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Ten Years of Network Television in the Eastern Arctic: Cultural Implications for the Diffusion of Educational Technology

Thomas Clark Wilson

A Thesis

in

The Department

of

Education

Presented in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy at
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Montréal, Québec, Canada

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ABSTRACT

Ten Years of Network Television in the Eastern Arctic:
Cultural Implications for the
Diffusion of Educational Technology

Thomas Clark Wilson, Ph.D.
Concordia University, 1987

A study of adolescent Inuit students in schools in the Eastern Northwest Territories was conducted to examine the progressive influences of satellite television exposure. In a first comparison three levels of television exposure were used: no exposure, medium exposure, and high exposure. In a second, comparison groups sampled in three surveys over a ten-year period were compared. The effort was directed at an examination of Rogers' dominant paradigm development hypothesis. Groups with the higher levels of television exposure were expected to display more characteristics of modernity and better personal adjustment.

Results indicated that the expectation of better personal adjustment projected by the dominant paradigm literature was not supportable. Subjects in the more developed community of Frobisher Bay displayed a somewhat lower level of personal adjustment as measured by an internal locus of control inventory.

Longitudinally it was found that the most dramatic influences of satellite television appeared shortly after

the appearance of the medium. These influences were evident in the subjects' expressed orientations toward selected issues, designed to reflect the subjects' feeling of the North's relative importance in consideration of personal questions.

After the coming of satellite television the Frobisher Bay subjects appeared to have become more oriented toward the world outside the North, at the expense of their affinity for the North. The non-television community of Igloolik most resembled the early post-television group in Frobisher Bay. However, the subjects of the second and third samplings, following the advent of an Inuit broadcasting system, had a more balanced attitude toward the relative importance of both the North, and the rest of Canada and the world.

The findings are discussed within the context of the Inuit Broadcasting Corporation, which appears to represent a culturally counterbalancing influence, and may act to return those students to a Northerly orientation.

ABREGEE

Ten Years of Network Television in the Eastern Arctic:
Cultural Implications for the
Diffusion of Educational Technology

Thomas Clark Wilson, Ph.D.
Concordia University, 1987

Une etude portant sur des etudiants adolescents Inuit qui frequentent des ecoles de la region est des Territoires du Nord-ouest fut menee afin d'examiner les influences progressives qui occasionnent l'exposition a la television par satellite. Lors d'une premiere comparaison, trois niveaux d'exposition a la television furent utilisees: pas d'exposition; exposition moderee; et haute exposition. Dans la deuxieme, des groupes de comparaisons selectionnees a partir de trois sondages menes au cours d'une period de dix ans furent compares. Il s'agissait ainsi d'examiner l'hypothese du paradigme dominant de development selon Everett Rogers. On s'attendait a ce que les groupes avec les plus hauts niveaux d'exposition a la television manifestent plus de caracteristiques de modernite de meme qu'un meilleur ajustement personnel.

Les resultats ont indique que l'esperance d'un meilleur ajustement personnel tel qu'ennonce par la litterature du paradigme dominant, n'etait pas verifiable. Les sujets de la communaute plus developpee de Frobisher Bay ont demontre

un niveau d'ajustement personnel quelque peu inferieure tel que mesure par un inventaire de la localisation interne de controle.

Longitudinallement, les resultats indiquent que les influences les plus dramatiques de la television par satellite apparaissent peu de temps apres l'introduction du media. Ces influences furent evidentes a travers les orientations exprimees des sujets sur des questions selectionnees, ces dernieres concues de maniere a refleter le sentiment des sujets face a l'importance relative du Nord en consideration de questions particulieres.

Apres l'arrivee de la television par satellite, les sujets de Frobisher Bay ont semble d'axer davantage sur le monde a l'exterieure du Nord, au detriment de leur affinite avec le Nord. Cependant, les sujets des deuxieme et troisieme echantillonnages possedaient une attitude plus equilibree envers l'importance relative et du Nord dans un premier temps, et du reste du Canada et du monde dans un second. La communaute sans television de Igloolik est celle qui ressemblait le plus au groupe post-television a Frobisher Bay.

Les resultats sont discutes dans le contexte du systeme de telediffusion Inuit qui semble representer une influence de contrepoids culturels et qui peut participer a ramener ces etudiants a une orientation centree vers le Nord.

Acknowledgements

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and participation. Thanks are also due to Concordia University's CASA research support programme, as well as to FCAC (Quebec) for funding the study and myself as a Doctoral student.

Last, I would like to thank my wife, Brenda Beauchamp, fher constant,and unflagging support throughout this work.

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Chapter 1

Introduction*

Public concern over any influences that sustained television watching may have on people is not new. Preoccupation with possible harmful effects, particularly on young children, goes back to the late 50s. However, early research found little to validate such fears (Himmelweit, 1958; Schramm, 1961).

This is not to say that there were no effects, however. In the words of Wilbur Schramm, television "dominates the child's leisure" (1961, p. 169), at least at the early stages before the age of eleven. After this, children "tend to turn away from television to the supposedly greater intellectual challenges of print" (1961, p. 170). Furthermore, the probability of anything "harmfull" happening as a result of television watching was believed remote: "TV is too fantasy oriented" (1961, p. 174). In fact, there seemed to be a tendency for children's interest to be stimulated by television watching (Himmelweit, 1958).

This type of attitude in the literature towards television might be referred to as "friendly". By the mid-60s, however, a counter trend was discernable, in the wake of the increasing concern with generalized violence,

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*Support for this study was received from FCAC (Quebec), Department of the Secretary of State, Concordia University's CASA research support agency, the Canadian Radio and Telecommunications Commission, the Inuit Broadcasting Corporation, and Kativik School Board.

particularly in the inner cities of the United States. Political assassinations, civil disorder, and the Viet Nam war became the staple of night-time television viewing in North America, as anyone who lived through the 60s with a television in the house remembers. Concern with violence in the United States reached a zenith with a wave of political assassinations and city riots culminating in 1968.

In 1972 the "Surgeon General's Report on Television and Social Behavior" published five volumes of research on the influence of television watching. Although it did find evidence linking television exposure to aggression it made no statement as to cause. The findings were "consonant with the interpretation that violence viewing leads to later aggression, but are not conclusive" (Surgeon General's Scientific Advisory Committee on Television and Social Behavior, [SGSAC], 1972, p. 95).

Further research in the 60s then began to reveal what had been suspected. Television was linked to aggressive behavior in the laboratory work of Bandura, Ross, and Ross (1961) and Berkowitz and Rawlings (1963). Subsequent research suggested, although not conclusively, that television viewing and aggression were linked. As the Feshback-Singer study of 1971 could not be replicated, however, (Wells, 1973) causal links between aggression and television viewing became thought of, again, with increasing scepticism (Kaplan and Singer, 1976). The most recent examination of the issue, the NBC Panel Study, claims there

is very little relation between TV viewing and aggression (Milavsky, Kessler, Stipp, & Rubens, 1982). However, on-going discussion continues on the issue in the journals and the subject is likely to remain controversial (Kenny, 1984).

Research on television "effects" and influences are centred in the United States. It was in the US following the SGSAC report, and even before it, that the issue grew as a result of concern over, among other things, generalized social violence. In Canada, television broadcasting began as State broadcasting, unlike the American experience, which involved commercial interests. Initial service from CBC television began in major centres in the early 50s. By the mid-60s television was pushing North toward an audience radically different in history, culture, and general outlook on the world, from viewers in the rest of Canada.

For research pursuing the question of television's effects, an ideal venue would be a place and population to serve as a "control" which had never had television. CBC North's advance into the North in the mid-60s created the circumstances whereby such a "control" group could be found in a natural, as opposed to a laboratory setting. There had been studies which attempted to trace television's effects when it was introduced to audiences familiar with the cultural context; Cowan and Foote (1975) in the United States, Dannheiser (1975) in India, Furu (1962) in Japan, and Salomon in Israel (1977); all found what are by now

recognized as the classical effects of the introduction of television, not extremely different from the early research.

By the mid-seventies a large body of literature had assessed the classical effects of television on audiences familiar with the content and context, although the picture of the violence was and is still is unresolved. Classical effects included absence from school, decline in literacy, and some mimicking of television personalities' "behaviour" (Noble, 1975).

The advent of the earth satellite made possible the transmission to and reception of television in areas far from the geographical as well as the cultural context of the signals' origins. The CBC was launched into Northern Canada* in the mid-sixties. Television was new to the North, although radio had been in the North for years (Mayes, 1972). The Northern situation was different from the southern in that the audience for the medium was not English- or French-speaking Canadian, but aboriginal Canadian; Inuit. The region of Canada this study addresses is that region of Canada in the Eastern Northwest

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*The "Hamelin line" refers to Louis-Edmond Hamelin's definition of the Canadian North, which takes into account 10 criteria of latitude, temperature, ice conditions, precipitation, vegetation, accessibility, population, and economic activity. The line follows the 50th parallel from Newfoundland to the Manitoba border where it turns northwest to the Peace River District in Alberta. From Alberta, the line curves west. This line was originally established to help the Federal Government compensate its "isolated" employees and was subsequently modified (Abramson, Lougheed, Roth, Valaskakis, and Wilson, 1986).

Territories. The presence of television in an area which is as culturally different from the rest of the country as possible, creates an opportunity to examine the influences and effects of television, including but not exclusively, violence. It presents the chance to examine questions about the nature and influence of television which go beyond the violence profile.

The characterization of a "violence" effect from television seems too restricted an approach to consider. If television has any behaviour-modifying influences or effects, and I must differentiate between an influence and an effect, violent behaviour, however it is defined, may be expected to be only one reflection of the medium's influence on people. An "effect" such as "violence" may not be presumed to touch everyone to the same extent. Searching for such an effect requires that it be isolated. Establishing it as an "effect" requires that it have an antecedent which may be isolated. It furthermore requires a satisfactory linkage between the two events. Such a study becomes, in effect, about linkage.

Part of the difficulty of searching for a "violence" effect is the definition of violent behaviour; another is measuring it. Reports by third parties make up the most recent study's violence ratings (Milavsky et al, 1984). These may be prone to over- or under-estimation, or even intentionally misreported (although using enough third-party accounts should compensate for this. However, there are

likely to be so many confounding effects of violence in everyday life that any attribution of violent behaviour to television watching becomes quite problematic. Television is ubiquitous. Isolating it as a "cause" of violent behaviour has been found to be very difficult (Milavsky et al 1984).

I am interested in the less overt, more subtle effects of television, as opposed to the overt effects most often characterized along the lines of Gerbner's "violence profile" (Gerbner, 1977). Putting the purpose of this study rhetorically, can television affect the way people see themselves within the context of their daily lives? Does it give them a different perspective on themselves? How is this likely to affect their future and that of their communities? How might it change the vision they have of themselves with respect to the rest of the country? What are the implications of discernable changes in people's views about themselves, for the future of public broadcasting, should it be possible to isolate a television effect? Such effects would be simpler, but far more subtle, than the recorded number of violent acts per year.

Problem Context

The subject of this dissertation is the influence of electronic means of communication. This is a story of long-distance communication by media which overcome the historical limitations of distance. The medium of study will be television. It will be argued that television

carries unique effects upon the viewer, effects which distinguish television from other media.

The Northwest Territories is a vast but sparsely populated land area. The subject area of this study is the Eastern Arctic, an area populated largely by the people we call "Eskimos". They call themselves "Inuit", which means "The People" in their own language, Inuktitut.

Inuit contact with people from outside the North certainly did not begin with television. There is solid historical documentation to place first contact between Inuit and outsiders as far back as the 10th Century (Crowe, 1974). The man usually credited with having introduced the Inuit to the outside world, or more properly the other way around, in this case the world of Europe, was the English privateer, Martin Frobisher. In 1578 he sailed his ship into the bay today bearing his name in search of a Northwest passage to Asia. Coming ashore at the end of that bay he found what seemed to be gold ore. He filled his ship's hold with it to take back to England. The English sailors did encounter Inuit and there was some trading of metal goods for fresh meat. Relations seem to have deteriorated rapidly, however, and after several clashes Frobisher and his motely crew returned to England to find that their "gold" was worthless iron pyrite.

Contact continued sporadically until the early 19th Century, and the Eastern Arctic Inuit remained relatively undisturbed by outside contact. In the early 1800s,

Missionaries came North and brought with them deep social and psychological change. Previously animistic, the Inuit converted to Christianity, principally Anglicanism in the Eastern Arctic. Whalers followed in the late 19th Century, establishing the foundations of a primitive economy.

Until 1885 what we now know as the Northwest Territories was British Crown land. The only authority figures of any import were the traders of the Hudson's Bay Company, and the Missionaries. Crowe (1974) points out that the traders wielded enormous discretionary power over the economic welfare of the Inuit hunters and trappers in their region. Generally speaking, however, their reign was a benevolent one, as was their co-rule with the Church. Often the local priest was the only spiritual and medical succour for sick or injured Inuit in their region.

The outlines of the pattern of Southern-Inuit contact emerge. Disease and cultural disruption have been observed in many geographical contexts, the North among these. However, this area has undergone a rather different process, a situation which involves a discussion of "development" both in the Northern context and in the wider Third World context. The two differ; it would be surprising if they did not. There are parallells, however.

Development

The context of this study is that of development and innovation. Both of these have a large literature corpus (Rogers, 1983). Viewing them in the context of the Canadian

North is an attempt to conceptualize the North in terms of recent Third World communications development. I shall treat this as a case study in the diffusion-of-innovations paradigm defined by Rogers (1983). Fitting this into the framework of development so as to compare it with other case studies in countries forming part of the Third World requires some explanation.

To show the case for considering the Canadian North in the context of development research, some history is called for. Although not widely known outside the field, there is a large and scholarly robust body of literature which may serve as a data base from which to derive cause for ascribing the history of the modern North to the process of development.

One can demonstrate rather conclusively that Northern history is one of development. In a field where so many things are happening so fast, establishing a context is often highly problematic. Differing methods and messages of communication enter the consideration of what is pertinent in the history. However, much work has already been done in the Northern context and this study to large extent draws from the base that has been established.

Until World War Two Canada did not really need its Northern area. It had been transferred to Canadian jurisdiction from the British Crown in 1885, but successive Governments seemed to regard it as more of a niusance and a burden than anything else (Paine, 1977). For that reason

the Hudson's Bay Company (The Bay) and the Church had been the primary manifestations of central authority in the Canadian North. Not that they really represented the central Government in Ottawa. They much more resembled surrogates. In any case, Ottawa seems to have been only too satisfied to have let the Church and the "Bay" hold sway (Paine, 1977).

World War Two changed the world, and the North, forever. The crucible from which our present world has crystallized, the modern North is certainly no exception to this. Just as Martin Frobisher had to enter the North in his 16th Century search for a Northwest passage, the Allied Powers had to enter the North in the search for forward bases from which to ferry aircraft to Europe. Martin Frobisher's input was limited because of the time and the technology available to him to invoke in his mission. The war's conclusion sealed this destiny with the decomposition of the wartime alliance between the Western powers and the USSR. By the end of the war the former ally was perceived as a potential adversary. The US had emerged as the predominant world power from the war; looking across to its potential opponent they saw, lying between themselves and the Soviets, Canada.

Simply put, the shortest flight path between the greater land mass of the USSR and that of the US lies across the Canadian Arctic. Beginning in the 1950s radar bases were built across the North, paid for principally by the US.

These provided "distant early warning", as little as 20 minutes in the case of missiles, of a Soviet attack on North America.

From obscurity in the 19th and early 20th Centuries, the Canadian North entered the awareness of the rest of the country. People hadn't perhaps heard too much of the Eskimos, but they had heard plenty of the Russians. Meanwhile, in the North itself, other issues were emerging irrespective of the shape of the geopolitical matrix.

By the end of the Second World War the world was reaching out to the Canadian Inuit. Natural forces such as famine and disease, brought on by over-hunting as a result of using firearms, and contact with Southerners, caused extreme deprivation in the North. The Federal Government decided to take the Inuit off the land and regroup them into small settlements along the coasts of the Eastern and Central Arctic. Paine (1977) and Duhaime (1983) note that as late as the early Fifties many Inuit were starving or suffering from life-threatening diseases. These conditions were a major impetus to decisions which established a permanent Government presence in the North. The various levels of Government replaced the Church and the Bay as the symbols and reality of Southern central authority.

The Inuit settled down in the new communities, although some locations were settlements of long standing; Pangnirtung was an old whaling community from the last Century (Mayes, 1978). The major change was that instead of

spending most of the year on the land hunting, living nomadically, and coming into the settlements infrequently to trade for provisions or seek health care, the pattern was reversed.

If this were to be made supportable, services had to be provided in the settlements to deal with the increased population density and provide some sort of transition from a nomadic to a localized life. Health care was chief among these. Inuit mortality of all ages at the time of resettlement was the highest in Canada (Paine, 1977). Most far reaching in terms of change, however, was education.

There seems to have been an assumption on the part of the authorities in charge of the North and its people that introducing education to the Inuit, and vice versa, would contribute to the overall process of development in the North (Simpson & Bowles, 1973). Wilson (1981) has described the consequences of that innovation.

The entire set of assumptions that entered into the reasoning for introducing a system of mass education and social infrastructure stems from a conception of development which has been called the "dominant paradigm" (Rogers, 1976). This was a generalized set of theories about development in Third World countries. It may be crudely summarized by noting its general operative assumption that the transfer of technology, economic activity, and expertise would result in the closing of the "gap" between the developed and less-developed regions of a country. The

definitive treatments of this "meta-theory" and practice of development are by Lerner (1958), Rogers (1969), and Inkeles & Smith (1974).

Development and the "Dominant Paradigm"

I begin by asking whether the Canadian North may be considered a developing region. An answer must take account of the history of the past thirty or forty years. Examination of the literature on this issue suggests that the North is, indeed, a developing region, within Canada (Mayes, 1978; Valaskakis, 1979; Smith, 1974). May it, however, be considered comparable to a Third World region? I make the case that it cannot. It is a region of a developed country greatly underdeveloped in relation to the rest of the country. In terms of the usual indicators, however, - GNP, per-capita income, literacy, infant mortality - it is in no terms comparable to a Third World setting. It is a special case of underdevelopment in the developed world. Despite this, the North does exhibit characteristics of developed regions in other countries. It has been geography which has buffered the North from development.

Innis' (1950, 1951) model of development is basically oriented toward the structure of communications, but a model formulated by an economist. The basic model describes the relationship between central sources of authority and frontier regions nominally under central political control. The relationship between central and frontier regions is

determined by the means of communication available between the two regions. Where they are slow authority is diffuse and weak. Where means are efficient and swift, so is authority. Obstacles that intervene between the two regions in terms of the time delay between the issue and receipt of orders determine the strength of central authority which is felt at the margins.

The history of Northern development can be described as one of increasing speed of communication between Northern centres and southern centres of authority. Eventually instant communication arrived in the form of the direct broadcast satellite, bringing the telephone and other means of instant communication. The history of development is counter-pointed with one of accelerated technological development. In Innis' terms, authority is complete.

The conventional theory (Rogers, 1969) posits a process of development from the top, trickling down. This expresses the so-called "dominant paradigm", which Rogers once described as the predominant theory of development (1969). The "dominant paradigm" is, or was, a body of literature which emerged in the early 1960s. Its protagonist was Everett E. Rogers, whose book "Modernization Among Peasants" (1965) was one of the most influential studies in what became known as the "development" literature. Rogers' work was not unique, however. Daniel Lerner (1958) had assembled studies on the process of modernization as it had transpired in six developing countries in what is now known as the

Middle East.* Lerner described the process of development which had affected these countries since the end of the Second World War. Stoehr and Taylor (1983) later referred to this process as "top-down". Massive development projects were instituted by central governments in an effort to rapidly modernize the country and the people. The entire thrust of the "dominant paradigm" was a description of a centre-weighted approach to development. Central governments and sources of authority decided the course of development appropriate for the country, and implemented it. This involved a heavy reliance on foreign aid.

By the early 1970s, however, Rogers and others were beginning to re-assess the viability of the "dominant paradigm" approach. The work which marked the transition away from the "dominant paradigm" school appeared in 1976. Containing work by several prominent writers in the development literature, the principal shift in thinking on the subject involved participation in

> social change in a society intended to bring about both social and material advancement. . . for the majority of the people through their gaining greater control over their environment (Rogers, 1976, p. 225).

This participation could then be seen as part of a drive toward the type of society that a country felt it required (Rogers, 1976). This type of development, labelled

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*Geographers would call this region the "Near East".

"participatory", or "bottom-up" (Stoehr and Taylor (1983) is not a gross departure from previous depictions. Important decisions still rested with central governments. However, the shift in the views of prominent writers was away from preoccupation with "economic growth, capital-intensive technology, centralized planning, and the attribution of underdevelopment to internal causes", yielding to "a growing recognition of the need for historically specific, precisely-located studies of the role of communications in the development process" (Roth, 1982, p. 7). The North's history does suggest a story of development and of increased authority. The "dominant paradigm" appears to break down in the North, however, and to establish how and why is particularly important.

Innis assumed that where communications were weak, authority would be likewise. Rogers, however, has changed his theorizations in recent years (Rogers, 1976, 1983). Innis' framework seems to to have more explanatory power, at least in the historical context; his ideas seem more congruent with Northern history and conditions than does Rogers' "dominant paradigm".

This is not, however, a historical account of communication in the North. It is a case study of the impact of the communications environment on people, as well as of the implications for those people of continuing change in that environment. It will be argued that the origin of control of the communication environment has a profound

impact on people. Where that communication environment is dynamic, unlike the North in the past, it may be expected to coincide with some sort of dysfunctional adjustment in people's lives. Dicks (1977) described the response of people to rapid technological change which alters the context of their daily interaction with others. He reflected on a "cultural gap" arising from the swift transition from a life involving the dog sled used for transportation and communication, to the direct-dial telephone, all in only a few years. This dissertation examines that issue: It is about development in the context of the North. It is not a study of development, however. It is, rather, a study of the consequences of a situation wherein control over the process of development resides in outside hands. It will be necessary to examine several issues: education, innovation, communications and the socio-cultural impact of communications, psychological maladjustment, and the inter-relations among all of these as outgrowths of the process of development.

