information is diffused. The M component is the information as it is carried in the

form of messages. The arrangement of the S, R, and C components and the content of the M component determine the effect (E) the communication process will have upon the receivers, which, in turn, shows how useful the entire system is as an agent of social change.

The model is particularly useful in a consideration of the communication system of a developing country. Schramm states that the first step in communication planning is

> "...to find out, as accurately as possible, where the country is... in its communication development. This calls, in the first place, for a basic inventory of facilities and services" (Schramm, 1964, 283).

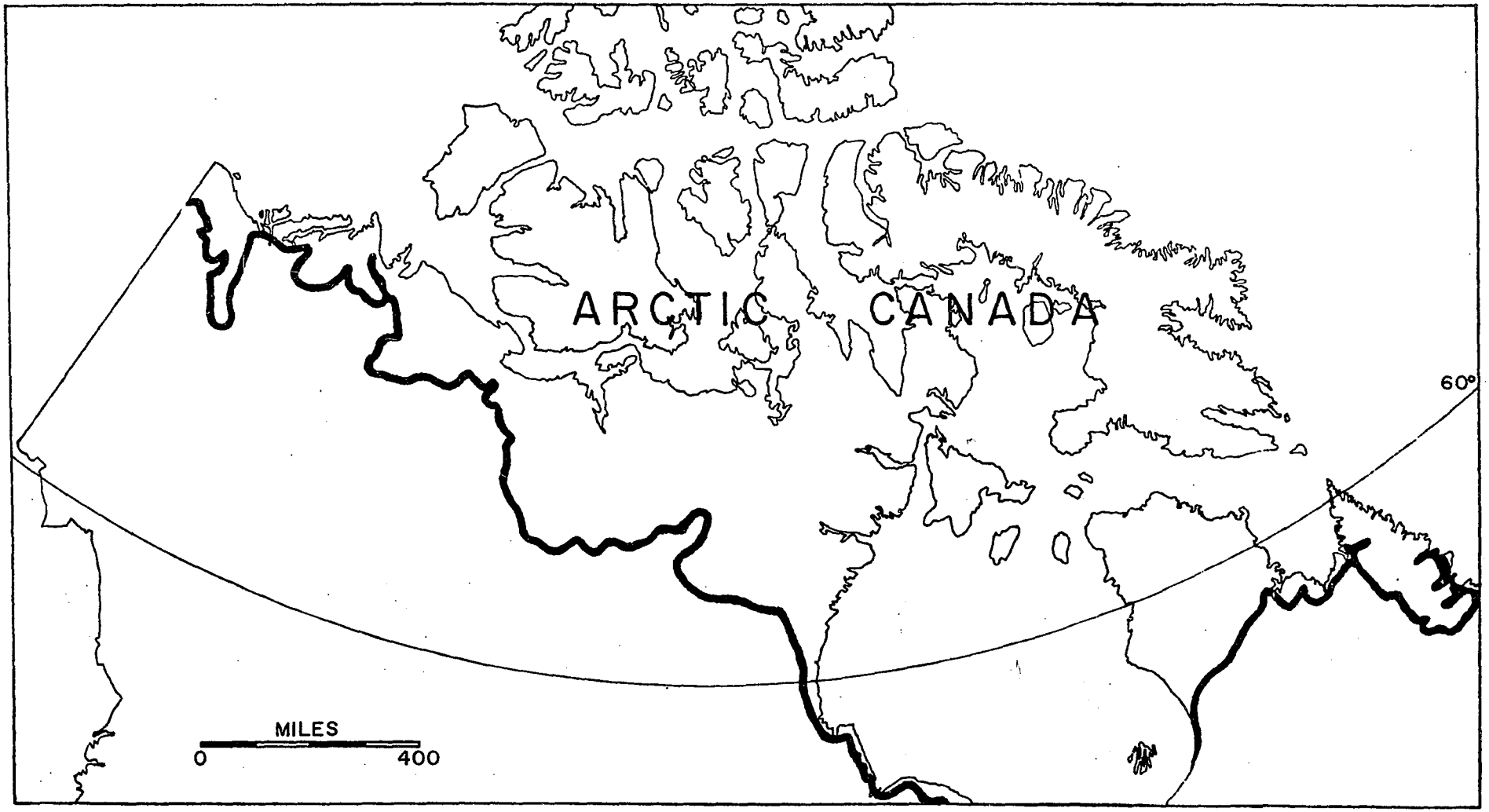
Only when such an inventory of facilities and services (which comprises the arrangement and operation of the S, R, C, and M components of the model) is completed, is one ready to move to the second research step: a consideration of the effect (the E component) of the information moving through the system.

There have been several studies previously conducted on communication in northern Canada, generally as "working papers" prepared by or for government agencies, or critiques of government programmes by outside agencies such as the Arctic Institute of North America. Most of these studies have combined a scattering of data about facilities and services with some assessment of their impact. To date, however, no complete inventory has been compiled of the communication facilities and services in the North. This lack of basic data is even more pronounced with respect to mass communication in the Arctic. The Government of Canada has undertaken a survey of communication facilities in the area generally north of 55°N west of Hudson Bay and 50°N east of it, but their information is incomplete and is concerned almost exclusively with telecommunication channels (Canada, Telecommission, 1970c). Other studies, such as those by Memorial University (Communication Needs on the East Coast of Labrador, 1970), Smith (1967), and

Murdoch (1971?) concentrate on particular regions or channels. Only Kenney's (1971, 2v) study attempts to consider both facilities and services and to assess the role they play in the process of social change, in that order. Unfortunately, his study suffers from a lack of data on the facilities and services available in his study region (the same area defined above, generally north of 55°N west of Hudson Bay and 50°N east of it), and a lack of discrimination as to what facilities and services are found in the area inhabited by Eskimos as opposed to that inhabited by Indians. Kenney's work also suffers from dwelling on the misuse of the soon to be launched Anik satellite while minimising discussion of other aspects of northern communication. To conclude, it should be noted that the recently submitted Report of the Special Senate Committee on Mass Media (1970) omits any consideration of the media in Canada's territories, confining itself exclusively to operations within the ten provinces.

This study differs in several respects from previous works on northern communication. First of all, it focusses strictly on mass communication within the Canadian Arctic (see Map 1-1). Secondly, the primary emphasis is placed on clarifying the structure of the mass communication system by inventorying the facilities and services available in the region as completely as possible. Secondary emphasis is placed on assessing the function of the system as a means of information exchange. Finally, considerable emphasis is placed on a documentation of what printed channels are accessible in the Arctic, and an assessment of their role in the region. No previous study has considered printed channels in any detail at all.

Most of the data for the study were collected from published and unpublished literature concerned with northern communication. Three weeks of research in the eastern Arctic in June and July, 1972, were used to



Map 1-1: Arctic Canada. (After Jenness, 1964).

collect further data and observe the mass communication system in operation. Other sources included a survey of community newspapers in northern Canada conducted as a part of the study, and a review of a large body of literature on the social and economic development of the Arctic.

The inventory of mass communication facilities and services, and a consideration of these in the context of the model of the communication process presented on page 7, reveal that the mass communication system of the Canadian Arctic is typical of that generally found in a developing area, but that it is not being used as an instrument of social change. Radio, books, newspapers, television, and film are the channels of mass communication available in the Arctic, but only film and C.B.C. shortwave radio are accessible to the entire region. Some of the reasons for the lack of accessibility are the spatial biases that exist in the distribution of facilities and services, which in turn have been caused by climate, topography, historical accident, and the number of ties between the scattered centres of population. The users of the system are restricted in number due to both the inaccessibility of the available channels, and the general organisation of society in the region. Government is the primary sender of information, and the white (minority) population is considered by them to be the primary receiver. Since western contact, the Eskimo population has sent and received very little information over mass communication channels due to their position as the recipient group in the acculturation process and their lack of political power. There have been several plans put forward to improve mass communication in the Arctic. Among them are the use of video tape recorders, the establishment of community radio stations, and the launching of a satellite called Anik by the government. It appears that with the present fragmented approach to improving mass communication, and the

government's attitude that Anik will be the panacea to all basic communication problems (see Chapter 5) there need be little expectation of any substantial improvement in mass communication in the Arctic in the near future.

All of these matters are considered in detail in the following chapters. Chapter 2 is a brief review of the evolution of the mass communication system in the Canadian Arctic to the mid-1950s, when the "modern" system came into being with the establishment of the C.B.C. Northern Service. Chapter 3 is a review of the spatial structure of the system as it is presently found in the region, considering the channels' availability, accessibility, and users. Chapter 4 is a review of the nature of the information being exchanged through the system, and utilizes a content analysis of the more significant messages of the system. A consideration of the effects of the system, as well as conclusions and recommendations, are presented in Chapter 5.

Chapter 2

THE EVOLUTION OF MASS COMMUNICATION IN THE CANADIAN ARCTIC

Since Europeans first landed in arctic North America some 1000 years ago, there has been a flow of goods and ideas between the native population and the newcomers. For about 800 years after contact, mass communication played no part in this interaction. Its use was later encouraged by technological developments, such as cheap printing and the development of radio, and a recognition of the role that it could fill as a means of information exchange between the Eskimos and agents of western culture. Missionaries were the first to recognise this role, and introduced print into the Arctic as a part of their proselytisation. Radio was the second channel of mass communication to be used in the Arctic, and given the great distances between settlements and the harsh climate, it is now considered the more useful of the two channels. Radio, however, until the mid-1950s, was not important as a channel of mass communication, but only as a means of intercommunication between such white agencies as police stations, trading posts, and exploring parties.

Prior to modification by westerners, communication among the Eskimos of North America, especially the Inupik language group, was based on a network of trade and travel routes, and the carriage of information was, therefore, directly linked to the means of transportation: walking, sled, and boat.[1] Stefansson (1914, 1, 2) has noted that the trade and travel routes were determined by three things: the geographic conditions that favoured the establishment of certain routes, the natural resources of the various areas, and population distribution. It has, however, proved

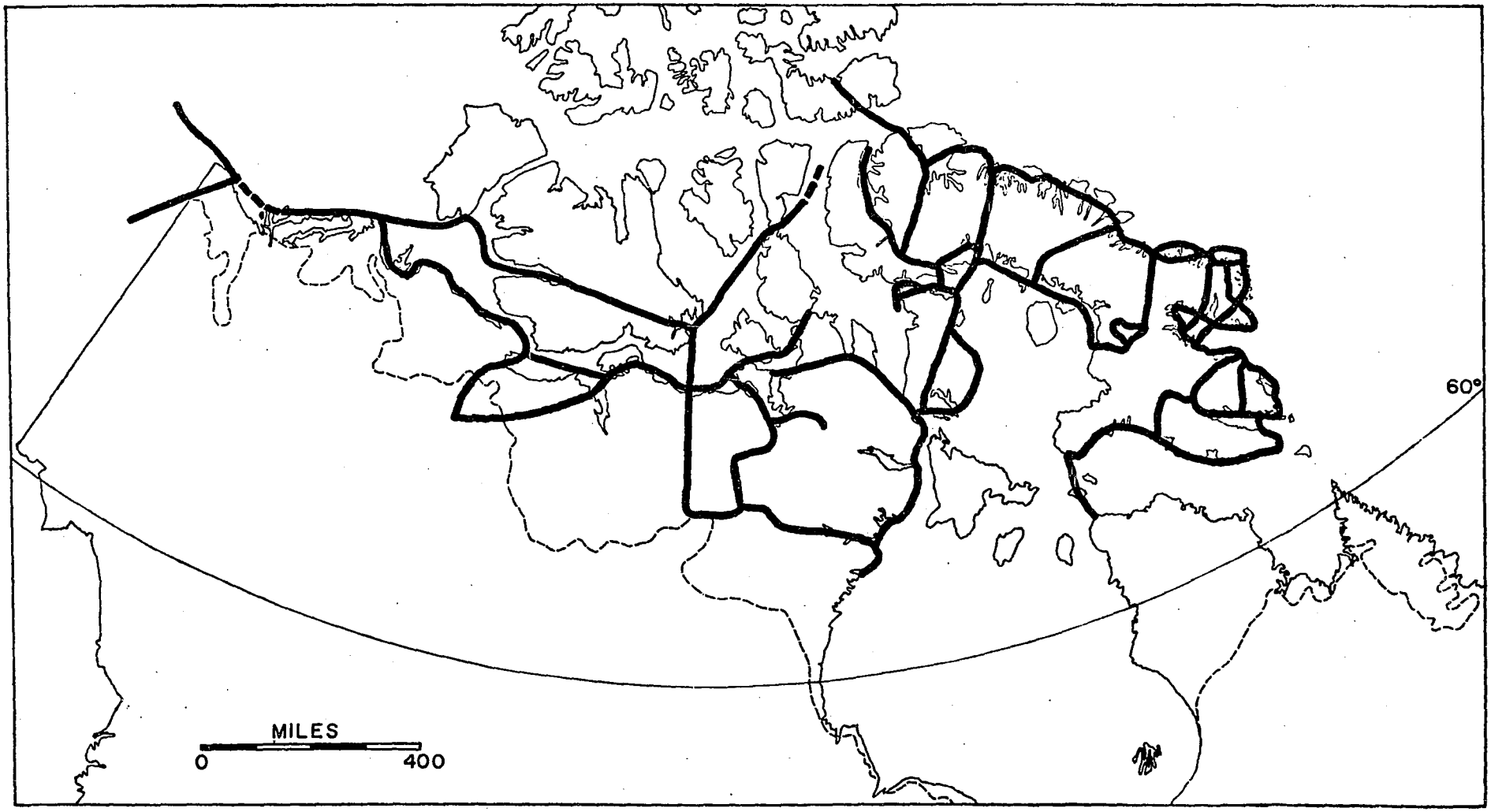
difficult for prehistorians to establish just what the network of routes was prior to the time of western contact. Reconstruction must be based on assumptions made about the past from available archeological data and "apparently reliable" information gathered by early western observers. Important to this reconstruction is Boas' (1964c1888, 54) assurance that "These routes are established by tradition, and the Eskimo never stray from them".

Map 2-1 shows the Eskimo trade and travel route network that emerges from using available data. Very little information is available as to the time that was necessary to traverse the various routes, but what is known is presented in Table 2-1. Similarly, little can be stated as to the intensity of intercourse, other than, as Boas noted "...relations...as distances increase, quickly become less common" (Ibid.). Such a situation is in accord with the geographical "rule" described by the gravity model, that interaction between places falls off directly with increasing distance.

It was at meeting places (kattimabvik) along the routes that groups of Eskimos exchanged both goods and information. Some of the information was utilitarian: the Eskimos' main concern was to stay alive, and discussions based on the location and means of obtaining food, as well as on hunting weapons, tools, shelters, and relatives, were always held. More important to historians is the information that was exchanged and preserved via the Eskimo oral tradition.

> "Unipkaren - tell me a story! This is what the child, and sometimes an older person says to the old man and old woman in the igloo. The elders were the living books of the traditions, legends, and exploits of their people. The Eskimo, who had never written anything, passed on the atmosphere of his thought by these tales, half historic, half legendary." (Metayer, 1971c1966, 62).

A number of questions may be raised as to how much of the information that has been transmitted via the oral tradition describes actual events, and



Map 2-1: Major Prehistoric Eskimo Trade and Travel Routes.
(After Boas, 1964c1888; Foote, 1965; Stefansson, 1914; Graburn, 1969.)

Table 2-1

Time to Traverse Various Eskimo
Trade and Travel Routes

Route	Time to Traverse	Source
Anadir River (Russia) - Mackenzie Delta	19 months	Foote (1965, 114)
Chukchi (Russia) - Mackenzie Delta	36 months	Foote (1965, 139)
Western Alaska - Mackenzie Delta	12 months	Stefansson (1914, 5)
Mackenzie Delta - Cape Parry	6 months	Stefansson (1914, 6)
Western Alaska - Hudson Bay	30 months (min.) 60 months (max.)	Stefansson (1914, 7)

N.B. All of these times are estimates, and could vary considerably from year to year as the Eskimos took time to hunt and visit while travelling.

how much of it is mythical or legendary. McManis (1969, 798-99) has summarised the questions: "1) in what manner were the happenings altered during retelling, 2) what information was omitted or rearranged chronologically, and 3) what material has been interpolated". Analysts agree only that information passed on by the oral tradition suffers from supposed but indeterminate modifications.

Stefansson (1914, 9) best summarizes the practical difficulties that alteration creates:

> "One who tries to decipher cultural historical records from among the mass of lore and legends of a tribe gets considerable help through remembering that, though an Eskimo readily adopts new ideas and beliefs, he modifies all of them so as to make them assimilate readily with his previous ideas and beliefs, and he will neither abandon nor greatly modify his previous stock."

With passing time, some information might have been forgotten completely. Other tellings took no account of chronological sequence, or perhaps of any time at all. Eskimos never thought in terms of hours, days, or weeks; only the seasons and events that were important to them were recorded, and then, only as they were related to one another, which was almost never in western chronological order. Stefansson came to the conclusion that "It is impossible, in the absence of extraneous evidence, to rely upon anything that is said to have happened farther back than the memory of the narrator himself extends" (Stefansson, 1966c1913, 256).

Many westerners who have interacted with Eskimos seem to agree with Stefansson's assessment. M'Clintock, referring to interviews with Eskimos held while searching for Franklin, complained about the continual vagueness of the information he was offered through his interpreter, yet states that what he was told about Parry's activities at Igloolik was "remarkably confirmed" by Parry's Narrative (M'Clintock, 1859, 139). Charles Francis Hall, in his account of time spent living with the Eskimos of south Baffin

Island, details how he was able to piece together the fate of the Frobisher expeditions by obtaining the Eskimo oral history, which he then used to clear up certain ambiguities in the written records. He does state, however, that he was confused by certain Eskimo tellings, especially those dealing with time, and that without the written history he could not have constructed the entire story (Hall, 1970c1864).

While the Eskimos were still utilizing oral communication exclusively, the tools of literacy had been developed and were available to westerners for centuries prior to the time that the two cultures made contact. Gutenberg and his associates had produced the movable type press in 1455 lowering the cost of written works sufficiently to make them available to the average man. With the concurrent growth of the ability to read and write among the European population, the use of the medium blossomed. Thus, when Europeans rediscovered America in the fifteenth century there came a relative flood of literature from explorers and scientists to an eager public. Kirwan notes that by 1700 "...works about travel and exploration came second only to those on theology in public popularity" (Kirwan, 1962, 61, 62).

Explorers were generally followed into a given area by whalers and fur traders. These groups formed the initial "line of contact" between the native and western cultures, and began the process of altering the Eskimos' way of life. Part of the alteration included the rearrangement of the trade and travel route network, this being accomplished by requiring the natives to trade at sites convenient to the westerners. Prior to the establishment of permanent trading posts, this process of alteration progressed slowly, as relations between the two cultures were sporadic and oriented almost exclusively towards the economic exploitation of the region. At this time,

the entire literature of the Arctic was written by whites about Eskimos, and was aimed solely at western audiences.

Missionaries

It was the missionaries who initiated a program of conscious social change, and who altered the pattern of literary production by producing material about the outside world for the Eskimos. The missionaries' goal was one of "civilising" and Christianising the native population by "...improving their material conditions so they might enjoy what the missionaries felt to be more meaningful lives" (Zaslow, 1971, 23, 24). In the Canadian Arctic, as elsewhere, the issue was only one of how to achieve the goal; the question was answered along denominational lines.

> "Protestant missionaries envisaged an exacting role for their converts, believing that they had to achieve their own salvation through a lengthy process of private study, reflection, prayer, and inner revelation, culminating in Baptism. Roman Catholics, however, conceived of salvation as requiring not only the efforts of the candidate, but priestly intercession as well." (Ibid., 65).

From this it is apparent that, for Catholics, literacy was, at best, not an essential in their proselytisation. However, Protestant missionaries were dedicated to spreading Christianity via propagation of the Gospel, a method based on the fundamental Protestant tenet of accepting the Bible as the sole standard of faith. The missionaries' problem is obvious: for a literate (i.e., white) audience, it was sufficient to have Bibles printed, distributed, and expounded. But, as Berkhofer has pointed out:

> "...what was needed for the savage? The Word could be conveyed by preaching, but in that situation the listener relied partly upon the authority of the speaker. Should not the convert be able to determine matters of salvation for himself by reference to the Supreme Source as revealed in the Holy Scriptures? Was not literacy required...?" (Berkhofer, 1972c1965, 4).

It was. However, if the natives were to be able to determine matters for themselves, they either had to be taught a language in which the Bible

already was printed, or, what was more common, to be given the work translated into their own tongue. Thus resulted what has been called the "...intense effort to translate the scriptures into other languages and to create written languages for the purpose where none existed before...." (Sopher, 1967, 43).

The process outlined above is highly visible in the Canadian Arctic, where expanding western society found a heathen population that was also illiterate. The first missionaries to arrive in the region were the Moravians who entered Labrador in 1771. By 1829, this group had established four missions among the Eskimos, each of which, Jenness (1964, 10) reports "...contained a dwelling for the missionary and his family, a church, a trading store and a workshop". As part of the missionaries' educational instruction, the Labrador Eskimos were taught to read and write in their own language using the Roman alphabet that had been taught to the Greenland Eskimos by Hans Egede more than a century before.

There were a few missionaries working in the eastern Canadian Arctic in the mid-1800s, but none was resident in the area until the Rev. E. J. Peck took over the Anglican Mission at Little Whale River, on the east coast of Hudson Bay, in 1876 (Carrington, 1963, 171). There, he compiled a grammar of the Eskimo language for use by whites dealing with the natives, primarily in the hope of overcoming the pitfalls of unilingualism (see page 17) and to strengthen his own knowledge of the language. He also worked to translate religious texts into Eskimo, utilizing a syllabic script developed by James Evans for use among Cree Indians.[2] In 1894, Peck moved to Blacklead Island, in Cumberland Sound, to establish a new mission, and, of course, carried "his" system of syllabics with him, providing another centre from which the method of writing could diffuse.

In the western Canadian Arctic, literary events were taking a different course. Father Emile Petitot, the first missionary to reach the Mackenzie delta, completed a grammar of the local Eskimo dialect in 1863, but spent such a brief time in the area that he was not able to break down the natives' illiteracy (Jenness, 1964, 15). In the early 1870s, the Rev. W. C. Bompas began working among the Eskimos of the lower Mackenzie, where he "...translated portions of Scripture, prayers and hymns into their language, and for this, he used Roman characters" (Marsh, 1957, 11). By 1896, the Rev. I. O. Stringer had established a mission at Herschel Island on the arctic coast, where the work of teaching the Eskimos to read and write was pursued. At that time, whaling activity was near its peak along the arctic coast, which encouraged large numbers of inland Alaskan Eskimos to migrate to the area. Some of these people had been instructed in schools operated by the government in Alaska how "...to read and write in their own tongue, using the letters of the English alphabet" (Jenness, 1964, 16).

Thus was the literary regionalisation of arctic Canada unconsciously initiated. Jenness (Ibid., 121) summarizes the situation as follows:

> "It was unfortunate that the first missionary to settle in the Eastern Arctic, the Rev. E. J. Peck, printed his hymns and prayers in the syllabic script...and taught that system of writing to the Eskimos of northern Labrador and southern Baffin Island. It left the rival missions subsequently established by the Roman Catholic church no alternative but to use the same system, and thereby entrench it among all Eskimo communities from King William Island to Hudson Strait and James Bay. A century earlier the Moravian missions on the east coast of the Labrador Peninsula had taught the Eskimos of the Atlantic region to read and write in the Roman alphabet as used in Greenland, which differs very little from the English; and before the close of the nineteenth century, the Eskimos in the Mackenzie delta had learned our English alphabet, either in Alaskan schools before migrating into Canada, or else from Alaskan natives with whom they traded and maintained close contact. From the Mackenzie delta the use of this alphabet passed into Coronation Gulf, beyond which it encountered the syllabic script introduced by Peck. Thus through the accident of history Canada faces this strange anomaly, that her Eastern Artic has become a lonely island of Peck syllabics hemmed in between two larger and more populous regions...."

Just after the turn of the century, in 1904, the syllabic region became a bit more tightly hemmed in. At that time the Moravians opened a new mission at Port Burwell, breaking an informal agreement not to intrude into territory already "staked out" by the other denominations. There, the Moravians instructed Eskimos already literate in the syllabic script how to read and write Eskimo in Roman characters "...so that all the Eskimos throughout (the Moravians') territory would employ the same system of writing, and be able to read the same printed books" (Jenness, 1965, 39).

The regions where these alphabets were found after the Moravian expansion are shown in Map 2-2. Examples of the alphabets in use in each of the regions are shown in Plate 2-1.

That the Eskimos were interested in learning to read and write is not open to doubt. Low (quoted in Jenness, 1964, 16) states that:

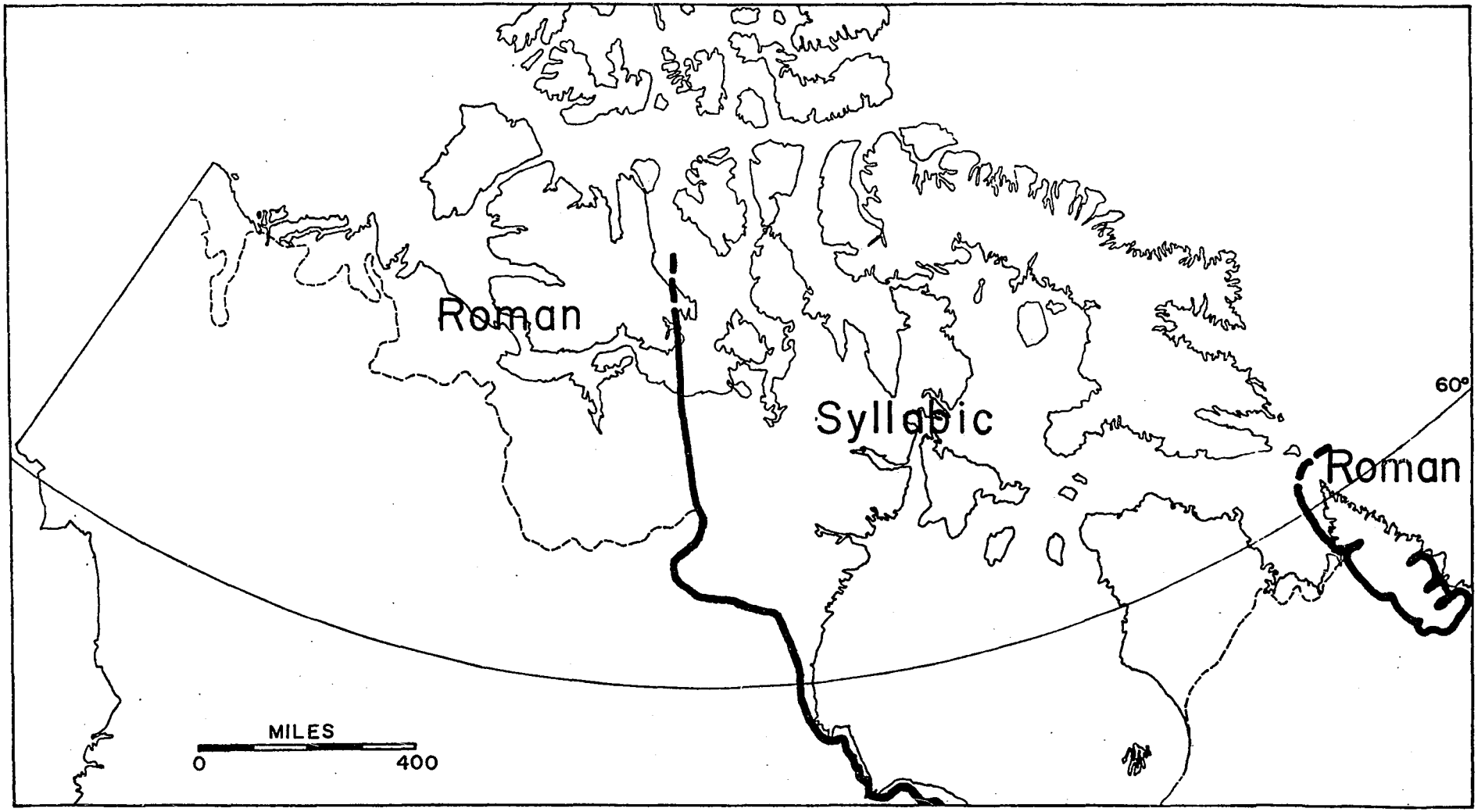
> "All are exceedingly anxious to learn to read the books printed by the Church Missionary Society.... A great many Eskimos have never come in contact with the missionaries; notwithstanding this, there are only a few of the Labrador natives who cannot read and write, while the natives of Baffin island are rapidly reaching the same state. Every native who learns to read and who possesses a book, becomes the teacher of the uninstructed; in this manner education is spreading rapidly. A good example is found in the natives of the northwest coast of Hudson bay, several of whom have learned to read from the Big island natives on the Scotch whaler, who were in turn instructed by visiting Eskimos from Cumberland gulf."