Development, Communication, and Modernity

A body of literature which grew up in the late 50s, 60s, and early 70s, identified communications and access to mass communication as a vitally important determinant of modernity. This is development, but it relates to the individual, not the society in general. In fact, the title of one of the most important works in the development literature, "Becoming Modern", signifies that development,

and modernity are often considered the same thing. The classical literature indicates by omission that the personal level of modernity follows from the society-wide level. It appears as a recrudescence of the "Weber Thesis" of classical 19th Century sociology (Weber, 1958). Some writers in the "dominant paradigm" tradition have even claimed to have quantitatively "proved" the validity of the Weber Thesis (McClelland, 1958). Inkeles & Smith (1974) defined the concept of modernity as their primary dependent variable of interest and set about searching for it in six developing countries.

Inkeles & Smith (1974), and to some extent colleagues in their field, defined three levels of personal development. The first of these was traditional, people living as they had for centuries, or at least generations before. The second was the transitionals, those emerging from the traditional to the modern way of life. Their status of transformation would be incomplete, and judging from research observations these people would be the most likely to display signs of maladjustment in their everyday lives. At the third level would be the modern man, or "person" in non-sexist terms (Significantly, most of Inkeles & Smith's and their colleagues' conclusions eg., Lerner, 1958 were based on observations of men).

The modern person was the least likely to display maladjustment, at least as measured by a battery of psychological tests (Inkeles & Smith, 1974, p. 264).

Furthermore, the traditional person was also comparatively "happy", at least insofar as the two of them could be contrasted with the middle group, the transitionals. Such a type of psychological adjustment occurring as a reaction to development was an artifact of that early type of "dominant paradigm" literature, particularly that of Lerner (1958), and Rogers (1962, 1969).

This type of research considered mass communication the major determinant of modernity, with education a close second. By correlational methods both of these were shown to contribute most discernably to a state of mind, or an assembly of mental attitudes which the authors settled on as a definition of modernity. Modernity was not considered a single attribute but "a general quality, reflected in attitudes, values and behavior in many and diverse realms of social action . . Individual modernity is, then, truly a syndrome, a complex and diffuse personal quality manifest in attitudes, values, and behavior. . . No one element is indispensable" (Inkeles & Smith, 1974, p. 109). This quality, or qualities, were "likely to be inculcated by participation in large-scale modern productive enterprises such as the factory, and, perhaps more critical, which may be required of the workers and the staff if the factory is to operate efficiently and effectively" (Inkeles & Smith, 1974, p. 19). A shift in mental attitudes was deemed a dominant characteristic of "modernity". It would also be considered "opening" of the mind to new and different ways

of doing things (Rogers, 1962, 1969).

By and large the policy makers who made decisions concerning the development of the Canadian North seem to have shared this attitude towards what was to constitute "modernity" and "development". The general path of development that was envisioned for the Canadian North was one that roughly parallelled the path of development articulated in the literature of the "dominant paradigm" (Paine,1977; Mayes, 1978; Roth, 1982). Government policy with regard to education makes this clear:

> The introduction of the Eskimo to the technology and materials of an industrial society at an early secondary school level allows them to explore various fields where employment may be obtained later in life. . .
>
> As long as the Inuit pursued their traditional hunting and fishing existence they could remain self-sufficient, but as this way of life became increasingly precarious the younger generation began to reject it. . . The Government has therefore accepted the responsibility for assuring that the Eskimo people can participate in the Industrial society on equal terms with all other Canadians (Simpson & Bowles in Malaurie, 1973, p. 356-357).

This constituted the major reasoning behind the establishment of a universal system of education in the Northwest Territories in 1955. The induction of a

psychological which has been called "modernity" seems to have been the primary impetus behind the innovation (Wilson, 1981).

Relating this back to our previous characterization of Northern history, this type of attitude change in the context of development seen over a long time period, of over a hundred years, may also be considered innovation. One of the principal chroniclers of the development field has been Everett Rogers. He is probably best known for defining the concept of the "change agent" (Rogers, 1969), one who brings an innovation to a society. Valaskakis has used this concept to characterize Northern history as a succession of change agents entering the North bringing one innovation after another (Valaskakis, 1979). This is also a form of development, or developmental innovation, although it does not conform to the modern terms of the "dominant paradigm". However, it is an approach that has much to say and it does fit in with the characterization of the North as a region in development, an issue I raised earlier. This approach views development as a process of communication, rather than the other way around. Furthermore, in positing that the process of communication intensifies as innovations arise in technology it implies that development will recursively intensify as an artifact of the advance of technology. In fact, the advance of communications technology coincides with accelerated development. It implies that the character of technological development will reflect advances in

communication. This is an outgrowth of the communication theory of Harold Innis (1950, 1951).

Innis' general point was that communications media determine the process of development. In the North, two of the most powerful advances to have come about in communication technology in the past 12 years have been telephone and television. Both of these are consequent to the ANIK satellite series. Before the satellite, communication with the North was either haphasard, as in the case of radio, or slow, as in the case of mail. The only swift way into the Eastern Arctic was by plane, subject to the vagaries of the weather. Ships brought large supplies North once a year. For most Inuit, prior to the satellite, the south of Canada was very remote, both in terms of distance, and in ease of access. It was equally remote, if not moreso, on the cultural level.

Researchers have wished for years to find "pure" television effects; those of television viewing on a naive audience. An early attempt to probe telecommunications impact was done by Dicks (1974). His findings were that telephone had an effect on people, at least in so far as their outwardly observable behaviour could be traced. Retail sales and economic activity increased after telephone; people travelled more. However, the effects were not so much upon the culture as on people's behaviour, and, effects were difficult to trace cognitively and behaviourally. For Frobisher Bay, the development process

that had begun with World War Two, through the post-war period, and into the late Twentieth Century had run through the full classical cycle. The North had the latest innovations, and continued to receive the latest.

Television entered the North via the "Frontier Package" in 1972 (Coldevin, 1976). Tapes were sent North to be rebroadcast in Frobisher Bay in the Eastern Arctic, and Inuvik in the West. Satellite television entered Frobisher Bay in 1973. For some time it was available only in Frobisher Bay on southern Baffin Island, and in Inuvik, in the Western Arctic.

Frobisher Bay responded to the television innovation with the usual effects, now well identified. After television, school attendance declined. Traditional patterns of social interaction in the North, such as visiting, declined, at least temporarily. Out-of-school activities like hockey, volleyball, etc., abated in the mid-Seventies, following television. The movie theatre closed after the competition of television was introduced.

Television in Frobisher by 1974 was live and online, offering the same service as to the rest of the country. Other Northern communities, however, remained without television until the late Seventies. Some remained clear until 1981, and one until 1983. The progressive introduction was largely an administrative decision by Ottawa (Roth, 1982). Larger communities with populations in excess of 500 received TV first. Frobisher was the largest

in the Eastern Arctic, and had received the first satellite service in the Eastern Arctic in 1974.

However, Frobisher's attractiveness as a unique research environment became apparent surprisingly, only to a small number of researchers. Original research on television in Frobisher Bay began in 1973. Coldevin's (1977) work aimed at discerning the social and cognitive effects of placing television into a hitherto naive environment. A later study of television exposure was done in Central-Arctic Rankin Inlet (1977). It focussed primarily on social and behavioural effects in the community. By the late Seventies, however, evidence was accumulating that the effect of television, to the extent that it could be measured, was probably far subtler than early television-effects literature had expounded. The role of television in inducing violent behaviour had become increasingly unclear, particularly in light of the equivocal findings of the NBC panel study (Milavsky et al, 1984).

Statement of the Problem

This research originated with the intention of deriving a different approach to the examination of television "effects", especially when considered over extended periods of time, but with few measurements over the time. It sought to combine observed effects and influences of television on the naive audience, with a comprehensive understanding of the social and cultural context in which television operates in the Eastern Arctic. This involved some consideration of

the process of development as it had occurred in that part of Canada, together with some of the interacting components of that process. It was felt that merely to view such television effects as could be discerned would provide an inadequate and misleading portrait of the situation.

Television came to the North at a time when all of the infrastructure conforming to the "dominant paradigm" pattern of development had been installed in Frobisher Bay. Control over transportation was begun; the use of modern air transportation in and into the North on a daily basis was established. A firm Government presence had existed since the end of the Second World War, but fast access did not come until airline service began into the Eastern Arctic in 1953. In the days before the airlines there were government planes, mostly military or police (RCMP). However, the most visible reaching out to the Arctic from the south at that time was the yearly supply ship which visited each Arctic coastal community.

In any process of development it is held that the most important element which contributes to development and the condition of modernity is the establishment of universal education (Inkeles & Smith, 1974). A Department of Education was set up in 1955 in the Northwest Territories and by the late 60s schools offering at least the first seven grades existed in all communities.

In the early Seventies, the latest product of development to come North was television. In 1973 satellite

television was introduced to Frobisher Bay. What distinguished Frobisher Bay from other Eastern Arctic communities was that it was the most "modern" community by every yardstick conventionally used to measure the phenomenon. Everything from personal incomes, to crime, to years of schooling, made Frobisher Bay the most developed place in the region.

Interestingly, the process of modernization as it occurred in Frobisher Bay parallelled the advance of communications in the region. Communications advance technologically by becoming less and less personally direct, since as technology becomes increasingly sophisticated, it may become less and less visible as a mechanism, or artifice, to use Simon's (1977) term. Frobisher Bay's experience of the south could, by some yardsticks, be considered far less direct by the mid-Seventies than it had been 15 years earlier. There were still the physical government presences, Federal and Territorial, Police, military. However, what people knew about and heard about the south was mediated less and less by word of mouth to ear than by word of radio and TV, to ear and eye. Furthermore, because of the efficiency of satellite transmission, the signal-to-noise ratio of the message was high enough that the message was getting through. The dominant paradigm assumes that innovation will originate from above the region affected. The North is an example of this, since innovations have come there from external sources of higher

authority.

Rogers' diffusion/innovation theory (1983) postulates that one who adopts an innovation does so because it is perceived that adopting will enhance the user's abrlity to make some important decision. According to Rogers, sufficient uncertainty may exist in the mind of the adopting person regarding the decision at hand that there is a concern to reduce the uncertainty, so as to facilitate an eventual decision. If the potential adopter believes that a given innovation is likely to act to reduce his or her uncertainty to a point which allows decisions to be made, adoption of the innovation becomes more likely. The reduction of uncertainty is one factor operating to diffuse innovations (Rogers, 1983). Rogers describes others but the process of modernization is characterized in his theoretical approach as a sequence of innovation adoption originating from the desire to reduce some kind of uncertainty.

Consequently, a discussion of the "effect" of "television" or "communications" in the North must take all of these factors into account. It is insufficient to research the impact of television or of education. None of these may be examined in isolation without losing a large body of data. In a sense, the present research addresses not so much the effects of television as the effects of what television brings: the information content and context. They are only a part of the continuous historical process of development in the North. That process has a long history.

In many instances the account is not in accord with what should have happened given the "dominant paradigm". The level of uncertainty, both in the problem and in the analysis, is quite high. If one characteristic could be said to describe the context of the problem, it would be that of uncertainty.

Purpose of the Study

The purpose of this study is to establish what a proliferation of television-borne information, as a mechanism of development and modernization, does to people in the region touched. I am hypothesizing a link between the unrestricted and uncountered flow of information and the individual's perception of him/herself, of the rest of the world, and of the individual's perceived place in the world. The reasoning behind this is that observed behaviour among the young people in the Eastern Arctic is such that some type of disorder may be considered to exist. I shall use solidly established data to support the contention of some maladjustment disorder in the response of young Northerners to the stimulus of modernity.

The first purpose will be to establish whether or not Rogers' early "dominant paradigm" approach explains, or rather, has much explanatory power in the Northern context. This purpose will be to explain the context of Northern development as compared to other examples.

The second purpose is to examine the effect of increased levels of available information. I shall examine

the most prominent information-bearing source of mass communication, specifically network television.

The third purpose is to establish a link between an increased information level in the social environment and people's behaviour, especially that of adolescents. Coming from the third, the fourth purpose is to examine the "classical" effect in the increase of modernity, or at least the effects of their artifact, mass communication, as an educational agent. Inkeles and Smith (1974), Lerner (1958), and McClelland (1958) have indicated in highly influential work that these mechanisms of development contribute most powerfully to the phenomenon of modernity. I shall examine how these assertions may be established to stand up in view of the experience of Northerners.

I shall be trying to find out if increasing the information level available to people is likely to rebound to their benefit. The Canadian North is not unique in respect to this issue. If information may be defined as the reduction of uncertainty, more information may further reduce uncertainty. Traditional development research suggests that this is a natural outcome and that, furthermore, enhanced levels of material prosperity and general overall commonweal are likely to result from the provision of the uncertainty-reducing supply of information.

I am enquiring whether or not this is generalizeable to the Canadian North, and if so to what extent. The question of general well being in the light of greater overall

information-receiving ability is one which is pertinent to all people. It is basically a communications problem. I have chosen to approach it in the environment of the North for several reasons:

-The history of the North is very well known. There are far fewer intervening variables than exist in the south of Canada, particularly in view of the North's lower population level.

-The population is ethnically more homogenous than anywhere else in Canada. Furthermore, the sampling method ensures that homogeneity of sampling will be enhanced.

-The North's communications history is well known. Since the actual population and general level of activity are so much lower than in the south, they are that much easier to keep track of.

-Replication of such a sampling is virtually impossible elsewhere in Canada.

This study will attempt to examine the effects of increased levels of information in the North as provided by the most recognized determinants of modernity; mass communication. The medium of communication chosen is television. According to the "dominant paradigm" approach, and that of the conventional development school, increased levels of information should lead to enhanced levels of development and modernity and bring about increased stability in the social environment. According to Innis, however, it should do the opposite, and imperil the "social

order".

Rogers' revised formulations (1976) would seem to be more in accord with those of Innis. But the development process in the North has been along the lines of that of the "dominant paradigm". Basically, this study's purpose is to try to establish what is the effect on social order of increased levels of awareness and understanding, brought on via the artifacts of modernity, mass communications, as implemented under the conventional model of the "dominant paradigm". Some of the conclusions will be tentative. In many Eastern Arctic communities (as of 1985) television has been present for only four years. In one of the comparison communities there will have been no television at all at the time of the sampling. In all communities at the time of sampling, however, there will have been education for at least twenty years.

Chapter Two

Literature Review

Canada occupies the second-largest area of any country in the world. Unlike the USSR or China, which are among the most populous countries in the world, Canada contains comparatively few people. This is because most of the country is generally considered to be uninhabitable. Most people in Canada live within 200 miles of the US border or along a coastline. Unlike the US, few people live inland.

In addition to its size in world terms, Canada occupies a substantial proportion of the world's land area known as the Circumpolar Region. This is generally defined as the earth's surface area above the Arctic Circle (62.5 degrees North). A Northern country, therefore, most of its population lives in the south. In this thesis, the term "North" will refer to that area of the country above what is known as the Hamelin line (Abramson, et al, 1986). Most of the major cities, with the exception of Edmonton, are situated in that 200-mile wide strip along the US border. Longitudinally, however, the country occupies territory stretching over half of the Northern hemisphere. With only 25 million people, and most of them in a circumscribed area, it is easy to appreciate that the country is underpopulated. Indeed, flying across Canada at night one sees few lights, and then only small patches.

This thesis addresses that area of Canada remote from the major population centres. It addresses the relationship

between the people who live in the remote regions, and the more central areas.

Canada, as it is generally appreciated today, is basically a product of European colonization. It shares this characteristic with most of North America, and with some of the South American countries. Until the mid-fifties Canada attracted immigrants primarily from European countries. Although this has changed in many places in Canada, particularly in the major cities, one can still (1985) visit regions of Canada which are as ethnically homogenous as they were before World War II. This is particularly true in parts of Eastern Canada.

Some parts of Canada have been particularly untouched by the wave of immigration which occurred following the war. Typically the most remote regions of the country remained the most untouched by "progress", and the most remote regions of Canada lie in its North.

Historically, the only reason that Canada is today the second-largest country in the world is that, probably, no one else wanted it. One of the major political issues in the 19th Century was whether or not to join in some political and/or economic form, with the United States. The American desire to annexe Canada goes back to the days of the American Revolution (Morton, 1977). The term "manifest destiny" stood for total American possession of the North American continent. American invasions of Canada failed in both the Revolution and the War of 1812 (Morton, 1977).

Although the issue did come up periodically in the course of that Century ("54-40 or fight!"), by the Century's end the Americans had accepted the presence of Canada as a sovereign Northern neighbour.

After 1763, when the British ejected the French from North America, the destiny of the continent lay as a predominantly English-speaking area with, in the case of Canada, strong ties to Britain. These ties weakened, however, as Britain grew more oriented toward Europe. Canada became an independent nation in 1867, consisting of four Provinces. The vast Northern territory, known primarily only to traders of the Hudson's Bay Company, remained under British jurisdiction until 1873, when it was handed over to Canada as the Northwest and Yukon Territories. The last British possession in North America became the Canadian Province of Newfoundland and Labrador only in 1949. Until well into the Twentieth Century, however, there were other preoccupations for the Canadian Government, and the Northwest Territories were largely ignored by successive Federal Governments.

There was, however, a lengthy history of intervention in the Canadian North by parties other than Governments. There is, in fact, a history of involvement in Northern Canada going back 400 years. Each of these involvements has permanently changed the North and its people and it is important to understand that the involvement of the Goverment in the North today is nothing new in the

historical context. It is merely the latest in a succession.

As noted in Chapter One, Inuit contact with Europeans is usually put at 1578, if one ignores the Ninth-Century Norse contact. However, the contact with Europeans, even after Frobisher, was only sporadic. The Inuit lived a nomadic life subject to the rigours of the climate and the land. Food was plentiful, however, and until the Nineteenth Century the Inuit were relatively undisturbed by outside influences.

In the meantime, the land over which they roamed had been claimed by Britain. Apart from occasional encounters with explorers, however, this sovereignty was transparent to the Inuit of the Eastern Arctic. Beginning in the 19th Century, however, the rest of the world was to reach out to the Canadian North. Valaskakis (1979) has characterized this history as a succession of those whom she calls "change agents", a term borrowed from Rogers (1969).

The thrust of Valaskakis' argument is that change agents have gone North in succession and brought with them artifacts which were adapted by the Inuit to suit their own purposes; in so doing Inuit permanently altered their own cuture and lifestyle. The first of the agents, in the early 19th Century, were the missionaries. The effects of their intervention in the North are discernable today, to mention two examples, in the unique writing system used by the Inuit of the Eastern and Central Arctic, and in the now

traditional devotion of Inuit to the Church, principally Anglican. In the course of the last century missionaries went North to bring the Word to the Inuit, as well as some rudimentary health care.

Another intervention was that of the Hudson's Bay Company. Lured by the wildlife resources in the North, the Company established regional trading posts throughout the Eastern and Central Arctic, trading with the Inuit for furs, offering metal goods and firearms. A hunter with a rifle was far more effective as well as productive. From a subsistence existence the Inuit moved partially to an economic one.

In the background, the Canadian political situation was changing. Canada became independent in 1867 with the four Provinces of Nova Scotia, New Brunswick, Quebec, and Ontario. The rest of British North America was still under British jurisdiction. Canada gained the Northwest Territories in 1873. Larger than it is now, it includes half of present-day Quebec, and large portions of Ontario, and the Western Provinces. In 1913 Quebec assumed its present size with the transfer of the Northern territory to Quebec jurisdiction. Provinces were carved out of the Canadian West, and the Yukon and Northwest Territories southern boundaries were set at the 60th parallel. They are still there.

There was no Government presence in these Northern territories, however. There were only the Churches and "The

Bay". Late in the 19th Century whalers moved North after having depleted their more southerly whaling waters. This provided further impetus toward a primitive/Northern economy. Many Inuit became employed in whaling as guides and summer shipboard labourers (Mayes, 1978).

Beginning in the early 20th Century the Federal Government placed some police units in the Arctic (Paine, 1977). The presence was minimal, however. Their most important contribution was to register the Inuit for Family Allowance Benefits (Valaskakis, 1979). Registration was carried out in the Thirties, and the Second World War came in 1939 bringing change on a scale previously unpracticed.

Even living a barter existence and trading with the Company, Inuit life was geared to the land. They gained their food as well as their accoutrements, from their life on the land. The latter were gained by barter, but the barter was in exchange for products garnered from the land. Until after the War this had worked out pretty well. At that point, as I have noted, the game supply began to dwindle (Paine, 1977). This was crucial because it was the resource base from which the Inuit derived physical as well as economic livelihood; starvation ensued in the late Forties (Paine, 1977).

For these reasons, as well as others related in Chapter One, additional change entered the North. This time the change agent was the Government of Canada, and the change which followed was as profound, if not moreso, than any

previously chronicled. I shall therefore discuss it, and its implications, in some detail.

Historical Context

Northern Development

Rogers (1969) has defined development as:

> a type of social change in which new ideas are introduced into a social system in order to produce higher per capita incomes and levels of living through more modern production methods and improved social organization (p. 18).

Communication "is the process by which messages are transferred from a source to one or many receivers" (Rogers, 1969, p. 18). This thesis is concerned with the interaction between these two processes. Development research argues that communication is fed by development: Communication grows consequent to the progression of development. I shall argue that the opposite may also obtain: Development may grow from enhanced communication. However, does it necessarily? Does an enhanced communications capability lead to enhanced development? The dominant paradigm implies that it should.

A comprehensive survey of Northern communications history in the 20th century must establish the context of communications and development in the Eastern Arctic. The setting's uniqueness distinguishes it radically from other settings discussed in the development and dominant paradigm literature. However, development in the region since the

end of the Second World War has been carried out in general concurrence with the conventional development approach, (i.e. the dominant paradigm). Examination of the literature may throw some light on the reasoning behind policy decisions regarding Northern development, as well as some of their consequences.

In the light of Rogers' definition of development the Eastern Arctic cannot be held up as much of a case of development. There have been no "production methods" introduced per se which could lead to "higher incomes", although higher incomes have ensued. Some "social organization" did come from the encounters, specifically those between the traders, the Church, and the Inuit. However, it would not be possible to class these in the same category as the development projects described by Rogers: Rogers discusses things of a vastly different scale. So do Stoehr and Taylor (1982): Something rather different happened in the North.

At the beginning of this Century Inuit in the Eastern Arctic were living off the resources of the land. At that time, many were employed by the whaling ships, although most still hunted and trapped for a livelihood. They traded their takings to the "Bay" agents in return for ammunition, wool, needles, knives, and other, by then necessary implements of everyday life.

Modern development in the Eastern Arctic did not begin until World War II (Paine, 1977). Initially, the impetus

for this arose from the necessity to fly large numbers of aircraft to Europe. Airfields were built in Northern Canada for this purpose: at Fort Chimo, in Northern Quebec and Frobisher Bay on southern Baffin Island. At the end of the War the North had emerged as an integral component of the North American defence strategy. Beginning in the early fifties, radar stations were built across the Arctic.

Due to over-hunting, the game supply in the Arctic was dwindling at that time (Paine, 1977). Many Inuit were starving, and a large relief effort was necessary to forstall catastrophe (Paine, 1977; Duhaime, 1984). By the mid-fifties, the demographic situation in the Arctic had changed from one in which people lived on the land, occasionally coming into settlements for provisions, to the reverse. Inuit lived in communities which had been established along the coastlines of the Eastern Arctic. Frobisher Bay became the major administrative centre in the Eastern Arctic.

Although the region had been administered directly from Ottawa, the move to decentralization saw the establishment of the Government of the Northwest Territories in 1955. Services were centralized in Frobisher Bay, it being the largest community, equipped with the best communication and transportation links to Southern Canada.* Gradually

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*In 1985, the name of Frobisher Bay was officially changed to the Inuit name, Iqaluit, meaning "The Fishes". For the sake of historical consistency I will refer to it throughout this thesis by its original name.

Frobisher Bay became the "metropolis" of the Eastern Arctic; in short, a region under development.

How does what happened in Frobisher Bay following the war coincide with the model of the dominant paradigm? One aspect absent from the picture of Frobisher and the Eastern Arctic, de rigeur in the dominant paradigm, is that of economic activity. Rogers refers to these more explicitly as more "modern production methods" (Rogers, 1969, p. 18). At the time development began in the Eastern Arctic following the war, there was no allowance for economic activity which would lead to production of any kind (Mayes, 1978). There were no means by which the region could be considered economically productive, despite the fact that historically, it had been economically viable prior to World War II! That, however, did not conform to the post-World-War-II concept of development.

Its most valuable attribute in the post-war era was the actual territory. In the absence of economic activity directed toward the purpose of development, development which did occur was quite restricted. This had to do partly with the status of the receivers of any development which was to ensue; the Inuit. Even after the war, they lived a primarily subsistence existence. Apart from some trading with the "Bay" there was little economic activity, at least up to 1965. Development, such as it was, entered the North in the form of what Rogers calls "innovation" (Rogers, 1983). In no way, however, was the innovation which

occurred a kind of economic activity which would promote or enhance "productivity" in the region. It was innovation of the "change agent" variety (Rogers, 1969).

Development and innovation are clearly not the same phenomenon. Although innovation may be a component of development, a series of innovations does not constitute development.

Innovations have gone North for 400 years. The present situation in the North is one of change, but as Crowe (1974) points out, the people of the North are used to change. This dissertations' focus is on one particular type of innovation, which is held to be a major mechanism of development: communication (Innis, 1951). As Mayes (1972) notes, communications influences have tended to modify the lifestyle and contemporaneous mode of subsistence at each point of introduction. As each one enters, it has tended to undermine the practice of self-sufficiency and independence.

Since the early 1950s a salient feature of the types of development and communication entering the North has been the increase in the speed with which information may be communicated from southern Canada to the North. The chief characteristic of these newer processes of change entering the North, is the speed at which they occur; a characteristic of modern means of communication. The process of change charted by preceding literature treats processes of development which occurred slowly. At least, their speed of entry was at such a rate that people of the

region could deal with them on their own terms. Even radio, which operates at the speed of light, had been in the North for thirty years when the regrouping into settlements occurred (Mayes, 1972). Radio, however, came North to serve the white residents and until the mid 1950s few Inuit had any access to radio. In any case, broadcasting was in English or French, with the exception of some Inuktitut broadcasts in Labrador.

Even after education was introduced in the mid 1950s geography still provided the principal buffer between Inuit and the southern part of Canada. Few Inuit ever went south unless it was to school or hospital. The south was a remote place and most Inuit's experience of it was a reflection of their personal contact with the white people who came North.

This situation ended in 1972 when the Canadian Broadcasting Corporation began television broadcasts in Frobisher Bay. In 1973 network television was made available via the ANIK-B satellite. The programming was the same as that offered over the rest of the CBC television network: situation comedies, police and medical dramas, movies, sports, and news. Roth (1982) notes that CBC television coverage appears to have been extended Northward not as a result of any defined government policy, but in the absence of it. In fact, the only discernable policy motivation appeared to have been a desire to make Canada competitive in the international aerospace industry (Roth, 1982).

With the introduction of the new medium, the south assumed a degree of immediacy previously unknown in Inuit experience. Not only the south, (i.e. southern Canada) became visible, but so too did the rest of the world. Within one year of television's advent in Frobisher Bay 78% of Inuit homes in Frobisher Bay had acquired TV sets (Coldevin, 1976). By 1974, with 98% saturation, there were few homes without it (Coldevin, 1977).

Television adoption had occurred faster than telephone adoption. Dicks (1977) related some of the results which seemed to have occurred as a result of telephone introduction in the mid 1960s. Some of these were: drops in mail volume; increase in levels of retail sales; drops in travel; and increases in the rates of property and violent crime. He suggested that the "unexpected options which new technologies present" may induce a stress in the society which then struggles to deal with the innovations (Dicks, 1977, p. 127). The stress may result from expanded economic activity in the region. However, criminal behaviour is something which is a recent phenomenon among Inuit (Finkler & Parizeau, 1973). Urbanization, economic activity, modernization, all may contribute to breakdown, or create a "gap" between the traditional crime-inhibiting behaviours in Inuit social organization, and the current reality (Dicks, 1977).

Criminal behaviour in the Arctic appears most pronounced in regions of most intense contact between change

agents and change receivers (Finkler & Parizeau, 1973). Frobisher Bay has a long-standing reputation throughout the region as the crime capital of the Eastern Arctic (Brody, 1975). Some questions which may be asked about these circumstances are: As people receive new technology, do they experience increased levels of stress, resulting in the breakdown of traditional behaviour? How much of dissonant behaviour may be attributed to new technology? Do the new technologies induce the dissonant behaviour? Does the modernization process increase people's stress levels, and may increased criminal behaviour be attributed to that?

During the 1960s and 1970s an enormous corpus of scholarly literature emerged from research directed toward the examination of those issues. Much of this research was ill thought out, as the questions above reveal. It is not surprising that many results were either patently obvious, or unreplicable. Television was the favourite medium of interest, and some of the findings of the research directed toward it have already been discussed. The North, however, is somewhat of a different story since the literature body on innovation in that region is quite small in comparison with the overall literature. In a way this disparity is surprising given the region's historical background. In fact, the history would seem to make the region an ideal venue for research.

To date, however, the predominant research carried out in the North has been anthropological. Inuit have been a

favourite subject for the anthropologists, and this has resulted in the popular mystique surrounding Inuit and the Inuit culture, at least in Western society. Artwork, for which there is an apparently insatiable demand, particularly in Europe, adds fuel to the popular perception of the hardy Inuk struggling to wrest an existence among the Arctic ice floes.

Even a short visit to Frobisher Bay or any other Arctic community shows that this is now far from true. People do still hunt, but the practice is as much recreational as anything else. The "modern" North is a society in a state of intensive change; it is highly surprising that of the more than 3000 citations catalogued by Rogers in his latest study of innovation diffusion (Rogers, 1983), none relate to northern Canada. However, in terms of what has been cited as the most powerful determinant of modernity, (Inkeles & Smith, 1974; Rogers, 1962, 1983), exposure to mass communications, some work has been done on television impact in Northern Canada, and in other Northern regions, such as Alaska.

Following the advent of network television service in Frobisher Bay in 1973, Coldevin (1976) carried out a television-impact study in the community funded by the Canadian Radio and Telecommunications Commission (CRTC). The research was directed at deriving baseline data for a longer-term television-impact study on young people. This type of research was intended to differ from "snapshot"

research in communities following the introduction of television. Watson (1977), for example, performed such a study in Rankin Inlet, in the Keewatin District of the Northwest Territories. The study was carried out some months after television service began in the community, and was primarily observational, He noted that the medium was evidently absorbing much of everyone's time in the community, so much so that traditional behaviour patterns, which included house-to-house visiting, bingo, dances, outdoor sports, all were observed less and less. This occured to such an extent that at sign-on time the community's streets were deserted.

Although interesting, this type of research did not say much about the long-term impact of such a powerful change agent entering the community. In fact, the only thing such research demonstrates is that the medium was evidently drawing people's interest. Given its novelty in the region, it probably would have been more surprising had there been no discernable "impact". However, "snapshot" research can only do that: provide a portrait at a given moment. It is useful for diagnosing what the situation is at a given moment. However, it reveals nothing about effects over time. To do this, it is necessary to take repeated observations.

In 1980, Coldevin and Wilson gathered more data in Frobisher using the same indices as in 1974, in addition to others. By that time certain aspects of the television

situation situation had changed; however, the population makeup had not. There were Inuit and Whites attending the school. The population sampled were adolescents of both groups.

Although the White sample was quite homogenous in the sense that they consisted of the children of Euro-Canadians, or at least Canadians having come to the North from southern Canada, the Inuit sample was made up of two distinct groups.

Cultural Lag

Dicks (1977) has noted that there appeared to be a "cultural gap" in the Inuit social organization, in the place of a previously-existing mechanism which acted to inhibit the traditional socially de-stabilizing factors - a gap introduced by stresses accompanying accelerated change. Anthropologists have long noted that stabilizing tendencies appear to enhance cultures' suriveabilty in adverse circumstances and environments (Benedict, 1927; Hall, 1977). Were stresses greater in areas of intense change, there may be differential behaviours or characteristics between people from areas where there were differential stresses or changes. People from areas where change was more rapid, or voluminous may, by that reasoning, be expected to display behaviours different from those of people from areas where change had either been slower, or differently paced.

Lerner (1958) described types of change and the effects of modernization in four developing countries. Inkeles and Smith (1974) did likewise. Their studies were efforts to

quantify the changes that were thought to go into making up what they called "modernization". Although their findings have been subjected to much criticism for as to what went into the phenomenon of modernization, they did provide copious evidence of some of the changes in personal attitudes that appear to accompany rapid change. Some of these included educational and employment aspirations, both of which appear to undergo substantial modification among people under such circumstances. Also included is their level of awareness of what is going on in the world, indeed, of what the world is.

This type of literature is an integral part of the dominant paradigm literature discussed earlier. The changes that were supposed to ensue from modernization were, therefore, what came to be conceived of as modernization in the individual. In areas where the pace of change lagged, so too might the pace of personal modernization.

This was precisely what Lerner, Inkeles and Smith, and others found. However, in the Canadian context little work, if any, was done on this subject with the exceptions noted before. In fact, the cultural lag Dicks referred to appeared to be the opposite from what happened in the third world. There, modernization and change were associated in the dominant paradigm literature with increased levels of positive personal adjustment. However, in the North of Canada the overall picture appeared to be the reverse. Where change was most intense, people's personal adjustment

appeared to be detrimental to their well being (Canada, 1977). Crime statistics, to take one example of maladjustment, were highest in Northern communities with the most intense rates of change (Finkler & Parizeau, 1973).

Much of this failing by the dominant paradigm literature has recently been attributed to the extremely positive view accorded the development paradigm, much of it an artifact of the general view of industrialized societies whose academic researchers carried out the studies. Post-dominant-paradigm research has been less sanguine in its appraisal of industrialization (Rogers, 1977).

Indeed, the recent history of modernization in the Canadian North belies the dominant paradigm. One of the most powerful determinants of modernity, in terms of that paradigm, in the sense of positive personal adjustment, was the rate or level of exposure to mass communication (Inkeles & Smith, 1974; Lerner, 1963, Rogers, 1969). Part of this thesis' purpose is to examine that issue.

Earlier it was stated that the Inuit sample at the Regional High School in Frobisher Bay consisted of two distinct groups. They reflected two different exposure levels to modernization, in terms of the dominant paradigm. The Inuit sample consisted first, of Inuit students resident in Frobisher Bay, most of them having lived there all of their lives. The second group consisted of students who had come to Frobisher for their secondary schooling, the higher grades being unavailable in their own communities. These

students were flown in from the smaller communities throughout the Baffin region, as well as from some locations in the Central Arctic. They started the Fall term in September in Frobisher, most being billetted at the Ukkivik hostel in Frobisher reserved for them. A few stayed with relatives, and a few others stayed with families. At Christmas most would return home for the holidays, and return to Frobisher for the winter term starting in January. Usually, some do not wish to return to Frobisher after the holidays, and it is not now the policy of the Territorial Government to force students to return. In fact, students may now return home if and when they wish.

At the time of Coldevin's first adolescent sampling (1974) CBC Network television had only recently been introduced to Frobisher Bay. In fact, Frobisher was the only community to have had television in the Eastern and Central Arctic at that time. Consequently, the Inuit group from communities other than Frobisher constituted a non-television exposed group, as opposed to the group from Frobisher.

Bearing in mind the foregoing discussion, however, it must be recognized that Frobisher was then, and still is, the most "developed" community in the Eastern Arctic, at least in terms of its past. Since the mid 50s, when the Strategic Air Command base was built, and the Government of Canada and then the Northwest Territories inserted their "presence" into the North, Frobisher Bay has undergone the

most intensive period of development in the Eastern Arctic. It cannot be said that television was the only process of development in the region, as a factor of mass communication. However, it was the most recent.

In contrast with Frobisher, the other communities represented at the high school had far less contact with the world outside the North. Air service was less frequent. Education was more recent; the students' experience with southern Canadians would, in most cases, have been only of people they would have met passing through their communities; a far less frequent occurrence than in Frobisher. The absence of television in their communities, with its ubiquitous portrayal of life in the "south" may have left the non-Frobisher students less aware of the world outside the North, in an analagous manner to what Lerner found in the Middle East: "The radius of the world in which the individual lives his daily life widens in proportion to the degree of contact with modern technology" (Lerner, 1958, p. 132). To test this hypothesis, in 1974 Coldevin gathered data on several indices:

1. Media availability, exposure patterns, most and least preferred television programs, and preferred language of broadcasting
2. Knowledge of facts about Canada
3. Perception of and attitudes toward international issues
4. Dominant national and international information sources
5. Socioeconomic orientations with respect to occupational

aspirations . . travel aspirations, and evaluation of the Eskimo versus southern lifestyle

6. Leisuretime activities. (Coldevin, 1977, p. 146).

These were the same basic indices used in the previous modernization studies (Lerner, 1958; Inkeles & Smith, 1974), although the study was by no means on the same scale as those earlier studies in the Third World.

Since ninety-eight percent of the households in Frobisher were found to have a television set, coverage of the community, even only a year after television's advent, was almost total. One might have suspected that the Frobisher Inuit students would display more knowledge of facts about Canada. However, this was not the case. The non-television students did display less awareness of national Canadian and international issues. Radio was available in all communities at the time of the survey, with substantial amounts of programming in Inuktitut. However, since, television was only available in Frobisher, one may safely conclude that the greater awareness of such issues on the part of the Frobisher students is attributable, at least in part, to the presence of television and television news. Furthermore, since both groups reported using television and radio as information sources, it may be said that the time of exposure to television, (i.e. a year in the case of the Frobisher students), and several months in the case of the non-Frobisher students just flown in school, was a partially determining factor.

There was little difference between the groups as to occupational aspirations. The two Inuit groups did tend to select more blue or white collar jobs, whereas the White students opted more for professional positions. However, since these are the jobs the Inuit students are being streamed into, this finding probably only reflected the particular academic stream of the students, (i.e. they put down what the job was they were being trained for, not necessarily what they aspired to).

The same may be said of travel desires. The Frobisher students were more interested in travelling outside of the North (90% to 78%). The difference, although just below the level of statistical significance, the X^2 value was still very high ($p = .07$). This was not surprising, since an average of 46% of the two groups had visited the south. How much of the desire to visit the south was attributable to the presence of television is highly problematic. One may suppose, but one cannot really say since the data were "captured" at a single point in time.

In terms of perferred working locations there was a substantial difference between the two Inuit groups. More of the Frobisher Inuit group opted for a working location in Southern Canada (47%) than of the non-Frobisher students. But again, how can one attribute this to television alone? All one can say is that the numbers reflect a particular situation at that time.

One thing that one might, if only by common sense,

attribute to television would be the preferred language for Northern broadcasting. Northern Canada differs here from Third World settings where the language of broadcasting is often the language only of the educated urban elite. In Northern Canada the language of broadcasting is also that of the national majority, but a Northern minority. Although there is now (1986) French television in Northern Quebec, in the mid-70s there was only English. As with working locations, there was some trend toward an effect of some kind. More of the Frobisher students preferred exclusively English on TV, as opposed to English and Inuktitut. This should not be surprising, since English was the only language on TV at the time of the sampling.

None of the above-mentioned indices did much to get at the issue of whether people in a region under development are better adjusted, as the dominant paradigm would have it. The dominant paradigm would hold that people who were in a more developed state were more likely to be better personally adjusted induviduals (Lerner, 1963). Within a developing region there were likely to have been people who could be said to be in both the "traditional" state, (i.e. that before development), and in the "modern" state. There was a third group, identified by Inkeles and Smith (1974): the transitional; between the two. One question on Coldevin's 1974 survey addressed this issue. It asked whether respondents thought the Eskimo lifestyle was better than, worse than, or no different from that in the south.

TABLE 1

Rating of the Inuit Lifestyle

(Relative Percentages in Brackets)

	EC	IF	IS*
Better	10(14)	12(17)	13(26)*
Worse	37(53)	13(19)	3(6)
Same	23(33)	45(64)	34(68)

Table 1 (above) displays the numbers and percentages (in brackets) of the response breakdown to Coldevin's question. Looking across the first row one may discern a shift upward in approval of the Inuit lifestyle: The Settlement students are most approving. The Whites are most disapproving, and the Settlement students, again, are the least disapproving. Of those perceiving no difference between the lifestyles, the Whites are the least concurrent and the Settlement group was the most concurrent, although there was little difference between them and the Frobisher group. Curiously, however, the Frobisher group falls between the other two on all three levels of the question. On the face of it, this finding would appear to disconfirm findings by Inkeles and Smith (1974) and Lerner (1958) in the Third World. In fact, they reflect the contrary. Inkeles and Smith (1974) argued that if exposure to modernizing influences had any effect,

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*"EC" denotes "Euro-Canadian; "IF" - Frobisher Inuit; and "IS" - Settlement Inuit.

*X^2 (2, N= 190) = 37.7, $p < .01$

it would be to improve personal adjustment (1974, p. 263). This is the thread of the dominant paradigm literature. In the 1974 Coldevin study an average of 66% of the Frobisher and Settlement groups saw no difference between the Inuit and southern lifestyles. If there was any trend at all, it was that the more traditional students from the less developed communities were most satisfied with their lifestyle as Inuit.

That is about the limit of what one may report as a finding, given a single observation. One cannot tie it to any external motivating factor (cause), although temporally, the two groups were at different developmental stages. More properly, one may say that they had different experiences of development, one of the factors of which was television. The relative absence of the factor among the Settlement group is suggestive, however. In fact, several influences from television exposure were noted by Coldevin: school absenteeism and violent hockey playing, the latter unobserved before the introduction of TV. This was reported by Watson (1977) in Rankin Inlet, and has been observed elsewhere.

The cultural gap Dicks (1977) referred to appeared in the wish of a large proportion of the Inuit sample to move to Southern Canada. Coldevin noted that the gap "appears to be widening considerably as a consequence of television in the community" (1975, p. 28). The general tenor of the first round of sampling may fall into the "pessimistic" vein

of television research. Due to its one-shot (at that time) nature, however, little could be said about the progressive effects of television within the context of modernization.

Parallel Research - The Second Frame

In 1980 Coldevin and Wilson (1981) made a second sampling at the Frobisher Bay high school. The clientele of the school, still consisted of the same three groups of students, although by no means the same individuals. Elsewhere, interest in the effects of television was also an active research concern. Forbes and Lonner of Western Washington University were also conducting a longitudinal study in Alaska.

Their study was also a longitudinal research project. Samplings were taken in 1977 and 1979 in nine villages in rural Alaska (Forbes and Lonner, 1980). By 1969, a total of 296 Alaskan Native children from four Native groups had been tested using a battery of thirteen social and psychological measures. In 1980 Forbes and Lonner published a report on their findings over the two years. Of the 296 children, 103 were sampled in the first assay: 229 were sampled in the second, including four villages not visited in 1977. Sixty-seven children in the 1979 sample were repeat subjects.