The same process was noted in the Mackenzie area:

> "One adult...taught another, and children taught their parents, until by the first decade of the twentieth century the Mackenzie Eskimos too were corresponding with one another from one end of the delta to the other" (Ibid.).

Thus was created, by missionary effort and native interest, an Eskimo population highly literate in their native tongue.

That the natives had been taught to read and write in their own language would not seem, apparently, to be a problem. However, functional literacy is



Map 2-2: Character Regions of Written Eskimo.
(The lines should be considered zones of transition.)

Plate 2-1

Scripts Utilized in Written Eskimo

ᐃᖅᓯᕗᑦ XXIII.

ᑎᑎᖄᓂᒃ ᐋᑎᓂᐆᑉ ᓵᕗᑦᓯᓂᖅᑳᓂᒃ ᑎᓯᐅᑦᓂᖅᑳᓂᒃᑯ.
ᑌᕕᑎᑉ ᐃᖅᑭᕚᑦ.

1 ᐋᑎᓂᒃ ᐲᓇᓯᑭᐹᔅ (ᒥᐋᓂᓇᓯᑭᐹᔅ): ᐋᔭᒃᑳᔅᓂᐋᖅ-
ᑭᖀᖅᑳ ᓲᓈᒥᒃ (ᑫᓲᒥᒃ).
2 (ᓈᑎᔅᓈᒥ) ᐃᕕᒃᓲᑲᑐᓂᖅᒥ ᑑᖅᑯᔭᒃᑖᓂᒃ ᑖᖅᒎᒃᑎᔅᐹᖅᑳ;
ᑎᓯᐅᔅᑑᖅᑳ ᒪᖅᑯᐃᖅᓯᔅᓂᕗᑉ ᐃᒥᖅᑭᓅᑦ.
3 ᑖᐸᓯᒪ ᑖᔅᓂᑳ ᓈᑯᒃᓯᑎᐹ: ᑎᓯᐅᒃᐹᖅᑳ ᐃᔅᑐᐋᖅᓂᕗᑉ
(ᐋᖑᐅᓂᕗᑉ) ᐋᐸᑯᓯᓂᖅᑳᓂ ᐋᑎᓂ ᐱᐁᑑᑯ.
4 ᐱᓲᒃᕕᒃᓵᖃᔅᑯᐋᕗᒪᑯ (ᑯᕗᒃᓯᐅᔅᑯᐋᖑᕗᒪᑯ) ᑐᒃᑯᐸ
ᑖᓇᓕᖅᑳᑰᑦ ((ᑖᒃ)ᐋᑯᔭᑰᑦ), ᖄᓄᐃᑐᒥᒃ ᐃᓕᒫᓲᖅᑭᖀᖅᑳ;
ᐃᒃᕕᑦ ᓈᔭᔅᕕᖅᑳ: ᐋᖑᐅᒃᐱᐊᑯᑎᕕᑦ ᑎᓯᐅᔅᓂᕕᑯ ᒫᓂᑰᒃ-
ᐹᖅᑳ (ᓯᒪᖃᑎᐹᖅᑳ).
5 ᐃᒃᕕᑦ ᓵᓪᓂ ᓴᒥᒃ (ᓂᔅᕿᕕᖅᒥᒃ) ᐋᑭᒃᓯᐃᕗᑎᑦ ᐅᒥ-
ᑭᓯᒪ (ᑫᒥᑭᓯᒪ) ᑖᑯᐋᓂ: ᐃᒃᕕᑦ ᓂᐋᑯᔅ ᒥᖅᑯᐋᒃᐸᑦ
ᐅᕝᓱᑦ (ᑰᕕᐋᓈᒃᑐᑦ); ᐃᒥᐅᓖᖅᒪᑯ ᓈᒪᒫᓇᒃᑐᒥᒃ.
6 ᐋᔫᖅᑭᑐᓕᕕᐅᓃᑦ (ᐱᐆᔫᑐᓕᕕᐅᓃᑦ) ᓈᐸᑫᑭᖑᐅᓃᑯ
ᐃᓖᑭᑦᓯᓈᔅᓂᐋᐸᖅᑳ ᐃᓄᓯᒪᓂ ᑖᒪᑦ: ᐆᕗᖅᑳᑯ ᐋᑎᓂᐆᑉ
ᐃᒃᑑᖅᑳᓃᑐᐹᔅᓯᓈᕗᒪᒃᕗᖅᑳ.

Above: Syllabic script.

Following page:
  Top: Roman, Danish alphabet.
  Bottom: Roman, English alphabet.

Sources:
  Syllabic: Book of Psalms (1917).
  Roman (Danish): Testamentetokak (1871).
  Roman (English): Angadjutitka (1952).

IMGERUT XXIII.

Tettekarnek Nâlekab sapputsininganik tessiorninganiglo.

Davidib imgerutâ.

NALEGAK pairijigivara; ajoksarniangilanga sunamik.

2 Natername iviksukatolingme tungojoktannik tangmârterpânga, tessiorlunga merngoêrsernerub iminginut.

3 Tâpsoma tarniga nekoksitipâ, tessiorpânga idluarnerub apkosiningane attine pivlugo.

4 Koroksioralloarajarunnalo tâktokut, kannoêtomik illimasulungilanga; igvit najoramga, ajaupiakotivit tessiornivillo mannigorpânga.

5 Igvit sâmne sâmik (nerrimavingmik) âkiksoivotit ômigijima tækkoæne. Igvit niakora mingoarpet orksomut, imilarmalo namaktomik.

6 Ajungitullivionerit nâpkigijaunerillo illagitsainarniarpânga inôsimne tamât, uvangalo Nâlekab iglunganêtuatsainaromârpunga.

PSALM 23

Attanrum pigiya nuna pingitlu tamaita: nuna tamatkerlugo, inuuyoat asin nayortingit tamaita.

Ingme amita sanaya immam kraanganc: kukkat kraangane sannaerklugo.

Kina mayorniarpa tatpaonga Attanrum inanun?: kina nikuvraniarpa inigiknetoaluanc?

Suinnakun issakresuittoar inuk, omata salumablunc: erkrosuittoar ilumine: unnertuutiroayuittoar inukrattine uingayisuklugit.

Attanrum aitorviginiaga inuk taimaserk: Godim Annaodjean nagliginiaga.

Tadjva inuit God kriiligiyariyat: Jacob Godigiyanga kivgartorvigiyat.

Attanruyoase, igluse opkoersarise; krillaom opkoangit angmartaosartuse: kraamanarnetoaluk Attanerk ittirasuarle.

Kina tamadja kraamanarnetoaluk Attanerk?: Attanerk suangablune simmarnartoar: anguyakmatta simmarnarnetoaluoyoar.

Attanruyoase, igluse opkoersarise, krillaom opkoangit angmartaosartuse: kraamanarnetoaluk Attanerk ittirasuarle.

Kina tamadja kraamanarnetoaluk Attanerk?: Attanerk ayorsainetoaluk ubva.

Kraamagilavut.

defined as "...the ability to read and write written symbols at a level of competence adequate for carrying out the functions of the individual's role in his customary social system" (Roger, 1969, 73, 74). If one recalls that the missionaries' goal was not to create literate savages, but, rather, upstanding members of a civilised Christian community, the problem becomes apparent. As representatives of western society, the missionaries considered western standards to be the ones the Eskimos should strive to attain. This included the ability to speak, read, and write in English, rather than in Eskimo. As Eskimo society was altered, and the western society which missionaries represented became the "customary" social system in arctic Canada through the nineteenth century, the Eskimos were increasingly unable to consider themselves functionally literate.

The situation in Labrador at the turn of the century illustrates the problem nicely. Jenness (1965, 39) reports that by 1884 "...all Eskimos along the Atlantic coast of Labrador could read and write their own language, and some of them...could speak a little English".

However, the Eskimos were dependent on the missionaries for providing them with reading matter, and the missionaries were increasingly hesitant to make the large effort necessary to translate material into what was becoming a language of questionable value. Thus, again with reference to Labrador, in 1919:

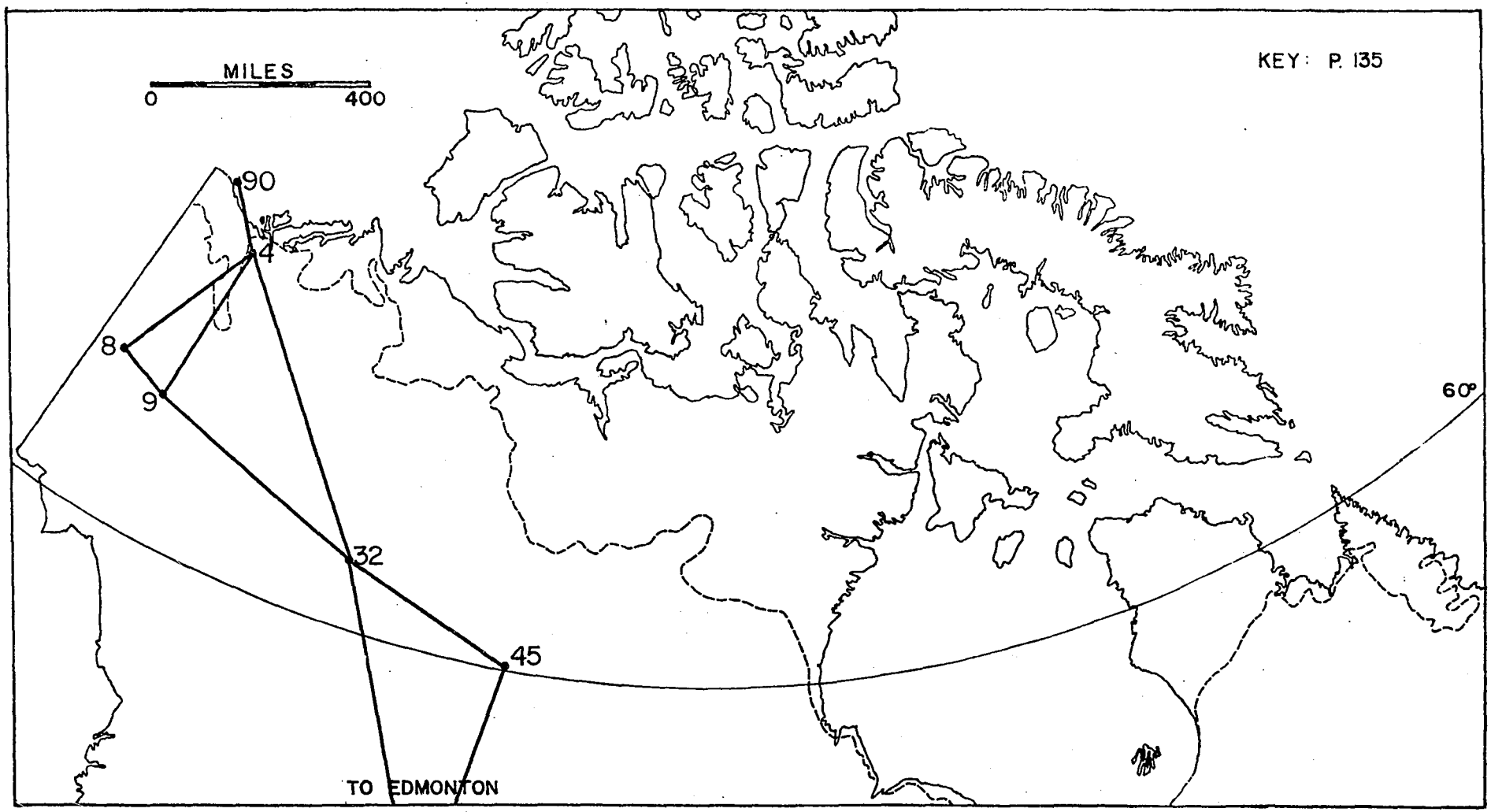
> "There is not a very extensive literature at the disposal of the Eskimo with a taste for reading; the Bible is the chief book, but besides it there are translations of The Pilgrim's Progress, Christy's Old Organ, Jessica's First Prayer, a book of short readings in natural history and general knowledge, the various school books, the hymnbooks used in the church - and the newspaper! The Eskimo Newspaper (Aglait Illunainortut: "The Paper for Everybody") is by no means a daily; rather it takes the form of an annual budget, printed by the missionaries at Nain during the winter, but it tells the people something of the doings of other lands, and it helps to stir their loyalty as British subjects."[3] (S. K. Hutton, quoted in Ibid., 40).

The natives thus found themselves unable to rely upon communicating in written Eskimo due both to the apparent decreasing utility of their language as a means of intercultural information exchange and the existence of the various script regions within the area of spoken Inupik Eskimo (see note 1). The oral tradition had declined by 1924 to the extent that Jenness noted (in Greenway, 1965, 179) "...the professional storytellers are gone, and with them any notion of prestige for their art".

The Introduction of Radio

Thus, by the 1920s the Inupik speaking Eskimos found themselves without a viable means of communicating in writing either among themselves or with the whites. It was only the technological development of the western society that had disrupted the traditional Eskimo way of life that appeared able to provide an alternative to a complete breakdown of the process of information exchange in the Canadian Arctic. Radio was the new channel of communication, and as the facilities for its use spread through the region it supplanted both the Eskimo oral tradition and the written media as the most important means of information exchange.

In 1923, the Royal Canadian Corps of Signals (R.C.C.S.) established the first point-to-point radio communication in the North, a radio-telegraphy line between Dawson and Mayo, which was extended to include Simpson and Edmonton the following year. This was the first step in constructing a communication system to aid in asserting Canada's sovereignty in the North by "...the opening up and development of the country" (Steel, 1925b, 44). Mining, oil, transport, and trading companies were the main commercial enterprises to benefit from the Mackenzie basin section of the system, which was completed in 1925; the government's customs officers and the R.C.M.P. found it helpful as well. The network as it existed in 1925 is shown in Map 2-3.



Map 2-3: The Northwest Territories and Yukon Radio System, 1925.
(After Steel, 1925b.)

One of the stated reasons for the construction of a network which utilized relay stations was to "...provide a greater number of contact points within the Territories and so serve a greater number of people" (Ibid., 45). It appears that the "people" were quite willing to take advantage of their opportunity. Steel reported that:

> "Press is handled daily between Edmonton and Dawson for 'The Dawson Times', and between Edmonton and Mayo for the paper published at that place by Mrs. Fotheringham. In addition, a correspondent in Fort Simpson supplies the papers in Edmonton and Calgary with a tri-weekly 600 word despatch" (Ibid., 48, 49).

Further,

> "As soon as it became known that communication was available to the outside, all the transportation companies and the various trading posts along the river made full use of the service" (Ibid.).

In 1926, the system was in good enough order that Dominion election returns were available in Aklavik very shortly after having been received in Edmonton.

At the same time, radios made their first appearance along the west coast of Hudson Bay, where the Eskimos' reaction to them was rather different from that of the Mackenzie whites. "The Eskimos were completely baffled by them as it seemed that one was listening to a spirit inside the little box" (Eskimo Point, 1970, n.p.). It was apparently some time before the natives managed to "...adjust their ears to the distant talks" (Ibid.).

Elsewhere, while the government worked to increase the number of radio stations it operated, other organizations set up networks of their own. Howey (1968, 771) states that in 1935:

> "...the Hudson's Bay Company began to equip their trading posts with low-powered radio-telegraph transmitters and receivers. While the primary purpose for these installations was the transaction of the company's business, they nevertheless provided all residents of their localities such as missionaries, R.C.M.P. officers and, later, other government personnel, telegraphic contact with their respective headquarters as well as faster communication with friends and relatives in the rest of Canada."

In the same period,

> "...the stations consolidated themselves as part of the northern community. Not only did the modern equipment provide better communication generally, but by its diversified nature, exerted an increasing effect on the way of life in communities.... Before the advent of the radio station, the only contact with other parts of Canada and the world was by a rather infrequent mail service, in some locations limited to once a year. Now, because the stations were able to communicate by radio directly with the south on both business and private matters, communication was reduced to a matter of hours.... From a private standpoint, the telegraphic service was used by the population of each community as a substitute for both mail and long-distance telephone" (Ibid., 769).

The regard of whites resident in northern Canada for radio cannot be overrated; by the mid-1930s the radio station was as much an institution as the R.C.M.P., the missions, and the H.B.C. posts. The advent of broadcast radio served to reinforce this attitude.

> "As the tube had revolutionized radio communication, so radio broadcasting effected a change in the way of life for northern residents that can more easily be imagined than calculated.
>
> No longer did people living in these latitudes have to await the arrival of year-old newspapers to know what had happened; now they could keep abreast of current affairs, as events took place. The radio receiver, which to people farther south, was largely an item for entertainment, became to a northerner a part of his life. Possibly nowhere in the world did people listen more attentively and more faithfully to the news broadcasts of the more powerful stations. All activity - business and social - ceased at these scheduled times and woe betide any individual who was imprudent enough to begin a conversation during them" (Ibid., 770).

Probably the most famous of the broadcasts was the "Northern Messenger", which was operated by station KDKA in Pittsburg, Pennsylvania, until 1933, when it was taken over by the C.B.C. This was "...a program of messages to the police, missionaries, weathermen and others stationed in the North from their families and friends 'outside'" (C.B.C., 1959, 10).

An excellent example of the near-obsession with listening to the accessible programs in provided in a series of Hudson's Bay Company journals kept by employees stationed in Ungava in the 1930s. These journals, in their account of daily activities, note, among other things, when radio broadcasts were and were not received, and with what degree of clarity. The records

show the regularity with which the men tuned into the Saturday night broadcasts from KDKA and CKAC, and evoke an image of "...men battling the odds for a word from the 'outside'" with a passion bordering on the fanatical (Lawlor, 1972, 5).

The general pattern of northern radio broadcasting was established in this period: the most important signals, such as the "Northern Messenger", came from outside the region, there was an almost complete absence of local programming, and there was no programming for Eskimos. Howey (1968, 770) states that in 1937, the government operated only three stations that engaged in local, public broadcasting, and even with them, broadcasting was strictly incidental to their other functions (see above, page 27).

Developments through the time of World War II had little effect on the radio communication services available to the inhabitants of the North. Improvements in air and marine navigation facilities were necessitated by defence requirements, but the local population was almost totally unaffected by them. The only real change was in the number of stations operating: the H.B.C. network was expanded to 33, while the government opened numerous new stations; this pace of development was apparently considered satisfactory. A report submitted to the government in 1946 declared "The present communication facilities in the northwest are quite extensive and provide service of a class which it has been found in the past desirable and economic to provide" (F. T. Fisher, 1946, 15).

Similarly, the period between World War II and 1958 saw the construction of several new defence systems, such as Polevault, ALCAN, and the DEWline, but again these did little to improve radio service for the residents of the region. There were, however, several small community stations operated as a sideline by the R.C.C.S., which were reputed to broadcast programs

"...similar to those heard in any part of Canada" (Northwest Territories and Yukon Radio Telegraph System, 1949, 21). Such stations were opened at, among other places, Whitehorse in 1946, Aklavik and Dawson, both in 1948, and Yellowknife in 1950. The ultimate public value of most of these installations was felt only when the C.B.C. Northern Service was established in 1958 and was able to use, as the backbone of its system, the community stations and facilities that had become obsolete for defence purposes.

Mass Communication in the Canadian North in 1956

In 1956, the Commissioner of the Northwest Territories, R. Gordon Robertson, submitted a brief to the Royal Commission of Broadcasting which utilized an outline of communication services in the area as the basis of a plea for improved services. The Commissioner said:

> "To appreciate the importance of radio to the Northwest Territories, the Royal Commission may wish to speculate on the character of Canadian life in the southern parts of our country had adequate radio facilities not been introduced. To make a comparison with the north they would have to imagine no telephone, limited telegraph, no local daily newspapers and only one weekly newspaper in an area of a million and a half square miles....
>
> There are limited facilities for standard broadcasts in only a few northern communities. Equipment used in such communities is not powerful, and as a result the range is limited, except under freak conditions, to within fifty to seventy-five miles of the settlement. Nowhere, however, are these radio stations on a satisfactory administrative or financial basis. Most of them have been run as a part-time sideline through the courtesy of the Department of National Defence, more particularly of officers and men of the Royal Canadian Corps of Signals, and of the Department of Transport. Standard radio broadcasting is not their job.... Small transmitters were installed at Hay River, Yellowknife and Aklavik, where they have been operated by volunteer community organizations and maintained by members of the Royal Canadian Corps of Signals. The Signal Corps are now finding it necessary to withdraw from these activities when the present equipment breaks down. One station, CFHR, Hay River, has already been closed for this reason, and it can be assumed that it will not be long until the remaining stations are closed.
>
> There are those who might argue that the present situation is worse than having no radio programs at all. Many northern residents, especially in winter, do receive radio programs, but very few of them are Canadian in origin. Listeners may become dependent upon the programs of stations in the United States which, however entertaining they may

> be, cannot be a substitute for Canadian programs containing Canadian news, Canadian information, Canadian discussion, and Canadian artists. Perhaps more disquieting is the clarity with which the North American broadcasts of other foreign countries are received. Considerable publicity has been given to Soviet broadcasts....it may be noted that, throughout a quite considerable part of the Arctic, among radio broadcasts which residents can most readily and clearly receive, are those which come from Moscow..." (Robertson, 1956, 4, 6, 7).

Also in 1956, the Commissioner of the Yukon Territory, F. H. Collins, submitted a brief to the same Royal Commission. In it, he complained about generally the same things as did Robertson, especially the "galling" dependence on Soviet and U. S. broadcasts, the absence of newspapers (the Yukon had one weekly at the time), and the disadvantages associated with delayed broadcasting of tapes by the radio stations at Whitehorse, Dawson, and Watson Lake (Collins, 1956).

Robertson summed up the overall situation by stating:

> "In a sense the minimum requirement for radio broadcasting in the north is that Canada should provide its northern citizens at least the same degree of service that the Soviet Union and other foreign countries are already giving them" (Robertson, 1956, 9).

Summary

Before the coming of Europeans, the Eskimos had possessed no means of reading or writing, nor had they any conception that "...unexpressed thoughts and audible words could both be represented in visible characters" (Jenness, 1965, 38). Rather, their means of information exchange and preservation was one of oral intercommunication, and the flow of information between places was linked directly to their system of transportation. Missionaries brought the innovation of literacy to the Arctic as a means of spreading Christianity and western civilisation among the Eskimos, but the Eskimos were as important in diffusing reading and writing through the region as were the missionaries. However, as the process of acculturation moved forward, the value to the Eskimos of being able to read and write their own

language was thrown into doubt when the apparent utility of the language as a channel of communication between dialect and culture groups declined.

About the time that the disutility of the Eskimos' literary skills was becoming apparent, radio was introduced to the region as an element of the white man's encroaching culture. At first the medium was used strictly as a means of intercommunication, and was only another tool to be used by white men in the exploitation of the country's resources. Public broadcasting was later provided on a casual basis by interested amateurs, but was aimed solely at a white audience, the majority of which was located in the sub-Arctic North.

By the mid-1950s there was a recognition that radio was a more useful channel of mass communication in the North than print. This stemmed from the fact that radio signals could cover the great distances between settlements in the region almost instantaneously, while printed matter could only be distributed as quickly as transport vehicles or humans could carry it. Broadcast radio service was, however, very poorly organized at the time, but with considerable prompting, the federal government took action in 1958 to improve the situation by allowing the C.B.C. to set up a northern service.

Chapter 3

THE MASS COMMUNICATION SYSTEM OF THE CANADIAN ARCTIC

It is generally agreed that prior to the early 1950s the Canadian Government took, at best, a rather casual attitude towards the administration of its northern territories. Since then, however, there has been a more positive attitude apparent, first shown in a reorganisation of the government agencies operating in the region. The new approach became manifest in mass communication is 1958, when the Canadian Broadcasting Corporation was allowed to set up its Northern Service. While this agency has been the foremost provider of mass communication facilities and services in the Canadian Arctic, there have been other media employed in the region: books, newspapers, television, and film. These are the channels of mass communication in the Canadian Arctic, and their availability, accessibility, and users determine the structure of the system in the region at the present time.

The first section of this chapter is an analysis of the availability of the various channels. This comprises a review of broadcast radio, including its operating characteristics, and a description of the radio network and the written and visual channels presently available in the region. The second section considers the accessibility of the channels, and what regional variations and spatial biases exist in the structure of the system. The final section describes the senders and receivers who utilize the channels.

As was noted in the preceeding chapter (page 34), by the mid-1950s, broadcast radio had been recognized as the most important channel of mass communication in the Canadian Arctic in spite of the disorganised way in which services were then provided. The importance of radio resulted primarily from its unexcelled utility as a means of quickly and relatively inexpensively

reaching a sparse population scattered over a large, generally uninhabited area. However, while radio has become the most significant mass medium in the Arctic, there have been problems with its use. The first radio-telegraph networks depended on land lines to transmit signals between stations.[1] This limited the routes where radio-telegraphy could be used due to problems of installation and maintainance which resulted from the climate and terrain of the region as well as the great distances that had to be traversed to connect inhabited places. The development of the wireless, and later, of microwave and tropospheric scatter systems, helped to alleviate such problems by eliminating the wire. With these systems, only relay stations had to be retained, which served to greatly simplify the installation and maintainance of radio systems.

The removal of the wire brought with it one major social effect: the security of messages associated with the wire was lost. Anyone with the proper receiver could listen to a "private" wireless transmission, in effect allowing for mass communication by creating a potential mass audience. It caused difficulties, however, for groups interested in secrecy, such as the Hudson's Bay Company and some government departments. These agencies were forced to transmit messages in codes, which were, unfortunately for the users of them, notoriously easy to break (Phillips, 1967, 193).

The scattered population of northern Canada and its location near the magnetic pole and auroral zone has caused other problems with certain types of radio signals. High Frequency (HF) radio has long been considered the most economical means of radio communication that can be used to cover long distances over harsh terrain. However, an unamplified HF signal, which may be travelling several thousand miles, is extremely susceptible to interference from sun-spot activity, the magnetic pole, the auroral belt, and other users.[2]

All of these cause the reception of an HF signal to be intermittent and subject to distortion and fading; reception is often not possible for days at a time (Canada, Telecommission, 1970b, 17). The Canadian Department of Communications has stated that "Virtually all users of HF systems are dissatisfied with the performance of public telecommunications services as presently operated" (Canada, Telecommission, 1970c, 39), and that commercial HF service in Canada "...lags far behind similar services provided by other nations" (Canada, Department of Communications, 1971a, 6).

Microwave systems produce a higher quality signal through the use of line-of-sight relay stations, which amplify the signal being transmitted (see note 2). These systems have been installed wherever possible, mostly in the western sub-Arctic, in an attempt to improve upon the quality of HF signals. However, microwave systems have problems of their own, the major one being fragility. The Montreal Star (1971a) reported that in 1971 a forest fire in British Columbia nearly destroyed one microwave relay tower. Such an event would have cut off "practically all" communication between the Yukon and areas to the south of the fire.

In the eastern Arctic, tropospheric scatter systems have been installed to improve upon HF services. The particular problems associated with these systems are related to the physical properties of the atmosphere. The system utilizes the troposphere to "bounce" signals from station to station, a procedure which allows a high percentage of a signal to be lost to the atmosphere. This problem can be overcome by either amplifying the signal at relay stations (see note 2), or by sufficiently increasing the strength of the original signal to allow for quality losses. The former method is generally used as it is the less expensive and more effective.

The foremost commercial user in the Arctic of all these radio systems has been the Canadian Broadcasting Corporation. In 1956, in a brief

presented to the Royal Commission on Broadcasting, the C.B.C. proposed that it establish a Northern Service in an attempt to improve what it admitted was a poor service. The Commission noted that at the time, there were eight low power radio stations scattered through the North, at Whitehorse, Dawson, Watson Lake, Aklavik, Yellowknife, Ft. Nelson, Churchill, and Goose Bay. All of these were being operated by the Canadian Armed Forces, Department of Transport, or the communities themselves on a voluntary basis, and were being supplied by the C.B.C. with tapes and recordings. The Commission also reported that "Reception from the C.B.C. shortwave transmitters is very unsatisfactory most of the time" (Canada, Report, Royal Commission on Broadcasting, 1957, 213), and accepted evidence that Soviet and U. S. broadcasts were much more clearly received.[3]

Both Robertson (1956) and the C.B.C. outlined plans for an agency which would provide high quality broadcast radio to northern Canada. The Commission felt that, in principle, the C.B.C. request for a $2,500,000 capital outlay and $450,000 per year for operating expenses was reasonable, and that a semi-autonomous agency should be set up within the C.B.C. to provide the improved service.

In 1958, a year after the Commission made its recommendations, Parliament voted funds to carry out the C.B.C. proposals, along the lines suggested by the Commission. The objective was "...to provide a broadcast service to meet the particular needs and tastes of the people living in the North - Indians, Eskimos, Metis and white - and give them a sense of identity with their fellow Canadians...." (Canada, C.B.C., 1972g, 1). The plan put forward to achieve the objective was to build a High Frequency shortwave transmitter in western Canada, and either build or take over the low power stations already scattered through the North. By 1959, medium wave stations had been taken over at Whitehorse, Dawson, Yellowknife, and

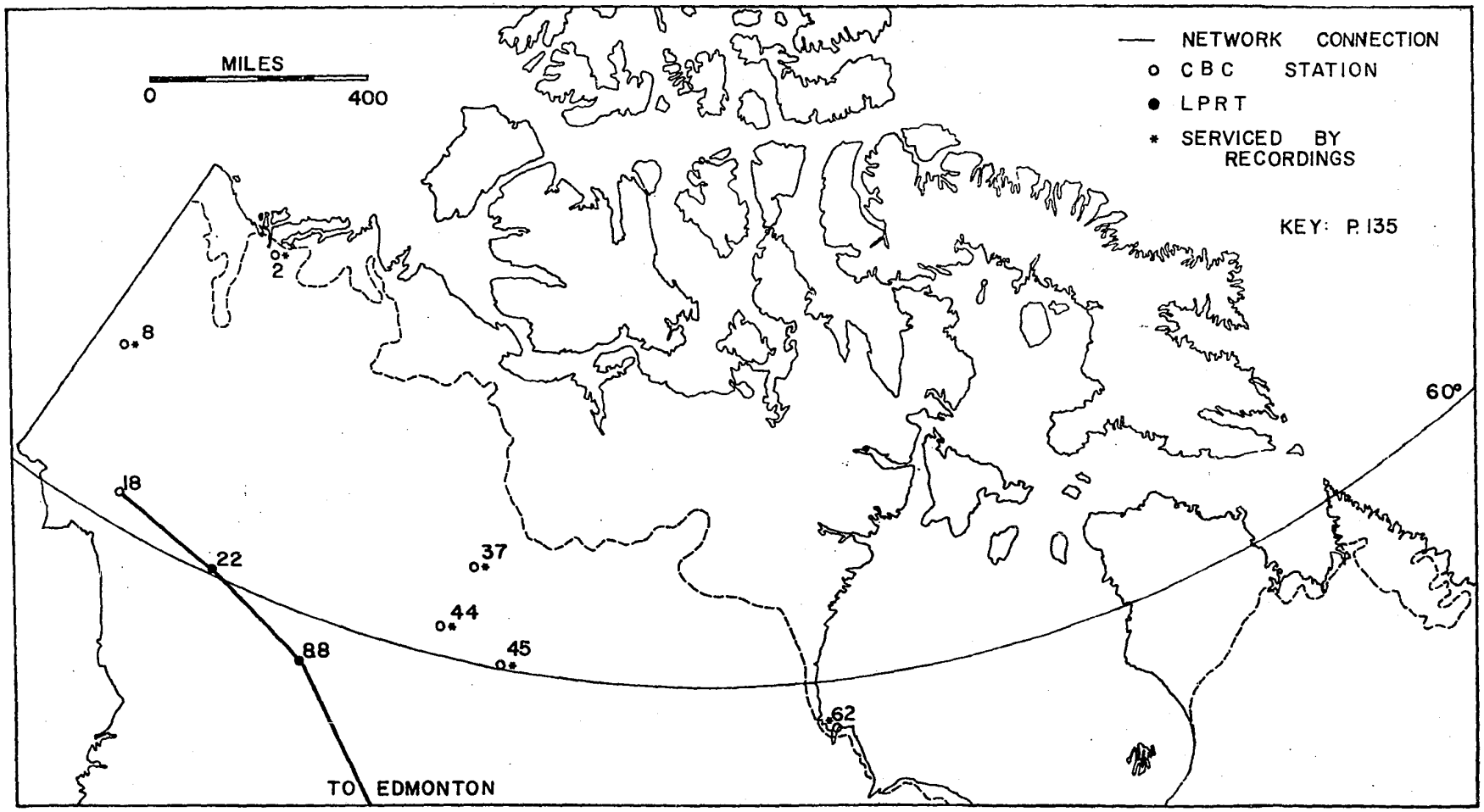
Goose Bay, and automatic unmanned low power radio transmitters (LPRTs) were under construction at Watson Lake and Ft. Nelson. Also studies were underway to determine the best location for the new shortwave transmitter. In the meantime, existing transmitters at Sackville, N. B., Lacombe, Alta., and Watrous, Sask., continued to serve as message sources for the North, and some northern stations continued to receive tapes made in Montreal for rebroadcast.

By 1960, the Ft. Nelson and Watson Lake LPRTs had been put into operation, as had been new community stations at Churchill, Ft. Smith, and Hay River. With the imminent opening of the Inuvik station, the ten-station network originally envisaged would be complete. This network is shown in Map 3-1.

It did not take long for the first sign of trouble to turn up. In 1960, the C.B.C. stated that

> "Because of coverage problems involved, these stations (the ten) are not expected to reach all Canadians in the North Country. Consequently, in September of 1959, the Corporation started a series of test transmissions to Northern Canada from CBC International Service transmitters at Sackville, New Brunswick. These tests were undertaken to determine the feasibility of using the transmitters for service to North-country Canadians beyond the reach of AM radio service. As of March 31 the tests gave every indication that the idea would prove practical" (Canada, C.B.C., 1960, 10).

The western Canada transmitter, which was to have been located near Vancouver, was the victim of a Parliamentary budget cut, and nothing more has ever been heard of it. In September, 1960, "A daily, seven-hour shortwave service to the north was started...in the form of two daily transmissions. Programming is in both French and English" (Canada, C.B.C., 1961, 35). Of greater significance was that in the same year the C.B.C. hired its first Eskimo producer and began programming in Eskimo on the shortwave service. At that time, radio had been in use in the Arctic for about 35 years, but this was



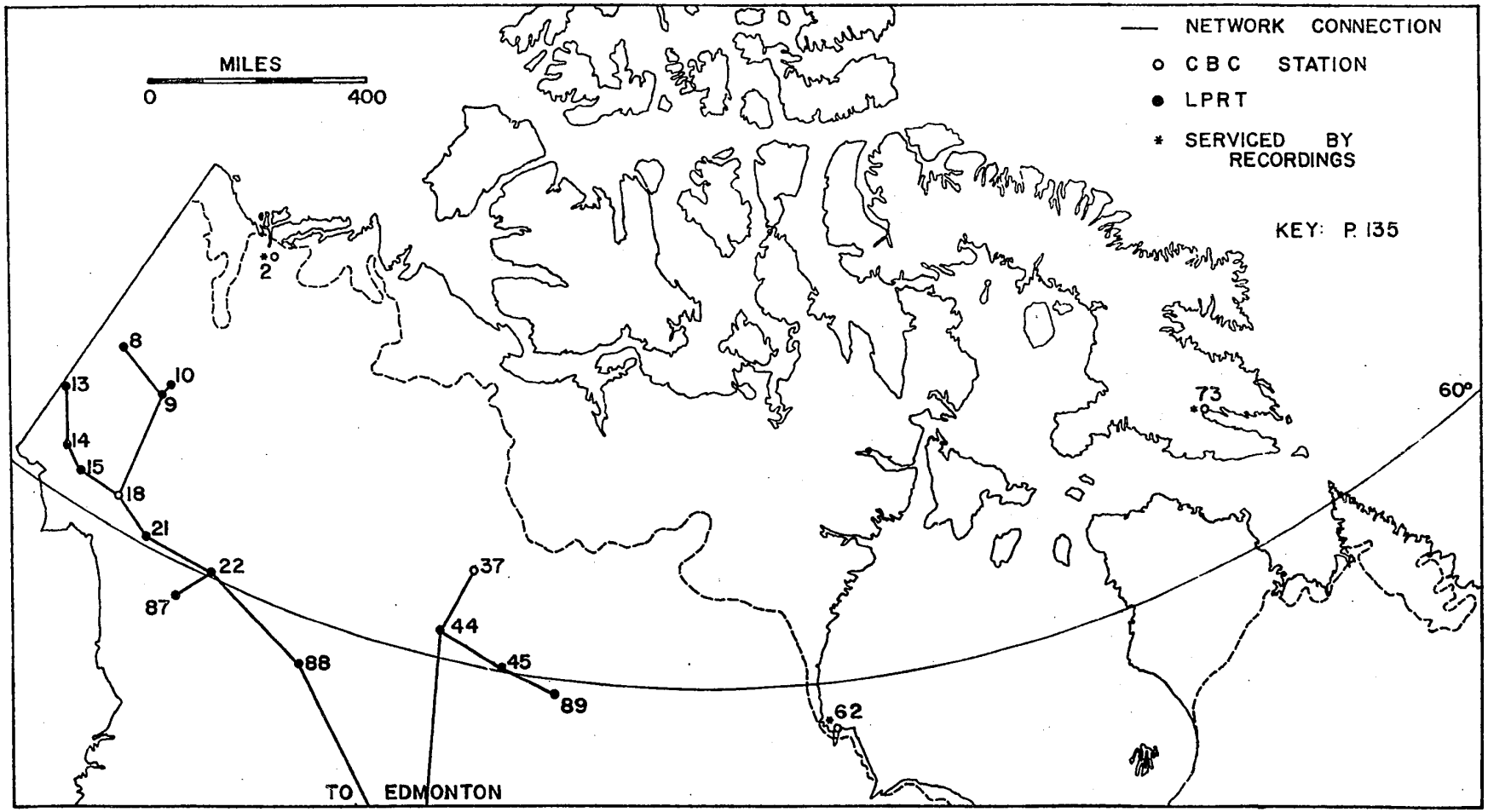
Map 3-1: The C.B.C. Northern Service Radio Network, 1960.
(After C.B.C., 1961. Goose Bay, not shown: o *).

the first radio service established in the region explicitly for Eskimos.

Through 1964, several more medium wave community stations and LPRTs were built in the Mackenzie region and in the Yukon; the network as it existed at that time is shown in Map 3-2.[4] The C.B.C. plan as it had evolved by that time was to develop two regional broadcasting networks, one in the Yukon, one in the western Northwest Territories. The networks were to be operated by linking two program centers (one for each network, at Whitehorse and Yellowknife, respectively) to both the national C.B.C. network and a series of LPRTs via telephone circuits installed and owned by Canadian National Telecommunications. A program center received most of its programming from the national network, but could inject local material into its broadcasts as well; the LPRTs had no capacity for local programming. Thus, whatever signal was received by a program center from the national network had a certain amount of local material added to it to complete the total regional program. This program was then transmitted simultaneously from a program center and the LPRTs linked to it, thereby forming a network. The operation of this system is shown diagrammatically in Figure 3-1.

The potential problem with this expansion was that as the various stations were connected by telephone circuits, a C.B.C. radio station could not be operated in a given location until C.N.T. made the decision to provide that place with telephone service. Apparently no conflict arose between the two crown corporations as both were interested in expanding into the same regions at the same times.

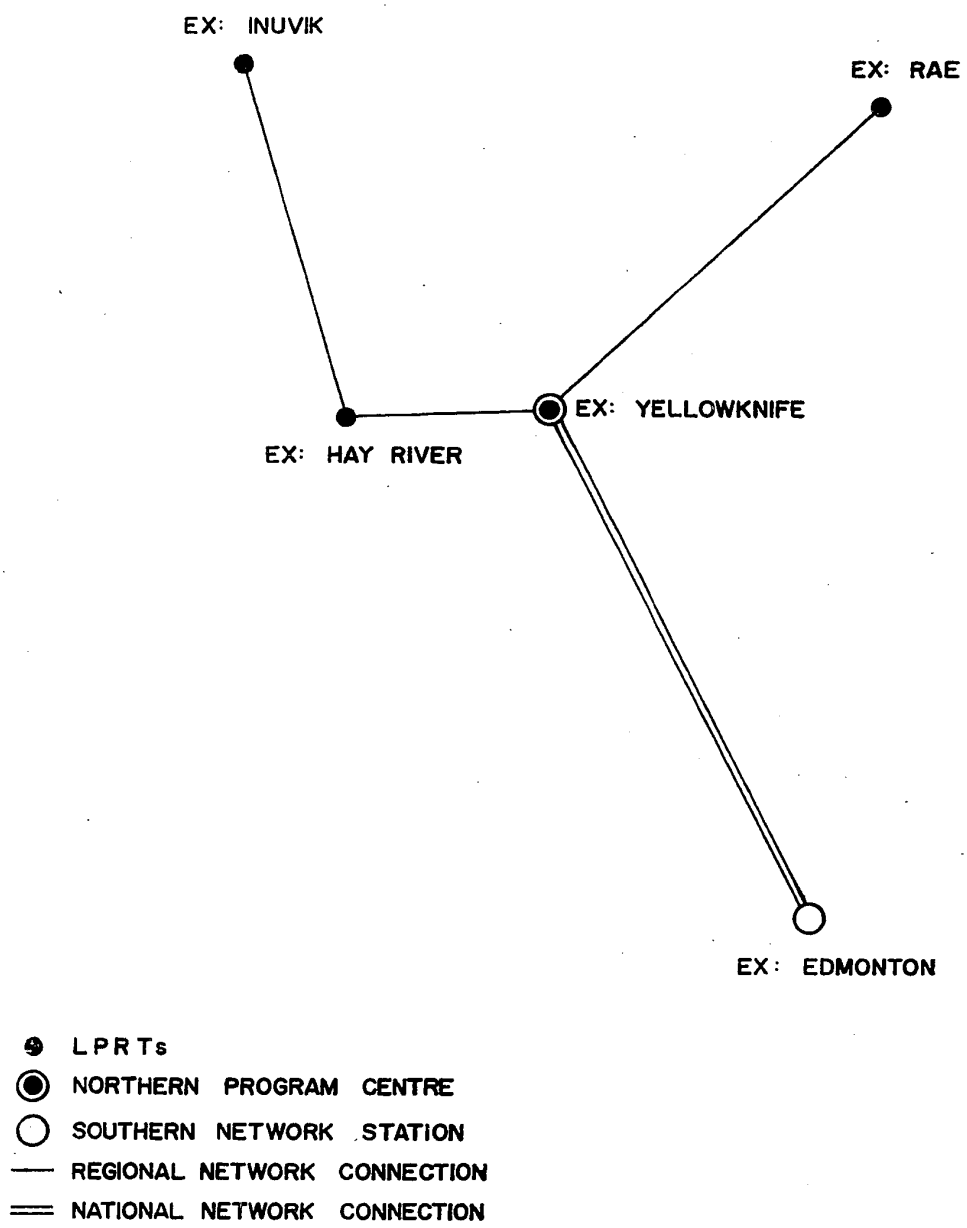
Growth of the networks continued, until by the end of 1968 the Northern Service had stations or LPRTs in 26 settlements in the Yukon and Northwest Territories and in the northern areas of all the provinces except the Maritimes. It was also serving the "High Arctic" with its shortwave



Map 3-2: The C.B.C. Northern Service Radio Network, 1964.
(After C.B.C., 1965a. Goose Bay, not shown: o* . See note 4, Ch. 3).

Figure 3-1

Operation of the C.B.C. Northern Service Networks

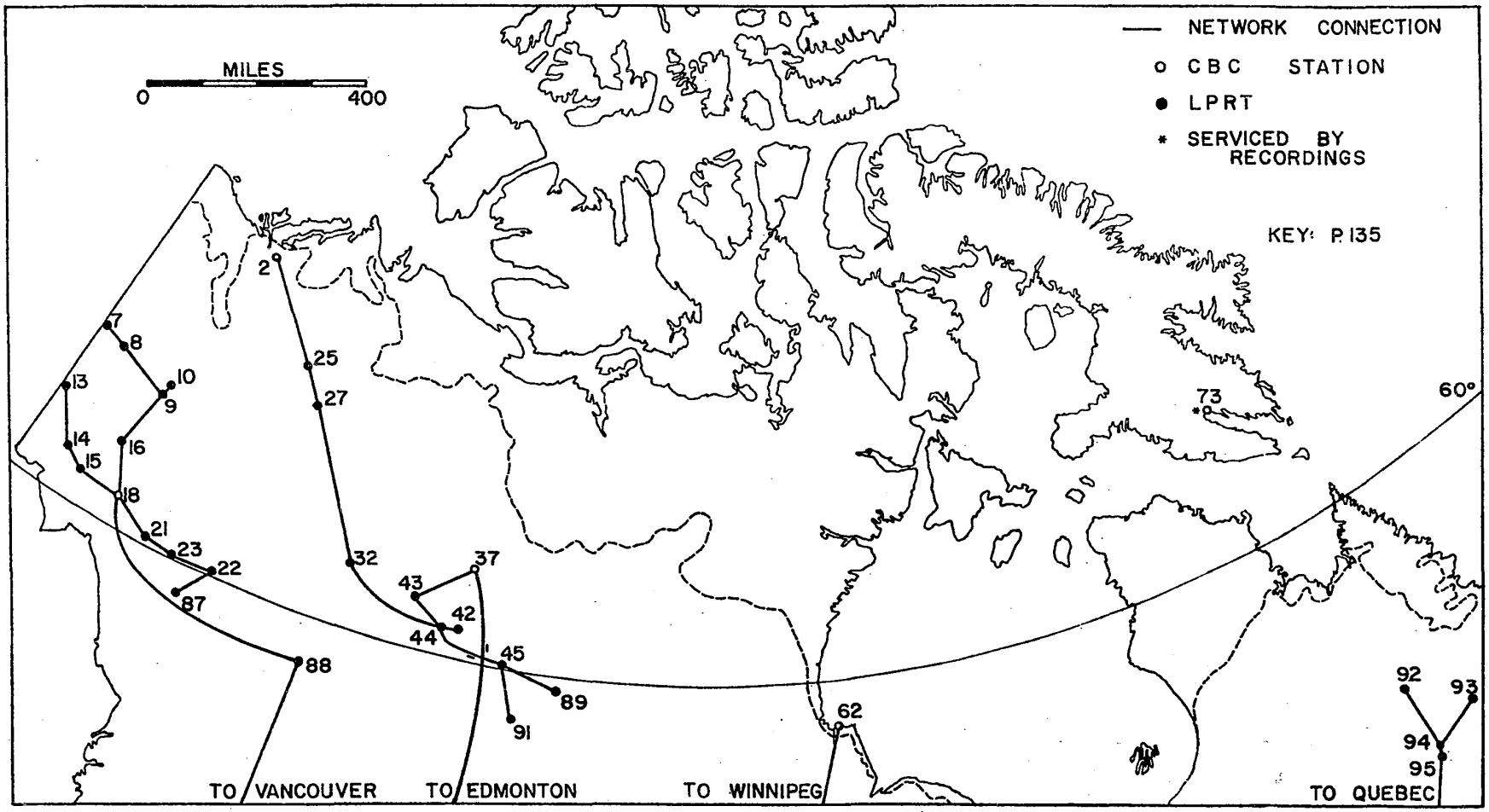


service (Canada, C.B.C., 1969, 53). There were six program centres (Happy Valley (Goose Bay), Churchill, Yellowknife, Whitehorse, Inuvik, and Frobisher Bay), all except Frobisher Bay being connected to the national network by 5000 miles of telephone lines. Frobisher Bay received news via the shortwave service, and network programmes on tape recordings. The network as it existed in 1968 is shown in Map 3-3 (see note 4).

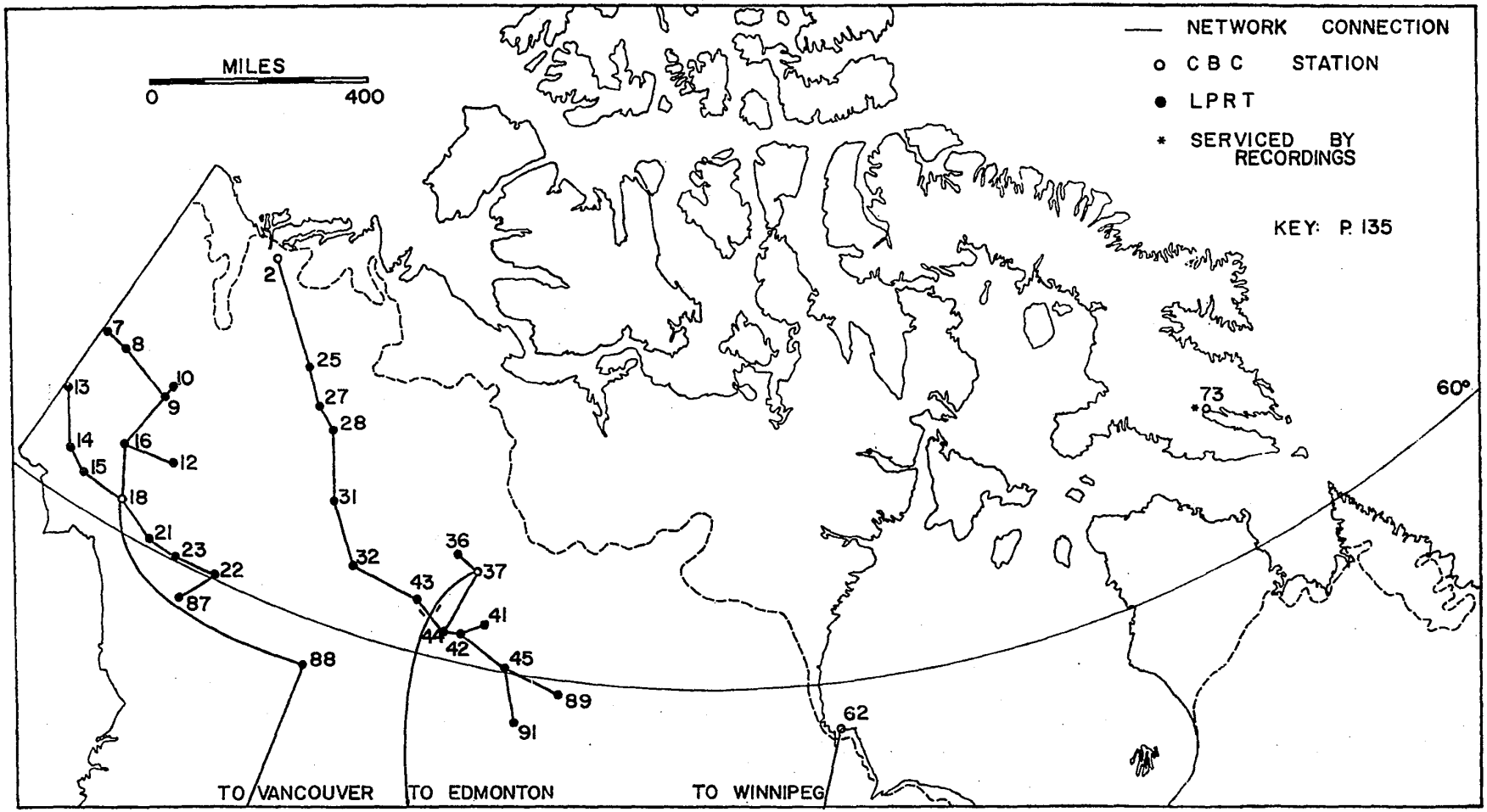
Since 1968, the C.B.C. Northern Service has added several LPRTs to its network, but has given the LPRTs in Labrador and the Goose Bay community station to the Newfoundland and Quebec networks. As a result of these changes, the 1972 network consists of 27 LPRTs and five community stations. These are shown in Map 3-4.

The changes in network affiliation were carried out in an attempt to provide a higher quality of service to a greater number of people. In 1969, the C.B.C. stated that they provided service to "...approximately 80 to 90 per cent of the people of the Territories and the northern part of all the provinces except the Maritimes" (Ibid.). However, in an assessment of the performance of Canadian radio stations conducted two years later which considered quality of service as well, the Canadian Radio-Television Commission reported that only 34.6% of the population of the Yukon and only 29.7% of the population of the Northwest Territories was within the service area of an AM radio station having a signal level that produced "...satisfactory day service to rural areas" (Canada, C.R.T.C., 1971, 66, 67).

It is obvious that the figures presented by the two agencies refer to different areas and levels of service quality: the C.B.C. includes its shortwave service and the northern areas of several provinces in its assessment, which the C.R.T.C. does not. It is important to clarify what service given places within the North receive. Map 3-5 shows the regions



Map 3-3: The C.B.C. Northern Service Radio Network, 1968.
(After C.B.C., 1969. Goose Bay, not shown: o , linked to network via 95. See note 4, Ch. 3).