Not all measures were administered to all of the children in both samplings:

Data from the 1977 study consisted of 1) results of "active" measures, which included all but one of the

> socio-cultural measures used in 1979; 2) mini-ethnographies of three of the research sites from the "replacive" category, and 3) results of the Children's Embedded Figures Test (CEFT) from the holistic category. The 1979 study used the ethnographies to provide context for training and for interpretation of data, adding one new measure, Sex-Roles, to the socio-cultural measures and added five new measures to the cognitive (holistic) measures (Forbes & Lonner, 1980, p. 6-7).

The researchers used five major independent variables in seeking to establish television's effect on children in the television villages: sex, age, village acculturation level, Culture area, and exposure index. These variables were selected in the light of what existing psychological and anthropological literature had to say about cognitive measures in conjunction with television exposure (Forbes & Lonner, 1980). Some of these indices are important since they are analagous to variables used in the present study.

Sex and age are obvious as to their meaning. Village Acculturation Level (VAL) was a dichotomous variable assigned "on the basis of exposure to the majority US culture" (Forbes & Lonner, 1980, p. 10). Subjects from villages having had more contact with "acculturating modernizing influences" were given a high VAL: There were two such villages. Those from the remaining seven had a low VAL.

Exposure Index (EI) referred to the individual's actual exposure significant acculturating influences. Such factors as travel, having lived in other communities, television reception or non-reception, etc., made up the index. This, together with culture area, the actual cultural group the child belonged to, constituted the independent variables.

Their measures consisted of three types: socio-cultural, perceptual-spatial-verbal, and interviews. The 1979 interviews revealed some tendency for television-town children to read less, although this was restricted to books. There was some trend for television-town adults to know more about the outside world, including national and international current events, although this appeared to be "at the expense of interest at the local community level" (Forbes & Lonner, 1980, p. 13).

Those without TV tended to be very positive about what they anticipated TV would bring them when introduced. This was in stark contrast to those living in TV towns, who tended to be very negative concerning the medium. This is in direct contrast to the experience of Igloolik in the Canadian Arctic, long refusing television until 1983. There, the people expressed deep concern over any introduction of TV in the community.

The increased national and international awareness, however, co-incides with Coldevin's 1974 findings. Of the large battery of social-psychological instruments Forbes and Lonner administered, one, a locus-of-control inventory is of

direct pertinence to the present study. This, and all other instruments were used as dependent measures with the previously-mentioned independent variables.

Age tended to show some relationship with perceptions of Native People, White People, and the city of Anchorage. As they aged, children appeared to grow increasingly negative toward all three. The authors speculated that this came with "the child's increasing awareness. . . of attitudes toward Native People in the world outside the village" (Forbes & Lonner, 1980, p. 31).

The more isolated Alaskan communities tended to display less sexual stereotyping. However, in more acculturated areas females had more positive attitudes toward the majority culture. Males tended to have lower educational aspirations, even though they generated higher national and international information scores.

Television was related to only two socio-cultural measures: a reduced level of internal locus of control, and a more positive attitude toward Black People. Locus of control is a concept generalized to measure the perceived control that one may think one has over one's life (Lefcourt, 1976, 1981). Forbes' and Lonner's results suggested that the children in the TV communities had a lower level of internal locus of control than those in the non-TV communities, (i.e. those in the TV communities had tended to experience a reduced level of internal locus of control over the two years). However, the higher exposure

groups tended to display higher internal locus of control scores, overall. Since their exposure index was weighted for television exposure, this finding seemed to contradict the first. Furthermore, there was a cultural area-by-TV interaction in that TV-town children in the Eskimo and Athapaskan areas were more internal than those in the non-TV town areas. It was their scores that dropped over the two years, while the non-TV town children's were stable. Forbes and Lonner attribited this drop in internal locus of control to the two-year presence of commercial television which accompanied it. Relating this to Rogers' (1969) definition of fatalism as a force which acts to inhibit social change, in that it appears "negatively related to mass media exposure" (Rogers, 1969, p. 283), a contradiction emerges.

Forbes and Lonner cited Levine's (1977) account as an explanation: Repeated exposure to television news may induce a state of "learned helplessness" (Levine, 1977; Seligman, 1975), resulting in lower internal loci of control. The thesis is basically that the news induces a state akin to lethargy, resulting in a state of lowered internal locus of control. The seeming conflict is left unresolved, although Forbes and Lonner pointed out that Rogers "was dealing with an adult population, while our subjects were children. A preferred alternative explanation is that television was confounded by other forces of modernization in Rogers' study" (Forbes & Lonner, 1980, p. 22).

The improved attitude toward Black People was

attributed to the portrayal of Black People on TV. The authors concluded that television has an effect on this dimension, since it provides information not otherwise available, Black People being seldom found in Northern Alaska. Conversely, television had no perceptable effect on perceptions of Village Life, White People, "Myself", and Alaskan Native People, "since first-hand information is readily available" Forbes & Lonner, 1980, p. 20).

Five questions probed the children's view of the world as a safe place. This was intended to probe concepts not unrelated to locus of control. Another bank of questions investigated children's perceptions with regard to the urban centre of Anchorage. The latter was adapted from Gerbner and Gross (1977). Analyzed individually item by item, the children in both 1977 and 1979 saw Anchorage as a scary place, "where people can't be trusted, where people would look out for themselves rather than help others, and where people would take advantage of you" (Forbes & Lonner, 1980, p. 23). Generally, Anchorage was viewed negatively and the village was seen in a more positive light. There were no relationships with any of the five independent variables.

Five other questions pertained to educational and occupational concerns. The first two treated occupational aspirations. In both 1977 and 1979 samplings, one-third of the Native responses were unclassifiable, indicating no clear notion of career options and/or opportunities. There were no relationships with any of the five independent

variables. The explanation for this finding was that few career models exist for these young people. Most careers the children might be familiar with are what they see often: doctors, nurses, teachers, pilots, and military personnel. These are overwhelmingly frequently White People; the Canadian North is no different in this respect.

On the remaining battery of psychological measures Forbes and Lonner found no clear results when TV versus non-TV comparisons were made. Whatever effect TV may have had, there appeared to be nothing their tests could discern, apart from those already mentioned. This study is particularly disappointing in this regard, since it was a "high-powered" battery-type investigation of the effects of television in such rural areas in North America. The non-results of the psychological measures were particularly diappointing. That, however, is not of direct interest to the present study. Of more interest are results from the social-cultural measures, from which several direct effects were discerned.

If the discussion is restricted to the effects of modernization, considerd as a matrix of which TV and mass communication are important elements, Forbes' and Lonner's results are noteworthy, particularly with regard to the implications they raise for the dominant paradigm approach to development. Clearly, the dominant paradigm's insistence that increased exposure to information sources enhances adaptation and brings about greater receptiveness to change,

is thrown into serious question by the Alaska findings, and by the 1974 Frobisher findings. For whatever reason such exposure seems to have resulted in a dissonant type of cognitive response: lowered levels of internal locus of control combined with greater apprehensiveness about large urban centres and the people inhabiting them. Although the people in these Alaskan villages could be described as more modern as a result of their exposure to television, one could probably not say that they were happier or better adjusted.

The dominant paradigm's assertion that increased exposure to mass information sources results in greater cultural openness and a more flexible outlook with regard to other cultural groups is also jeapordized. In fact, the contrary appears to have been the case. Although the reaction projected by the dominant paradigm is overwhelmingly a positive one, the findings from the Alaska study are less categorical. In certain dimensions they are quite pessimistic. They are certainly far more congruent with the earlier Coldevin work in Frobisher in 1974: Television appeared to be not altogether a positive influence, although it did appear to have had the effect of imparting significant amounts of "wordly" information (not necessarily locally relevant). Whether or not this was of much utility to the receivers was then a moot point. Forbes and Lonner concluded from their results that

> television as the main variable of interest, can be

> linked to only two attitude changes. . . These are 1) a more positive view of Black People, and 2) a decreased feeling of control over one's life (Forbes & Lonner, 1980, p. 56).

The authors emphasized the fact that they were examining the effects of television watched for the purposes of entertainment. There was no question of its having been intended as an educational medium by either the supplier or the user. The subject of investigation of this thesis is precisely that use of television: entertainment. The word "use" has an importance which I shall develop. The investigation of television as an educational vehicle is an aspect which will emerge from the study of it as an entertainment vehicle.

Frobisher - 1980

In 1980 Wilson and Coldevin conducted a follow-up to Coldevin's 1974 study in Frobisher. The purpose, in 1980, was to look at the same three groups of students in the Frobisher Bay high school, although these would necessarily not consist of the same individuals. The researchers concluded that this was of little importance, since the experience of television for the groups would have been essentially unchanged.

In 1974 the Frobisher Inuit group had been exposed to television for a year, and the Settlement group for only a month or so following their arrival in Frobisher Bay for school. By 1980, students living in Frobisher had been

exposed to television for six years. This provided an opportunity to examine progressive influences resulting from such an exposure.

In contrast with the Frobisher group, in 1980 the Settlement Inuit group in many cases came from communities where television was a very recent innovation; a question of some months. In some cases they came from communities as yet unequipped with satellite television, although these were only seven individuals. Some of the Settlement students had seen television before their arrival in Frobisher for school, since some had been in Frobisher for school the year before. Their home communities were either unequipped, or had been only recently equipped.

So, although they might have seen television before, their experience of the medium could have been considered in no way comparable to that of the Frobisher group of Inuit students, who by that time may have been said to have grown up with television.

The 1980 sample size was 184: 25% EuroCanadian, 33% Frobisher Inuit, and 43% Settlement Inuit. From the point of view of replicability, the sample size was unchanged since 1974. The sampling was done in the month of December, 1980, based on school officials' recommendations not to wait until after the turn of the year. As before, the students were sampled in intact classes, during regular school hours.

Measurements were similar to those taken in 1974, so as to preserve comparability with the earlier study. Some

refinements had been made, however. The most important of these was the addition of a locus-of-control inventory, using the rationale of the 1977 and 1979 Alaskan studies. The other indices, which were examined in 1974 by Coldevin, were replicated in the 1980 project.

Locus of Control was designed to replicate in as close a manner as possible the locus-of-control inventories administered by Forbes and Lonner (1980). Their instrument had been patterned after those used by Coleman for the United States Department of Health, Education, and Welfare's study of educational opportunity in that country (1966). Some items were also chosen from Rotter's (1966) locus-of-control eleven-item short-form instrument. The instrument was pre-tested with a group of Montreal Allophone* high school students, achieving a test-retest reliability coefficient: r (24) = .72. Internal consistency, however, was not assessed for theoretical reasons which will be discussed in a later section.

Results of the 1980 Analysis

The general pattern of differences between EuroCanadians and Inuit students discerned in 1974 was observed again. The presence of differences between the Frobisher Inuit and Settlement students persisted. However, the Settlement students' response pattern was different.

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*"Allophone" is a term used in the Province of Quebec to denote a person whose mother tongue is neither French nor English.

This proved interesting given the assertions of the dominant paradigm school of development that increased exposure to mass communication sources will hasten development and promote adjustment. One indication of that happening might be an increased openness to the use of English on the air, something which did appear in the 1974 sample of Frobisher students.

In the case of the Frobisher students in 1980, this did not occur. In fact, the reverse was observed: Preference for only English on the air had declined among this group from 63% to 21%. Preference for a mix of English and Inuktitut rose from 37% in 1974 to 79% in 1980. However, among the Settlement Inuit, no discernable shift was observed at all. Most interestingly, the EuroCanadians were observed to have shifted opinion in the same direction as the Frobisher Inuit, (i.e. toward favouring a mix of English and Inuktitut on the air).

What this says is that two samples of two ethnic groups registered a similar opinion shift over six years. Two samples of a third group registered no significant change. The third was relatively unexposed to television and all that it brings. Of course, this is simply a correlational finding, of limited meaning taken alone.

Although by no means dovetailing the language issue, another index showed some interesting shifts over the six years. The Frobisher Inuit recorded a significant shift away from awareness of international and national issues

toward local issues. Forty-five percent mentioned uniquely local issues in 1980 compared with only 13% in 1974 (on the international issue question). The Settlement group remained virtually unchanged (23% local in 1980; 28% in 1974).

Consider the results for national issue awareness. There was a directional and quantitative shift similar to that for international awareness among the Frobisher group. There was no change at all among the Settlement groups over the six years, 28% of whom identified local issues or none at all on both samplings. The fact that these two variables appear correlated is not surprising, however, since most news broadcasts in Northern Canada consist of national and international news together. Local news does not run at all as often. The surprising observation is the shift among the Frobisher group toward an orientation to local issues. Both groups receive the same radio broadcasts simultaneously on CBC radio. The mentioning of more local stories among the Frobisher group may reflect the coverage given to local Frobisher Bay issues on radio, although Frobisher is by no means the only community covered on radio. Television, however, has almost no local news, since it originates in the south. The preponderance of Settlement students' mention of national and international issues in 1974 and 1980 may reflect that fact. In 1974 any knowledge they would have had of national and international issues would necessarily have come from radio, Frobisher being the only

television-equipped community in the region at that time. One might have expected six years of television exposure, with its constant dosage of national and international news, to have increased the Frobisher students' awareness in this regard. However, local issues on radio may have counter-acted this.

Occupational Aspirations

Students were asked what type of job they would most like to have when they left school. Not surprisingly, a large majority (70%) of the EuroCanadians selected professional positions. Most of their parents would have had such jobs themselves, and this percentage was quite stable between the two samplings. Somewhat more EuroCanadians expressed a preference for blue-collar positions in 1980 than had in 1974.

The real change was observed among the Frobisher Inuit. Almost twice as many chose white-collar jobs in 1980 as had six years earlier. This was at the expense of blue-collar jobs, while the professional fields drew approximately the same proportion each time. Almost no shift was observed among the Settlement group.

It should be pointed out that many of the Inuit students of both groups were in non-academic streams leading to blue-collar qualifications (entitled settlement maintenance, or electrical-technical). These prepare students for those types of positions in their home communities. The students' expressed preference was quite

understandable since they may have been merely expressing expectations.

There was some observed shift among the Frobisher group in the proportion wishing to work in the North. In 1980 10% more of this group expressed a preference to work in the North than had in 1974. However, such a shift also occurred among the EuroCanadians. This may be attributable to a generalized sense of satisfaction with living in the North in general, up from 1974. However, that leaves unresolved the question of to what to attribute the phenomenon.

Travel aspirations underwent a similar shift among the Frobisher group. There was three times as much interest in travelling about the North in 1980 as in 1974. Both EuroCanadian and Settlement groups displayed little change.

To the extent that there was change between the samplings, all of these indices run counter to what would be expected given the dominant paradigm. However, they are quite similar to what Forbes and Lonner found in Alaska. Exposure to sources of modernization and development seems to have had a counter-effect in the people exposed. They were observed to want less of it rather than more.

This was also visible in the media which students listed as primary leisure-time activities. In 1974 over 80% of all three groups reported that television was their primary out-of-school pastime. By 1980 this had declined by half or more. The Settlement group registered the greatest drop, from 84% reporting television as a pastime, to 34% in

1980. This group were the greatest radio listeners of the three in both samplings. What was most striking was the resurgence in 1980 of traditional Inuit activities among both Inuit groups, particularly among the Frobisher group. Since reported television viewing was down, the authors attributed the increase in traditional activities to an attenuation of television's novelty effect. They may have simply become more used to the medium, watching it less. In the Frobisher group this would explain their lowered awareness of national and international issues, since few of them reported listening to any radio. They simply did not appear to have been as exposed to non-Northern information, and hence reported more local issues. And, although more Settlement Inuit reported listening to radio than did Frobisher Inuit, the percentage (13%) represents only 10 individuals. The authors concluded that both groups were watching less television than their counterpart groups in 1974. This also seemed to obtain among the EuroCanadian group.

Locus of Control

The most significant addition to the 1980 questionnaire was the addition of a locus-of-control inventory, described earlier (Wilson, 1981). The eleven-item instrument was summed on a scale of internality. The subject received a point for each choice of the internal choice of the internal-external forced choice alternatives. The maximum score possible, therefore, was eleven. Given that the items

when summed formed a scale of interval-level data, mean scores could be generated for each group for purposes of comparison. A one-way analysis of variance revealed significant mean score differences among the three groups, F (2,181) = 14.85, $p < .001$, and a subsequent Newman-Keuls multiple-means comparison revealed that the mean score for the EuroCanadian group (8.47) was significantly higher than either of those of the two Inuit groups taken either individually or collectively (Frobisher Inuit mean score was 6.65; Settlement Inuit mean score was 7.29).

Post hoc analysis revealed further that that the Settlement Inuit mean score was significantly higher than that of the Frobisher Inuit. The higher score accrued to the EuroCanadian was congruent with findings in the United States to the effect that AmerIndian Peoples appear to generate lower internal locus of control readings on instruments of this type (Lefcourt, 1976). The lower internal readings among the more urban Frobisher Inuit was also replicative of the Forbes and Lonner results from Alaska. What was particularly intriguing was the aspect of the difference between the Frobisher Inuit and the Settlement Inuit.

There were indications of some interaction between the locus of control scores and television. The subjects were asked to chose a model for the person they most admired. Each subject's choice was then categorized as to whether the model chosen was a local or a non-local personality. The

vast majority of non-local personalities were real or fictional television characters. There was no apparent difference between the three ethnic groups as to the type of model chosen (X^2 (4, N = 184) = 6.13, $p > .05$), although there was a near-significant result between the model groups on the locus of control scores; F (2, 181) = 2.82, $p = .06$; the students who selected model personalities from outside the North, fictional or non-fictional, appeared to have higher internal locus of control scores.

When a two-way ANOVA was done on locus of control using model and ethnic group as the factors (independent variables) two significant main effects were found. Given a moderate disproportionality in the cell sizes, the ANOVA was rerun using the regression approach, a more conservative analysis. The results were unchanged, in fact the main effects were slightly enhanced; F (2,181) = 9.865, $p < .001$. the Euro-Canadians had, as expected, the highest levels of internal locus of control. They were followed by the Settlement Inuit students, and last, by the Frobisher Inuit students. Further, those students chosing the non-Northern personalities tended to a lower level of internal locus of control.

These analyses included those subjects who had chosen no models as admired personalities. They represented 22% of the sample, so the analyses were rerun with those subjects omitted. Although there was some decline in the ethnic main effect it was still highly significant. The "model" effect

was much more intense.

The author then ran a similar ANOVA using the two Inuit groups, with and without those having chosen no model personality. The results were unchanged, apart from some diminution in the main effects when the subjects having chosen no model were included. All effects, however, were significant.

The author (Wilson, 1981) interpreted this finding to mean that subjects with the higher internal locus of control tended to pick the local personality models, although this was a non-significant finding alone. When combined with the ethnic effect, (i.e. subjects' community of origin), a statistically significant effect was observed: The two effects were significant considered together, but only the ethnic effect was significant alone. The utility of such a finding, for interpretative purposes, was therefore limited.

The ethnic effect on locus of control was unequivocal, albeit of rather limited generalizability. It had been observed beforehand that AmerIndian subjects tend to a lower internal locus of control than other minorities, as well as White Americans. Although the finding of differential levels of locus of control between the two samples was interesting, it was nevertheless a "snapshot" observation. Furthermore, it involved only two groups, and it was highly problematical to attribute such an observed difference to the presence or absence of television. Television was present in almost all of the communities of origin at the

time of the sampling, with the exception of four communities represented by seven Settlement Inuit students. These communities were subsequently connected to the CBC satellite system in 1981.

Television, Change, and the Inuit Broadcasting Corporation

What, however, of the question with regard to the traditional Inuit lifestyle as opposed to the Southern lifestyle? This, it will be recalled, addressed the issue of personal adjustment raised by so much of the dominant paradigm literature. The overall finding from the responses to this question in 1980 was a generalized spreading out of opinion between the three alternate responses for all three groups. To the extent that there was no apparent relationship in the three-by-three matrix (three groups with three possible responses) no pattern was observed (X^2 (4, N = 184) = 4.5). In comparison to 1974 there were suggestions of some changes, however. The Frobisher Inuit group appeared to have a more positive opinion about the Inuit lifestyle by 1980 (38% "better" versus 17% in 1974). There had been a modest increase in this response among the Settlement Inuit also. Indeed, the most noteworthy shift of opinion among this group was in the direction of "worse" (25% versus 6% in 1974). There had only been a 6% increase in this opinion among the Frobisher Inuit.

Another interesting result was that the Euro-Canadian group appeared to have a different opinion on the question

from that of their 1974 counterpart group. Twenty-two percent fewer of the 1980 group selected the "worse" option than had in 1974. Sixteen percent more thought there was "no difference" than had in 1974. Six percent more thought the Inuit lifestyle was better than had in 1974.

Six years is a long time with regard to such opinion questions. One would have to be quite cautious in interpreting responses to such questions, particularly in light of the fact that one is considering two groups of people measured at two points in time. This is the principal difference between the Frobisher studies and the Alaskan ones. The latter gathered a certain amount of data from the same individuals at two points in time, in addition to data from different individuals at two points in time.

It would appear that there had been some change of opinion, or that the latter cohort had a somewhat different appreciation of the Inuit lifestyle. The social-cultural situation had not really changed that much in Frobisher, or in the other communities between 1974 and 1980. In fact, the only really noteworthy change was a difference of opinion with respect to the appreciation of the traditional Inuit lifestyle. It is clear from the data that the opinion differences were not homogenous between the two Inuit groups.

Another factor in the television landscape in Frobisher and in the rest of the North was the advent of Inuktitut television. CBC North had added some Inuktitut programmes

to its weekly schedule (Fraser, 1980), but this had only contributed some 60 minutes of programming to the television week.