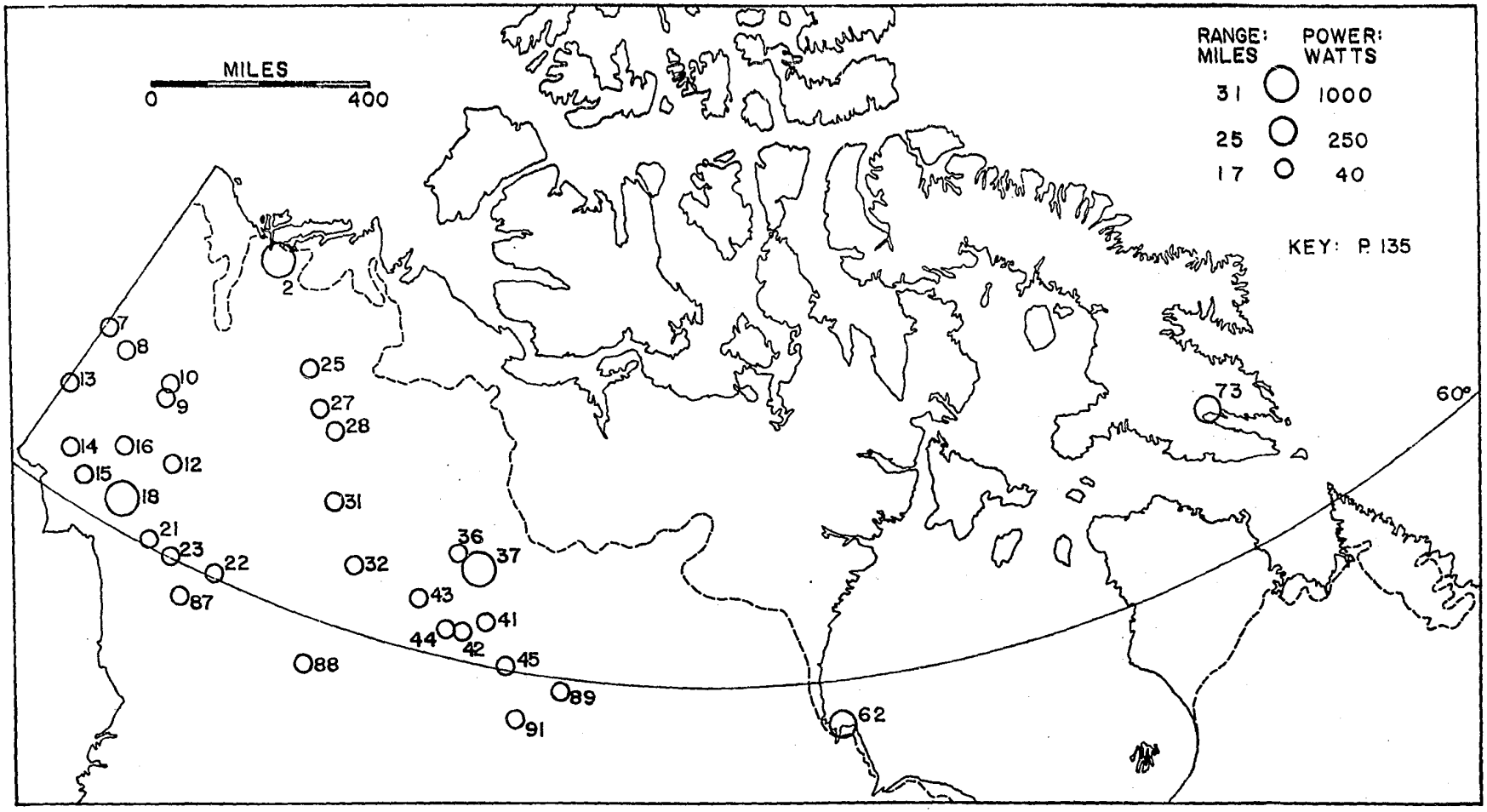


Map 3-4: The C.B.C. Northern Service Radio Network, 1972.
(After C.B.C., 1972a.)

that fall within the broadcast range of the C.B.C. Northern Service's community stations and LPRTs. The area not within the range of these AM stations is completely dependent on the C.B.C. shortwave service, or on the service of private or foreign agencies. The quality of the shortwave service thus becomes of great significance, as this service is the only Canadian radio signal accessible in most of the Arctic. In 1965, Sim reported that it was not possible to receive a Sackville broadcast in the eastern Arctic in summertime (Sim, 1965, 7). Mr. Peter Ernerk claimed in 1970, while an employee of CHFC, the C.B.C. station at Churchill, that the shortwave service was "...subject to bad fading and cannot be relied upon for passing messages" (Canada, Telecommission, 1970d, 21). In the summer of 1972, it is still impossible to receive the C.B.C. shortwave service regularly in southern Baffin Island. Only CFFB, the C.B.C. station at Frobisher Bay, can regularly receive the shortwave broadcast, but they have antennas of a quality that individuals resident in the area cannot hope to equal. It is therefore difficult to accept the C.B.C.'s contention that it "serves" 80 to 90 percent of the Northern population if they mean that the service is a dependable one of high quality.

Alternatives to C.B.C. Radio in the Arctic

Competition in the Arctic to the C.B.C. shortwave broadcasts has come from several sources. Radio Greenland was formerly so well received in the eastern Canadian Arctic that it broadcast a programme especially for Canadian Eskimo listeners (Nielsen, 1963, 4). In addition, Loftus (1970, 17) reports that the Voice of America and Radio Moscow are still, as in 1956, more clearly received in some areas than are Canadian broadcasts. In the summer of 1972, it is possible to clearly receive several non-Canadian shortwave broadcasts on a regular basis in southern Baffin Island. Notable among them are the Voice of America and the B.B.C.



Map 3-5: Coverage Areas of C.B.C. Northern Service Radio Stations, 1972.
(After C.B.C., 1972a; Canada, Telecommission, 1970b.)

Non-C.B.C. Canadian service is presently provided by four private stations in the Canadian North, at Fort Simpson, Whitehorse, Tuktoyaktuk, and Pond Inlet, only the latter two of which are in the Arctic. The Tuktoyaktuk station provides an example of what may be the only viable alternative to the C.B.C. within the realm of broadcast radio; a private group with sufficient financial, technical, and political support to obtain the permission and acquire the expertise necessary to operate a radio station in Canada. By way of contrast, there was in 1966-67 the highly publicized case of an unlicensed station that operated for several months in Pond Inlet until forced to close by the Department of Transport. The closure resulted from complaints made by licensed stations and aircraft operators who claimed their services were being interfered with (Pirate Radio Station, 1968). The station was later reopened legally with assistance from the C.B.C., but it now operates at a very low power, which restricts the service it can provide to the community (Canada, Telecommission, 1970d, 47, 48). Similarly, Baker Lake, which has made attempts to obtain a broadcast license for 16 years, has finally received permission to operate a radio station, which should begin broadcasting in the fall of 1972. The only reasons for the long delay appear to be associated with the residents' lack of technical and political expertise (Tukisiviksat, 1972).

The Tuktoyaktuk group, to avoid such problems, secured the support of the Mid-Canada Development Foundation before approaching the C.R.T.C. with an application to operate. Being able to show financial support, and a suitable level of managerial expertise (through, among other things, a program exchange arrangement with station CHUM in Toronto), the Tuktoyaktuk group was granted a license to operate a 1000 watt station, with the stipulation that "...a substantial amount of programming be in the Eskimo language and that

Eskimo personnel be utilized and encouraged in all possible ways" (Canada, C.R.T.C., 1971, 157).

Other innovations have been tried in northern broadcasting in the past few years with varying degrees of success. Two notable examples are experiments that have been carried out in Rankin Inlet and Eskimo Point. In the latter community, the adult education centre produces a thirty minute tape of local events and music which is sent to the C.B.C. station at Churchill for broadcast on Saturday mornings (Arviap Nipinga, 1972; Tukisiviksat, 1972).

In Rankin Inlet, broadcasting innovation has taken the form of a community radio-telephone service. Four telephone circuits were connected to a broadcast radio facility, which allows up to four parties to hold a conversation over their telephones that is then broadcast to the community via the radio station. Called "comminterphone", the system operates from 8 a.m. to 11 p.m. daily with a power of 40 watts. The system, which was opened in October, 1971, was originally designed as a three month experimental forum for discussion of community problems. However, the system is still operating, and is being used as well for such things as notifying the public of lost children or severe weather conditions. The community council of Rankin Inlet would like to obtain control of the system so that it can continue to operate on a permanent basis, but it is encountering what appears to be the standard problem of obtaining a broadcast license from the C.R.T.C. (Tukisiviksat, 1972; Montreal Star, 1971b).[5]

There is no question but that broadcast radio has not fulfilled its potential as a channel of mass communication in the Canadian Arctic, in large part due to the limited facilities described above. The C.B.C. Northern Service has made an admirable effort to provide service to the population

of the region since it was established 14 years ago, but has been impeded by budget and political considerations. Private community stations are few, the major reason being the difficulty of obtaining a broadcast license from a regulation-oriented C.R.T.C. This agency has repeatedly refused to consider extenuating circumstances which has led to almost no licenses being issued. The overall result of the limited number of stations is to greatly restrict the role that radio can play as a channel of information dispersal in the Arctic.

Written Channels

The main alternative to broadcast radio as a source of information is written material. Unfortunately, virtually all of the literature of or about arctic Canada, from the first explorers' journals to the most recent scientific and popular publications, has been written by outsiders for their home audiences. For decades after a means of writing the Eskimo language was developed, the only books produced for the native population were those translated by missionaries, and these, not surprisingly, were generally of a religious nature. According to its author, the first secular work aimed at the Eskimos was a book published by the Hudson's Bay Company in 1931 titled The Eskimo Book of Knowledge. It was designed to help the Eskimo fend against the "shadow of Civilisation" by arming him "...with vital knowledge, so that apart from the crutch of sympathetic legislation he may stand a better chance to fend for himself" (Binney, 1931, 4). This book was succeeded after World War II by the government published The Book of Wisdom for Eskimo, and in 1964 by the Q-Book. Both were designed to be a sort of Eskimo encyclopedia, dealing with a variety of topics such as education, health, welfare, etc. According to Phillips (1967, 274) and interviewees in Frobisher Bay questioned by the writer, the Q-Book has been

well received by the Eskimos primarily due to the scarcity of written works in their language.

Scarcity is the key factor with written material in the Canadian Arctic, and may be attributed to many factors. These range from the lack of a coherent education policy between the government and missions, which has served to keep literacy rates low, to the simple lack of syllabic printing equipment. There are presently, for instance, only eight syllabic typewriters in southern Baffin Island, five of them in Frobisher Bay, two in Pangnirtung, and one in Lake Harbour. Another source simply states that

> "Reading does not seem to be a popular pursuit.... It is difficult to determine to what extent this is due to lack of education, interest, or books." (Canada, Telecommission, 1970c, Annex III, 12).

While the reasons for scarcity may vary, it is agreed that a minimum of books or periodicals written in Eskimo are presently available in the Canadian Arctic. In early 1972, the Northwest Territories Public Library Services did not know how many such books existed, only that there were "very few" (Patricia Smith, personal communication). At the same time, Kenney (personal communication) was able to list four books and two periodicals. A list of all secular books and periodicals, excluding newspapers, printed in the Eskimo language and known to exist at the time of writing is given in Table 3-1.[6]

Besides books produced for Eskimos, there have been a few of an autobiographical nature written in recent years by Eskimos (with collaborators) for both Eskimo and non-Eskimo audiences. The first of these, I, Nulugak, was published in 1966, and has since been followed by such works as Harpoon of the Hunter, The Autobiography of John Ayaruaq, and Pitseolak: Pictures out of my Life, which features a parallel Eskimo/English text. Harpoon of the Hunter is notable in that it was originally published in

Table 3-1

Secular Literature in the Eskimo Language

Books

Title	Date	Publisher
The Eskimo Book of Knowledge	1931	H.B.C.
Book of Wisdom for Eskimo	1949	Govt. of Canada
Q-Book	1964	Govt. of Canada
The Little Arctic Tern and the Big Polar Bear	circa 1965	Govt. of Canada
The Autobiography of John Ayaruaq	1968	Govt. of Canada
Eskimo Stories from Povungnituk	1969	Govt. of Canada
Eskimo Point	1970	Eskimo Point Residents
Pitseolak: Pictures out of my Life	1970?	Design Collaborative
Harpoon of the Hunter (serialized in Inuttituut)	1970?	Govt. of Canada

Periodicals

Nuna ("Magazine for Eskimos")	quarterly since 1960	O.M.I.
Inuttituut	irregular since 1959	Govt. of Canada
Ajagait	irregular ? since 1967	Govt. of Quebec
Inuit Monthly	monthly since 1971	Inuit Taparisat

serial form, in Eskimo, by "Inuttituut". The story proved so popular among its Eskimo readership that it was produced in English as well; it has also proved to be a popular account of traditional Eskimo life in that language.

Other than the few books and periodicals listed in Table 3-1, newspapers are the only channel of written mass communication in the Canadian Arctic. As virtually no information was available about northern newspapers, other than that a few were produced on an irregular basis, it was decided to survey all known northern newspapers, and to solicit the assistance of the Government of the Northwest Territories in providing information about them. The survey was conducted in May, 1972, as a questionnaire mailed to editors of newspapers thought to be then operating, in which information about circulation, sources of income, staff composition, and language(s) of publication was requested. The results of the survey are presented in Table 3-2; locations of newspapers known to be presently operating are shown in Map 3-6.

A questionnaire was not returned from nine editors, but alternate sources provided some data on all but five, any or all of which may have recently ceased publication. The major features of most of the papers is their ephemeral nature and irregular frequency of publication. At least three papers ceased operations in the first six months of 1972, and the Pangnirtung paper may not produce another issue. Publication schedules are generally not adhered to for a variety of reasons, making it difficult to determine whether a paper which has not been printed for some time has closed or is simply behind its publication schedule. Another notable point is the insecure financial position of most northern newspapers. At least seven depend wholly or in part on government assistance, at least two (Peel River Press, Eastern Arctic Star) have recently closed due to financial

Table 3-2

Northern Newspapers

Community	Title of Paper	Local Circulation	Out of Town Circulation	English Content	Eskimo Content (syllabic)	Eskimo Content (Roman)	Period of Publication	Government Financial Aid	White Staff	Native Staff
Aklavik	Pokiak Press	NO INFORMATION								
* Baker Lake	Kamanituak Klarion	100	50	X	X		M		6	2
* Cambridge Bay	Imianik	150	33	X		X	2W		na	na
* Cape Dorset	Newsletter	NO INFORMATION								
* Churchill	Keewatin Echo	(1)	(1)	X	X		M	X	1	1
*	Taiga Times	500	150	X			W		2	3
* Coppermine	Koglotomiut News	150	nil	X		X	W	X	3	3
* Eskimo Point	Arviap Nipinga	100	40	X	X		M		na	na
Ft. McPherson	Peel River Press	DEFUNCT: May, 1971								
Ft. Providence	Gondee Chow	NO INFORMATION								
Ft. Simpson	Mackenzie News	na	na	X			W		na	na
Ft. Smith	Norther	NO INFORMATION								
* Frobisher Bay	Eastern Arctic Star	DEFUNCT: January, 1972								
*	The Listening Post	DEFUNCT: Spring, 1972								
Hay River	Hay River News	DEFUNCT: May, 1972								
	Tapwe	- 214 -		X			W		na	na
* Igloolik	The Midnight Sun	75	100	X	X		M	X	2	2

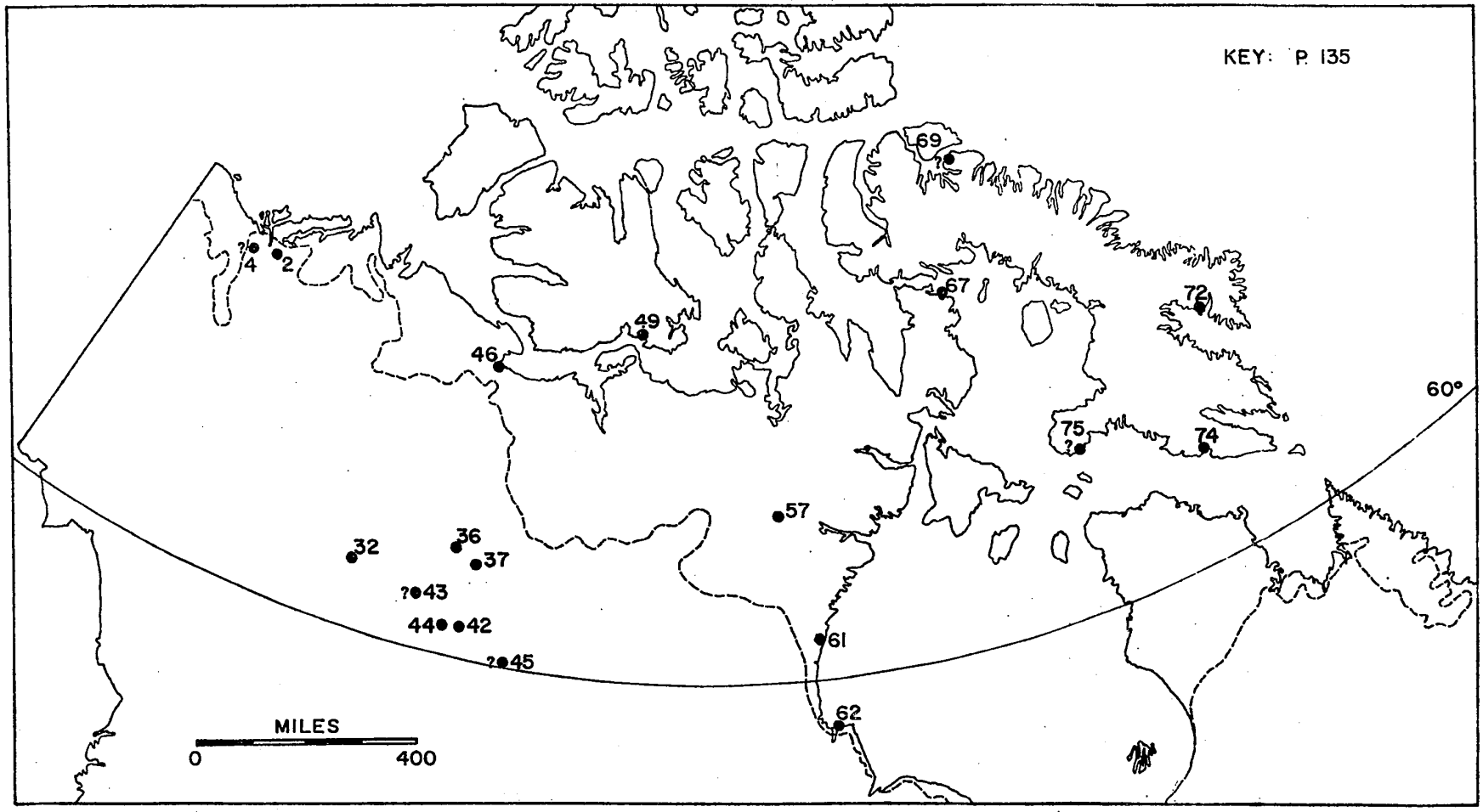
Table 3-2 (cont.)

Community	Title of Paper	Local Circulation	Out of Town Circulation	English Content	Eskimo Content (syllabic)	Eskimo Content (Roman)	Period of Publication	Government Financial Aid	White Staff	Native Staff
* Inuvik	The Drum	- 825 -		X			W		na	na
* Lake Harbour	Lake Harbour, N.W.T.	na	na	X	X		na	X?	na	na
* Pangnirtung	News and Views	50	100	X	X		I	X	1	2
Pine Point	Pine Pointer	230	30	X			2W		5	nil
* Pond Inlet	Newsweek	NO INFORMATION								
Rae-Edzo	Rae-Edzo News	200	na	X			2M		0	10
Yellowknife	Native Press	200	2100	X			3W	X	1	2
	News of the North	2100	2600	X			W		na	na
	Ttsigoinda	250	150	X			M	X	2	2
	Tukisiviksat	nil	2500	X	X		M	X	na	na
	Yellowknifer	na	na	X			W		na	na

Key: W: weekly; 2W: every two weeks; 3W: every three weeks; M: monthly; 2M: every two months; I: irregular. *: Arctic paper.

Notes: (1) distributed to every family in Keewatin

Sources: 1: Survey of Newspapers described in text.
2: Directory: Newspapers, Magazines, and Trade Publications (1971).



Map 3-6: Northern Communities with Newspapers.
(A question mark indicates incomplete information.)

pressures, and at least two (Ttsigoinda and Taiga Times) are presently in some financial difficulty.

Several editors returned detailed letters about the operation of their papers, and it was also possible to interview the editors of the Eastern Arctic Star and Pangnirtung News and Views while in the Arctic in the summer of 1972. The information gathered from these sources has made it possible to make several general statements about the operation of newspapers in the Arctic.

The first is that, almost without exception, editors of Arctic newspapers have no formal instruction or experience in running a newspaper, but only a high level of ambition and interest. As a result, many editors quickly find themselves to be overcommitted financially and/or temporally, which causes the quality of their paper to suffer. One newspaper, the Hay River News, was forced to close in May, 1972, due to the editors' lack of time to oversee its publication.

Secondly, there is no possibility that any newspaper being published privately in the Arctic can make a profit for its owner. The Eastern Arctic Star was able to produce a revenue from sales and advertising sufficient to cover its operating costs, but not to provide any money to pay off the capital outlay that was necessary to begin publication. This paper was produced using a Gestetner press and copier, equipment that is too sophisticated for use in the Arctic due to the need to have it sent to Montreal for anything more than minor maintainance. The Eastern Arctic Star also was printed in a building acquired for the purpose at a cost of $4000, an expense which could hardly be considered essential to a small operation. Nonetheless, even without the building and sophisticated machinery, the paper could not have produced a revenue sufficient to cover capital costs. It is also

essential to consider that such items as food and housing for the owner must be provided for by his newspaper. A one-bedroom Butler apartment in Frobisher Bay rents to a non-government employee for $350 per month. Food prices are also substantially higher than in Montreal, so that a paper would have to provide an excess of income over capital and operating costs of at least $500 per month simply to keep the owner housed and fed. Given the limited market for an Arctic newspaper, this level of income is simply not possible to achieve at the present time. The industrial development officers of the Government of the Northwest Territories consider the financial aspects of newspaper operation so bleak that they refuse to provide development capital to assist in starting operations. It is interesting to note in this regard that in Ft. McPherson a former industrial development officer attempted to set up a newspaper on his own initiative, but even with a small government grant, the paper survived only nine months before succumbing to financial pressures (Rosa Jackson and Piet van Loon, personal communications).

A third problem is the need to encourage local support for and assistance with a newspaper. Numerous papers dependent on the interest of one person have closed because the editor has moved or changed jobs within the community. The Pangnirtung News and Views may cease publication because the editor moved to Toronto in July, 1972. At the time of her departure, she knew of no one who was seriously interested in taking the paper over. The editor of the Baker Lake paper, which is published on a volunteer basis by the local residents' association, contends that the reason the paper has so little Eskimo language content (about 15%) is that people who can do translation work are not interested in donating their time (Lynn Borthwick and Susan Gilchrist, personal communications).

The lack of a significant amount of Eskimo language content is a feature of many Arctic papers. Reasons for this vary, but it is clear that such a

situation severely limits local response to a paper. A major reason for the lack of local advertising in the Eastern Arctic Star, which in turn extenuated its financial difficulties, was that it had virtually no Eskimo language content. This served to restrict the circulation of the paper to the one-third of the Frobisher Bay population that can read English easily, thus lessening its appeal as a means of advertising to local merchants. The editor of a predecessor paper, the Eastern Arctic Newsweek, felt the biggest reason his paper failed was its lack of Eskimo language content.

Government assistance to Arctic papers may be, at once, their biggest aid and problem. Certainly, when government subsidises virtually every type of industry in the region, there is no reason that they should refuse to subsidise newspapers. However, government assistance is a very poor idea from one point of view, that of the control it implies over information content. Certainly, government does not presently exercise explicit editorial control over any paper it supplies funds to. It has, however, been pointed out by several editors and other observers in the Arctic that government has clear ideas about what information should be in newspapers, and if newspaper content varies from the sort of information considered acceptable, funds may be curtailed or employment of staff terminated.

A point raised by two editors is that of C.B.C. advertising. The C.B.C., as a non-profit corporation, is not allowed to carry commercial advertising, but it permitted to carry public service announcements. The editors concerned state that such announcements in fact constitute free advertising, and that by offering such a free service, the C.B.C. reduces the amount of paid advertising available to newspapers. It must be agreed that local advertising may suffer from what in fact amounts to unfair competition on the part of the C.B.C., but at the same time it must be noted that the C.B.C. would be

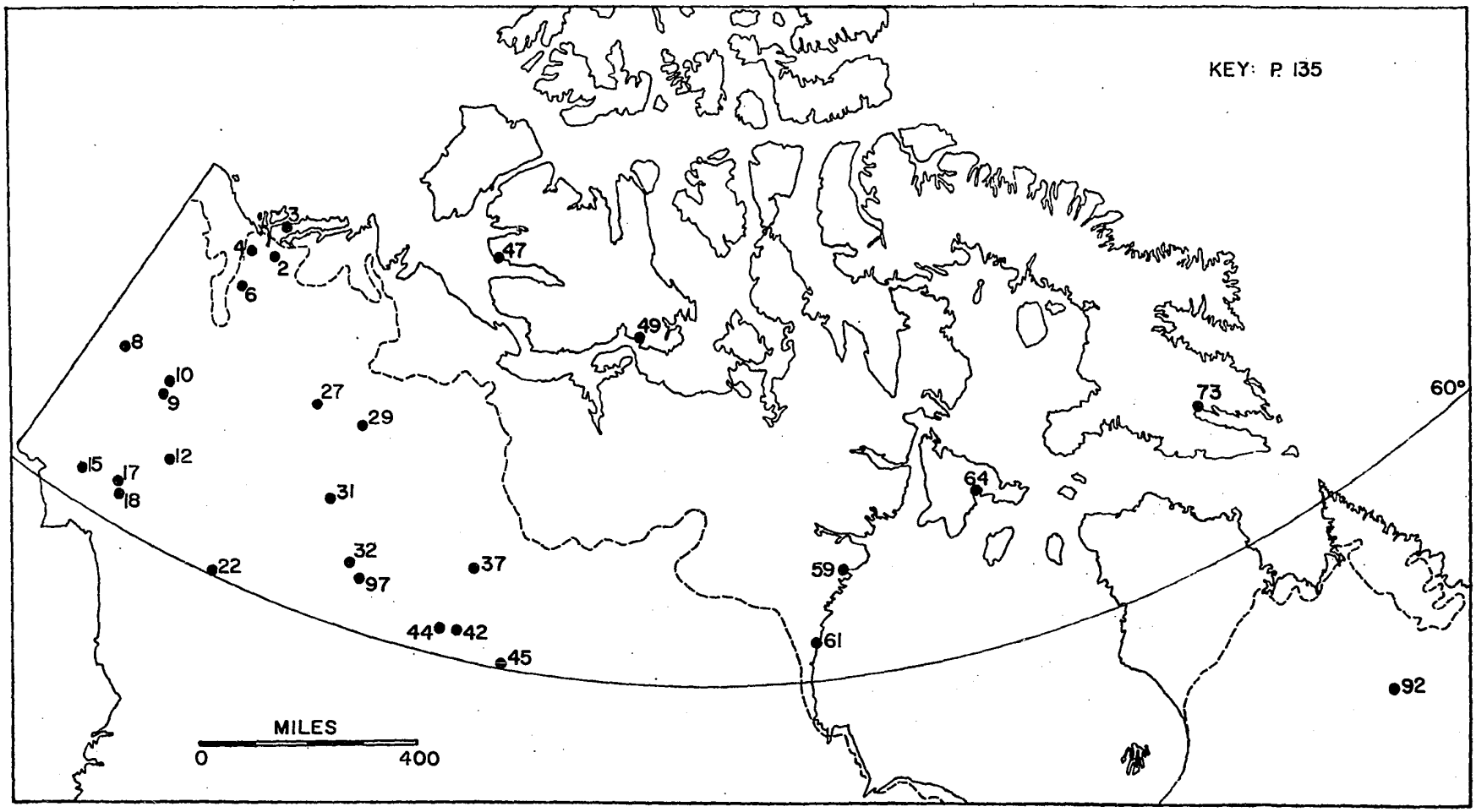
eliminating one of their most valuable services by ceasing to air their public service announcements. For example, several movie operators in the Arctic order films on a regular basis from distributors in southern Canada, but until the films are actually delivered, the operators do not know whether they will receive the ordered films or substitutes. This system does not lend itself to advertising movie titles in a weekly newspaper, as the operators seldom know what titles they have until a day or two before they intend to show them. This situation allows insufficient time to place an advertisement in a weekly newspaper, so the C.B.C. announces, as a public service, what movies are showing. Similarly, Nordair uses the C.B.C. to announce plane departures and arrivals, rather than relying exclusively on newspaper advertisements of their printed schedules. Nordair operates commercial aircraft on class 2 and 3 licenses, which allow them to deviate from their printed schedules as often as they wish to do so, for a variety of reasons, such as inclement weather or insufficient load. In view of the abrupt changes of schedule that may result under these conditions, it is impossible for them to inform their customers of late developments through a weekly newspaper, while it is possible to do so through the C.B.C. (Rosa Jackson, Doug Beiers, Harry Walker, personal communications; Canada, C.B.C., 1972g, 6).

In conclusion, everyone in the Arctic is in favor of having community newspapers. However, there is no possibility of operating one independent of government assistance, which entails certain implicit editorial restrictions. Until cost considerations can be overcome, which is not likely to happen in the near future, there will be no privately published newspaper operating on a permanent basis in the Arctic.

The means of distributing available books, periodicals, and newspapers to large numbers of people is a system of public libraries. In 1964, the Northwest Territories made the decision to establish a public library system. The following year, the Public Library Services was organised, plans for buildings made, and book ordering begun. The headquarters of the system is at Hay River, and by March, 1971, eighteen other communities in the Territories had either member or associate libraries. In early 1972, the director of the system reported there were approximately 30,000 books in the various libraries (Patricia Smith, personal communication). In 1971, the Northwest Territories libraries reported 73,000 borrowings (Northwest Territories, 1971, 115). However, the proportion of these that were by whites, Eskimos, and Indians is impossible to ascertain, as the Territories "...consider our readers Northerners and do not discriminate" (Patricia Smith, personal communication).

In Labrador, a recent survey showed that "...the only source of books is the school library which is inadequate for the interests of adults" (Canada, Telecommission, 1970c, Annex III, 11). The only library in northern Quebec is in Schefferville; in 1970 it reported having 5601 books (Quebec, 1970, n.p.). The Yukon has a highly developed public library system, begun in the early 1960s; it had eight member libraries in 1971, and maintains an exchange arrangement with school libraries as well (Yukon Territory, 1971). There is presently no public library in arctic Manitoba. None of the Quebec and Yukon libraries are located in the Arctic, and only seven of the Northwest Territories libraries are located in the region. The northern settlements having a public library are shown in Map 3-7.

The operation of the Frobisher Bay library provides an insight into the role of the libraries operated by the Northwest Territories Public



Map 3-7: Northern Communities with Libraries.

Library Services. The population of the hamlet is approximately 2500, about 1000 of whom are registered as borrowers at the library. Virtually all Eskimo children in the community are library members, but only a few dozen adult Eskimos are registered. This situation is a direct reflection of Eskimo reading abilities and library holdings. Most adult Eskimos cannot read English; the children can all read English to a greater or lesser extent depending on how much schooling they have. The library, with total holdings of about 5000 books, has only three books written in Eskimo: The Autobiography of John Ayaruaq, Harpoon of the Hunter, which is an assemblage of the serialised articles that first appeared in "Inuttituut", and Pitseolak: Pictures out of my Life.[7] This means that adult Eskimos cannot use the library because it has no books that they can read. However, the adults are avid readers of northern newspapers with Eskimo content, and the library subscribes to several of these. The problem that arises with their use is that the Eskimos tend to walk off with the newspapers rather than check them out. This happens because the Eskimos do not understand that library books and newspapers are only for borrowing, and the librarians are prevented from explaining the system to them because they do not speak Eskimo. However, "permanent borrowing" is allowed to continue, as the librarian prefers that the papers be taken out and not returned rather than have them not be used at all (Mrs. A. Cooper, personal communication).

In an effort to increase the use of books in the eastern Arctic by those able to read them, the Frobisher Bay library will shortly begin a program in which four blocks of 300 books each will be sent in rotation to Igloolik, Pangnirtung, Pond Inlet, and Resolute Bay. Every four months a new block of books will be sent to the settlements, and the content of the blocks will be changed when each one has been to every settlement. Children's

books are to be included, as well as northern newspapers. The only problems appear to be finding space for the collections in the settlements, and librarians to look after the books.

There are several significant factors to note concerning the status of written channels in the Canadian Arctic. The first is how little of it is written for or by the native population. As was stated above, there is no one cause for this, but rather it stems from a combination of many, including the traditional Eskimo use of oral media, the dispersed population, and the scarcity of syllabic printing equipment. The distances between centres of population may be the most important of these. It has historically caused problems with mail delivery, and is an obvious deterrent to the movement of newspapers and books, especially given the current minimal transport facilities between the eastern and western Arctic.

The most important factor, is, however, that of literacy. While it appears that until recently from 90 (Eber, 1970?, n.p.) to 99 percent (Graburn, 1969, 204) of Eskimos were able to read and write their own language, only a small number of Eskimos can read and write English. In 1957, the Commissioner of the Northwest Territories (quoted in Gilroy, 1964, 199) put the figure at 10%; Jenness stated ten years later that "The majority are literate to the extent that they can sign their names and write simple letters..." (Jenness, 1968, 40). Interviews held in Frobisher Bay in 1972 indicate that at the present time few adults over the age of 25 can read English, but most younger individuals can read it to a greater or lesser extent depending on the amount of schooling they have received.

It was noted earlier (see pages 26 and 27) that in the early 1900s the Eskimos found themselves in a state of increasing functional illiteracy. It is apparent that the situation as it then existed has

continued to deteriorate to the point that now written media are only barely viable as a means of mass communication between Eskimos and whites. Probably the best indication of the low practical value that the written media are presently accorded is found in a statement made by the C.B.C. when they introduced television into the North in 1967: "Radio, until this year, was the only medium of mass communication in the North" (Canada, C.B.C., 1968, 41).

Given the inability of Eskimos to produce written material for themselves due to lack of knowledge of how to go about such a thing, the current government emphasis on learning English rather than Eskimo (and the consequent official disinterest in Eskimo publishing), and the apparent impossibility of a private press being supported by the limited market for Eskimo language publications, there appears to be little chance that written channels will become more important as a means of information exchange in the forseeable future.

Visual Channels

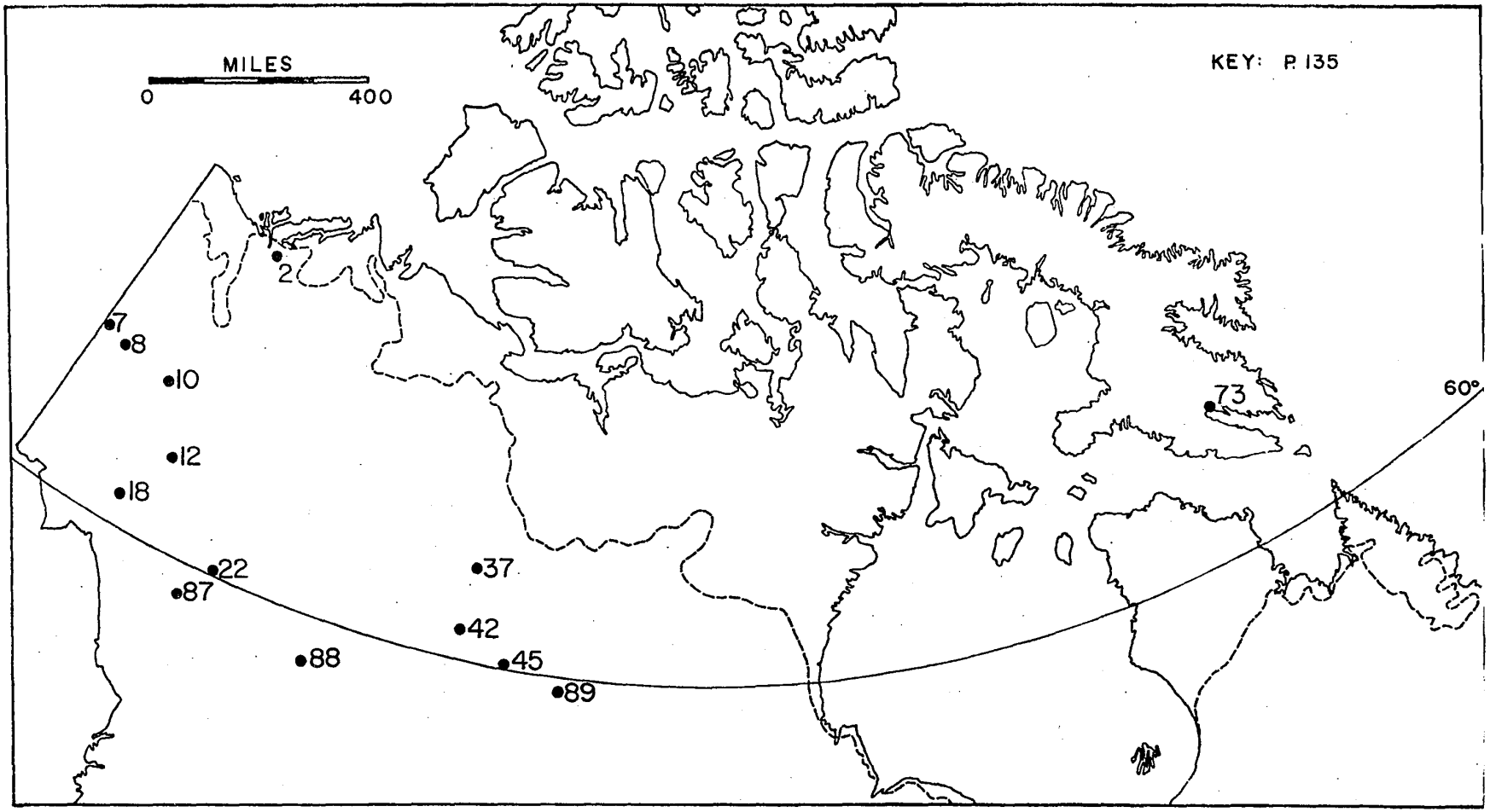
Visual channels of mass communication were the last to appear in arctic Canada. Television was first used in Canada in 1952, but was not utilized in northern Canada until 1967 when the C.B.C. began showing a "Frontier Coverage Package" at Yellowknife. The C.B.C. states that

> "The Frontier Coverage Package television station was designed... to provide a modified service at the least possible cost.... The programs are recorded at one of CBC's larger television centres in the South and shipped by air to the stations in the North. One tape provides the daily four-hour program service. The stations operate from 1900 to 2300 hours daily....
>
> The CBC, for obvious reasons of cost and engineering, did not wish to provide a television service to the North until it could do so by satellite. In 1967, however, under pressure from the government, from mining companies and from local groups in the North, it introduced the Frontier Coverage Package.... The CBC emphasized, when it introduced the FCP system, that it was only a partial and interim service" (Canada, C.B.C., 1972d, 2).

Partial and interim though the system might be, the number of F.C.P. stations has increased yearly since 1967 until in 1972, fourteen northern communities have the service, two of them located in the Arctic.[8] These places are shown in Map 3-8. As of spring, 1972, no community north of 55°N was receiving live television. However, Whitehorse has two television channels available via cable, and cable television will be in operation in Yellowknife in the summer of 1972 (Canada, Facts and Figures Yukon Territory, 1972, 8). There is not now any television production centre in the North that can inject local programming into broadcasts, nor is there any plan to have such a centre (Kenney, 1971, v. 1, 24). It is noteworthy that the Whitehorse cable systems, and one of the two stations located in the Arctic, that at Churchill, are privately owned.

The C.R.T.C. (1971, 65, 66) states that in 1971, television signals of a quality "...normally available to a domestic receiver" were available to 76.5% of the Yukon population, and to 40.8% of the Northwest Territories population.

Film has been used as a channel of mass communication in the Arctic for a far longer period of time than television, but precisely when it was first used, and by whom, is not known. In contrast to the other channels of mass communication being used in the Arctic, especially television, film is not a medium that requires any sort of organized network or expensive capital facilities as a prerequisite to the provision of services. As elsewhere in North America, commercial entrepreneurs, community organisations, and special interest groups such as churches and cooperatives show films in a place and at a time that is convenient to them. It is therefore obvious that every community in the Arctic will have at least one person or group showing films, most of them several (see, for example, Honigmann, 1965, Graburn, 1969, and Sim, 1965).



Map 3-8: C.B.C. Frontier Coverage Package Television Stations, 1972.
(After C.B.C., 1972b.)

Frobisher Bay and Pangnirtung provide examples of several of the above mentioned methods of showing movies. In Frobisher Bay, there are two commercial theatres and one private club which show movies on a regular basis; a school residence and several community groups show movies on an irregular basis. One of the commercial theatres, the Palace, has a different movie every day, with two showings on weekdays and three on weekends. The other, a theatre located in the new office-apartment complex, shows one film on Tuesday night, and another on Thursday night. The F.A.R.A. Club has one showing of a movie on Wednesday night, which is repeated on Thursday. All of these theatres are supplied by commercial distributors in Montreal.

In Pangnirtung, there is one movie shown twice on most weeknights by the Community Association. Most films there are supplied commercially, but a few are obtained from other sources such as the National Film Board of Canada and the Adult Education Centre in Frobisher Bay. The movie operations in Frobisher Bay and Pangnirtung are representative of those found throughout the Arctic in their methods and variety of operations. Their physical equipment ranges from that comparable to a modern theatre in southern Canada (the new theatre in Frobisher Bay) to that which utilizes one projector and requires the audience to sit in folding chairs in a room also used for such diverse events as dances and bingo games (Pangnirtung).

In conclusion, it may be stated that both visual channels as presently found in northern Canada are physically the same thing, i.e., reels of film. It is the difference in facilities needed to provide a service with them that explains the variation in their distribution. Television, with its need of expensive broadcast stations, is located in only two arctic communities where it serves only the local population. Movies, on the other

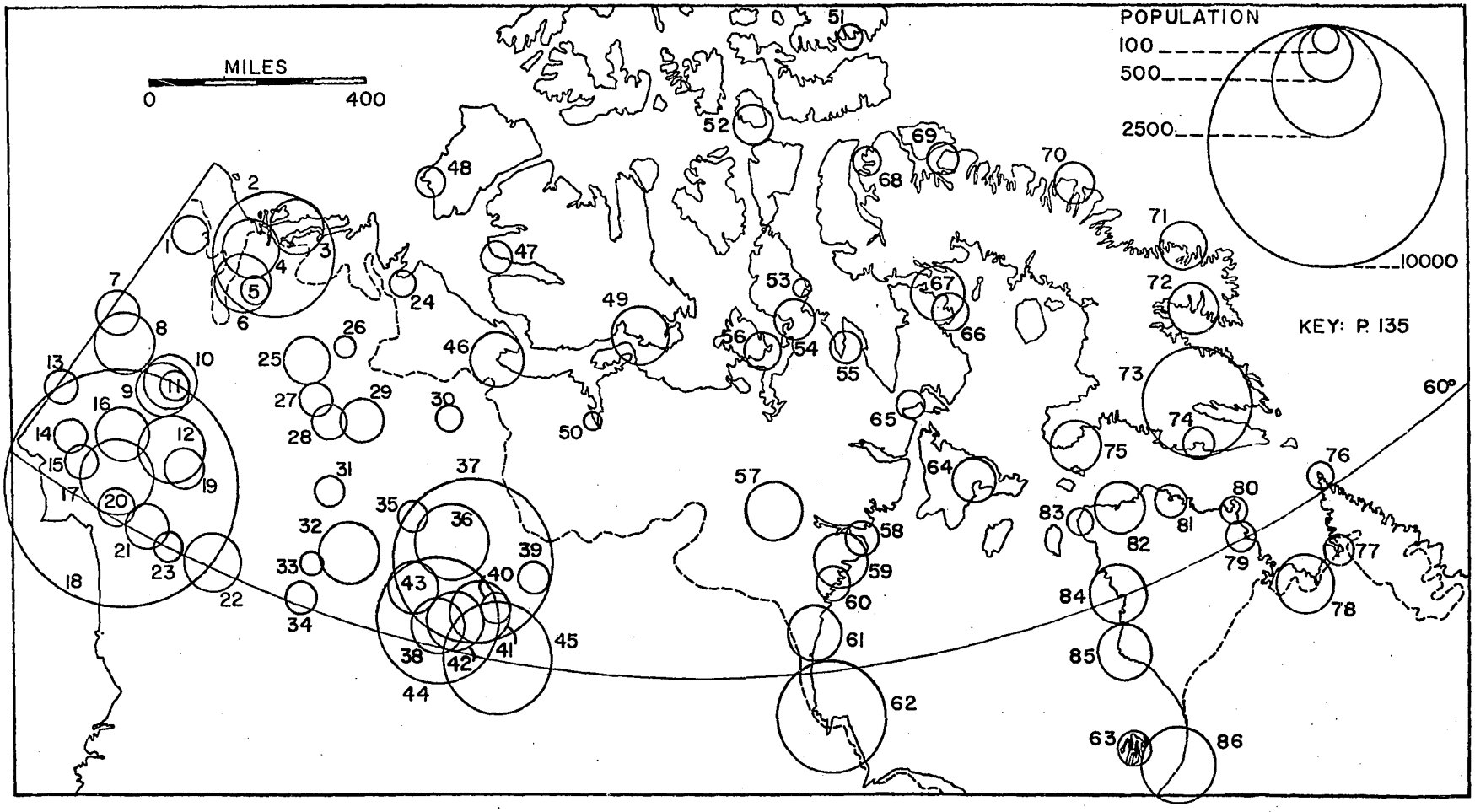
hand, require only a projector, a projection hall, and a modicum of entrepreneural effort to provide a service, and are thus ubiquitous in arctic settlements.

Accessibility to the Channels

The channels that have been described thus far, radio, books, newspapers, television, and film, are all available in the Canadian Arctic, but accessibility to them is very limited. It will be recalled that accessibility was defined in Chapter 1 as a function of the number of channels available to users, both senders and receivers, in a given location. Map 3-9 shows 42 settlements in the Canadian Arctic with a population of at least fifty persons. The inhabitants of these places represent potential users of channels of mass communication. Table 3-3 shows what channels are accessible to each of the 42 settlements, and Table 3-4 what number of settlements have access to each channel.

The tables clearly indicate that while five channels of mass communication are available in the Canadian Arctic, with the exceptions of film and the C.B.C. shortwave service, the various communities have an extraordinarily low level of access to the channels. Local channels are especially few in the region. Only the community radio stations, with the ability to inject local content into their programming, and the local newspapers qualify. There are only, at best, about 15 such local channels in the Arctic.

The reasons for the low level of accessibility and the absence of local channels are many: population distribution, climate, physiography, historical accident, and the provision of facilities and services on a regional basis have all played a part in the evolution of both contact-array and time-lag spatial biases.



Map 3-9: Population of Northern Canada.
(Only settlements with at least fifty residents are shown.)

Table 3-3

Accessibility to Channels of Mass Communication
in the Canadian Arctic by Settlement

Settlement	Community radio station	LPRT	Television	Library	Local Newspaper(s)	Total channels accessible
Arctic Bay						0
Baker Lake					X	1
Bathurst Inlet						0
Belcher Islands						0
Broughton Island						0
Cambridge Bay				X	X	2
Cape Dorset					?	(1)
Chesterfield Inlet						0
Churchill	X		X		X	3
Clyde						0
Coppermine					X	1
Coral Harbour				X		1
Eskimo Point				X	X	2
Fort Chimo						0
Frobisher Bay	X		X	X		3
Gjoa Haven						0
Great Whale						0
Grise Fjord						0
Hall Beach						0
Holman Island				X		1
Igloolik					X	1
Ivugivik						0
Koartuk						0
Lake Harbour					X	1
Pangnirtung					?	(1)
Paulatuk						0
Payne Bay						0
Pelly Bay						0
Pond Inlet	X				?	(2)
Port Burwell						0
Port Harrison						0
Povungnituk						0
Rankin Inlet	(A)			X		(2)

Table 3-3 (cont.)

Settlement	Community radio station	LPRT	Television	Library	Local newspaper(s)	Total channels accessible
Repulse Bay						0
Resolute						0
Sachs Harbour						0
Spence Bay						0
Sugluk						0
Thom Bay						0
Tuktoyaktuk	X			X		2
Wakeham Bay						0
Whale Cove - Tavani						0

Notes: (A): The radio station at Rankin Inlet is experimental and is not a licensed broadcast station.

Table 3-4

Percentages of Arctic Settlements
with Access to Channels of Mass Communication

Channel	Arctic Settlements having access to Channel	
	Number	Percentage of 42 Settlements
Newspaper	7	17%
LPRT	0	0%
Community radio station	4	10%
Library	7	17%
Television	2	5%
Film	"everyplace"	100%

The population distribution of the Canadian North is shown in Map 3-9, which shows settlements of over fifty people. Table 3-5, which details the population distribution, makes it clear that many more people live west of 120°W than east of that line (the significance of the boundary is given below); approximately 38,500 in the former area, and 14,500 in the latter.[9] The reasons for this distribution are many. The Canadian Arctic as shown in Map 1-1 is that area north of the limit of tree growth. This line is virtually the same as that of the warmest-month isotherm of 50°F, and shows the effective limit of white pioneer settlement in northern Canada. The Arctic extends to much lower latitudes in the eastern part of Canada, and additionally, is more difficult to penetrate by virtue of its physiography. The eastern Arctic is a large archipelago, through which it is difficult to travel in any season, while the western sub-Arctic is more easily approached as it is part of the continental landmass and has an excellent transportation corridor, the Mackenzie River.

Historical accident was the first direct cause of a variation in the mass communication facilities provided to the Arctic population. In Chapter 2 the development of three character regions of written Eskimo within the Arctic was elaborated on, and the regions shown in Map 2-2. The newspaper survey described on page 54 provided evidence to the effect that the boundaries between the syllabic script and Roman alphabet regions are intact.

Most other communication facilities in the North have developed in the sub-Arctic, and have generally had the goal of serving the white residents rather than the natives of the region. The distribution of libraries and of newspapers shown in Maps 3-6 and 3-7 show that in the western Arctic there are three libraries and two newspapers, while in the

Table 3-5

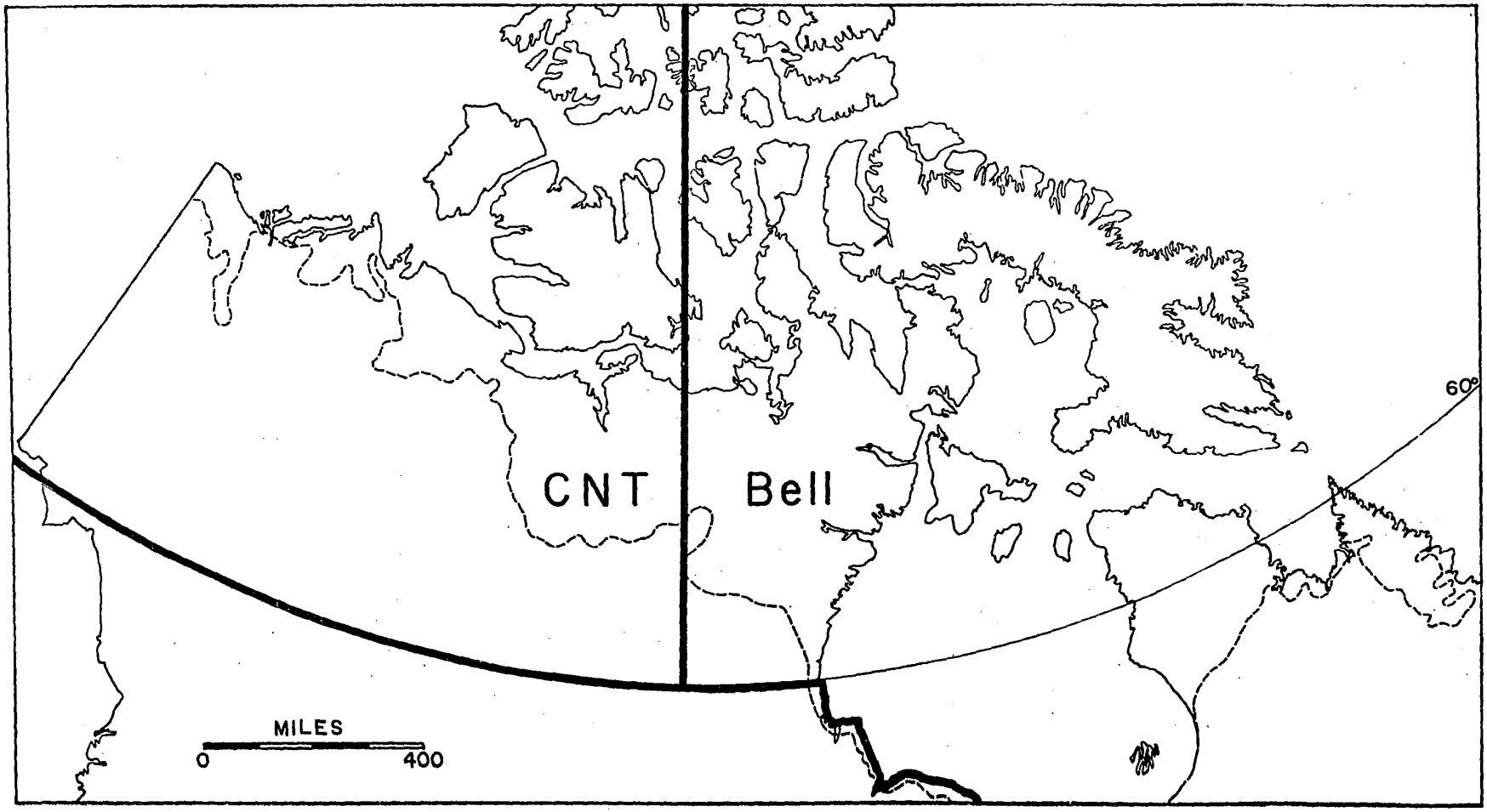
The Population of Northern Canada
(Settlements of at least 50 People)

Region	West of 102°W	East of 102°W	Total
Yukon Territory	17,000	0	17,000
Northwest Territories	21,500	8,500	30,000
Churchill, Manitoba	0	2,000	2,000
Arctic Quebec	0	4,000	4,000
	38,500	14,500	53,000
	Arctic Percentage of Above		
Yukon Territory	0	0	0
Northwest Territories	2,100	8,500	10,600
Churchill, Manitoba	0	2,000	2,000
Arctic Quebec	0	4,000	4,000
	2,100	14,500	16.600

eastern Arctic there are four libraries and at least six newspapers. No less than 21 libraries and at least eleven newspapers are located in the sub-Arctic part of Quebec and the Yukon and Northwest Territories.

The most conspicious apparent variations in facilities and services exist in the C.B.C. broadcast system. Fifty years ago, the first landline radio-telegraphy systems were installed in the Mackenzie valley and Yukon while the east and central parts of the Canadian North were dependent on HF radio alone. The microwave systems that were developed as a replacement for wire systems operate on a line-of-sight basis, and utilize relay stations installed about 30 - 40 miles apart. The use of such a system is "...prohibitively expensive...where there are no transportation facilities" (Canada, Department of Communications, 1971a, 82) or where there is no land upon which to install the relay stations. This is the situation in the eastern Arctic, where the numerous water bodies and almost non-existent land transportation facilities necessitated the use of an alternate system, the tropospheric scatter. Because two different companies, Canadian National Telecommunications and Bell Canada, had developed expertise with microwave and tropospheric scatter systems, respectively, while building various defence systems in the North, and because it would be "most economical" to do so, it was agreed that Bell would provide public telecommunications facilities to that area of Canada north of 60°N and east of 102°W (as well as to northern Quebec and Ontario), and C.N.T. to the area west of that line (Loftus, 1970, 15). These regions are shown in Map 3-10.