Feaver (1976) had been among the first to identify the need for some kind of Native television content to balance the overwhelming predominance of CBC network television. Since the mid 1970s there had been increasing uneasiness among Canadian Inuit and officials concerned with the North at the increasing amount of southern television in the North. As early as 1973 the Eskimo Brotherhood of Canada (ITC) proposed that 80% of all Northern television broadcasting be in Inuktitut (Roth, 1982).

In 1978 ITC proposed an Inuit television project in the Northwest Territiories. Approval was received from the Federal Government the same year. Earlier that year the Inuit Communications Society of Northern Quebec (TNI) proposed a radio-link project among communities in Arctic Quebec, receiving approval as the Naalakvik I Project; a further project, Naalakvik II followed in 1979 (Hill & Valaskakis, 1979).

These initiatives had emerged from profound uneasiness at the amount of non-Native television content coming North via satellite. Canada had launched its first communications satellite, ANIK-A in 1973. However, there were other satellites in the sky relaying television programming: American satellites were in position to be received in Northern Canada. By the time of the Wilson-Coldevin study

in 1980, the community of Frobisher Bay had a choice of TV programming that would have made it the envy of the rest of Canada. "Home Box Office", "Showtime", as well as the offerings of WTBS of Atlanta, Georgia, were only a few of the alternatives. To receive such off-satellite programming one needed a satellite-receiver dish, commercially available for under $5000. It was then merely a question of where to point the dish once it was connected to the TV. The reports of favourite programmes from the Inuit respondents to the 1980 questionnaire included some only available on a "pirate" basis (so called since the practice of receiving off-satellite broadcasts was illegal at that time).

The type of change the Frobisher Inuit were undergoing was that of an information explosion. It was distinguished from previous change not so much by its presence as by the rapidity with which it occurred. Native organizations like ITC lobbied hard with Government for some kind of say in Northern broadcasting (Green & Simailak, 1980; Roth, 1982).

In 1980, the Inukshuk ANIK-B Project began in six communities in the Northwest Territories, bringing Inuktitut television to the North several nights each week for nine months (Valaskakis, Robbins, & Wilson, 1981). ITC applied for incorporation of Inukshuk as an Inuit television network the following year (Brisebois, 1983), and the Inuit Broadcasting Corporation (IBC) was formed.

At the time Coldevin and Wilson did their sampling in Frobisher Bay (December, 1980) the Inukshuk Project had been

on the air for four months broadcasting a variety of news and information programming. Although evidently highly popular among Inuit viewers it seemed that the new network* held little appeal for younger Inuit. Wilson and Coldevin recorded only two mentions of the fledgling network among programmes mentioned by Inuit students as favourites. Far and away these viewers preferred the fast-paced, professional quality southern programmes. Sports, situation comedies, and action dramas were most often mentioned (Wilson, 1981).

This was no secret at that time; the network was young and still undergoing the growing pains of its early years. However, if it were to fulfill its mandate it would have to broaden its appeal. IBC, as the outgrowth of Inukshuk, proceeded to undertake this task. It was aided in its efforts by the results of the Therrien Commission on Northern Broadcasting (CRTC, 1980). This was the first Federal Government policy formulation with regard to Northern broadcasting. It advocated increased Native content and control over Northern communications services, including television. It was not, however, an articulated policy.

In April, 1983, the Northern Native Broadcast Access Plan (NNBAP) was innaugurated to provide funding to Native Communications Societies established to produce radio and

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*I use the word "network" in its literal, not legal, meaning.

television services of direct interest and pertinence to Native Peoples (Hudson, 1985). This was a $40.3 million programme over four fiscal years, which in Canada begin in June. The NNBAP is due for evaluation in the summer of 1986, after four years of having provided funds to thirteen NCSs across Canada from Northern Labrador (The OKalaKatiget Society) to the Yukon Territory (Northern Native Broadcasting, Whitehorse). IBC has been referred to as the "flagship" of the NNBAP (Valaskakis, 1985). This is not surprising given that it receives the most funding of the 13 societies ($1,600,000) (Canada, Secretary of State, 1985).

> The principal objectives of the NNBAP include the development and active use of native languages. . . and their transmission to native children and youth; . . native knowledge and appreciation of their linguistic and cultural heritage; (and) the development and maintenance of a positive self image of the linguistic and cultural identities of Northern Natives Canada. (1985), In Wilson, 1985, p. 56).

These were precisely the things which Wilson was getting at in 1980 in Frobisher. Due to the limited sample and the limited, although by no means insignificant differentiation between the two Inuit groups, there was a suggestion that the urban television-saturated Inuit adolescents were undergoing some kind of acculturative stress. Some of Wilson's other findings among the Frobisher Inuit were strikingly similar to those of Forbes and Lonner (1980).

There appeared to be a relationship between ethnicity among the Inuit groups and the language spoken with siblings. The Frobisher group appeared to be more bilingual, (i.e. speaking a combination of English and Inuktitut), or English alone, than Inuktitut alone; something the Settlement group tended to. Overall, females tended to be more bilingual than boys in speaking with peers and siblings. Both tended to speak to peers in either Inuktitut of English, but not both at the same time, as did girls.

The language spoken with parents appeared related to reading ability in Inuktitut. One might expect speaking Inuktitut at home to stress the importance of literacy in the language. As Forbes and Lonner found, those with higher levels of exposure to the "majority" culture seemed more likely to speak English, or both languages together, than Inuktitut alone.

Between the two Inuit groups other common threads with the Alaska study were discernable. Frobisher Inuit girls were more likely to read syllabics than their male classmates. This was not the case among the Settlement Inuit. Frobisher Inuit speaking Inuktitut with parents tended to fall into the low exposure group.

These were some of the conditions of acculturation which led to the subsequent formulation of the NNBAP two years after the Wilson-Coldevin 1980-1981 study, and the concurrent evaluation of the Inukshuk Project (Valaskakis,

Robbins, & Wilson, 1981). The conditions had been identified but there was little to tie them directly to exposure to television. The socio-cultural environment in Frobisher and similar Arctic urban towns comprises a complex matrix of acculturative stresses of which television was one element. And, television was present in communities other than Frobisher, so that discerning differential effects was difficult.

In no television study does the medium emerge as the "smoking gun". Even the voluminous and elaborate NBC Panel study could derive a correlation of only .04 between observed violent behaviour and television watching. Since this amounts to less than one-fifth of one per cent of variance, some prefer to call that no relationship at all. Milavsky and his team (1982) disagree, and controversy concerning the significance of their findings still rages (Kenny, Milavsky, et al, 1984).

Such "effects" as are observed are always more subtle than one expects and indeed, such are the results of much of the cross-cultural literature treating television. The September, 1985 issue of the Journal of Cross Cultural Psychology, the Winter, 1983 issue of Anthropologica, and the Spring, 1982 issue of Inuit Studies are three such examples. Each culture's expectations and experiences are different, even among cultures which might appear similar to the outsider. Even within a cultural context some differences may emerge so that the actual "effects" of the

medium may be difficult to discern as causally attributable. Only with the use of a "control" group unexposed to the medium may one attribute cause, or at least suggest it from some defendable position, comparing such a group with exposed groups.

Chapter III

Rationale

Television, it has been suggested, "is really an external force whose effects on individuals in a culture is mediated (sic), even determined, by the way it is subjectively perceived and handled" (Salomon, 1985, p. 383).

> The results of encounters cannot be attributed to the medium alone, for the medium as encountered is itself a product of culturally determined perceptions, expectations, mores, norms, behaviors, and the like (Salomon, 1985, p. 390).

Salomon's words reveal an exhaustion of the old "effects" model of television research, most exemplified by the Surgeon General's Report (SSGAC, 1972). Originally viewing the audience as passive recipients of what was sent over the medium, it has become apparent to many that the early "social modelling" effects are an obsolete notion. Indeed, Salomon has articulated a study approach which views people's reactions to television as a series of "inter-actions": People don't merely receive things from television; they use it. In so doing they affect what they receive later, or how they use what they receive later. This, in turn, has an effect upon how they react to and use what they receive next. The process is thought to continue recursively (Salomon, 1981).

Consequent to this view, and with the findings and

conclusions of the 1974 and 1980 Frobisher Bay studies in mind, as well as those of the 1977 and 1979 Alaskan studies, a third Frobisher Bay study emerged as a desirable option.

Theoretical Approach

The reasoning behind a third study was that to seriously examine the process of television interaction, a third data set would be necessary to triangulate the observations so as to arrive at a viable conclusion.

Objectives

The principal objective of a third study was to establish whether changes observed between the first and second Frobisher Bay studies were merely different opinions expressed by different individuals at different points in time, or part of a progressive process. The rationale to probe this objective was that changes observed before and after television will show up only gradually, as the pertinent literature suggests. Hence, they would be discernable only over time. The hypothesis was that television, if it affects people at all, does so gradually and progressively.

If this were the case, it would make sense to include a group in the third data set, which had been unexposed to television. If television's influences are progressive, an unexposed group may have been expected to display characteristics similar to those of the 1974 television-unexposed, (i.e. the Settlement Inuit group).

The Settlement Inuit group were equally hypothesized to

display characteristics similar to those of the Frobisher group in the first sampling. This would be in consonance with their exposure to the medium, since television was introduced into the North on a large scale only in 1975.

To act as a check on these two hypotheses a third was that a middle group from a community exposed since 1975 would display characteristics which would put them between the non-exposure group, and the heavy exposure group from Frobisher Bay. In other words, a middle group would be expected to show characteristics common to the other two.

Theoretical and Operational Variables

The variables to be studied were to be those that had been examined in the first two studies. There had been some consideration of adding a psychological stress inventory to the questionnaire. However, examination of that instrument indicated that it was of such a personally sensitive nature that its use in the Inuit cultural context of the mid-1980s would have been intrusive. Consequently, the idea was dropped.

The issue of intrusiveness was particularly important to address in the research environment of the Northwest Territories. Each of the 1974 and 1980 studies in Frobisher Bay had to receive the approval of the Territorial Government's Scientific Research Department, which evaluated a descriptive proposal before granting a Scientific Research Licence. By 1983 self-government in the Northwest Territories had reached the point that prospective

researchers wishing to conduct studies in schools in the Territories first had to obtain the approval of the Local Education Authority (LEA), the local council consisting of community members, which supervises education in each community in the Territories' three Regions.

By 1983 there had been a steady parade of southern researchers trouping north to study the Inuit. An often-told joke is worth retelling to describe the general atmosphere in which researchers have to be prepared to operate:

Question: Describe the typical Inuit family.

Answer: The typical Inuit family consists of a mother, a father, three children, one or two grandparents, and one anthropologist and one sociologist.

There are numerous variants, but the point is that it is an Inuk joke!

Igloolik was the community selected to be the non-television group. This Hamlet of 777(1980) had consistently refused the introduction of network television. By 1983, however, fewer than two-thirds of the community's voting population voted for the ban, as reflected in a plebicite early that year on the issue. The "no's" fell below two-thirds for the first time, and television was scheduled to be introduced in October, 1983. In early 1983, Igloolik was the only community in the Northwest Territories with a population in excess of 500 persons, without CBC television reception.

From the point of view of research, the political situation was such that it was extremely unadvisable for any researcher who could manage to persuade the Igloolik LEA to let them do research on such a touchy issue as television, to abuse the priviledge.

Application was made to the the Igloolik LEA, and approval was received. Cawte (1982) has raised the issue of the researcher's accountability to the people under study. Approval from the LEA was given subject to the proviso that results of some kind would be sent back by the researchers to inform the council of what had been found. This condition was accepted and the study was cleared to go ahead, since with the LEA's approval that of the Territorial Government was virtually automatic.

Operationally it was hypothesized that on the seven socio-cultural variables there would be no difference between any of the four groups. Added to these seven was the factor of time. Since 1983 would be the third study, and the three studies were separated by six, three, and nine years, respectively it was conceptually and operationally feasible to add time as another dimension to the study, (i.e. there would be no change among or between the groups over time). This raised methodological questions of analysis, (i.e. how would one analyze the data over more than two dimensions)? This issue is dealt with in the analysis section.

It was expected that television influences being

gradual and cumulative, they would only show up over time. However, time was conceptualized in two ways. There was the more obvious time aspect of the three studies having been done over a ten-year period. There was also the fact that television itself had been gradually introduced among the groups. In that respect the groups themselves represented a time continuum. For these reasons it was expected that differences between and among the groups at and between the samplings may have been describable in terms of the time dimension.

Definition of Variables

As noted in a previous chapter the indices in question were the following:

1. Media availability, exposure patterns, most and least preferred television programs, and preferred language of broadcasting
2. Knowledge of facts about Canada
3. Perception of and attitudes toward national and international issues
4. Dominant national and international information sources
5. Socioeconomic orientations with respect to occupational aspirations, travel aspirations, and evaluation of the Eskimo vs southern lifestyle
6. Leisure-time activities.
7. Internal locus of control.

Media availability was the presence or absence of television in the subject's home community. Exposure

patterns meant how much television the subjects watched during the week and on weekends. Most and least preferred television programmes were the three most-liked and three most-disliked television programmes mentioned by the subjects on an open-ended question to this effect. Preferred language of broadcasting was the language(s) selected by the subjects on an open-ended question.

Knowledge of Canadian facts was assessed by seven questions asking for the following information:

1. Name of the Prime Minister of Canada at the time (Trudeau);
2. The capital city of Canada; (Ottawa)
3. The capital city of the Northwest Territories; (Yellowknife)
4. The name of the Canadian political party then in power (Liberal);
5. The names of the three national Canadian political parties;

(Liberal, Conservative, and New Democratic)

6. Canada's two official languages; (English and French)
7. The number of Canadian Provinces and Territories (12).

Perceptions and attitudes toward international and national issues were the awareness of international and national issues as reflected in media news stories that the subjects recorded on two open-ended questions to that effect.

Dominant information sources were those mentioned on a

forced-choice question of such information sources. Subjects were to be asked which of them (among 10) they used most to gather information on international and national issues.

Socio-economic orientations concerning occupational aspirations, travel aspirations, and attitudes toward the Inuit and southern lifestyles were to be collected by asking subjects for their most-hoped-for job after finishing school; their most-expected job after finishing school, (i.e. what they hoped they would find vs what they expected they would find); where they wished to travel to or visit; and their opinion as to whether or not the Inuit lifestyle as lived in the modern north was better than, worse than, or no different from that in the south.

Leisure-time activities were to be those that subjects selected from a list of out-of-school activities. Internal locus of control was the same instrument described in an earlier chapter, which would generate an internal score out of eleven which could be used to compute group means for the purposes of group comparisons. The Canadian-information items too could be used to generate information scores out of seven, again for purposes of group comparisons.

Another cumulative variable, that of exposure to the metropolitain Canadian environment, was added to the study. Although not on the questionnaire as an item, it was constructed from the information the subjects put on their questionnaires pertaining to issues analagous to those

examined by Forbes and Lonner (1980). These were: comes from TV settlement; from outside of Canada; living in Frobisher; living in Frobisher with TV; lived in another northern settlement; lived in southern Canada; ever travelled to southern Canada; been south in past five years; been south more than once; travelled outside of Canada; travelled abroad more than once; travelled abroad in past five years. Like the previous two, these 12 items could be summed to generate a cumulative score from which group means could be calculated.

Scope and Limitations

The study was proposed to be limited to the Eastern Arctic. However, it was designed to encompass issues which communication and development research has asserted to be of salient concern to the study of development and communications in developing regions.

However, in terms of geographic region and the population represented within the sample the scope is very wide; a large proportion of the school-aged population of the Eastern Arctic would be included. The principal limitation would be that of generalizability to populations outside the north. It is doubtful that the EC groups could be considered "typical" of southern Canadians, particularly in light of the exposure these young people have had to the Inuit and to the Inuit culture. Cultural assimilation may work both ways.

Another issue is that of the specificity of Inuit

response to television. How much of what may be found would be culturally unique and hence, ungeneralizable? That is unique which constitutes culture; that which makes it distinctive enough to be discernable.

To the extent that the Inuit samples to be tested share characteristics of remoteness and recency of development on a large scale, the Canadian Eastern Arctic Inuit do share some significant attributes with people in similar areas in North America. The cultural dimension adds to this commonality with the Alaskan studies. By no stretch of the imagination may the Canadian north be considered a Third World analogue. However, there may be enough commonalities to warrant some degree of comparison: recency of transformation to an urban from a nomadic economy; recency of education and the introduction of literacy; recency of exposure to the metropolitain culture, and a trend toward what has been referred to as "electronic colonialism" (Coldevin, 1979), to name four.

In some ways, however, the Inuit differ from the Third World. There is nothing like the Third World's endemic disease and deprivation, recent northern history notwithstanding. As pointed out, many Inuit were literate in their own language at the turn of this Century. Many Third World countries' rural populations continue to draw their subsistence from the land while undergoing development. The Canadian Inuit have experienced a virtual economic conversion from dependency on the land, and hence a

degree of independence, to dependency on southern resources (Mayes, 1978; Smith, 1975).

Within the context of these limitations generalizability may not be taken too far. However, within the Canadian context of development, and to the extent that Canadian development practices are extendable to other national settings, a problematic point, there may be some room for extrapolation.

Chapter IV

Methods

Population and Sample - Frobisher Bay

The population from which the core samples were to be drawn consisted of high-school-aged Inuit and Euro-Canadian students at the Gordon Robertson Educational Centre in Frobisher Bay, in the Baffin Region of the Northwest Territories. Normally the student complement of this high school ranges from 250 to 400 students attending grades Secondary 1 to Secondary 5. There are also the streams of "Settlement Maintenance", "Electrical Mechanical", "Clerical Secretarial", and "Home Makers".

Secondary 1 to Secondary 5 are the regular academic "stream" of the school. Students follow a curriculum based on that of the Province of Alberta. The programme is designed to be continuous from the primary grades in that students may receive secondary accreditation for prospective university entrance. Very few Inuit students have gone this far (Northwest Territories, 1983). Most communities have at least a Secondary 3 level; some have Secondary 4. Consequently, a student desiring to continue after Secondary 4 or 5 must go to Frobisher; this might not happen until the middle teen years. Classes at "GREC" may consist of all three groups.

Settlement Maintenance, however, consists almost exclusively of Inuit students from communities other than Frobisher. This programme is a non-academic stream, its

objective being to provide some marketable job-related skills which students may translate into jobs in the various utilities which keep the communities running.

Electrical-Mechanical is similarly motivated, differing only in subject matter. It produces electrical technicians, plumbing assistants, both of whom may continue toward journeyman certification under appropriate supervision. It is primarily, although not exclusively, male.

Clerical-Secretarial gives training in common clerical and secretarial skills; typing, word processing, stenography, dictaphone, filing, etc.. These students tend to be predominantly female.

Home Makers provides a variety of household skills including nutritional cooking for those intending to return home to pursue a family life. Its role for prospective wives and mothers is particularly important, since nutrition is a basic problem in the north, even today. It is not a question of want, but one of knowledge of what constitutes a nutritious meal. This is usually the smallest group.

The academic stream, (i.e. that apart from the above four), tends to be predominantly Euro-Canadian, although a fair proportion of Inuit students do go through it - mostly Frobisher Inuit students - since Settlement Maintenance tends to be dominated by Settlement Inuit students.

Other Cohorts

Six cohorts were defined for the sample: Euro-Canadian; Frobisher Inuit; Settlement Inuit; Igloolik Inuit;

Pangnirtung Inuit; and Hall Beach Inuit. The Pangnirtung group was thought to represent a middle television exposure group, having received the medium during the installation wave in 1975. Pangnirtung's proximity to Frobisher Bay (45 minutes by air), I thought, would make it an overall medium exposure group.

The last group, the Hall Beach Inuit, were to be selected from the school in that community, 800 miles northwest of Frobisher Bay. It is necessary to pass through Hall Beach to visit Igloolik (twenty minutes away by air), so the researcher planned to take advantage of that fact to get more subjects. This group was expected to have much in common with the Igloolik group, due to their relative remoteness from the urban centre of Frobisher Bay. An additional feature was that since Hall Beach was a military base, it had television service starting in 1981. So close to Igloolik, it was expected that some meaningful comparisons could be made.

Instrumentation

Instrumentation consisted of the questionnaire, complete with its internal locus of control inventory. Due to the numerous cohorts, several versions of the questionnaire were prepared, each having slightly different variants of certain questions which pertained to each community. The locus-of-control instrument was identical for the six cohorts.

Data consisted of the subjects' responses to each of

the questions on the instrument. These were data of the categorical type; several ordinal-level questions were included (media-use questions), as were two interval-level questions (regarding amounts of television watched per week). There were questions to gather the usual demographic information with regard to home community, age, grade, sex, and how much and where the respondent had travelled. Subjects were examined in intact classes; strictest confidentiality of responses was given. Questionnaires and the locus of control instrument are displayed in Appendix 1.

Chapter V

Procedures

Application for funding of a third study was first made to FCAC (Quebec) in late 1981. This application was turned down with suggestions to re-apply the following year with certain modifications and additions to the proposal. This was done and funding was approved for June of 1983. Initial planning for the study was undertaken in August, 1983. Letters of introduction to the appropriate schools were prepared and sent out, followed up with phone calls. Approval granted, application was made to the Territorial Government for a Scientific Research Licence.

Finally, the final questionnaire and locus of control instrument were drawn up and printed. As noted there were slight differences on certain questions for the different communities. There was no mention of television or television watching at all on the Igloolik questionnaire. The locus-of-control inventories, however, were identical for all communities.