The difference in channel facilities is one reason for the variance in the quality of broadcast radio service in the Canadian North today. On the one hand, C.N.T. has only to expand its telephone circuits to allow the C.B.C. (which uses but does not operate the facilities owned and provided by



Map 3-10: C.N.T. and Bell Canada Northern Telecommunications Service Areas.

C.N.T. and Bell) to expand its broadcast services in the west. Bell cannot do this as easily; the "private" company has more limited financial resources than the government-owned C.N.T., and even if it could afford to install more tropo systems, the service received from them would not be as good as that given by microwaves due to the atmospheric problems discussed above (see page 37).

The most unfortunate part of the accessibility situation in the Bell service area is that the only commercial tropospheric system is the one connecting Goose Bay with southern Quebec (Ibid.,16). Thus, all eastern and central arctic settlements are still entirely dependent on the relatively poor C.B.C. shortwave service unless they are within range of one of the community broadcasting stations shown in Map 3-5. In addition, the C.B.C. station at Frobisher Bay is itself dependent on the shortwave service for topical material, which it then rebroadcasts.[10]

It is clear from Map 3-4 that most of the C.B.C. program centres and LPRTs are in the sub-Arctic Yukon and Northwest Territories. The same pattern is visible with C.B.C. television stations, as shown in Map 3-8. It appears that only film and the C.B.C. shortwave radio service escape any regional variation in accessibility, the former, as noted earlier, only because showing movies is quite inexpensive and requires no organised network, the latter due to the nature of its propagation.

The figures presented in Table 3-6 clarify the inequitable distribution of mass communication facilities and services, and indicate that a contact-array spatial bias exists relative to population distribution both within the Arctic itself and relative to the sub-Arctic Yukon and Northwest Territories. The western Arctic has a much greater number of newspapers, libraries, and community radio stations per capita than either the eastern

Table 3-6

Accessibility of Mass Communication Channels on a Per Capita Basis

	Sub-Arctic (Quebec, Yukon and Northwest Territories)	Arctic	
		West of 102°W	East of 102°W
Population in settlements of at least 50 people	36,400	2,100	14,500
Channel			
Newspaper:			
number	11	2	6
per capita	.0003	.001	.0004
Library:			
number	21	3	4
per capita	.0006	.0014	.0003
Community radio station			
number	5	1	3
per capita	.0001	.0005	.0002
LPRT			
number	23	0	0
per capita	.0006	0	0
Television station			
number	11	0	2
per capita	.0003	0	.0001

Community radio stations and television stations include both C.B.C. and private stations.

Arctic or the sub-Arctic parts of Quebec and the Yukon and Northwest Territories, which have roughly the same overall level of service. The situation is reversed with respect to LPRTs and television stations. The western Arctic is in the poorest condition, while the sub-Arctic areas of Quebec and the Yukon and Northwest Territories are much better served; the eastern Arctic falls somewhere between. The broadcasting situation in the West is striking. As the sub-Arctic Yukon and Northwest Territories is so well served by the C.B.C., it is interesting that so little of the service has "rubbed off" on the arctic area immediately north. The one radio station in the western Arctic, at Tuktoyaktuk, is privately owned.

Maps 3-4 and 3-8, of the 1972 C.B.C. Northern Service radio and television networks, respectively, make it look as though the C.B.C. tried to fit as many stations as was possible into the sub-Arctic while almost completely ignoring the Arctic. This biased distribution unfortunately means, as has been pointed out before, that unless an Arctic settlement falls within the service area of one of the radio stations shown in Map 3-5, it is dependent exclusively on the Sackville broadcasts for topical information. Given the problems of reception associated with this service, the meaning of this situation is that most of the Arctic population is part of a mass communication system that is effectively still tied directly to transportation, and receipt of information is therefore subject to a time-lag spatial bias. Of the 42 settlements listed in Table 3-3, only 10% have a local radio station. The rest of the settlements, 90% of them, are dependent for their news on taped television, books, newspapers, and movies, all delivered, at the best, by aircraft from another settlement. Only those settlements with their own libraries (17%) and newspapers (17%) have any recourse to an immediately available alternate channel of mass

communication. All settlements with taped television have a radio station, so that even if live television were available in the same places it would not serve a useful role in conveying topical material to Arctic residents. It is worth noting that the C.B.C. has avoided including any topical material in its F.C.P. television programming, as it would be out of date by the time it is shown to its audience. Frontier Coverage Package tapes, in the interest of keeping costs down, are shared among several communities in the North. The route that the tapes follow from the production centre in Calgary is shown in Table 3-7.

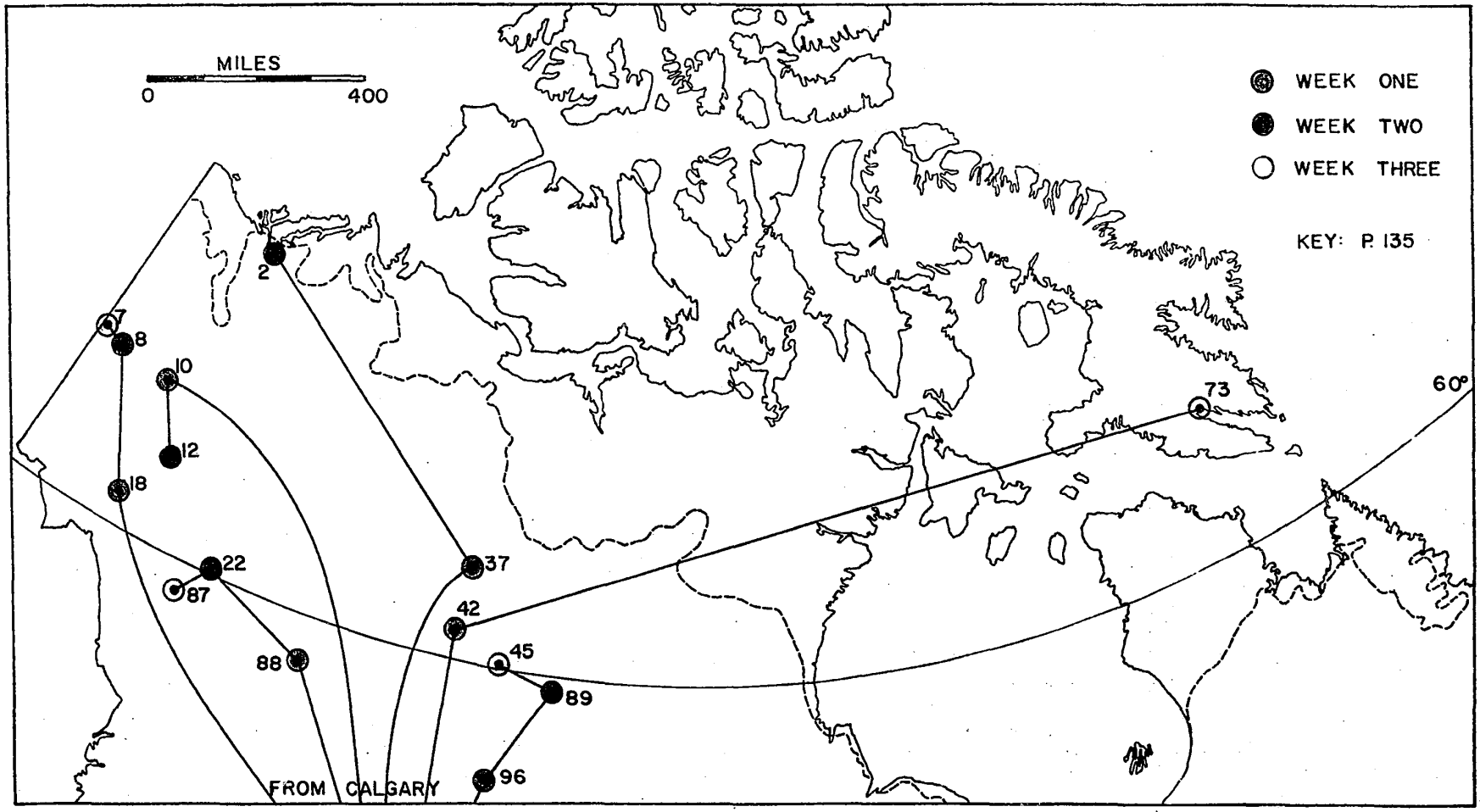
Table 3-7

Distribution of F.C.P. Tapes

	Air-shipped from Calgary to:		
Tape	One week after network	Two weeks	Three weeks
1	CFYK Yellowknife	CHAK Inuvik	
2	CFWH Whitehorse	Dawson	Clinton Creek
3	Fort Nelson	Watson Lake	Cassiar
4	Pine Point		CFFB Frobisher Bay
5	Fort McMurray	Uranium City	Fort Smith
6	Elsa	Faro	

(Canada, C.B.C., 1972d, 8).

It is interesting to note that distance from Calgary is the apparent determinant of when a settlement with F.C.P. television receives a tape. Five of the six tapes that move from Calgary into the Yukon and Northwest Territories travel farther away from Calgary each succeeding week, as shown in Map 3-11. This illustrates a time-lag bias in its finest form. It also shows why the C.B.C. was forced to drop the only topical programme it ever attempted to include in its F.C.P. service, N.H.L. hockey (Canada, C.B.C., 1971a, 35).



Map 3-11: Distribution of Frontier Coverage Package Television Tapes.
(After C.B.C., 1972d.)

That most of the important sources of messages are not natives of the Arctic, and that most messages flow into the region from outside has been alluded to several times. Establishing precisely who the senders are is fairly straightforward; one need only locate the sources of messages to do so. These are the various editors of newspapers, the authors of books, the producers of radio, television, and film programmes, and the advertisers who may use any or all of these channels.

Senders are numerically about evenly divided in terms of ethnic group. The C.B.C. staff is "largely white" (Canada, Telecommission, 1970b, 13), with only six Eskimos, Indians, and Metis being permanently employed in May, 1972 (Canada, C.B.C., 1972g, 4). Authors of the books listed on page 53 are evenly distributed: three were written by whites, three by Eskimos, and three by a mixed group. Among newspaper staff, where information is available, four of seven full-time staff are white, but 25 of 43 part-timers are natives.

However, it is not the numerical, but the political and social position of the senders that determines their authority. Local newspaper staff, as shown above, may be taken as approximately equal in ethnic composition. But the decision makers of the most important channels of information are almost exclusively white, and located outside the Arctic. Over 50% of C.B.C. Northern Service programming is produced outside the North, and most of what it consists of is determined by highly placed officers within the corporation, only one of whom, an Eskimo producer in Montreal, is not white.[11] Similarly, all television programmes and commercial movies are made outside the Arctic, all by whites. Of the few books there are in the Eskimo language, only one, Eskimo Point (1970), was created and produced in the Arctic. Most advertisers utilizing the channels of mass communication in

the Arctic are also white, and advertise in English. Very few local businesses are owned by Eskimos, and most businesses, whoever owns them, cater to the more affluent part of the population, which is the English-speaking non-native.

The most important factor to note about the senders is the number working directly or indirectly for government. The C.B.C. radio and television staff, the staff of at least seven northern newspapers, and the production staff of six of the nine Eskimo language books, are all under government control. This tends, either explicitly, as with the C.B.C., or implicitly, as with local papers that depend in part on government grants, to limit the staffs' freedom of expression to what government feels is acceptable content.

While the senders in a mass communication system tend to be few in number, especially in a developing area such as arctic Canada, where information sources are generally limited to government officials and a few scientists and entrepreneurs, the receivers often form a large and diverse body, a mass. It is possible to estimate fairly accurrately what sort of people compose the mass of receivers in the Canadian Arctic. One method is to ask the senders who they see their audience to be.

The director of the C.B.C. Northern Service, Mr. Andrew Cowan, has elaborated on who the C.B.C. perceives as its radio and television audience:

> "In the North as in the rest of Canada, broadcasting is predominantly middle class in its outlook and appeal. The majority of the programs on the Northern Service are for the white minority" (Canada, Telecommission, 1970b, 13).

It is only fair to note that Cowan is sympathetic with the situation of the majority native population, and he attributes serving a white audience to their more effective political pull and articulately stated demands. The present lack of native programming in the Arctic may also be attributed,

at least in part, to the lack of access by Eskimos to the channels of communication necessary for them to express their needs.

One must be aware, however, that Eskimos pay some of the taxes that help support the C.B.C., and that they have shown themselves to be interested in radio-listening many times. In 1963, Nielsen stated that

> "...the Eskimo people do not like to miss broadcasts in the Eskimo language, (sic) They know their exact date and time which show (sic) real interest, considering what little significanse (sic) clocks have for them in other cases. Another thing which show (sic) great interest was the great number of wireless receivers I saw" (Nielsen, 1963, 1).

Other observers have commented on Eskimo possession of radios. Graburn (1969, 145) notes that in the late 1950s there were "very few radios" in Sugluk, but that about 3.3% of Eskimo income was spent on radios and record players (Ibid., 161). Macdonald et al (1968, 147) report that in 1968, "...about 68% of all householders in the central and eastern Arctic own shortwave receiving sets in good working condition". Both Graburn and Macdonald et al attribute the low figures of radio ownership to the fact that in Eskimo society radio listening is generally a group activity.

From the foregoing discussion it is obvious that Eskimos are certainly as active in their radio listening as are whites. The same may also be true with television. The introduction of television was a response to white pressures, especially those of industrialists operating in the region who felt that the availability of television would encourage longer turn-around times of southern transient labourers (Canada, Telecommission, 1970c, 31). In this regard, it is interesting to note that only ten of 53 white respondents to Parsons' 1970 survey in Inuvik indicated that no television was a deprivation associated with northern living (Parsons, 1970, 52). The C.B.C. itself is skeptical that F.C.P. television has stabilized the work forces of northern towns (Canada, C.B.C., 1972g, 2). Native people in the North have been very critical of television programming designed

exclusively for whites. They feel that

> "...programming designed for southern audiences would distract and disturb their culture. It would also widen the generation gap between the older traditional groups and the younger people who have been exposed to the southern way of life" (Canada, Telecommission, 1970d, 8).

However, while much criticism has been made of television programming for the North by both whites and natives, in at least one community, Aklavik, "...many of the native people have television sets, and virtually all of the people have the opportunity of watching television" (Eades, 1971, 3).

Given television, one might be tempted to believe that a similar channel, film, would perhaps not be appreciated by large audiences. It seems, however, that Eskimos think more highly of film than any other channel of mass communication. The Honigmanns (1965), Graburn (1969), the Eades (1971), and the Department of Communications (Canada, Telecommission, 1970c, Annex, 14) all concur in their assessment that movies are the major spectator activity in an Arctic settlement. This view is substantiated by interviews held concerning movie attendance in Frobisher Bay and Pangnirtung. At the theatre in Frobisher Bay most often patronised by Eskimos, the Palace, and at the Community Association Hall in Pangnirtung, capacity audiences are the rule, and there are only rarely more than a few empty seats at any showing.

The surprise is that the white population may not be avid film-goers. As many people in this group are transient employees, it would seem that they would appreciate movies for the same reasons they might appreciate television. However, as with television, Parsons' (1970, 52) survey has shown that only seven of 53 white residents in Inuvik who were questionned felt that a slender choice in available films was a deprivation associated with northern living, indicating a certain disinterest in movies. Observations made in Frobisher Bay and Pangnirtung support Parsons' conclusions, as virtually no

whites regularly attend films, in direct contrast to the Eskimos. Only the F.A.R.A. Club in Frobisher Bay regularly attracts a large white audience, and that is reputedly due as much to the bar facilities as it is to the movies.

If one accepts Parsons' figures and the various assessments of Eskimo interest, it is likely that Eskimos, not whites, are the dominant audience of television and film in the Arctic, in spite of the fact that films and television programmes are not at all oriented towards them.

Summary

It was the development of broadcast radio and the organisation of the Canadian Broadcasting Corporation's Northern Service that marked the beginning of the present mass communication system in the Canadian Arctic. It has been shown, however, that most of the C.B.C. facilities and services have been established in the sub-Arctic parts of Quebec and the Yukon and Northwest Territories, leaving arctic Canada with a highly restricted radio system. The situation is similar with the other channels of mass communication as well. Books, newspapers, libraries, and television are all only minimally accessible to Arctic residents; only film and the C.B.C. shortwave radio service are available throughout the region.

As a result of restricted accessibility to the few available channels, it follows that the people able to use them are limited as well. The senders who control message content are predominantly white, and most are located outside the Arctic. They aim their service at a predominantly white audience, although Eskimos participate as actively as whites as receivers.

The result of the restricted system of channels and users is to seriously impede the mass flow of information between the two culture groups resident in the Arctic. This situation is compounded by the absence of channels with a local content in the Arctic; only the few local newspapers

and community radio stations fit into this category. It is therefore critical that what little information can be exchanged be useful and relevant to the groups concerned. If it is not, the communication process could be blocked, leading to difficulty in the process of social change.

Chapter 4

THE INFORMATION BEING EXCHANGED THROUGH THE MASS COMMUNICATION SYSTEM

It has been shown thus far that 1) there is a limited availability of channels of mass communication in the Canadian Arctic, 2) there is limited access to the available channels, 3) most senders of messages are white and are located outside the Arctic, and 4) Eskimos and whites alike are active receivers of messages. As important to the process of communication as the structure by which messages are exchanged is their content. This chapter analyses the content of certain messages that recently have been dispersed via the channels described in Chapter 3. The purpose is to ascertain the quantity and nature of the information included in the messages, and to assess its relevancy to receivers. The standard against which the transmitted information is compared has been presented in statements made by Eskimo residents of the Arctic as to how useful they consider the information they receive. The analytical tool used, where sufficient data are available, is content analysis.

Content analysis is defined as "...the objective, systematic and quantitative description of the manifest content of communication" (Carney, 1967, 23). It is considered by Holsti (1969, 2) to be a valid research tool "...for investigating any problem in which the content of communication serves as the basis for inference". The procedure followed here is designed to clarify the subject matter of selected messages. This is done by placing all of the messages into subject categories, such as "news" or "music", and using pages (with printed channels) and minutes (with oral channels) to quantify how much of a given message is devoted to a given subject. These quantities have been transformed to percentages to allow comparisons of subject categories to be made between channels and/or over time.

This procedure is objective, systematic, and quantitative, thus satisfying the terms of the definition. Subjectivity may be present, however, in the procedure followed to select messages for analysis. The messages chosen to be analysed are those that have been important in the process of mass communication in the Arctic. The selection of specific material was based on familiarity with the communication process in the region, and was designed to include material well known to both senders and receivers. As it is recognized that another observer might have chosen different messages, the material to be analysed is listed below, with the specific reasons it is considered.

1. The C.B.C. Northern Service shortwave program, at intervals over the last ten years. Reason: the inhabitants of most Arctic settlements are almost totally dependent on the service for topical material, and there is programming specifically for Eskimos as well as for whites.

2. The Eskimo Book of Knowledge, The Book of Wisdom for Eskimo, and Q-Book. Reason: these books form a series, and were specifically designed to transmit information considered necessary by the whites governing the Arctic for the successful adaptation of the Eskimos to western society.

3. Local programming of radio station CFFB, Frobisher Bay. Reason: there is limited opportunity for local radio programming in the Arctic, and this analysis provides an indication of how one station with the capacity to inject local content uses its opportunity.

4. Movies shown in selected Arctic communities in 1962 and 1972. Reason: movies have been shown to be very popular with Eskimos, and this analysis gives an idea of what they have been seeing over the last ten years.

5. Frontier Coverage Package Television. Reason: this channel may carry programming designed exclusively for whites, but it is received by Eskimos as well. It is therefore important to establish what information is carried to the Eskimos over this increasingly accessible channel.

Given the almost total absence of community radio stations in arctic Canada, the C.B.C. Northern Service Shortwave Program becomes the most significant carrier of topical items to the local population. Ten shortwave program schedules of the C.B.C. Northern Service from various dates over the past ten years have been analysed to give an indication of how much broadcasting time is devoted to white and Eskimo audiences, as measured by the language of broadcast. English and French transmissions are taken as being explicitly directed to whites, Eskimo language broadcasts to Eskimos. It proved impossible to analyse more than ten program schedules due to ambiguities in the schedules; specifically, where no closing times are given it is impossible to establish the length of a broadcast.

The results of the analysis are presented in Table 4-1. It is obvious from the figures given that the amount of Eskimo programming increased regularly until May, 1971, generally at the expense of white broadcasting time. It is apparent, however, as Cowan states (see page 85) that most programming is for the white minority, and in the last year, there has been a progressive decline in the amount of Eskimo programming. This may be due to a growing intolerance of Eskimo programming by the white population. In 1970, Cowan pointed out that

> "Until now the white minority has been tolerant of the few programs for native peoples on Northern Service radio, some of them in Indian and Eskimo languages. But experience has shown that mixed broadcasting audiences are not very tolerant of each other's tastes, preferences and language" (Canada, Telecommission, 1970b, 15).

The message content of the programming is as important as its quantity. Table 4-2 shows the percentage of broadcasting time explicitly devoted to news for both whites and Eskimos. The figures must be taken as approximations due to ambiguities in program titles. Weather and sports programmes are counted as news.

Table 4-1

Language of C.B.C. Northern Service
Shortwave Programs

Broadcast Time				
Total minutes per week	French/ English	Eskimo	Schedule Date	Percentage of broadcast time in Eskimo
2870	2810	60	Summer, 1962	2.1
3806	3656	150	Summer, 1963	3.9
4144	3964	180	April, 1965	4.3
4123	3883	240	October, 1965	5.8
3570	3315	255	April, 1968	7.1
3717	3027	690	May, 1971	18.6
3703	3063	640	August, 1971	17.3
3703	3063	640	November, 1971	17.3
3731	3091	640	Until May, 1972	17.1
3731	3121	610	Effective May, 1972	16.4

Table 4-2

Percentage of C.B.C. Northern Service
Shortwave Program Time Devoted to News

Schedule Date and Language of Broadcast	Broadcast Time	News Time	News as % of Broadcast Time
Summer, 1962			
French/English	2810	912	32.4
Eskimo	60	0	0
Summer, 1963			
French/English	3656	985	26.9
Eskimo	150	0	0
April, 1965			
French/English	3964	1269	32.0
Eskimo	180	0	0
October, 1965			
French/English	3883	1423	36.6
Eskimo	240	30	12.0
April, 1968			
French/English	3315	1075	32.4
Eskimo	255	0	0
May, 1971			
French/English	3027	991	32.7
Eskimo	690	120	17.4
August, 1971			
French/English	3063	1020	33.3
Eskimo	640	120	18.8
November, 1971			
French/English	3063	1126	36.7
Eskimo	640	120	18.8
Until May, 1972			
French/English	3091	1149	37.2
Eskimo	640	120	18.8
Effective May, 1972			
French/English	3121	1149	36.8
Eskimo	610	120	19.7

The import of the figures is that, with a third of one week's English and French transmissions devoted to news, the whites are well provided with topical information. The Eskimos are much more poorly served, with (recently) about 19% of one week's broadcasts in their language devoted to news. This figure, however, is misleading, and must be halved, as the ten minute news program broadcast to Eskimos five evenings weekly is a repeat of the same afternoon's broadcast. Only the twenty minute Sunday news program is not repeated, leaving the Eskimos with about 10% of one week's broadcasts in their language as "fresh" news. The C.B.C. states that these Eskimo news programmes contain "...national and regional news with northern content" (Canada, C.B.C., Northern Service Program Schedule, 1972e).

The most unfortunate part of shortwave news programming for Eskimos is that it is a translation of the same news that is presented in English. This means that the Eskimos are kept up to date, in their own language, about such topics as the Vietnam war and Quebec political events, but that there is no news about what Eskimos are doing, such as reports on caribou hunting or local northern development programmes. Further, the news in Eskimo, as a translation from English, may not only be marginally interesting to the Eskimos, it may be but marginally intelligible. The thought patterns and cultural values of westerners and Eskimos are still very different, and a report of southern news events written in western terms of reference may be completely meaningless to an Eskimo who does not have the background needed to understand it.

Other Eskimo programming, about 80% of one week's broadcast time in their language, is provided by the C.B.C., their goal being "to inform and entertain". Programmes for the shortwave service are produced in Montreal, Frobisher Bay, Churchill, and Yellowknife, in order to "...present the same

variety of subjects from a different point of view" (Ibid.). This programming

> "...informs the Eskimo people on happenings such as meetings, formation of associations, government activities, and reports on events in the settlements and community council activities. Interviews, home economics, co-op news, progress reports of Eskimo patients in hospital in the South are all included in the programs as well as legends and dramas. Eskimo music - both traditional and modern - throat music and drum dances share broadcast time with "southern" performers" (Ibid.).

There have been a few attempts made by the whites directly responsible for the Eskimos' well-being to supply them with information designed to help them adapt to western society. The Hudson's Bay Company produced The Eskimo Book of Knowledge in 1931, and since World War II, two similar books have been produced by the Canadian Government: The Book of Wisdom for Eskimo and Q-Book. All three books attempted to fill a need of any traditional people subjected to rapid social change, that of providing information about the encroaching, dominant society.

A content analysis of the subject matter of each of these books is presented in Tables 4-3, 4-4, and 4-5. The topic titles have been made comparable where possible; a subtopic is listed if it comprises at least one percent of the pages in the book. Any title or subtitle in quotations is a term taken directly from the book in question. The Eskimo Book of Knowledge used is Binney (1931), which is the Labrador version; it has a parallel text in English and the Labrador Roman script. The Book of Wisdom for Eskimo used is Canada, Department of Mines (1949). It is written in three parallel sections, one in English, one in Eskimo syllabics, and one in Eskimo with Roman characters. The content of only the syllabic section has been analysed, so that the number of pages in the book appears inordinately small (the entire book has 102 pages). The percentage of pages devoted to any one topic, however, is nearly the same in all three sections,

Table 4-3

Content Analysis: The Eskimo Book of Knowledge

Topic	Subtopic	Pages	
		Number	Percent of total
Description and history of Canada, the British Empire, and H.B.C.		40.0	16.2
Laws of Canada and Newfoundland		20.0	8.1
Religion		6.0	2.4
Health		80.0	32.4
	Causes of poor health	16.0	6.4
	The "Laws of Health"	8.0	3.2
	Proper eating, recipes	18.0	7.3
	Prevention of sickness	16.0	6.4
	First aid	6.0	2.4
	Women's duties in maintaining good health	4.0	1.6
	Construction and care of houses	12.0	4.8
Work		68.0	27.5
	"The nature of work"	16.0	6.4
	Trapping and the care of skins	12.0	4.8
	"The example of white workers"	20.0	8.1
	"Care in work"	20.0	8.1
"Pledge of the Company to the Inuit"		6.0	2.4
Table of contents and credits		3.0	1.2
Title pages		3.0	1.2
Introduction and foreward		12.0	4.8
Pictures		9.0	3.6
		247.0	99.8

Table 4-4

Content Analysis: The Book of Wisdom for Eskimo

Topic	Subtopic	Pages	
		Number	Percent of total
Education		2.5	7.8
	Housekeeping	2.5	7.8
Health		12.5	39.1
	Origin and spread of sickness	2.0	6.3
	Cleanliness of body	1.0	3.2
	Proper eating	.5	1.6
	First aid	2.0	6.3
	Childbirth, care of infant	4.0	12.5
	Tuberculosis	3.0	9.4
Welfare		6.0	18.8
	Family allowances and other asst.	6.0	18.8
Safety		3.0	9.4
	Clean water	1.0	3.2
	Care of boats and weapons	2.0	6.3
Resources		5.0	15.7
	Clean air	1.0	3.2
	Conservation	4.0	12.5
Business		1.0	3.2
	"Planning for periods of scarcity"	1.0	3.2
Table of contents		1.0	3.2
Introduction		1.0	3.2
		32.0	100.4

Table 4-5

Content Analysis: Q-Book

Topic	Subtopic	Pages	
		Number	Percent of total
Description of Canada		8.0	2.6
"Community Life"; civics		16.0	5.3
Education		32.0	10.6
	Value of literacy	6.0	2.0
	Special education; adult education; vocational training; financial aid	12.0	4.0
	Housekeeping	5.0	1.6
	Child safety	3.0	1.0
Health		80.0	26.2
	Origin and spread of sickness	4.0	1.3
	Cleanliness of body	3.0	1.0
	Childbirth; pre- and post-natal care; midwifery	9.0	3.0
	Proper eating, recipes	6.0	2.0
	First aid	20.0	6.6
	Tuberculosis	4.0	1.3
	Liquor/alcoholism	5.0	1.6
Welfare		40.0	13.1
	Names	5.0	1.6
	Social assistance; family allowances; medical and rehabilitation services	14.0	4.6
	Taxes	8.0	2.6
	Child welfare; foster homes; adoption	8.0	2.6
Safety		42	13.8
	Safe drinking water	3.0	1.0
	Fire prevention and fighting	8.0	2.6
	Operating of engines	5.0	1.6
	Care of/safety with engines	4.0	1.3
	Care of/safety with boats	8.0	2.6

Table 4-5 (cont.)

Topic	Subtopic	Pages	
		Number	Percent of total
Resources		8.0	2.6
	Game/fish/mining law	4.0	1.3
Business and banking		16.0	5.3
	Cooperatives	6.0	2.0
	Banking	8.0	2.6
Table of contents and credits		26.0	8.5
Title pages		9.0	3.0
Preface and introduction to the new orthography		16.0	5.3
Blank pages		11.0	3.6
		304.0	99.9

the only differences being that the syllabic section has two pages about welfare not included in the English section, and the Roman section has several pages of photographs not found in the other two sections. The Q-Book used is Canada, Department of Northern Affairs and Natural Resources (1964), and has a parallel text in English, Eskimo syllabics, and the then new standard Roman orthography.[1]

The tables show several marked changes in content over the years. The Eskimo Book of Knowledge would today be subjectively considered by most readers as highly moralistic and paternal; the feeling is confirmed by the analysis of content. The sections on religion, work, laws, and the "Pledge of the Company to the Inuit" make up no less than 40.4% of the book. The frontispiece is a portrait of the King, and the Royal family is held to epitomise the white civilisation that the book encourages its readers to imitate. Probably the only "practical" part of the book is the section on health, which comprises a third of the pages and offers considerable useful advice on sanitation, preventive health, and first aid.

The Book of Wisdom for Eskimo was produced 18 years after its predecessor, in 1949, is much more limited in scope, and deals only with problems of immediate concern to the Eskimos. The two most important things to note are that the section on health is still the largest one in the book (39.1%), and that education, as was the case in the earlier book, is still ignored. The section titled "Planning for periods of scarcity" may indicate that the readers of the Hudson's Bay Company book did not entirely take to heart the admonitions directed at them about the rewards of work.

It is the Q-Book which provides the best indication that information previously presented to the Eskimos was not greatly easing their adaptation

to western society. The first thing to note is the increase in size, to 304 pages, up from 102 pages fifteen years earlier. In this expanded version health is still the major topic, comprising 26.2% of the book. Welfare is also significant, with 13.1% of the pages. While this is less than the 18.8% found in The Book of Wisdom for Eskimo, the newer book has considerably more pages and four major subtopics; the earlier book only offered advice on obtaining family allowances. The obvious conclusion to draw is that with the advent of sophisticated welfare programmes in Canada, the Eskimos were one of the most likely groups to be consumers, possibly as a result of the earlier lack of emphasis on education. This hypothesis is strengthened by the conspicuous inclusion of the compulsory school-attendance law of the Northwest Territories in the Q-Book.

A further notable topic is safety; only 9.4% of The Book of Wisdom for Eskimo is about safety, while 13.8% of the Q-Book is about the subject. The percentage of the two books devoted to first aid is about the same, but the Q-Book contains 350% as many pages (in any one script) on the subject as its predecessor. One is led to wonder whether Eskimos are becoming increasingly careless, refuse to go to hospital when injured, or just what.

Certain observers, including some Eskimos, feel that the Q-Book, while useful to a certain extent, provides only a limited amount of relevant information to Eskimos, and that it has definite shortcomings. The Anglican Church, for instance, considers the book a technical treatise that offers no philosophical basis for carrying out its instructions. For instance, the mechanics of housekeeping is a major topic in the Q-Book, but the only mention made of why one would wish to have a clean house is that it provides a healthy place in which to live. The Anglican Diocese of the Arctic has

taken the position that more information needs to be made available as to why a person would wish to keep a clean house, and attempts to explain the reasons for this in a booklet they have produced on housekeeping. This booklet, along with several others, is written entirely in Eskimo, and explains the reasons that westerners do certain things in terms of reference that are more readily understandable to Eskimos naive in the ways of western culture than are the rather abrupt government publications.

The other major criticism of the Q-Book is that it is not specific enough. People who are ignorant of certain aspects of a foreign culture need to be told precisely how those parts of the culture operate, or they will often fail to embrace a new process or event for reasons as simple as timidity. For instance, the Q-Book explains the functions and operations of banks. This includes definitions of unfamiliar terms, such as "interest" and "account number", as well as the principles on which a bank operates. Nowhere, however, is there an explanation of precisely how to open a bank account, or how to write a check, omissions which can serve to intimidate a potential bank user. Similar objections have been raised about most topics discussed in the Q-Book. The Eades provide evidence that information in the book is not reaching its designated audience. They state:

> "Northern people are eager for information on topics such as:
> - how to prepare income tax returns
> - how to open a bank account
> - what is involved in hamlet status
> - what are the children learning in school
> - what opportunities exist beyond the community for young people finishing school" (Eades, 1971, 16).

The response by one agency, the Adult Education Centre in Frobisher Bay, has been to print several pamphlets on various topics which offer detailed instructions on how to open a bank account, how to vote, how to collect unemployment insurance, etc. The Centre has produced twelve such publications (as well as radio programmes and video tapes on the same topics) and 2000

copies of each were distributed in the eastern Arctic. The stated reason for producing the pamphlets was to provide information on any topic that was causing "crises" among the Eskimo population due to a lack or misinterpretation of available information (Report of the Principal, 1972). This programme of pamphlet production has apparently been well received by the Eskimos of the eastern Arctic, but may not be continued due to the recent dismissal of the principal of the Adult Education Centre (Tony Moss-Davies, personal communication).

Community radio stations provide another potential source of information for residents of the Arctic. There are very few stations in the region with the capacity to include local material in their programme schedule, only four to be precise. CFFB, the C.B.C. station in Frobisher Bay, is one such station, and its programming has been studied to assess how one station makes use of its ability to include local material in its schedule.

In 1963, the Honigmanns stated that CFFB "...has not succeeded in using much of its potential ability to reach Eskimos in their own language" (Honigmann, 1965, 134). At that time, one-half hour of 17 hours daily broadcast time was directed specifically towards Eskimos. The station did not employ any Eskimos on a regular basis.

There has been only an insignificant improvement in service over the last nine years. Currently only one of 19 hours daily broadcast time is directed explicitly towards Eskimos. The station now employs four Eskimo announcers, three as C.B.C. staff and one on a free-lance basis, so that the voice heard by listeners is speaking Eskimo from $7^{1}/_{2}$ to 9 hours daily. However, most of the content of the programmes run by these announcers is the same as that run by English speaking announcers, that is, music and tapes. Therefore, the one hour programme (from ten to eleven a.m. weekdays)

is the only local programme produced by and for Eskimos. Most of a daily broadcast, whether it is in Eskimo, English, or French, is on tapes flown to Frobisher Bay from Montreal and other production centres. Approximately four of the 19 hour daily broadcasts are locally produced, but the content of the programmes is essentially the same as that of the tapes, i.e., music and news. News is received by CFFB via the shortwave broadcasts from Sackville for rebroadcast, and via telex and telephone for local production. One of the Eskimos employed by the station spends approximately half of his working time translating, but this still means that Eskimos receive news that was designed for and produced by whites (see page 95).

The station manager, who holds the position only temporarily, and his staff recognize that the present situation is considerably less than desirable, and would like to see their programming schedule reflect the population composition of the hamlet, which is two-thirds Eskimo. The manager would also prefer to use fewer southern tapes and have more local production by and for Eskimos, but feels that such a change is unlikely to take place in the near future due to a lack of qualified Eskimos.[2]

Movies were earlier shown to be a very popular channel of mass communication among the Eskimos of Canada (see page 87). In 1962, the Honigmanns prepared an analysis of movies shown at the Aurora Theatre (now closed) in Frobisher Bay, and noted that movies were the major spectator activity among the Eskimo population of the town. Their analysis is reproduced as Table 4-6.

It unfortunately proved impossible to obtain the data necessary to produce a similar analysis for the Palace Theatre (the only one in Frobisher Bay regularly patronised by Eskimos) due to the non-cooperation of the theatre owner. However, interviews conducted in the hamlet, and observations made in 1972 by the writer indicate that the types of films presently being

Table 4-6

Type of Films Shown in Aurora Theatre, April, May, June, 1962

Category	Number of Pictures in Category	Percent of all Categories
Adventures and westerns	22	59
Music and comedy	8	22
Drama and other	6	16
Science fiction	1	3
Total	37	100

Source: Honigmann, 1965, 218.

shown there does not markedly differ from those shown in the Honigmanns' analysis of ten years ago. The only variation may be an increase in the number of science-fiction films, which are presently considered extremely popular but which are reportedly very difficult to obtain from southern film distributors.

The Honigmanns noted a distinct disinterest in documentary films and dramas, a response which is altered only if a film depicts Eskimos. This disinterest is still widely remarked by observers in Frobisher Bay. Eskimos there favor action films and stay away from theatres when action is not included, at least in part because extended English dialogue is difficult for many Eskimos to follow. The reported interest in films about Eskimos is real. When a film made by the R.C.M.P. about Grise Fjord was shown recently in Pangnirtung, it received an entuhsiastic response. Another well received film was "The People's Choice", a filmstrip about voting made by the Adult Education Centre in Frobisher Bay. The filmstrip is only 13 minutes long, but the soundtrack is in the Eskimo language (apparently the only film ever made with an Eskimo audio component), and reportedly has received standing ovations in several settlements where it has played.

The most unfortunate part of the present film situation is that such a popular channel of information serves only to perpetuate stereotypes about life outside the Arctic. The Honigmanns (1965) first recognised this in Frobisher Bay, and more recently, the Eades (1971) observed the same thing in Gjoa Haven and Aklavik. Murdoch considers movies to be one of the major influences forming the attitudes held by Quebec Eskimos. He states the interpretation of the information in movies to be that

> "...movies are true, romantic love is what everyone wants, Indians are bad and can never beat the white man, Indians in movies are not the same kind of Indians that live in Nouveau-Québec, white people are always killing other people" (Murdoch, 1971, 10, 11).

While recognising that these may not be attitudes that filmmakers are consciously trying to foster, he concludes that in the absence of alternative information, these are attitudes prevalent among the Eskimo population of Quebec. Assuming this to be the case, there is no reason to believe that the same attitudes are not prevalent among Eskimos living elsewhere in the Arctic because the same types of movies are shown throughout the region.

The other aspect of movies has to do with films made about the Arctic. Most of these are ethnographies, the first being "Nanook of the North", made in 1922. There are virtually no films available on social problems in the Arctic (Eades, 1971, 4). For instance, in the 1972 National Film Board of Canada Film Catalogue, there are 57 films listed in the section titled "Eskimos and the Arctic Life". Of these, at least 39 are ethnographies, and most of the rest are descriptions of the region per se rather than of the people living there (Film Catalogue, 1972). Just as most movies shown in the Arctic tend to perpetuate stereotypes of southern life, these films tend to perpetuate stereotypes of northern life in the eyes of southerners. By offering such a limited interchange of realistic information about other cultures in Canada, movies do little to act as a useful agent of social change.

Neither does television provide realistic information about life in the South to native residents of the Arctic. Television programming in the North consists of four hour tapes produced in Calgary by the C.B.C which are then distributed to the local broadcasting stations. The Eades (1971), among others, have contended that "...the majority of the television programmes were not very realistic in what they depicted of the 'outside' ....in fact many of them helped, along with the commercial movies that came to town, to strengthen the stereotype views the natives had" (Eades, 1971, 3).

The C.B.C. itself seems to accept this assessment, and admits that it does not attempt to satisfy the needs of the native population (Canada, C.B.C., 1972g, 11ff).

Given the view that television serves solely as a means of entertainment for residents of the North, it was considered desirable to establish precisely what programmes are being shown in the region as a means of assessing the information being made available by this channel. To do this, a content analysis was performed on the F.C.P. programme schedule of a winter week in 1971 then compared to a similar analysis performed by the C.B.C. on their national English language network programming. These analyses are presented in Tables 4-7 and 4-8, respectively.

The figures clearly show that the C.B.C. is trying to satisfy the needs of the white population that northern television was designed to serve. The "informal education" category in Table 4-7 (19.7%) includes all children's shows; the first hour of the tape is generally designed for them. There is no news, as any semblance of topicality would be lost in a delayed tape. In 1971, northern audiences received 300% as many variety shows as southern audiences, but only about 50% as many dramas and stories. Otherwise, the content of the schedules of the two regions is very similar.

It is, unfortunately, the minor differences that exist which authenticate the claims that television perpetuates stereotypes. Variety shows such as "Laugh-In", "The Partridge Family", and "The Beverly Hillbillies" are probably welcomed by transient whites for their comic relief. But, in the absence of other information on southern life, the native people can only assume that all southerners live like the Partridge and Clampett families, and suffer from the same sort of small daily crises that

Table 4-7

F.C.P. Television, Feb. 4 - Feb. 10, 1971

Category	Minutes	%
Information and Orientation		
News and News Commentaries	0	0
Public Affairs, Talks, etc.	390	23.3
Educational (a) Formal	0	0
(b) Informal	330	19.7
Light Entertainment		
Music and Dance	120	7.2
Drama, Story, etc.	180	10.7
Quiz and Games	30	1.8
Variety/Music Hall	330	19.7
Arts, Letters and Sciences		
Music and Dance	0	0
Drama, Poem and Story	120	7.2
Science Research	0	0
Sports and Outdoors	180	10.7
	1680	100.2

Sources: Format after Canada, C.B.C., 1971a, 53.
Content from News of the North, 1971.

Table 4-8

"Analysis of Program Content of CBC English Television Network in a Representative Winter Week, 1971"

Category	Minutes	%
Information and Orientation		
News and News Commentaries	132	3.0
Public Affairs, Talks, etc.	776	17.4
Educational (a) Formal	150	3.4
(b) Informal	1235	27.7
Light Entertainment		
Music and Dance	180	4.0
Drama, Story, etc.	1125	25.3
Quiz and Games	30	0.7
Variety/Music Hall	270	6.1
Arts, Letters and Sciences		
Music and Dance	90	2.0
Drama, Poem and Story	15	0.3
Science Research	120	2.7
Sports and Outdoors	330	7.4
	4453	100.0

Source: Canada, C.B.C., 1971a, 53.

are depicted on "Laugh-In". If one considers the emphasis placed on problems in society by public affairs shows (of which there are numerous on northern television), generally at the expense of any mention of any "good news", it is easy to understand why native residents of the North see southern life as being considerably different from the way it really is.

The foregoing discussion has provided several indications that the information being exchanged through the channels of mass communication in the Canadian Arctic is not relevant to Eskimo receivers. Besides these indications, a few statements have been made by Eskimos and other observers that indicate the level of utility of the information presently accessible to them. Nielsen issued one of the earliest statements of what Eskimos wanted in their radio programming, and presented an insight into why such opinions are difficult to obtain. In his 1963 report to the Canadian Government, he stated:

> "When asking the Eskimos if they wanted more broadcasts from Montreal in their own language they all answered "Yes" without hesitation. When further questioning them about what kind of broadcasts they wanted they had great difficulty in giving definite answers. This does not surprise me at all when I think of our inquiries on the same object in Greenland. Our Greenlandic listeners uncritically receive our briadcasts (sic) from Radio Greenland, because they still lack a background for judging. When our listeners, who for many years have been listening to specially arranged broadcasts, have difficulty in giving an opinion on their special wishes, then I am not at all surprised that our kinsmen in Canada do not know what to say when asked the same question.
>
> We got a little information though. Most commonly people wished more music broadcasts, preferring lighter music as accordian and guitar music.... I also understood that they would very much like to hear what is going on in the world. They also wished broadcasts for children" (Nielsen, 1963, 1, 2).

Four years later, in 1967, the missionary at Pond Inlet surveyed the inhabitants of the region on a number of topics. His survey (Rousseliere, 1967) indicated there was a greater interest in having northern news than world news, and a clear opposition to traditional tales and songs. This

opposition appeared to stem at least in part from the fact that most residents already knew all the local tales and songs, and would be bored hearing them on the radio. Any sort of recorded music was considered desirable. It is noteworthy that these opinions were collected at about the same time the Pond Inlet people were setting up their own radio station as an alternative to the C.B.C. shortwave service.

Other critical statements were made in a brief presented to the Special Senate Committee on Mass Media by three native peoples' organisations in 1969 (Presentation to Special Senate Committee on Mass Media, 1969). The theme of the report is that broadcast agencies in Canada are guilty of sins of omission, that what they do broadcast for Indians and Eskimos is satisfactory as far as it goes, but that a greater amount of programming could be directed towards native people. The natives were specific in their criticism of several groups:

> "There are no programs for Indians or Eskimos on the French radio network of the CBC; nor on the French and English television networks.... Nor are there any continuing programs for native peoples produced by private television stations or carried on the CTV Network" (Ibid., Appendix F).

More recent statements by northern residents concerning the information available to them came at the Northern Communications Conference held at Yellowknife in September, 1970. One Eskimo participant offered that "...there seemed to be no relationship between the planning being done and the real needs of the people requiring service" (Canada, Telecommission, 1970d, 33). Another expressed concern with radio programming, stating "...there are programs suited to an urban audience that were not acceptable in the North" (Ibid., 43). In its final recommendations, the conference stated that

> "Northern orientation of programming is essential.... Each community should have a radio program service for education, information, entertainment, and social action purposes.... Programming in native languages should be encouraged. Full participation and operation by local people is recommended" (Ibid., 6, 7).

The latest published expressions of the Eskimos' desires are found in a report by the Arctic Institute of North America. In it, Josepi Padlayat, of Sugluk, is quoted as saying

> "One must eat with the stomach and with the head. In the North today, we have enough to eat with our stomachs, but nothing to eat with our heads" (Kenney, 1971, v. 1, 5).

Kenney considers the clearest indication of native dissatisfaction to be the "...spontaneous setting-up of northern communications societies by northerners themselves" (Ibid., 14). Another indication of dissatisfaction comes from recent events in Inuvik. There, it has been reported that

> "On Saturday afternoons the Indian and Eskimo children gather in the dinky movie theatre on Inuvik's main drag to stone Hopalong Cassidy with soda pop cans and boo his Wonder Horse Topper" (Montreal Star, 1970).

While in Frobisher Bay in 1972, it proved possible to obtain another sample of Eskimo opinion. This was done with the cooperation of Mrs. Jeela Moss-Davies, who runs the only radio programme on station CFFB specifically directed towards Eskimos (see page 104). On Friday, June 30, 1972, this programme was run as a phone-in show, where a channel of mass communication (radio) and a channel of intercommunication (telephone) were combined to provide a vehicle for the expression of Eskimo opinion about communication. It was hypothesised by Mrs. Moss-Davies that the response by Eskimos to the invitation to express themselves might result in nothing more than a few crank calls, but after a slow start, several persons telephoned the programme, and then the lines remained busy until the programme ended.

The opinions expressed by callers were all to the effect that more Eskimo programmes on the radio, Eskimo programmes on television, and a greater emphasis on the teaching of syllabics to schoolchildren were all desirable. The first two statements of opinion are compatible with those previously published. It is the latter which perhaps provides the surprise, as little public notice has previously been given as to what the Eskimos

think about the increasing disutility of their written language. Their expressions indicate that English and the standard Roman orthography may be desirable as a means of communication with other groups of people, but that there is a clear interest in retaining syllabics as a means of communication among Eskimos in the eastern Canadian Arctic. The reasons given for wanting to maintain the syllabic script were to help preserve the Eskimo language and culture, and to slow down the widening culture gap between parents literate only in syllabics and children literate only in English.

All of the published comments collected here and those gathered on the radio indicate widespread dissatisfaction among Eskimos with the information being made available to them via channels of mass communication. It is notable that most statements made about a specific channel refer to radio. This probably stems primarily from the absence of such channels as television, books, and newspapers in most parts of the Arctic. The C.B.C. is also an obvious target for complaint. Its shortwave service, which is irregularly accessible in all parts of the Arctic, offers a minimum of Eskimo programming, and only a small part of that is topical. Given the limited access to television and community radio in the region, and the fact that all television programming is directed towards whites, it is clear the shortwave service is not living up to the obligations associated with being the only accessible channel of communication not tied to transportation.

The only information widely reported to have been well received wherever it has been made accessible are the pamphlets put out by the Adult Education Centre in Frobisher Bay, the childrens' shows, such as "Sesame Street" and "Drop-In", on F.C.P. television, and some Eskimo language radio programmes. Local newspapers, movies, and some radio programmes, appear to be uncritically received rather than popular. The newspapers generally offer only a minimum

of Eskimo language content, but are the only alternative to reading nothing at all. The same holds true for some radio programmes; they are listened to because there is so little programming accessible in the Eskimo language. Movies are presently used almost exclusively as a means of entertainment, but when information about Eskimo life and certain aspects of southern life has been made available through them, it has been well received (Eades, 1971).

It is clear that there is a very limited amount of information accessible in the Arctic through the available channels of mass communication. Further, much of what is accessible, because it is designed primarily to entertain rather than to inform, often serves to introduce discontent among receivers. Schramm notes that

> "The flow of information is of the greatest importance in regulating the level of social tension. Communication is a kind of temperature-controlling agent. It can raise the social temperature, for example, by raising aspirations when the...economy is not ready to satisfy them. It can reduce temperature by providing explanation, holding out rewards, speeding up development, by permitting change...." (Schramm, 1964, 37).

Because so much of the information that is accessible in the Arctic is designed for whites, aspirations that cannot be fulfilled are constantly being raised among the native population. Movies and commercial advertising are the most important sources of such desires. Through them, a constant stream of consumer goods and lifestyles that are economically and socially unattainable for most Eskimos are paraded before them. The visibility of these goods and lifestyles among the white population of many Arctic settlements can lead to the development of frustrations that may be difficult to overcome. The primary way to avoid creating such problems is to provide information from several different sources via several different channels and thereby enable receivers to clarify how certain items and events relate to

them. Schramm has elaborated on the importance of multiple channels.

> If they want additional details on news, or want to check up on what they have heard, people in a more highly developed society can easily turn to another medium.... But the majority of the people in a developing village are likely to have no secondary source except other people.
>
> This means that, not only is there less likelihood of reaching any person in the first place, but also less opportunity for a person to check up on what has been heard.... One possible consequence is misunderstanding. Rao has described another consequence. He found in his village study that when additional information was available to support, confirm, or clarify suggested changes, then favorable action was much more likely to take place. When supplementary information was not available, the suggestions for change were typically received with suspicion and often resisted.
>
> When multiple channels are available, then it is much easier to furnish a local service, discover and meet local needs, and direct information to them. Increasingly, as a country develops, local newspapers, local radio stations, local production of leaflets, and the like come into existence. In a newly developing society, however, these are scarce....
>
> This is an unfortunate fact of life in the early stages of economic and social development. Information would flow more freely if it could travel multiple channels. It would be received more accurately and be more effective. If local media could supplement regional and national media, they could play the part of middlemen, interpreting the information and fitting it to local conditions and needs. The coming into existence of these multiple and local channels is therefore one sign that the transition to modern communication is well on the way" (Ibid., 88, 89).

It was shown in chapter three that the level of accessibility to the few available channels of mass communication in the Arctic is very low, and that very few of these channels are local. It was also demonstrated that the information that moves from the few sources over the few channels is itself limited, generally to content designed to entertain rather than inform. The primary source, indeed, in some places, the only source, of information is government. The significance of the situation created by this restricted information exchange cannot be underestimated. Because the system of mass communication of the Canadian Arctic functions as it does, alternative information does not exist. Almost without exception, what the government says is what the Eskimos know. This does not imply that government is dispensing false information, only that it dispenses its

own information via the channels it frequently controls. In the absence of other accessible sources and channels, what the government says becomes truth.

The lack of alternative information in the Arctic is more serious than it might be elsewhere due to the apparent absence of alternatives in western society as its exists in the region. For instance, Eskimos see all whites living in the same kind of houses, all of which are furnished by the government with the same kind of maple furniture. There is only one brand of tea available in the Hudson's Bay Company stores, which is the only store in most settlements. Only one airline serves most settlements, and the missionaries claim that Christianity is the only religion. Given this background of standardisation, it is not difficult to understand why Eskimos have until recently readily accepted government as the "only" source of information, and why they have not realised that movies, television, and more books, newspapers, and radio programmes could be in their language. Standardisation, as well as the uncritical way in which Eskimos have historically received information directed towards them also at least partly explains the difficulty that has been exhibited by Eskimos in stating desirable alternatives to existing situations, such as presently accessible information. With the entire concept of choice effectively absent from their semi-westernised way of life, there has been no reason to expect Eskimos to suggest alternative ways of increasing the amount and variety of information available to them.

Summary

It has been shown that little relevant information is being made accessible through the five available channels to native residents of the Canadian Arctic. The vast majority of radio broadcast time is devoted to

programmes designed for the white minority population, and what little is designed for Eskimos is often not presented in a way that is useful and understandable to them. The few books in Eskimo that have been specifically aimed at doing so have in fact done little to ease the Eskimos' transition to western society. Neither have the popular movies and television served as channels of exchanging informative messages due to their primary function as a means of entertainment.

Rogers (1969, 99) indicates that the role of mass communication in a developing area, such as arctic Canada, is a crucial one. An implicit assumption in his work is, however, that the content of messages exchanged through the mass communication system of a developing area is pro-development. The analyses of message content and the assessments of the utility of accessible information presented in this chapter indicate this is not the case in arctic Canada. Therefore, the mass communication system of the region cannot be considered to be playing a useful part in the adaptation of Eskimos to western culture.

Chapter 5

CONCLUSION

The components of the mass communication system operating in the Canadian Arctic have been fully inventoried in the preceeding chapters. From the inventory, it is clear that the system is very restricted in terms of users, channels, and the information that flows through it. Precisely how restricted these components are is made clear by considering them in terms of the model presented in Chapter 1, S-M-C-R-E.

The senders (S) of messages are primarily members of the white elite who control the social and economic development of the Arctic from outside the region. Most of the senders are employed by government. Rogers, in a list of characteristics of the mass communication systems found in under-developed countries, states that "There is a greater degree of government control over the mass media, especially the electronic media, in less developed countries than in more developed countries" (Rogers, 1969, 98). Nobody could argue that the C.B.C. does not dominate radio, which is the most significant channel of mass communication in the Arctic. Also, the C.B.C controls television via the Frontier Coverage Package system. At least four Arctic newspapers indicate that they are, to one degree or another, dependent on government assistance. There are very few privately operated community radio stations and newspapers, and only two Eskimo books have been produced by non-government agencies in the past forty years. There is little private advertising in any of the mass media in the Arctic due to the limited number of organisations with a need to advertise, and the insuitability of accessible channels for the purpose.