The last blockage overcome, that of the Igloolik LEA, the Study was scheduled for October, 1983, timed to co-incide with the introduction of television service into Igloolik. Upon consulting with the Igloolik school principal, Dr. Guy Palmer, as to their own schedule, my visit to Igloolik was scheduled to begin on Monday, October 10, 1983. Arrival was to be late that night after flying all day; sampling was to be done the following day. CBC

television service was scheduled to begin on Tuesday, October 18. Thus, it was reasoned that sufficient time was given for unforseen developments which might delay the sampling. The only thing that might have conceivably retarded the visit would have been the weather; which might have limited flying. The month of October, however, is not usually a bad month for weather in the north; December or January would have different stories.

As it turned out my arrival in Igloolik was delayed to Tuesday, October 11, the following afternoon. Bad weather there forced me to overnight in Nanisivik, 400 miles to the north of Igloolik. Since it was too late to do any sampling by the time I arrived I began the work the next day, Wednesday, October 12, 1983, and finished up that day. School authorities were overwhelmingly helpful and co-operative, and I feel I should point out that without their assistance the Igloolik data would have been far more difficult to come by, and not of the quality that it was. I left Igloolik that Wednesday afternoon and flew down to Frobisher Bay via Hall Beach to begin the sampling at GREC the following day. The Igloolik sampling was therefore completed six days before the CBC button was pushed, on schedule, on the 18th of October, 1983.

Sampling was done in Frobisher at GREC over the following seven days. Following that, Coldevin and I flew to Pangnirtung to do the sampling there. That completed, we flew back to Montreal on Thursday, October 20. In all, 379

students had been sampled in Frobisher, Igloolik, and Pangnirtung. Two Euro-Canadian children in Pangnirtung were pooled with those in Frobisher; otherwise the cohorts were left intact. Twelve students from the small school in Hall Beach were added the following February, 1984, bringing the sample total to 391.

Coding

Having been returned to Montreal the raw questionnaires were coded for data analysis. It was intended to use the resident statistical package SPSS as the primary vehicle of analysis, with some recourse to BMDP83 for the certain problematic analyses. This is discussed in more detail in the "Analysis" chapter. After coding was done by myself (Codebook in Appendix 2), the coded sheets were submitted for keypunching by the university's computer centre services department. That done, the analysis could begin after the preparation of the statistical software programmes.

Chapter VI

Analysis

Sample

Of the 391 respondents, 224 (57.3%) were male; 167 (42.7%) were female. The largest age group was between 14 and 15 years of age (35.3%); the largest grade representation was that of Grade 7 (26.3%), followed by Grade 10 (25.6%). Grades 8 and 9 were well represented (15.3% each); the higher grades had the fewest students: Grade 11 (8.4%); Grade 12 (1.3%, all Euro-Canadians); Settlement Maintenance (4.3%); Electrical-Mechanical (.8%); Clerical-Secretarial (.5%); and Home-Makers (2%).

Sixty-eight percent of the Settlement Inuit students were male, the largest proportion among the six cohorts. Although Hall Beach had, at 58.3%, the largest proportion of females, this involved only twelve individuals. In terms of sampling reliability, Pangnirtung had the largest proportion of females. The sampling had therefore procured a representative distribution over age and sex, and at 307, had obtained a large percentage of the high school-aged Inuit population of the Eastern Arctic. It could therefore be justifiably considered a reliable representation of the adolescent population of the Baffin and Keewatin Regions in the Northwest Territories.

The inclusion of such large proportions of the population makes this study particularly representative. Although it might not be possible to generalize to a

southern population, or anywhere outside the North, the fact of having such a large sample-to-population ratio is noteworthy in contrast to most television research.

Analysis Plan

The analysis consisted of several phases. Due to the complexity of the data structure, involving multi-dimensional comparisons, it was concluded that the simplest, most intuitive comparisons should be done first. This involved the comparisons on the indices of interest between cohorts of the third study. Second, three-way comparisons were to be performed generating a longitudinal "trace" of the processes, to the extent that the indices could represent them.

Normally this might sound like one was performing the same test more than once on the same subjects. This catches the whole point behind the analysis: The three data bases represent different individuals. The usual presentation of this problem, in statistical terms, would be as follows.

Suppose there were three groups measured with respect to some attribute of interest. One is interested in establishing whether there are any differences between the three groups. Among three groups there are three possible pairwise comparisons: A versus B; B versus C; and A versus C. If the data on the attribute of interest were of the interval level this could be done with three independent T-Tests. The difficulty is that each group is being tested twice, driving up the probability of making a Type-I error.

One resolves the problem with a oneway ANOVA.

One may find that somewhere among the three groups exists at least one significant difference. This could be between any one of the three and any one of the other two, or between combinations of the three. Follow-up analyses (post-hocs) may then be performed taking account of the need for multiple pairwise comparisons (Winer, 1971).

One method for handling analyses of observations gathered over time is that of repeated-measures analysis (Winer, 1971). This technique presupposes that at each point of assay one measures the same individuals on the attribute(s) of interest. As in the case of between-group analyses, post-hoc comparisons may be used to locate intra-group effects.

The present situation, however, is complicated by the problem of analyzing categorical data in more than two dimensions. Consider the following simplified scenario. At three points in time three separate samples of Groups A, B, and C are measured with respect to some attribute. Call the three assays Time1, Time2, and Time3. There are nine groups; three at each of the three times. The three A groups consist of different individuals, sampled from a population over time. The same obtains for the three B groups, and the three C groups. Call them A1, A2, and A3; denote the Bs and Cs similarly.

What could one do with data measured at the categorical level? Normally Chi-Square tests are possible using

two-dimensional models, (i.e. using two factors). Consider: Groups A, B, and C are measured for some attribute at the categorical level; eg. sex; male or female. There may be a separate group A, B, and C measured at another time with respect to the same attribute. Call the attributes "variables". One could compare the As, Bs, and Cs in the following contingency table using a Chi-Square test of significance.

	T1	T2	T3
A	F11	F12	F13
B	F21	F22	F23
C	F31	F32	F33

where the Fs are the observed cell frequencies of the three groups A to C for each of the three times, 1 to 3. The subscripts denote the measurement of the attribute at the three times, (i.e. Group A, Time1, Group B, Time1, etc.); they denote the rows and columns respectively.

Although it is not widely known, one may conduct Chi-Square analyses using contingency tables with more than two dimensions. Call the third the "plane" dimension. Each time one introduces a variable into a categorical analysis an additional dimension is represented. Some difficulty resides in the way Chi-Square analyses are done. Each attribute, or variable, is considered a dimension. Suppose the three groups at time one were compared on an attribute. Group is itself an attribute, taking up one dimension, leaving one other dimension for the second attribute of

interest. Under the traditional method of performing Chi-Square tests two dimensions have usually been the limit, although there is no theoretical reason why such a limitation must exist. However, interpretation and the actual calculation appear to have hindered general use of the Chi-Square test in the analysis of three- and higher dimensional contingency tables. Consider the following scenario.

	V1	V2	V3	V1	V2	V3
A	F111	F121	F131	F112	F122	F132
B	F211	F221	F231	F212	F222	F232
C	F311	F321	F331	F312	F322	F332

A Chi-Square test may still be done in the above scenario. However, the interpretation is complicated by the addition of the third dimension. An overall Chi-Square test may be done on the entire matrix, but after that; what? All one could say with significant findings would be that somewhere in the matrix a difference is present between one or more elements of the matrix, and one or more others; the "mores" may be taken as a group or individually, or as both at the same time. One has no means of chasing down the contrasts, unlike interval-level analysis: Chi-Square values may not be partitioned, unlike interval-level statistics in ANOVA and REGRESSION analyses, which may be broken into their individual components, or "effects".

Much work has been put into devising a solution to this data analysis problem (Plackett, 1974; Goodman, 1978) to

name but two authors. The goal has been to develop a method of analyzing categorical data replicating the stringency established for the analysis of interval-level data, to thus negate adverse comparisons of data analyses according to the levels of measurement (Bishop, Fienberg, & Holland, 1975). Properly applied, log-linear analysis may do this.

Log-linear Analysis

Log-linear analysis (Fienberg, 1982) offers a methodology whereby categorical data may be cross classified and analyzed in more than two dimensions. Of course, it also permits two-dimensional analyses. It is fundamentally an extrapolation of the general linear model to categorical data. The methodology's principal advantage resides in a partitioning capability of main effects, interactions, and co-variates, these terms being used in a meaning fully analagous to that used in regular factorial designs. Just as the sum of squares in a regression equation may be partitioned, so too may the analagous parameters in a log-linear equation. This is achieved by using for the analysis the natural logarithm of each cell's expected frequency. Variations in the resulting quantities may then be used to account for what are natural analogues to "row", "column", and higher order "main effects", as well as "interactions". The technique uses

> the expected cell frequency as the product of several terms, each representing a main effect or interaction. Since the logarithm of a product of terms is the sum of

the logarithms of the terms, the logarithm of the expected cell frequency can be expressed as a linear model - the log-linear model (Dixon, 1981, p.176).

The statistic used to assess significance in a log-linear model is variously referred to as G-Squared (Dixon, 1981; Fienberg, 1982), or L-Squared (Norusis, 1985). In either case the formula is the same, and it is invariably labelled on computer output as the "Liklihood-ratio Chi-Square" to distinguish it from the better known Pearson Chi-Square. The L^2 formula is:

$$L^2 = 2\ (f_{ijkl}\ \ln\ (f_{ijkl}/F_{ijkl}))$$

whereas the Pearson X^2 formula is

$$X^2 = (f_{ijkl}-F_{ijkl})^2/F_{ijkl}$$

where, in both cases, "f_{ijkl}" is the sum of the observed cell frequencies in $cell_{ijkl}$, "F_{ijkl}" is the same cell's expected, or "model" frequency, and "ln" is the natural logarithm of the expression in the parentheses.

Both statistics are asymtotically distributed as Chi-square, with "n-p" degrees of freedom (df), where "n" is the number of cells, and "p" is the number of independent parameters estimated (Dixon, 1981, p. 177).

Because of the time factor in the present study, log-linear analysis appeared to be the most appropriate method for the examination of the principal categorical variables of interest. Quoting Norusis:

As additional variables are included in the cross-classification tables, the number of cells rapidly increases and it is difficult, if not impossible, to unravel the associations among the variables by . . . (computing) a chi-square test of independence for each subtable. This strategy is fraught with problems and usually does not result in a systematic evaluation of the relationship among the variables. The classical chi-square approach also does not provide estimates of the effects of the variables on each other, and its application to tables with more than two variables is complicated (Norusis, 1985, p. 297-298).

TABLES 2 to 9

Tables 2 to 9

The following tables detail the Z-scores derived from the logit analyses which are discussed within the body of the text. Two types of tables are presented. The first was the two-way analysis, using ethnic group and year of study as independent variables. The second type involved the collapsing of those two independent variables into one with nine levels, the last of which was the non-television 1983 Igloolik group. Dichotomous variables refer to dependent variables expressed as dichotomies. For the sake of parsimony, non-dichotomous variables were subjected to special contrasts wherein the dependent variables of the logit models in question were expressed in dichotomies of interest.

TABLE 2

Z-SCORES FOR DICHOTOMOUS INDICES*

	CPRTYPE	WPRTYPE	TRAVLASP	WORKLOC	LEISURE
FROB74	-7	-6.7	-5.38	-1.97	3.96
SETT74	-5.66	-5	-3.81	.44	&*
FROB80	-3.24	-3.97	-2.82	-.78	1.54
SETT80	-6.14	-6.15	-4.52	.25	2.31
FROB83	-3.22	-3.84	-1.46	-.13	1.0
SETT83	-4.8	-5.56	-3.08	1.4	.69
PANG83	-2.65	-4.24	-2.74	.38	1.96
HB83	&	-3.5	.45	-1.82	.88
OVERALL	19.39	-5.7	-5.8	6.59	21.93

---

*From left to right: CPRTYPE - Canadian Issues; WPRTYPE - International Issues; TRAVLASP - Travel Aspirations; WORKLOC - Preferred Working Locations; LEISURE - Preferred Leisure-time Activities.

Labels for each group are: FROB74 - Frobisher Inuit sampled in 1974; SETT74 - Non-Frobisher Inuit sampled in 1974; FROB80 - Frobisher Inuit sampled in 1980; SETT80 - Non-Frobisher Inuit sampled in 1980; FROB83 - Frobisher Inuit sampled in 1983; SETT83 - Non-Frobisher Inuit sampled in 1983; PANG83 - Pangnirtung Inuit sampled in 1983; HB83 - Hall Beach Inuit sampled in 1983; OVERALL - Entire sample gathered over the three studies.

*The "&" symbol denotes the absence of a standard error by which to divide the lambda coefficient, so as to obtain a Z-score This results if one of the response categories was empty, eg. if no one responded "no" to a "yes-or-no" type question.

TABLE 3

PREFERRED BROADCASTING LANGUAGE Z-SCORES

CONTRAST	(0 1 1 2)	(0 1 -1 0)	(3 -1 -1 -1)*
FROB74	.0	-1.48	&*
SETT74	-2.22	.05	&
FROB80	.16	-4.53	.77
SETT80	.04	-3.27	-.93
FROB83	.79	-4.12	.62
SETT83	-.57	-2.73	.42
PANG83	.21	-3.27	.56
HB83	-.88	-2.1	&
OVERALL	-2.26	5.7	-23.1

---

*Contrast levels from left to right are "Don't Know"; English; Inuktitut; and Both.

Labels for each group are: FROB74 - Frobisher Inuit sampled in 1974; SETT74 - Non-Frobisher Inuit sampled in 1974; FROB80 - Frobisher Inuit sampled in 1980; SETT80 - Non-Frobisher Inuit sampled in 1980; FROB83 - Frobisher Inuit sampled in 1983; SETT83 - Non-Frobisher Inuit sampled in 1983; PANG83 - Pangnirtung Inuit sampled in 1983; HB83 - Hall Beach Inuit sampled in 1983; OVERALL - Entire sample gathered over the three studies.

*The "&" symbol denotes the absence of a standard error by which to divide the lambda coefficient, so as to obtain a Z-score This results if one of the response categories was empty, eg. no one responded "no" to a "yes-or-no" type question.

TABLE 4

EMPLOYMENT TYPE Z-SCORES*

CONTRAST	(0 2 -1 -1)	(0 0 1 -1)	(3 -1 -1 -1)
FROB74	1.4	1.04	&
SETT74	1.06	1.06	&
FROB80	1.17	2.81	-2.36
SETT80	1.46	.58	-2.43
FROB83	1.62	2.38	-1.4
SETT83	1.9	.18	-1.59
PANG83	.69	1.51	-2.06
HB83	.95	1.92	&
OVERALL	-.63	-2.69	-46.6

---

*Contrast levels from left to right are "Don't Know"; Professional; White Collar; Blue Collar.

Labels for each group are: FROB74 - Frobisher Inuit sampled in 1974; SETT74 - Non-Frobisher Inuit sampled in 1974; FROB80 - Frobisher Inuit sampled in 1980; SETT80 - Non-Frobisher Inuit sampled in 1980; FROB83 - Frobisher Inuit sampled in 1983; SETT83 - Non-Frobisher Inuit sampled in 1983; PANG83 - Pangnirtung Inuit sampled in 1983; HB83 - Hall Beach Inuit sampled in 1983; OVERALL - Entire sample gathered over the three studies.

TABLE 5

LIFESTYLE RATING Z-SCORES*

CONTRAST	(0 1 -1 0)	(0 1 1 -2)	(3 -1 -1 -1)
FROB74	-1.97	-2.36	&
SETT74	.48	-2.97	&
FROB80	-1.16	.77	.47
SETT80	-1.63	.15	.61
FROB83	1.82	1.15	-.3
SETT83	1.78	-.04	1.11
PANG83	.8	-.66	&
HB83	-1.33	-1.95	&
OVERALL	4.54	-6.21	-19.8

---

*Contrast levels from left to right are "Don't Know"; Better; Worse; and No Difference.

Labels for each group are: FROB74 - Frobisher Inuit sampled in 1974; SETT74 - Non-Frobisher Inuit sampled in 1974; FROB80 - Frobisher Inuit sampled in 1980; SETT80 - Non-Frobisher Inuit sampled in 1980; FROB83 - Frobisher Inuit sampled in 1983; SETT83 - Non-Frobisher Inuit sampled in 1983; PANG83 - Pangnirtung Inuit sampled in 1983; HB83 - Hall Beach Inuit sampled in 1983; OVERALL - Entire sample gathered over the three studies.

TABLE 6

TWO-WAY COMPARISONS*

ETHLOC	CPRTYPE	WPRTYPE	TRAVLASP	WORKLOC	LEISURE
FROB	2.11	1.17	.5	-3.01	-24.9
STUDY					
1974	-5.32	-3.13	-4.38	-2	12.22
1980	-1.73	-1.13	-2.53	-1.43	1.81
E X S					
21	-2.75	3.12	-2.55	-.61	&*
22	1.27	-.3	.12	.4	.74
OVERALL	-4.43	-8.13	-8.7	7.56	13.49

---

*From left to right: CPRTYPE - Canadian Issues; WPRTYPE - International Issues; TRAVLASP - Travel Aspirations; WORKLOC - Preferred Working Locations; LEISURE - Preferred Leisure-time Activities.

Labels for groups under comparison are: ETHLOC - sampling group being compared - i.e. FROB (all Frobisher Inuit groups collapsed); STUDY - the year of sampling, 1974 or 1980. In both cases the last group serves as the reference category, and is thu omitted. E X S denotes the interaction between group and year.

*The "&" symbol denotes the absence of a standard error by which to divide the lambda coefficient, so as to obtain a Z-score This results if one of the response categories was empty,neg. if no one responded "no" to a "yes-or-no" type question.

TABLE 7

EMPLOYMENT ASPIRATIONS*

ETHLOC	(0 1 1 -2)	(0 2 -1 -1)	(0 0 1 -1)	(3 -1 -1 -1)
FROB	2.4	-.23	2.8	-.29
STUDY				
1974	-1.22	-.91	-.26	&*
1980	.29	-.74	.83	-1.66
E X S				
21	-1.13	.57	-1.74	&
22	.45	.08	.18	-.29
OVERALL	-2.68	.4	-3.02	-49.6

---

*Only the three rightmost contrasts are orthogonal. The contrast on the left (0 1 1 -2) generated an L^2 value below the .05 significance level, indicating an extremely poor fit. Contrast levels from left to right are "Don't Know"; Professional White Collar; and Blue Collar.

*The "&" symbol denotes the absence of a standard error by which to divide the lambda coefficient, so as to obtain a Z-score This results if one of the response categories was empty, eg. if no one responded "no" to a "yes-or-no" type question.

TABLE 8

RATING OF THE INUIT LIFESTYLE*

ETHLOC	(0 1 -1 0)	(0 1 1 -2)	(3 -1 -1 -1)
FROB	-1.31	1.72	0
STUDY			
1974	-2.9	-4.58	0
1980	-4.75	-.12	.31
E X S			
21	-1.46	.03	0
22	.43	-.39	1.06
OVERALL	5.75	-5.44	0

*Contrast levels from left to right are; Don't Know; Better; Worse; and No Difference. Contrasts are orthogonal.

TABLE 9

PREFERRED NORTHERN BROADCASTING LANGUAGE*

ETHLOC	(0 1 1 -2)	(0 1 -1 0)	(3 -1 -1 -1)
PROB	2.98	-2.73	.79
STUDY			
1974	-2.43	3.6	&*
1980	0	-1.33	-1.22
E X S			
21	1.23	-.22	&*
22	-1.3	-.08	1.54
OVERALL	-2.28	4.52	-36.76

*Contrast levels from left to right are; Don't Know; English; Inuktitut; and both. Contrasts are orthogonal.

*The "&" symbol denotes the absence of a standard error by which to divide the lambda coefficient, so as to obtain a Z-score This results if one of the response categories was empty, eg: if no one responded "no" to a "yes-or-no" type question.

Results

Initial Findings - Three Cohorts

Subjects

The first two studies had gathered data from 374 individuals (190 in 1974; 184 in 1980). The 1983 sampling added 273 from the Euro-Canadian, Frobisher Inuit, and Settlement Inuit groups (84, 105, and 84 respectively). Another 118 were added from Igloolik, Pangnirtung, and Hall Beach (57, 49, and 12 respectively), for a total over the ten years of 765 individuals: 199 EuroCanadians; 235 Frobisher Inuit; 213 Settlement Inuit; 57 Igloolik; 49 Pangnirtung; and 12 Hall Beach.

Comparisons

Considering that the study had run over ten years, with the third sampling intended as the final collection, it seems to make sense to begin with some comparisons between the groups of the last sample, before proceeding to compare the 1983 sample with the prior two.

The preferred language for Northern broadcasting showed the Frobisher Inuit and Settlement Inuit to be of virtually identical opinion. A mean of 66% of the two Inuit groups favoured a mix of English and Inuktitut; "mix" was interpreted to imply a 50-50 share between the two languages. The Euro-Canadian group favoured exclusively English programming by about two-thirds.

Knowledge of Canadian facts generated mean scores for each of the three groups:

Euro-Canadian - 6.26, (SD - 1.28);

Frobisher Inuit - 4.0, (SD - 2.18);

Settlement Inuit - 5.50, (SD - 1.88); $F(2,270) = 37.7$, $p < .001$

This is interesting in the light of the earlier discussion of multiple comparisons. Clearly, the Euro-Canadian group received the highest mean score out of seven. Their score was higher than either Inuit group taken individually or as a block. Furthermore, the Settlement Inuit group's mean was significantly higher than the Frobisher Inuit group's, as revealed by the Student-Newman-Keuls multiple means comparison test.