The messages (M) that the senders of information transmit are generally focussed towards the minority (white) population of the Arctic. Rogers

states that "Mass media messages in less developed countries are of low interest and relevancy to villagers because of the strong urban orientation of the mass media" (Ibid.). Such an orientation certainly exists in northern Canada. Most radio programmes and all television programmes and movies are designed for audiences in southern Canada, but are used in the Arctic regardless. The C.B.C. contends that the reason white audiences receive better service than Eskimos in the Arctic is that for English and French broadcasts the Northern Service has the "...resources of the national radio and, to a certain extent, television networks available to it.... The Northern Service has no source of programs for native peoples available from the national networks or other regions of the CBC" (Canada, C.B.C., 1972g, 2, 3). With only the few community radio stations and newspapers providing local information, it is clear that the majority of messages are aimed at the minority of the people. This bears out Rogers' contention that "...certain elite audiences in less developed countries have mass media exposure levels which are just as high as those for similar elites in more developed nations" (Rogers, 1969, 98). All television programmes, all movies, and 83.6% of shortwave radio broadcasting are aimed at the white population. Virtually all library books and all newspapers are printed in English. Thus, not only does the white population have more exposure to mass media, in some centres such as Churchill and Frobisher Bay nearly equal to that available in southern Canada, but it comes at the expense of the majority of the population, as Rogers suggests is generally the case.

The channels (C) over which messages are carried are very limited in both availability and accessibility. Rogers states that "The mass media in less developed countries reach much smaller audiences than those in more developed countries" (Ibid.). The most important reason for this in the

Canadian Arctic is the restricted network of channels. There are only five channels of mass communication available in the Arctic: radio, books, newspapers, television, and film. Figures given by the C.R.T.C. in 1971 indicate the relative levels of accessibility to broadcasting services in northern and southern Canada (Canada, C.R.T.C., 1971, 65-67):

A. 1: 29.7% of the population of the Northwest Territories has AM radio service (see page 44 for service definition).
   2: 34.6% of the population of the Yukon Territory has AM radio service.
   3: 87.4% (Newfoundland) to 100% (P. E. I.) of the populations of the provinces have AM radio service.

B. 1: 40.8% of the population of the Northwest Territories has television service (see page 67 for service definition).
   2: 76.5% of the population of the Yukon Territory has television service.
   3: 87% (Newfoundland) to 95.5% (New Brunswick) of the populations of the provinces have television service.

The other channels are equally inaccessible in the Arctic. Only 17% of the settlements in the region have a local newspaper and only 17% have a library. Thus, local radio, television, books, and newspapers simply do not exist for the majority of Arctic residents. Only the C.B.C. shortwave service, which is impossible to receive regularly, and movies are accessible in every settlement.

Considering the inaccessibility of all channels, it is easy to understand Rogers' statement that "Audiences for the electronic media, especially radio and film, are larger than for print media such as newspapers and magazines in less developed countries" (Rogers, 1969, 98). In the Canadian Arctic, radio and film are the only two channels accessible to every settlement, and even then, in the case of the C.B.C. shortwave service, the accessibility is irregular. There are other reasons for this pattern. Receivers(R) of information carried via channels of mass communication in the Arctic are predominantly Eskimos. Because of their lack of

functional literacy and a scarcity of printed material, the Eskimos are forced to rely on the electronic media for information. At most, only ten Arctic settlements have a local newspaper. Only nine secular books and four periodicals exist that have any Eskimo content. Printed material in English cannot be utilized by most adult Eskimos. It is therefore obvious that the electronic media are the only channels of communication presently viable in the Canadian Arctic.

The effect (E) of this situation is to greatly limit the exchange of information between the culture groups resident in the Arctic. Schramm (1964, 88) states that a developed society will have three media channels to bring it news, while an underdeveloped one will have only two. He does not mention having no channels or only one channel, but this is the situation that exists in most Arctic settlements (see page 72). Because movies are used almost exclusively as a means of entertainment, and the C.B.C. shortwave service is so unreliable and has such a limited amount of Eskimo programming, neither of these channels can be taken as a source of news in the Arctic.

Limited information is the source of what one person has called "crises" (Tony Moss-Davies, personal communication). These can be equated with information overload, and are said to occur when a person lacks or misinterprets available information. Such a crisis may range from something as simple as a lack of information about how to open a bank account, to the fiasco that developed at Sachs Harbour over rights to oil exploration in 1971 through a major misinterpretation of available information (see Usher, 1971, for a description of the events that took place). Both the general lack of information among Eskimos and the frequent misinterpretation of what is available stems directly from the degree of government control of information in the Arctic. In Chapter 4 the argument was presented that "alternative" is a foreign concept among Eskimos. This is true of information

as well as most other aspects of Arctic life. The reasons for there being no alternative information available is government control of most sources and channels of messages. This control, in itself, need not be a negative factor if government is aware of its position and acts in a way that does not take advantage of it. Unfortunately, it is universally held in non-government circles, and even among some government employees, that government has not lived up to its responsibilities, and that government controlled communication is a one-way, authoritarian process of the ruler talking down to the ruled.

The Telecommission study that was recently prepared for the Canadian Department of Communications states that "The potential of communications fo. social development in the North has not yet been grasped and pursued" (Canada, Department of Communications, 1971a, 60). The C.B.C. Northern Service admits that their objective of giving Eskimos, Indians, and Metis a service that will meet their needs and tastes has not been met (Canada, C.B.C., 1972g, 3). The native people, after a history of silence, are starting to express their dissatisfaction as well. Several native groups, in a brief to the Special Senate Committee on Mass Media, stated that:

> "At present, Canada's broadcasting system does not serve as an agent of social change. It is more concerned with upholding the existing social order. It is oriented towards the middle class, the consumers - the people who buy the goods its advertisers have to sell" (quoted in Canada, Telecommission, 1970b, 2).

Mr. Andrew Cowan, Director of the C.B.C. Northern Service, concurs with this view, stating that the present exclusion of content prepared by and for native people reduces them to

> "...bystanders, rubbernecks of the white man's parade, eavesdroppers and knot hole watchers of a world that will never be theirs" (Ibid., 20).

There are, of course, some non-government sources of information in the Arctic: a few newspapers, two private community radio stations, and

movies. Unfortunately, movies are not useful as a source of information, but only as a source of entertainment. The independent newspapers amount to little more than chronicles of local events, and as such do little to provide an alternative source of information about the outside world. Of the private radio stations, one (CHPI in Pond Inlet) devotes most of its broadcast time to music, and the other (CFCT in Tuktoyaktuk) receives its news from the C.B.C. station in Inuvik. Thus, neither of these stations serve as a source of non-government information.

Murdoch has summarised the existing status of mass communication and its role in Eskimo society.

> "...the Eskimo simply does not have the knowledge or the systems which would enable him to survive in (a settlement with alien institutions) without the continued support of the white man.
>
> Some efforts are being made to fill this gap but these are, of necessity, being directed towards the individual rather than the group. As is usual in such a situation, the results have not been particularly successful because the individual, not wishing to differentiate himself from the group, rejects what is being taught. The machinery necessary to reach the group does not exist and, until it does, we can expect only a deterioration in relations between the native and the white man. Inevitably, it is the native who will suffer" (Murdoch, 1971?, 4).

Murdoch further contends that

> "In order for (Eskimo) society to assess its condition and to initiate a course of therapy, it requires certain necessary facilities. The most essential facility at this time is a network through which the Eskimo people may communicate with each other and have access to information" (Ibid., 13).

Sim has presented three criteria that an effective communication system in northern Canada should satisfy: 1) it should permit "...the relay and interplay of voices, sounds, and opinions, freely over the thousands of miles of uninhabited territory", 2) it should create "...a higher level of self-consciousness among the people of the North", especially as this refers to the natives' awareness of problems and their obligation to deal with them, and 3) it should be "...a means of achieving an articulate expression of opinion in the North" (Sim, 1965, 13, 14).

The Canadian Government has accepted the position that the first priority of a northern communications system should be assigned to "...ameliorating social conditions"(Canada, Department of Communications, 1971b, 143). To do so, they have designed a course of action that entails the use of a communications satellite called Anik, and have taken great pains to show this satellite is "ideally suited" to improve services in the North (see, for instance, Canada, Telecommission, 1970a - d; the quotation is from Canada, Department of Communications, 1971b, 144). Mr. Robert Stanbury, Minister of Communications, has been quoted as saying "Anik is the one instrument that best can meet the basic needs...of the North...." (The Drum, 1972).

As presently planned, three of the satellite's twelve channels will be used to provide telephone and live television, but not, for the present, radio, to selected northern settlements by early 1973. Kenney has enumerated the 24 northern settlements that will receive live television via the satellite; Frobisher Bay, Resolute Bay, Rankin Inlet, Churchill, Great Whale River, Ft. Chimo, and Ft. George are the only seven Arctic communities included (Kenney, 1971, v. 1, 22-29). Of these, two already have taped television. Kenney also quotes the Parliamentary Secretary to the Secretary of State as reporting that there is no plan for northern regional television content, nor for a northern television production centre (Ibid., 26). Neither is there any capacity built into the satellite system for inter-community communication.

The satellite system described above has a price tag of about $90,000,000 (Ibid., 22). Unfortunately, it will do virtually nothing to improve mass communication as an agent of social change in the Arctic. The only requirement the system will fill is that for live television by

some whites, a "basic need" which exists "...because delayed programs have not been well received" (Canada, Department of Communications, 1971a, 48). Cowan, among others, has stated that

> "If the satellite is merely used to bring to the North the programs designed and produced for southern Canadians, then it will not only be a loss, but a disadvantage to the northern people" (Canada, Telecommission, 1970d, 59).

The most significant part of the government plan, however, is the omission of any means to allow inter-community communication within the Arctic. Sim noted seven years ago that this was a need to be attained, and more recently both the Northern Communications Conference and the Arctic Institute of North America took positions similar to his. The Institute (Kenney, 1971, v. 1, 17) reports the need for lateral channels of communication between villages, and defends its position with statements by Eskimos to the effect that they feel isolated from what is going on in other Eskimo communities. To overcome the feelings of isolation, the communications conference recommended that

> "Low power community broadcast stations should be connected intra-regionally, inter-regionally, and to the national radio CBC network" (Canada, Telecommission, 1970d, 7).

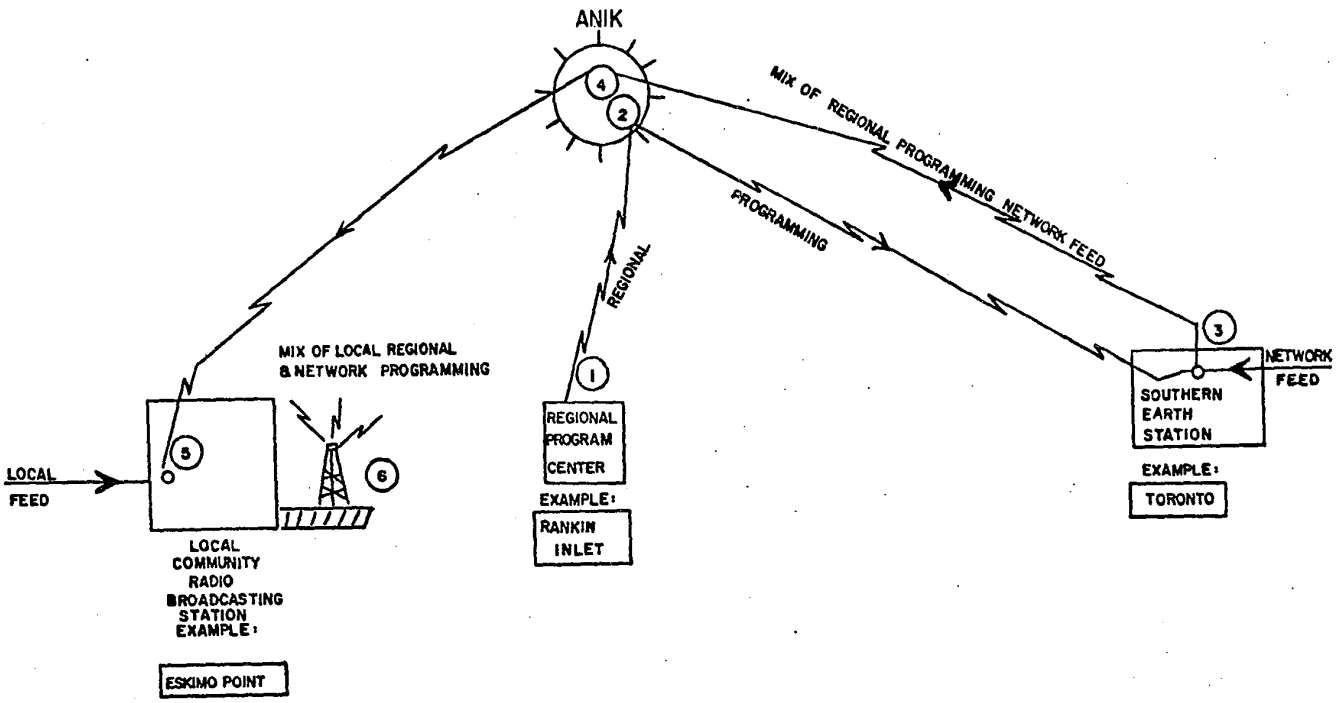
From the foregoing discussion it appears that the only useful role the satellite system will have is to provide an improved telephone service and an alternative to the C.B.C. shortwave service to four places currently without a local radio station; $90,000,000 is a considerable amount of money to provide about 3000 people with immediately available news and better telephone service.

The entire plan appears to bear out the contention voiced at the Northern Communications Conference that there is little relation between the real needs of the people and the planning being done to satisfy those needs (see page 113). It further appears that "planning" for the satellite

does not exist, but that the satellite is simply, in the words of a C.B.C. staff member, a Juggernaut that the government bureaucracy began and cannot now stop. This is illustrated by the fact that the C.B.C. expects to increase the power of its shortwave transmitters in Sackville from 50 to 250 kilowatts in the fall of 1972, only months before the satellite system becomes operational. If all goes well, the northern shortwave system could be made redundant by the satellite within a few years, just as the F.C.P. television system will be made redundant in early 1973. It can therefore only be considered exceedingly odd that the C.B.C., after having operated its shortwave transmitters in one configuration for 14 years should choose the present time to improve them.

If the government's plan to improve mass communication appears doomed to be an expensive failure, it is worth considering what alternate action might be taken to improve services to the Arctic. Kenney (1971, v. 2, 32-39) has suggested a system that would utilize the satellite, but require a different arrangement of earth stations and another channel on the satellite.[1] The system would entail establishing regional and local radio and television broadcasting stations in the North, and simply use the satellite as the means of linkage. It would operate as shown in Plate 5-1.

Kenney estimates the cost of his arrangement would be $1,000,000 for a television production centre, and $200,000 for each radio production centre (Ibid., 39). He fails to consider the cost of local radio stations, but the government puts the capital cost of a 40 watt AM station at $12,300 (Canada, Telecommission, 1970b, 32). However, many 40 watt stations already exist in the North (though not in the Arctic) as LPRTs. The only alteration necessary to use them in Kenney's system would be to modify them so that they could be used for local broadcasting. Murdoch, in a proposal



(START AT (1) AND FOLLOW NUMBERS IN SEQUENCE)

EXAMPLE OF MIXTURE OF LOCAL, REGIONAL & NETWORK RADIO, PROGRAM BROADCASTING IN A NORTHERN LOCATION

Plate 5-1: The Kenney Broadcasting System. (After Kenney, 1971, v. 2, 36.)

for a broadcasting system for northern Quebec, has estimated the operating costs of a small radio station. These are reproduced as Table 5-1. Given that his system presumes eleven stations and certain ancillary facilities in the South, the cost to operate one station for one year is about $17,000. It would not be necessary to include television receivers in the Kenney system, other than those already planned for by the government, due to the low priority placed by the native people on having television service. Such a broadcasting system would allow for local injection of information, a regional interchange of information, and the reception of national radio and (in the larger centres) television programmes. The capital costs additional to the presently committed $90,000,000 would be insignificant. Moreover, it would enable Anik to serve all the residents of the North, not just the white minority.

Improvements can be made to other channels in the mass communication system as well. The Eades (1971), for instance, have presented a detailed plan for increasing the amount of information made available to communities by films. It centres around the production and exchange of locally produced films, utilizing video tape recordings, and would be supplemental to the currently available (entertainment) films. Such a system is already in operation in rural Newfoundland, where, since 1967, Memorial University has utilized videotape as an integral part of its adult education program. The Newfoundland system has these goals:

> "...to develop insight into the dimensions of the community, to assist in creating a desire of the community to act on problems brought out on film, to foster more effective community-government communication and to promote greater understanding and a desire by the community to act on its own behalf" (Harris, 1972, 6, 7).

Results from this program are only now becoming available, but preliminary evidence is that local production and exchange of films is useful in

Table 5-1

Radio Operating Costs

Salaries		
Station Operators (22 x $4,000)	88,000	
Manager	8,000	
Southern Producers (4 x 7,500)	30,000	
Regional Directors (2 x 6,000)	12,000	138,000
Travel - Regional Directors		10,000
Meetings of Board of Directors		7,000
Rent		
south (600 sq.ft. @ $2/sq.ft.)	1,200	
north (11 x 250 sq.ft. @ $5/sq.ft.)	13,750	14,950
Office Supplies		1,000
Supplies, other		
Newspaper	2,000	
Tapes and records	6,000	8,000
Telephone (plus first year installation)		4,000
Postage		2,000
Total Operating Costs.....		$184,950

Source: Murdoch, 1971?, 20.

attaining the aims of the program, which are very similar to those set out by Sim (see page 125). It is widely held by observers in the Arctic that video tape has a tremendous potential as a source of non-topical information for residents of the region. However, only Inuit Taparisat and the Adult Education Centre in Frobisher Bay have made any use of video tape as a means of information exchange to date. The former group owns three video tape recorders which are being used "...to improve communication among the Inuit of the Canadian North by use of all available sources of information" (Inuit Monthly, 1972). The Adult Education Centre has produced at least 15 video tape programmes, their goal being to provide "...information, rather than propaganda" to Eskimos who do not speak English (Report of the Principal, 1972).

A final method of improving mass communication among Canadian Eskimos would be to establish an Eskimo language press. Oldendow has described the operation of the major press in Greenland, which could serve as the model for a similar operation in the Canadian Arctic. He says:

> "This up-to-date press meets the requirements of the whole of Greenland for printed matter. The implications of this will immediately be obvious to any printer or publisher. It issues all the printed matter required in everyday life and in all branches of public administration, textbooks and handbooks in every subject and at every standard, songbooks, the Greenlandic Hymnbook, The New Testament and a picture Bible in the most beautiful colours - all works of a considerable size. Amongst the periodica it publishes are a parish magazine, an official gazette, annual reports of the Provincial Council in both Danish and Greenlandic and often comprising 300-400 large pages, as well as a series of publications issued by various educational, cultural and religious associations of Greenland, including a number of translations of the great names in world literature. In addition a number of native writers have had their works issued by the press and recently the first anthology of writings from Greenland, in both Danish and Greenlandic, has appeared. Works of a purely bibliophile nature have also been issued, often privately printed" (Oldendow, 1959, 42).

Such a press, which could perhaps be operated on a cooperative basis by the various community associations in the Arctic, would probably be able

to maintain itself without being subsidised by government if government would allow the press to print material for it on a contract basis. The money thus earned by the press could offset losses from printing small numbers of books and periodicals. The existence of such a press at a centrally located Arctic settlement with good transportation facilities, perhaps Frobisher Bay, could also solve the financial problems of many newspapers by offering an inexpensive rate for the printing of such items. No newspaper in the Arctic currently attempts, nor can one hope, to compete with radio and the "grapevine" as a source of topical material, so there would be no problem involved with a paper being produced in one settlement and being printed in another.

There is no valid reason why mass communication in the Canadian Arctic cannot be vastly improved in a very short period of time. The Anik satellite provides an excellent foundation for an improved broadcasting network, and the local production of movies, books, and newspapers designed by and for Eskimos presents no insurmountable obstacles. Information overload clearly exists in the Arctic at the present time due to the limited amount of information accessible there. However, even information that is conspicuously irrelevant to the Eskimo population must be embraced by them due to the lack of other material. This present uncritical acceptance of proffered information will not, however, last forever. Indications already exist in statements recently made by Eskimos, some of which were presented in Chapter 4, that dissatisfaction exists, and this can only be expected to increase as the natives see the minority white population constantly receive better communication services such as the soon to be introduced live television.

It is the present state of Eskimo social development that explains the need for more information to be made available from more sources via more

channels in arctic Canada. Present government policy is aimed at providing the Eskimos with the skills and knowledge necessary to allow them to participate on equal terms with any other person in Canadian life. As long as the present paternal, authoritarian system of providing information to the Eskimos is allowed to survive, their culture will continue to disintegrate. It is time for government to cease "guiding" the Eskimos' adaptation to western society and help to provide them with the information they need to make their own choices as to what direction their future existence will take.

Appendix

KEY TO LOCATION OF PLACES SHOWN ON MAPS

1 Old Crow
2 Inuvik
3 Tuktoyaktuk
4 Aklavik
5 Arctic Red River
6 Ft. McPherson
7 Clinton Creek
8 Dawson
9 Mayo
10 Elsa
11 Keno
12 Faro
13 Beaver Creek
14 Destruction Bay
15 Haines Junction
16 Carmacks
17 Takhini
18 Whitehorse
19 Ross River
20 Carcross
21 Teslin
22 Watson Lake
23 Swift River
24 Paulatuk
25 Fort Good Hope
26 Colville Lake
27 Norman Wells
28 Ft. Norman
29 Ft. Franklin
30 Port Radium
31 Wrigley
32 Ft. Simpson
33 South Nahanni
34 Fort Liard
35 Lac la Martre
36 Rae
37 Yellowknife
38 Enterprise
39 Snowdrift
40 Rocher River
41 Ft. Resolution
42 Pine Point
43 Ft. Providence
44 Hay River
45 Ft. Smith
46 Coppermine
47 Holman Island
48 Sachs Harbour
49 Cambridge Bay
50 Bathurst Inlet
51 Grise Fjord
52 Resolute
53 Thom Bay
54 Spence Bay
55 Pelly Bay
56 Gjoa Haven
57 Baker Lake
58 Chesterfield Inlet
59 Rankin Inlet
60 Whale Cove - Tavani
61 Eskimo Point
62 Churchill
63 Belcher Islands
64 Coral Harbour
65 Repulse Bay
66 Hall Beach
67 Igloolik
68 Arctic Bay
69 Pond Inlet
70 Clyde
71 Broughton Island
72 Pangnirtung
73 Frobisher Bay
74 Lake Harbour
75 Cape Dorset
76 Port Burwell
77 George River
78 Ft. Chimo
79 Payne Bay
80 Koartuk
81 Wakeham Bay
82 Sugluk
83 Ivugivik
84 Povungnituk
85 Port Harrison
86 Great Whale River
87 Cassiar
88 Ft. Nelson
89 Uranium City
90 Herschel Island
91 Ft. Chipewyan
92 Schefferville
93 Churchill Falls
94 Labrador City
95 Wabush
96 Ft. McMurray
97 Jean-Marie River

Notes

Chapter 2

1. Yupik and Inupik are the two major units of the Eskimo language. The latter, Inupik, is found in northern Alaska, Canada, and western Greenland, and is sufficiently similar in all these places that it did not act as an impediment to oral communication among any Eskimos who spoke it wherever they might be from (Collins, 1954).

2. The sources disagree as to who first used syllabic script to write the Eskimo language. Carrington (1963, 171) states that Bishop Horden of Moose Factory "...had managed to adapt the syllabic script to the Eskimo language and...he produced a little printed book of devotions in the native tongue". Marsh (1957, 6) states that Rev. Peck "...introduced a system of writing in syllabics", and most other sources, including Peck's biographer (Lewis, 1905) agree. It is therefore impossible to state definitely who first utilized syllabics to write Eskimo, but it is certain that Peck played the major role in popularizing the system.

3. The paper was printed annually from 1902 - 1921.

Chapter 3

1. It should be recalled that these systems were used solely as a means of intercommunication among white agencies; see page 34.

2. The quality of a radio signal is determined by its reliability (how often it can be received) and its fidelity (how well it can be received). Generally, the farther a signal travels, the poorer its quality will be. The most common way to improve signal quality is, therefore, to reduce the distance it must travel. This is done by installing relay (repeater) stations along the route between the senders and ultimate receivers. These stations receive and re-transmit signals, thus maintaining the quality of signals by reducing the distance they must travel before reception. A detailed discussion of this topic may be found in Canada, Department of Communications, 1971a, 80ff.

3. The high level of interest during the 1950s in the quality of reception of U. S. and Soviet broadcasts was a consequence of the cold war. Undoubtedly broadcasts from other countries could be received in northern Canada, but probably because of their lesser role as propagandists, no mention is made of them in government documents.

4. There is disagreement among the sources used to draw Maps 3-2 and 3-3. The C.B.C. Annual Reports of 1965 and 1969 show one series of network linkages, while CN Moves North (1964?) and CNT in the North (1970?) show another. Further, the 1969 C.B.C. Annual Report states on page 53 that 25 LPRTs were in operation in 1968, but lists 26 on page 115; it is taken that the 26 were operating as it was possible to list them. Linkages shown in the maps follow those shown in the C.N.T. sources; one assumes they know what they own (see page 77).

Notes

Chapter 3

5. In 1971, the C.B.C. and the community of Espanola, Ontario, conducted an experiment to test the potential of converting a C.B.C. owned LPRT to a local broadcasting station. The groups concerned state that "Our biggest problem was filling out the application to receive an independent operating licence from the CRTC." (Citizen Access to Radio in Northern Ontario, 1972). As a result, the C.B.C. still holds the license.

6. There is a large literature in Greenlandic which is not considered here as only a few Canadian Eskimos are capable of reading it.

7. The library also has one Eskimo-English dictionary, one Eskimo-English grammar, and one Eskimo-French grammar. These three books, and the three listed in the text, represent the only books in the library with Eskimo language content.

8. The Churchill, Manitoba, television station, which uses taped programming, is an affiliate of the C.B.C. (Kenney, 1971, v. 1, 24).

9. By considering only settlements with a population of at least fifty people, some unknown number of people are not counted, and thus do not figure in the calculations in the tables.

10. Taped, non-topical material is flown to the station from Montreal for rebroadcast.

11. The reference states: "Fifty per cent of programming is produced there (the North). The rest of the programming is standard C.B.C. network service which serves all parts of Canada" (Canada, Telecommission, 1970d, 59). This is an impossible situation. A considerable amount of short-wave service programming in the Eskimo language is produced in Montreal. Montreal is not in the North, nor is programming in Eskimo standard C.B.C. network service in southern Canada. Therefore, more than 50% of Northern Service programming must come from outside the North.

Chapter 4

1. One of the stated reasons for publishing the book was to introduce the Eskimos to a new system of writing their language. This new system was devised as a means of overcoming the boundaries created by the use of syllabic and Roman characters to write Inupik Eskimo.

2. A new station manager is to be installed in the fall of 1972 at CFFB and is expected to change the present programming policy considerably to include more Eskimo language content.

Notes

Chapter 5

1. At the time of writing, six of the satellite's twelve channels have no assigned user.

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