International Issue Awareness was significantly greater among the Euro-Canadian group, X^2 (2, N = 273) = 31.36, $p < .01$. Eighty-one per cent of them selected international stories as opposed to local ones. The Frobisher Inuit group selected half of each category, and the Settlement Inuit selected 62% international stories. One may say that that the Settlement Inuit group was somewhat more aware of international issues than the Frobisher Inuit group, although this is only a trend X^2 (1 N = 189) = 6.83, $p < .025$. The .025 level of significance was selected because such comparisons use the same individuals twice; once versus the Euro-Canadian group and Settlement Inuit, and once versus the Settlement Inuit alone.

National Issue awareness was found to be greatest among the Euro-Canadian group, X^2 (2) = 31.36, $p < .01$, N =

273). Between the two Inuit groups, the Settlement Inuit group was significantly more nationally aware, X^2 (1) = 6.6, $p < .01$, N = 189.

Occupational aspirations found the Euro-Canadian group more professionally oriented than either of the two Inuit groups. The Settlement Inuit students expressed a greater inclination to blue collar positions than did their Frobisher classmates: They preferred white collar positions.

Preferred employment locations were dominated among both Inuit groups by Northern Arctic locations (Frobisher Inuit, 69%; Settlement Inuit, 81%). Fifty-eight percent of the Euro-Canadian group opted for the south. This was significantly more than either Inuit group individually or as a block. And, more of the Frobisher Inuit would prefer to work in the south than would the Settlement Inuit group (31% versus 19%).

Travel aspirations both followed and deviated from employment locations. They followed since the Euro-Canadian group overwhelmingly favoured southern travel locations (90%). They deviated in that the Settlement Inuit group was more favourably inclined toward southern travel, whereas they were not so positive about working, and presumably living, in the south.

Lifestyle ratings among both Inuit groups were overwhelmingly favourable toward the Inuit lifestyle, as opposed to that of southerners. More of the Euro-Canadian group thought that the Inuit lifestyle was "better" (37%)

than either "worse" or "not different" from the Inuit. However, this marginal percentage difference was not statistically significant; from a serious statistical point of view there may be said to have been a three-way split among the Euro-Canadian group on this question. The Inuit groups as a block, however, preferred their own lifestyle.

Primary leisure activities were oriented toward television, although less so among the Settlement Inuit group. The primary difference of interest appears to have been that the Euro-Canadian group were more interested in reading as a pastime than were either of the Inuit groups. The Inuit groups appeared to prefer hobbies, including hunting and fishing.

Locus of Control was found to be significantly more internal among the Euro-Canadian group, (i.e. they were more internal than the Inuit groups taken individually or as a block). As it turned out, the two Inuit groups were found to have statistically similar internal-locus-of-control mean scores.

Exposure index was a variable in 1983 which had been used in 1980. It was assessed by the twelve exposure questions patterned after the practice of Forbes and Lonner (1980). As expected, the Euro-Canadian group displayed more exposure to southern influences, F (2, 245) = 351.8, p < .001. However, the Settlement Inuit group displayed more exposure than did the Frobisher Inuit group, as measured by the Student-Newman-Keuls multiple means comparison test,

(i.e. they were more exposed to influences outside their community than were the Frobisher Inuit students).

The three interval-level variables, Canadian facts, Exposure, and Locus of control, may be conceived of as a constellation of effects; it may make much more sense to look at them simultaneously, rather than individually, from a statistical point of view. This implies a multiple variable analysis of variance (MANOVA), which is conceptually what one should do in the first phase, after which one may look for single-variable effects (Norusis, 1985).

Since the three variables were taken from the same subjects they are presumed to be correlated. The MANOVA procedure makes the appropriate corrections for the correlations. However, no multivariate effects were found. Whatever the individual patterns of responses among the three cohorts, there were no multivariate effects.

Initial Results - Six Cohorts

The 1983 study differed from the other two with the addition of three cohorts: Igloolik, Pangnirtung, and Hall Beach. The salient feature of the Igloolik cohort was the fact that at the time of its sampling Igloolik was a television-free community. Its only previous experience with the medium was the 1980-1981 ANIK-B Project (Valaskakis, Robbins & Wilson, 1981). This project was the precursor to IBC. However, it did not involve television actually coming into homes in Igloolik; broadcasting

occurred over a monitor in a building reserved for the purpose. Only Inukshuk programming was received on that occasion, so Igloolik may be considered to have been free of CBC Network exposure.

The community nearest to Igloolik, Hall Beach, is seventy miles away. Hall Beach does receive television from the CBC and did at the time of the Igloolik sampling. There is no spill over, however; signals come down from the satellite, not overland, as with microwave. For all intents and purposes Igloolik, at the time of the sampling, October 12, 1983, may be considered to have been television free.

Igloolik is an Inuit community of about 800, subject to seasonal variations. It guards its Inuit cultural heritage to the point of putting special scrutiny on prospective researchers, and was one of the strongest proponents of Inuktitut television in the Arctic.

Hall Beach is a relatively small Inuit community seventy miles south of Igloolik. It is a NORAD air force base, and has received two CBC satellite television signals, one from each satellite intended for Eastern and Western Canada, since 1981. It also has a jet-quality airport, and twice-weekly airline service to Montreal via Frobisher Bay. The local economy is dominated by the air base, and by Northern standards Hall Beach is relatively prosperous. Sampling was performed in Hall Beach one Friday afternoon in February, 1984. The sample, however, was small; one intact class of twelve Grade 9 students.

Pangnirtung is 150 miles Northeast of Frobisher Bay, in Pangnirtung Fiord, which flows into Cumberland Sound. It has about 900 inhabitants who live in one of the most scenically beautiful communities in Northern Canada. It has had network television since 1975 (Roth, 1982), and much traffic flows to and from Frobisher Bay; only 45 minutes away by air, there are six flights per week. Culturally, however, it has been relatively sheltered, at least by Frobisher Bay standards. The local economy is dominated by hunting and trapping, carving, and tourism; Ayuituq National Park is easily accessible and attracts many hikers and climbers each summer. However, many people are dependent on social assistance (Mayes, 1978), a characteristic feature in Northern communities.

Comparisons

The preferred language of Northern broadcasting among the six groups revealed differences among the Inuit groups. The most glaring opinion difference lay between the Igloolik groups and all of the other Inuit groups. Igloolik favoured exclusively-English programming by 78%. The mix option drew 18%; 4%, or 2 individuals, favoured Inuktitut exclusively. By that standard the Igloolik Inuit preferred exclusively-English programming by a 14% greater margin than the Euro-Canadian group!

Generally, the Pangnirtung and Hall Beach Inuit concurred with the Settlement Inuit and Frobisher groups. However, the small size of the Hall Beach cohort prompts one

to interpret their responses with caution.

International issue awareness generated clear discrepancies among the Inuit groups. The Frobisher group had a greater tendency to select local issues, or answer that they didn't know. Although the Pangnirtung group exceeded Frobisher in their selection of local issues (16%), they were as internationally aware as the Settlement Inuit group (62%). Igloolik, however, had the greatest proportion of "don't know" (DK) responses (67%), indicating a deep lack of awareness along this information dimension. The Hall Beach group responded 100% with international issues. Pangnirtung appeared somewhat, but by no means significantly more aware than the Settlement Inuit group.

National issue awareness found the Frobisher group substantially less aware on this level as indicated by the high rate of DK answers. They were exceeded only by the Igloolik group (80%). Findings here generally dovetailed those for international awareness. Pangnirtung was somewhat more locally oriented than either the Frobisher or Settlement Inuit groups. The most significant finding involves the high rate of DK answers in Igloolik, indicating extreme unawareness and uncertainty on this issue (80%).

Occupational aspirations of the six cohorts indicated that the greatest amount of DK answers occurred in Igloolik (29.1%), followed by the Frobisher group (19%). Responses for the Blue collar positions indicated that the Igloolik group most favoured these jobs (44%), followed by the

Settlement Inuit group (41%). Not surprisingly, the Euro-Canadian group most favoured the professional positions (56%), whereas among the five Inuit cohorts the Hall Beach group were most desirous of this type of job (33%), followed by the Settlement Inuit group (33%). Pangnirtung was most in favour of the White collar jobs (30%) if one disregards the Hall Beach group's response (42%) of twelve individuals.

A second question asked as a follow up to the one on occupational aspirations asked about expectations, (i.e. where they actually expected they would find work). The resulting differences indicated that expectations, as opposed to aspirations, generated overall 11.8% more DK answers for the entire sample. If one includes the missing responses, (i.e. the non-answers), this increases to 18% for the aspiration question, and 30% for the expectation question, rounding to a difference of 12%. The test for the significance of the difference between two proportions (Bruning & Kintz, 1976) was run to determine whether this difference could be considered statistically meaningful. The difference between the two proportions over the whole sample yielded a Z-score of -3.92, with an associated significance level of less than .0001. Eliminating the non-responses and analyzing the expressed DKs resulted in a Z-score of -4.05.

By and large the largest increase of DK answers occurred in the Igloolik group (Z = -1.62); this value, however, is not significant. The Settlement Inuit group did

generate a significant Z value of -2.25; (p = .024); and the Euro-Canadian group generated a value of -2.46. The groups' Z-score values of differences between aspirations and expectations of employment were:

Euro-Canadian - Z = -2.46;
Settlement Inuit - Z = -2.25;
Frobisher - Z = -1.7;
Igloolik - Z = -1.62;
Pangnirtung - Z = -1.49;

where the first two were the two significantly-differing groups.*

Preferred employment locations were first elicited by aspiration. Subjects were asked where they would prefer to work upon finishing school; the North or the south of Canada. A polarization of sorts was discernable between the Inuit and Euro-Canadian groups: Not surprisingly the Euro-Canadian group preferred to work in the south, and the Inuit groups chose the North (X^2 (1) = 25.97, $p < .001$). With the exception of the Hall Beach group, who counted as only 3% of the sample, the Inuit students ranged from 67% to 77% in favour of Northern working locations, the Frobisher group least in favour, and the Settlement Inuit group most so. This difference, however, was not significant. The question on expected working locations did not generate appreciably different values from those of the aspiration question.

Travel aspirations revealed the same North-south

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*A Z-score of an absolute value of 1.96 or greater is considered to be significant at the .05 level.

polarization along ethnic lines. Among the Inuit groups, however, the Settlement Inuit students were most in favour of travelling to the south (69%); Pangnirtung was second (67%). Igloolik was least in favour of southern travel (43%); Frobisher somewhat more (53%). It is apparent that there is some difference in preference between the Inuit groups, since the Settlement Inuit and Pangnirtung groups were more in favour of southern travel than the Frobisher and Igloolik groups (X^2 (1) = 10.07, $p < .001$).

Lifestyle ratings revealed that among the Inuit the Frobisher group most felt they were better off among all the groups than people in the south of Canada (66.4%). The Igloolik group thought they were worse off most among the Inuit groups (15.8%), whereas only 7.3% of the Settlement Inuit agreed. By and large those believing most that there was no difference between the lifestyles were the Pangnirtung group; Igloolik were not far behind at 39%. The Frobisher group was most categorical, (i.e. had the lowest "no difference" response), at 23%. Those most in agreement that the Inuit lifestyle is better were the Frobisher and Settlement Inuit groups (66.4% and 58.7%, respectively), whereas Pangnirtung and Igloolik were most in agreement that there was no difference (42.9% and 38.6%, respectively. Interestingly, the group most split on the question was the Euro-Canadians.

Leisure-time activities indicated that Pangnirtung claims the highest proportion of TV watchers (48%), followed

by Frobisher(39%). Igloolik, with no TV at the time of the sampling, indicated its most frequent leisure activity to be hunting and fishing (37.5%); traditional pursuits as a whole, hunting and fishing, arts, crafts, hobbies, sewing and knitting, amounted to 48.2% in Igloolik.

Locus of control yielded an F-ratio of 10.15 (5,395) when a oneway ANOVA was run with the groups as the independent variables. This value was well above the .05 significance level. Due to the great disparity in cell sizes (from 12 to 107) the harmonic mean was used in the post-hoc tests. The difference generating the significant F-ratio was found to lie between the Euro-Canadian group and the Inuit groups taken as a block (using the Newman-Keuls procedure). There were no differences among the Inuit groups.

Exposure index when run with the six cohorts as the independent variable yielded an F-ratio of 150.98 (5,395), highly significant indeed. The Newman-Keuls post-hoc test, again using the harmonic mean, revealed that four distinct subsets were homogenous: The Euro-Canadian group was by far the most exposed, generating a mean of 8.31 out of a possible 11. They were in a unique subset. The second subset consisted of the Frobisher and Settlement cohorts.

The third subset, in descending order of exposure, was the Pangnirtung group; the mean was 3.2, substantially below those of the other two subsets, but still well above those of the last subset, that of Hall Beach and Igloolik, whose

mean scores were 1.08 and 1.07, respectively. There appears to be a relationship between the level of exposure and proximity to Frobisher Bay, unless one includes the Euro-Canadian group in the discussion; doing so does not invalidate the first assertion, but does add another dimension to the situation. Not surprisingly the Pearson correlation between information about Canada and exposure index is high; r = .5786.

Knowledge of Canadian Facts indicated that the Euro-Canadians were more knowledgeable than the Settlement or Pangnirtung students taken as a block, (i.e. the two subsets were significantly different). The third subset, in descending order of magnitude, included the Frobisher and Pangnirtung groups, (i.e. Pangnirtung was not significantly different from either Settlement Inuit or Frobisher). Clearly, however, the Settlement Inuit and Frobisher groups were significantly different from each other.

The same situation obtained among the Hall Beach, Frobisher, and Pangnirtung groups: Hall Beach and Frobisher formed a unique subset. Similarly, Igloolik and Hall Beach formed a distinct subset as the least information-aware group of cohorts.

1983 Results - Implications

This discussion will focus on the findings and implications of the 1983 results. It is not a formal discussion section. Later chapters will deal with their implications with regard to the first two studies.

It is apparent that significant differences existed among the six groups with regard to major issues. Certain differential responses among the five Inuit groups are equally apparent. It is of extreme interest to note that the preponderance of the differences pertain to the relationship between the Igloolik cohort and the four other Inuit cohorts.

This is apparent in the responses with regard to the perferred-language-of-Northern-broacasting question. The Igloolik cohort was 78% in favour of English alone in this role, by far the largest percentage among the five Inuit groups, and larger than even the Euro-Canadian cohort. Many reasons may be suggested for this discrepancy, particularly in view of the fact that Igloolik was the television-free cohort. The data by themselves, however, do not suggest any explanations beyond the rather obvious that the absence of television may have something to do with it. Such an explanation, however, is correlational; more comprehensive analysis is necessary.

Two patterns emerge from the international-issue-awareness question. It is clear that the Frobisher group is less internationally aware than the Settlement Inuit group. The Euro-Canadian group, as usual, is the most aware. However, the Igloolik cohort had the highest percentage of "don't know" (DK) responses; two-thirds of them could not express a choice on this issue. The absence of television is suggestive, particularly since

the Pangnirtung cohort mentioned international issues as frequently as the students from the non-Frobisher communities.

This pattern was more-or-less duplicated in the national-issue-awareness question. The "uncertainty" index for Igloolik, as represented by the DK responses was even higher than in the international responses: 80%. As before, Pangnirtung was somewhat more locally oriented than either the Settlement Inuit or Frobisher groups, with nothing like the uncertainty evident in Igloolik. This was also evident in the 1973 study of Inuit adults carried out by Coldevin in Fort Chimo, Quebec, in 1973 (Coldevin, 1977).

Uncertainty was equally visible in the high rate of DK answers for occupational aspirations in the Igloolik cohort. However, it did not show up in the employment locations issue: Most of the Inuit preferred to work in the North, and such differences among the Inuit cohorts as were discerned were incidental. One might call the tendency to wish to remain in the North a proximity index. It is equally apparent in travel aspirations, although in a somewhat different fashion. The group expressing the greatest desire to remain in the North, (i.e. travel only in the North), was the Igloolik cohort. The south seems to hold less appeal for them than for the other Inuit cohorts. Most interestingly, the Settlement Inuit cohort was most in favour of travelling to the south; Pangnirtung was second. Frobisher was least in favour of the idea.

Frobisher was most categorical on the lifestyle question: 66.4% of them believed that they were better off in the North than were people in the south of Canada. However, the Igloolik cohort had the highest amount of "worse off" responses among the Inuit cohorts (15%). One could argue many explanations for this; however, it is evident that about half of the Inuit feel that they are as well off as people in the south.

Igloolik appears to have been somewhat stronger in traditional pursuits on the Leisure-time-activity question. There was no TV in Igloolik then, however. In Pangnirtung, where it was operational, the cohort were the heaviest TV watchers. However, television in Pangnirtung was more recent than in Frobisher. The "novelty" effect may have been still influential.

One may again look at the three interval level-data questions, exposure index, information index, and internal locus of control. The Inuit groups did not seem to be different among themselves with regard to internal locus of control. As a group, however, they were significantly less internal than the Euro-Canadian cohort. This does fall in line with previous studies of North American Aboriginals groups (Lefcourt, 1976).

Information of Canadian facts suggested that the Hall Beach and Igloolik cohorts, the most geographically remote from the south, and from Frobisher Bay, were least aware of Canadian information. Frobisher Inuit themselves, however,

appeared significantly less aware of the facts in question than were the Settlement Inuit group. This suggests that it was not proximity to Frobisher itself which may have been the determinant on this question.

It is evident that certain behavioural disparities exist among the five Inuit groups. The most interesting involves the relatively low exposure and information levels among the Frobisher Bay cohort, although this tendency was less pronounced for exposure. It is most curious that this tendency should obtain among the Frobisher cohort; given what the dominant paradigm has to say about the roles of information exposure, and exposure to external cultural influences overall, the reverse should obtain. Frobisher should reflect the most exposure, and be the most information aware of the Inuit cohorts. This calls into serious question some of the basic tenets of the dominant paradigm.

The other items reflecting cultural and information exposure support this line of reasoning: Something is wrong with the dominant paradigm approach in that, in Northern Canada, it seems difficult to discern its classical pattern. It does surface somewhat in travel aspirations, and working locations. In this case, the Inuit do prefer the North, although by no means consistently, and not in much proportion to southern exposure.

Locus of Control

Recent literature on the locus of control construct strongly suggests that it is not a single construct, but a matrix of constructs (Lefcourt, 1982). Levinson (Lefcourt, 1982) has identified three sub-constructs as being of particular explanatory power: fate, powerful others, and chance. These were identified out of results from principal components analyses of data generated by some of the more prominent locus of control instruments (Levinson, 1981).

Such a finding is not entirely surprising, given the fact that questions in a locus of control instrument do not approach the problem of evaluating internal locus of control directly. They get at it obliquely by asking the subject questions which are presumed to reflect the subject's feeling about the issue raised in the question. The questions are designed to generate responses which are believed to accurately reflect the subject's internal locus of control (Robinson and Shaver, 1977).

One may use forced-choice questions to generate summary scores which, in turn generate means. If the items are conceptually varied, however, it may be a legitimate issue to question whether the resulting summary measure measures one thing or several things; and if the latter is the case, how may the several things be separated out.

Separating the elements arithmetically implies several subscales. Since the subscales would be drawn from the overall scale, the result would be the production of several

weaker scales, as opposed to one stronger one. The terms "strong" and "weak" are used in the statistical sense of being capable of generating variance. Breaking the scale up is, therefore, not a recommended solution.

Principal components analysis is the recommended solution. This consists in what is usually identified as the first stage of factor analysis (Nie, Hull, et al, 1975). The goal is to reduce a multi-dimensional scale to a smaller, more tractable one. If this is all that the researcher desires, (i.e. reducing the number of dimensions for the sake of explicability), principal components analysis (PCA) may be performed on interval or categorical data; the latter may include dichotomies (Kim and Mueller, 1978). The procedure in this case precludes going to the second stage of factor analysis, (i.e. factor solution). The second stage is indicated only when the data is interval level and when there is solid theoretical reasoning to suppose that the factor solution will have some intrinsic meaning (Tabatchnik and Fiddell, 1982).

Accordingly, a principal components analysis was performed on the locus of control scale for the 1983 sample. It generated four principal components, or factors. In accordance with convention (Nie, Hull, et al 1975) the variables which were most heavily loaded with the factors were used to name the factors for the purpose of identifying from which of the eleven items they drew their greatest variance contribution(s). These principal components in

descending order of magnitude were: hard work (14%); luck (13%); control (10%); and adjustment (10%). The percentages represent the relative amount of explanatory variance contributed by each factor. The unrotated principal components factor matrix is presented below:

TABLE 10

PRINCIPAL COMPONENTS FACTOR MATRIX

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4
LOCUS4	.70990			
LOCUS7	.66489			
LOCUS10	.49310			
LOCUS6		.74023		
LOCUS1		.66656		
LOCUS11		.51322		
LOCUS8			.58768	
LOCUS5			.58635	
LOCUS9			.57000	
LOCUS2				.70535
LOCUS3				-.44743

Factor one might be renamed "performance" due to its component contributing factors. The most distinguishing thing about the variance contribution of the factors is that together they contribute only 47.7% of the total variance. Clearly the matrix does not account for nearly all of the variance generated by the instrument.

Generally one choses a rotation in a factor analysis which will maximize the explanatory power of the analysis. Statistical software by default generates orthogonal factors which are uncorrelated, making them easier to explain. One may then proceed to examine them individually, and the problem then becomes one of interpretation.

Restricting the analysis to the issue of TV and information availability, for the theoretical reasons raised by the dominant paradigm research, comparisons were restricted to Igloolik and the rest of the Inuit cohorts. Oneway ANOVAS were done among the six cohorts using the four factor scores generated by the principal components analysis. On only one of the extracted factors did Igloolik register any difference from the other cohorts; that of factor two, which I have labelled "luck". Igloolik showed itself more likely to believe that success was due to luck than to actions. The direction of difference, however, lay with the Euro-Canadian cohort, (i.e. Igloolik was more inclined to believe in luck than the Euro-Canadians). Most interestingly, the Settlements were not different from the Euro-Canadians.

This does, of course, tend to complicate the analysis: Instead of one locus of control scale, there are four. However, only two provided significant results, and only one involving Igloolik. These were factor one (hard work), and factor two (luck). The ANOVA on PC number one revealed that the Settlement Inuit and Hall Beach cohorts were significantly more external than the others. If one had been ready to attribute Igloolik's greater externality on factor number two to the absence of television, (i.e. view television as an internal-locus-of-control-enhancing factor), this result makes one pause; both the Settlement Inuit and Hall Beach groups had TV at the time of the

sampling. No doubt this may be the reason why on the overall scale the Inuit groups formed a homogenous subset, significantly less internal than the Euro-Canadians. The countervailing tendencies may cancel out in the full scale.

Locus of Control Revisited. The internal locus of control variable was subsequently subjected to a forced-entry multiple regression analysis using only the Inuit students for reasons described presently. Independent variables were the amounts of television watched weekdays and weekends, exposure, age, and Canadian information score. The effort was directed at examining the extent to which the internal locus of control scores depended, or could be "predicted" by a regression equation. The results, although disappointing, were nevertheless not considered insignificant. A significant fit F (6,300) = 3.04, $p < .05$, was found from the independent variables selected, "explaining" 5.7% of the variance in the internal locus of control variable. An analysis of the residuals plot revealed fourteen outliers, well below the ten percent rule of thumb (Draper and Smith, 1981), indicating no serious anomalies in the data.

A serious difficulty, however, resides in the fact that the third sampling included groups which had not been sampled before. There was, therefore, no baseline for them. The baseline did exist for the Frobisher, Settlement Inuit, and Euro-Canadian cohorts. All of the previously-mentioned caveats against one-shot sampling apply in this case.

Intrinsically, the 1983 results are interesting. They may not be taken too far, however; in fact by themselves they may not be used for robust generalizations at all.

Longitudinal Comparisons

Longitudinal comparisons are intended to discern differences, should they exist, between groups sampled at different times. This entails comparing the separately-gathered samples with each other, singly and in combination. It also entails examining certain variables of individual cohorts within a study and comparing them with their analogues in other studies. This involves certain variables which may have been sampled at fewer than the sum of the time points, in this case, three. Of the focal points of study listed earlier, locus of control and exposure were generated in the later two samplings. Two variables, the reported amount of week-day and weekend television watching, were gathered in the first and third samplings. All other focal points of the study were sampled in each of the three studies.

Overall Considerations

Since the purpose of the entire study was to examine the effects of television exposure over time on previously unexposed populations, the Euro-Canadians were excluded from subsequent analyses. The purpose being to examine the progressive effects of network television on a relatively homogenous population, (i.e. one relatively unchanging over time), it was reasoned that including the transient

Euro-Canadian students in the analyses would result in invalidation of subsequent results.

The analysis was approached with the objective of generating "pure" comparisons, (i.e. comparisons between homogeneous samplings). The groups at each of the three samplings were intended to be ethnically comparable; originating from environments that were per se not relatively dissimilar over time. The relative difference between Frobisher and the Settlement group did not change over time; they did not become more or less like each other, and although perceptions did change, differences did not attenuate or intensify.

The 1983 sampling in the Gordon Robertson Educational Centre was the largest; however, this was really accidental since it depended entirely on the size of the student enrollment at the time. The inclusion of Igloolik, Pangnirtung, and Hall Beach, broadened out the sampling.

Contrast Technique

A logical point of departure (there could have been many) was to compare the first study with the second. This might reveal what changes, if any, had occurred between and within the groups over the first six-year interval. This ability was achieved via the dummy variable mentioned above.

Access to a television set was the only variable measured in only the first two studies. The reason for dropping it in the third study, or at least not using it in the analysis, was that in 1980, only one individual reported

no TV access. In 1975, only three had reported this. Since this represented television saturation at both points, and since there was no reason to suspect the situation would change in 1983, this variable was dropped from the analysis in the case of the Frobisher Bay-gathered cohorts. Of course, the situation in Igloolik in 1983 invited comparison and this will be treated at the appropriate point.

Upon reflection, what is most surprising is the speed of adoption of the innovation. The 1974 data indicated that at the time of the sampling, which occurred one year after the community began receiving satellite television, saturation was virtually complete. As an innovation the medium may, by Rogers' (1983) criteria, be considered utterly successful. Few if any innovations have ever achieved such a rate of adoption.

As a starting point for longitudinal analysis the 1974 and 1980 samplings were compared. Harking back to the earlier description of log-linear analysis, to compare the three ethnic groups on one response variable at two points in time involves en extension of the general log-linear model; it is, in fact, a logit model (Fienberg, 1982; Norusis, 1985). Such a model may be defined in factorial terms. A dependent variable is analyzed with respect to one or more independent variables, or factors. The conditions for such a model are: The dependent, or response variable, must be categorical, and preferably, although not necessarily, dichotomous; polytomous dependent variables

require more elaborate treatment. In this case the dependent variables were dichotomous and categorical.

A logit model is conceptually similar to that of discriminant analysis (Fienberg, 1981). One tries to distinguish between two or more groups represented by a response variable measured on the categorical level, on the basis of their responses, in this case group membership in one or more categorically-measured independent variables. In fact, most of the log-linear comparisons in this study will use logit models.

Until recently log-linear analysis and logit analysis have not been in widespread use, due to the difficulty of computing the expected frequencies. However, with the advent of such routines within the SPSSX and BMDP4F computer packages, a precision of measurement and analysis has been imparted to categorical and ordinal analysis, which was previously the preserve of factorial analysis.

The value of the log-linear approach, equally in the logit case, is that one may discern a relative ratio of explicability-to-simplicity between two models of interest by subtracting the greater maximum-liklihood ratio L^2 value from the smaller, including each's degrees of freedom. The resulting difference is itself interpretable as a maximum-likelihood ratio Chi-square, L^2, using as degrees of freedom the difference between those for the first two Chi-square values. Its interpretation is one of parsimony. If the difference value is not significant, the

simpler model may be retained as an adequate explanation for the fit of the data. Methodologically this process is analagous to the method of stepwise regression although it bears more intuitive resemblance to the analysis-of-variance approach in which one may ignore interaction terms if they are non-significant and pool them with the error term (Blalock, 1979). Since interaction effects are difficult to interpret, one may prefer to delete them if doing so results in a less-than-significant L^2.

Although intuitively one might wish to "build" a model, logit and log-linear analysis take the opposite approach.* One usually starts with the most complicated model and attempts to reduce it, testing at each step whether the difference between the present and the most recent model yields a significant L-Square. At the point that it does, one stops.

Canadian Issues

Overall the Inuit groups tended not to have selected local stories, (i.e. all other factors considered equal): Z = -4.43. In study 1 this was particularly evident (Z = -5.32). This effect was mitigated by the effect of time (study). In 1974 Inuit students were less likely to chose local stories (Z = -5.32), and in 1980 although less categorically, they were also less likely to chose these

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*Some authors do approach model selection in this direction: cf. Knocke and Burke, 1980.

stories (Z = -1.73). The difference between the two values is suggestive since one is significant and one is not. If one value is significant and one is not, the difference between them must be significant provided they are measuring the same attribute, (i.e. the values are contrasted). This effects may be interpreted to mean that the choice of local stories was abnormally low in 1974. Although it was less than 50% of the total in 1980 the actual choice rate for local stories was not disproportionately low. It may really have represented a return, or a regression to a "normal" rate of choice.

The two Inuit groups may be contrasted, revealing the striking finding that the Frobisher Inuit's choice of local stories was disproportionately low in 1974, as compared with the Settlement Inuit group in that year (Z = -2.75). However, in 1980 sixty percent of the Frobisher Inuit group chose local stories (Z = 1.27). In the third study the upward trend continued: (Z = 3.59). Over the ten years a clear progression emerged from overwhelming preponderance of choice of national issue stories toward a more balanced choice of local and national stories, in fact a predominance of local stories among the Frobisher Inuit (Z = 2.11).

The Settlement Inuit appear to have selected significantly more local stories in 1974 (Z = 2.75). With the rise in Frobisher's local story selection in 1980 the Settlement Inuit fell somewhat behind, although not significantly so (Z = -1.27). In the third study the

Settlement Inuit group selected fewer local stories than the Frobisher Inuit and appear from the standpoint of the three studies overall to have been less affected than the Frobisher Inuit group, (i.e. to have undergone less of a swing). They did display a gradual increase in the number of local stories selected in response to this question but their selection was by no means as definitive as among the Frobisher Inuit group.

International Issues

The students' responses to the international issue question might be reasonably expected to correlate with those to national issues. By and large this was the case, but the effect among the Frobisher Inuit was by no means as strong as it was in the national issue question.

The Inuit students tended to select international issues as opposed to local ones ($Z = -8.13$). However, the Frobisher Inuit group selected more local stories than the Settlement Inuit group, although not significantly more ($Z = 1.17$) overall. In the first study Frobisher's selection of local stories was disproportionately low ($Z = -3.17$). This was coincident with the arrival of CBC Network Television. By the time of the second study Frobisher selected proportionately more local stories than the Settlement Inuit group ($Zs = 3.12; 3.16$, for 1980 and 1983).

The Settlement Inuit in the first study selected significantly more local stories than Frobisher. However, their raw percentage of local story selection did not change

overall, in fact it declined in the second study. Following 1974 the Settlement Inuit fell behind Frobisher in local story selection. In fact the most distinguishing feature of the Settlement Inuit students' response to this question was their relative stability of response in comparison with the Frobisher Students.

Travel Aspirations

Overall travel aspirations for the Inuit groups tended toward destinations outside the North ($Z = -8.77$). Of the two Inuit groups Frobisher expressed somewhat more Northern travel preferences, albeit not significantly more. In both the first and second studies there were significantly more preferences expressed for non-Northern destinations ($Z = -4.38$; $Z = -2.53$, for 1974 and 1980). Contrasted with the first study, however, there were significantly more preferences for travel to Northern destinations in the second two studies ($Z = 4.38$; 2.14).

Differentially Frobisher appears to have been least likely to have chosen Northern destinations in the first study ($Z = -2.55$). Their greatest jump toward Northern points occurred in 1980 ($Z = 2.55$) although their year of greatest preference was 1983 (48%). Analagous to their choices for national and international issue stories, an abnormally low Northern orientation appears to have obtained in 1974, one year after the arrival of television in the community. The latter two studies are characterized by a regression to a more Northerly orientation.

The Settlement Inuit group did select significantly more Northern destinations than Frobisher in 1974 (Z = 2.55). However, this trend reversed in 1980 and 1983. The Settlement Inuit students appear to have been less Northerly in their travel orientations than the Frobisher Inuit students in the second and third studies. This may almost be interpreted as a "lagged" effect from the introduction of TV. The effect appears to have been exceptionally strong among the Frobisher Inuit group coincident with the arrival of network television. The Settlement Inuit group underwent a slower progression of Northerly orientations, having started from a more positive Northerly attitude in 1974. Their shift over the three studies was much more gradual.

Choice of Working Location

Both Inuit groups' orientations towards this question were Northerly oriented by more than 50% at each of the three time points (Z = 7.56). Frobisher's attitude increased with each of the two successive studies, although overall the Settlement Inuit group was the more Northerly oriented of the two (Z (Frobisher) = -3.01).

Among the two groups over time there was a steady increase in Northerly orientations with the two successive studies, although the Settlement Inuit group did register a slight decline (from 74% to 72%) between 1974 and 1980. This, however, was neither significantly lower than their response rate in the first study, nor significantly less than Frobisher's responses that year: (i.e. there was no

ethnicity-by-study interaction for that year between Frobisher and the Settlements).

The variables discussed in the previous sections represent indices of attitudes toward what we may call Northerliness. This is defined as the relative importance that the North plays in the individual's perception of the issues in question. To the extent that the individual selects the Northerly orientation the North may be said to play a commensurate role in the individual's thinking with regard to that issue. Aggregated over the members of a group the results may be considered to represent the thinking of the group on that issue.

It is unfortunate that no study was done prior to the arrival of CBC TV in Frobisher Bay in 1972. Had such a baseline study been done it might have been possible to discern whether Frobisher's 1974 overall non-Northerly orientation toward all of these issues, with the exception of the last, was an anomalous, or a pristine state. If this situation had been pristine, there could have been said to have been no influence from the advent of television. This would have implied that Frobisher's orientation in 1974 was natural and undisturbed. Had it been anomalous the contrary could have been concluded. There not having been a pre-TV study in Frobisher, one can only wish that there had been. However, there were other possibilities, which I shall address.

If one considers the attitudinal variables of Northerly

orientation there appears to have been a shift from non-Northerly toward Northerly outlooks. This shift is far more pronounced among the Frobisher Inuit group. Furthermore, the starting point of the Frobisher Inuit group in 1974 was, on all issues, less Northerly than that of the Settlement Inuit group. With the exception of the choice of working location Frobisher's starting point in 1974 was significantly less Northerly than those of the Settlement Inuit groups.

If one could establish that Frobisher's 1974 results were anomalous, a case could be constructed to argue in favour of a television effect, since the only thing at that point which radically distinguished the Frobisher Inuit group from the Settlement Inuit students was their relative exposure to television. At that point Frobisher Bay was the only community in the Eastern Arctic equipped with television reception. At the time of the 1974 study television had been in place for a year and a half (Coldevin, 1977). Settlement students arriving in Frobisher Bay would only have been exposed to the medium for the time since their arrival for the start of the Fall school term: September to November, 1974.

Internal Northerly Attributions

The four previously discussed variables represented external Northerliness attitudes by the students concerned. They may be considered as how one perceives the relative importance of those issues with regard to the North,

contrasted with the non-North. However, they do not reflect upon the individual. They reflect upon the individual's perception of his or her environment.

Other attributes may be said to reflect upon the individual's attitude toward something to do with him- or herself. These were the expressed preference for the principal language of Northern broadcasting; types of employment desired; the rating of the Inuit versus the southern lifestyle; and the principal leisure activities partaken of by the individual.

Given that these variables may have taken on one of three or more values per respondent the analysis and discussion become somewhat more complex. Log-linear and logit analysis do permit special contrasts of the dependent variable. In the case of the first variable, preferred language, a set of contrasts was designed:

1. 0 2 1 -2
2. 0 1 -1 0
3. 3 -1 -1 -1)

In order for the contrasts to be independent they were designed to be orthogonal. They may then be looked at separately.

As may be seen in the design three contrasts were designed. The first contrasts those who chose a mixture of English and Inuktitut with those who chose either alone. The second contrasts those who chose English alone with those who chose Inuktitut alone. The third contrasts those

who chose either language alone and a mixture of both with those who "didn't know". This may be considered an index of uncertainty by some as opposed to those who expressed an opinion.

The rationale for the first contrast involved a consideration of whether the tendency to chose both languages together differed from the tendency to chose either one to the exclusion of the other. The choice of Inuktitut may have represented a favourable attitude toward Northerliness (defined earlier). The choice of English may have implied the contrary attitude. However, the choice of both together may have implied a tendency to put the two together in the individual's perception, (i.e. a tendency to synthesis). This gets at the heart of the "Traditional-Transitional-Modern" trichotomy (Inkeles and Smith, 1974). Those favouring Inuktitut might be considered to reflect traditional values. However, the dominant paradigm model breaks down here. Clearly it is possible to construct a rationale to support the depiction of those selecting English alone as transitionals, or as modernists. The same may be said of those selecting a mixture. This is another justification of Rogers' break with the dominant paradigm approach (1977). Even those selecting Inuktitut alone may be considered to represent either a transitional or a modern approach, given the appropriate rationalizations.

Overall results from this question indicated that the

Inuit students were significantly less likely to have chosen either English or Inuktitut alone than a mix of the two (Z = -2.28). This was irrespective of the year of study, (i.e. other considerations being held equal), including the identity of the Inuit groups themselves.

English was significantly more likely to have been selected than Inuktitut alone: Z = 4.52. This tendency appears to have been strongest in the first study and particularly among the Frobisher Inuit group (62%). There was a steady decline for both groups after this, particularly among the Frobisher Inuit.

Curiously, the highest occurrence of the "mix" response occurred in 1974. For Frobisher it was 27%, and 52% for the Settlement Inuit group. Thereafter selection of this option declined among both Inuit groups, although most discernably among the Settlement Inuit group: 52% in 1974; 33% in 1980; and 37% in 1983.

Few students expressed uncertainty over the three studies (as indicated by the number of "don't know" answers, or non-responses): twenty-eight students reacted this way overall, although there was a trend for this type of response to increase between studies (Z = 37).

Between groups, the Settlement Inuit group appears to have selected either language alone less frequently than Frobisher (Z = -2.98). Furthermore, they appear to have chosen English more frequently than Inuktitut when the two languages were contrasted separately (Z = 2.73).

Looked at from the perspective of "study", or time, collapsing over group, English and Inuktitut were selected much more often alone in the latter two studies, than in the first. The tendency to wish to see a mix appears to have been strongest in the first study (Z = 2.43, 1st versus 2nd; Z = 2.36, 1st versus 3rd).

Contrasts between the languages alone were particularly interesting. It is apparent that the choice of either language alone was significantly less in the first study: Between the latter two there was little difference between the coefficients (both were .288).

Between languages the first study showed a clear preference for English (Z = 3.59). The striking aspect of this finding is that the first study is the one which stands out among the three. There is little difference between the second and the third. The preference, moreover, is overwhelmingly for English, or for a mix of the two in the first study. The contrary obtains in the second two, (i.e. for Inuktitut or a mix of the two), the trend continuing over the two later studies.

Differentially over time or between studies, the only noticeable result involves the Settlement Inuit's choice of English or Inuktitut alone. They selected this more than Frobisher did in the third study as compared with the first, (i.e. at the end of the ten years the Settlement Inuit group were more likely than Frobisher to chose Inuktitut or English alone): Z = 2.09.

The most striking finding involves the evident shift away from the selection of English toward Inuktitut in the later studies. There does appear to have been a retrenchment of Inuktitut among the Frobisher Inuit, although the shift is not statistically significant.

Desired Types of Employment

As noted earlier this question asked for the type of employment the student(s) would most like to obtain upon finishing their studies. Choices, of which there were sixty-six in 1983 alone, were trichotomized into Professional, White Collar, and Blue Collar positions. This was an attempt to directly measure the individual's perception of his/her own future.

As before three contrasts were defined, since this variable could take on one of four values. These were: professional versus white and blue collar; white collar versus blue collar; and don't know versus the other three. A fourth, professional and white collar versus blue collar, was added.

Professional versus white and blue collar produced no significant overall effect. This indicated that when these two choices were considered there was no overall difference, (i.e. when other considerations were held constant). Furthermore, this contrast displayed no significant effects when considered by the independent variables ethnicity and study, nor by the ethnicity-study interaction. It was thought that there might have been a professional-white or

blue collar dichotomy of preference for employment among and between ethnic groups and/or studies. Its relative absence suggests a corresponding absence of such a perceptual dichotomy among the samples.

White collar versus blue collar revealed a significant overall effect ($Z = -3.02$), indicating an overall preference for the blue collar positions (as evinced by the negative-valued coefficient). This in itself is not surprising given the relatively high proportion of students enrolled in the Settlement Maintenance, and Electrical Mechanical curriculum options. The largest proportion of these came from the Settlements. When this contrast was considered by ethnic group it generated a significant coefficient ($Z = -2.8$) indicating that overall, (i.e. irrespective of study), the Settlement students picked blue collar jobs 3.15 times more often (according to the odds calculation algorithm outlined earlier).

On none of the studies, however, were blue or white collar jobs selected more frequently, (i.e. there was no study effect). This indicated that the relative proportion of white-to-blue collar job selections was consistent over the ten years.

Don't know versus other choices not surprisingly, generated significant coefficients all of the way through. However, the only meaningful interpretation of this was that overall there were fewer "don't know" responses. The consistency of this tendency is revealed by the lack of any

interaction effects on this contrast.

Blue collar versus professional and white collar generated a significant overall main effect. Blue collar positions were chosen more often by 1.23 to 1. When considered by ethnicity the blue collar jobs were chosen more often by the Settlement Inuit students (Z = -2.8 or by 2.12 to 1). Considering the prevalent streaming of Settlement Inuit students into these options, this result is not entirely surprising. There was no significant two-way interaction indicating that the responses of the groups tended to be consistent over the ten years. The absence of a time, or study effect confirms this.

Rating of the Inuit Lifestyle

The respondents were asked to rate the Inuit lifestyle as worse, better, or no different from that of people living in southern Canada. Allowing for "don't know" responses this permitted four possible choices, again necessitating contrasts.

The following contrasts were designed: a) better versus worse; b) better and worse versus no difference; and c) don't know versus the others. Overall the Inuit students felt that they were better off than people in the south, (i.e. they had a better lifestyle): Z = 5.75. It must be noted that many of the students had visited the south, but that the ratio of those that had visited the south to those that had not was extremely consistent across the three studies; an average of 58% in the three studies, with a

standard deviation of 1.4%. The majority of the visits were short, and one-time trips.

On the second contrast the Inuit students felt that there was no actual difference (Z = -5.44). There were very few "don't know" responses in all three studies.

When considered by groups, no discernable differences emerged over the three studies on any of the three contrasts. However, when considered by study, with ethnic group held constant, startling differences emerged. As opposed to Study 1 in 1974, the second study group were significantly more likely to state that the Inuit lifestyle was better than that in the south (Z = 2.9). By the time of the third sampling there was a slight trend in the opposite direction, (i.e. they were slightly less inclined to express a positive attitude than they should have been under independence), with reference to the 1974-1980 swing.

With regard to the contrast between those with a definite opinion and those feeling that there was no difference between the two lifestyles, in both study 2 and 3 there was a marked tendency to make a decision, (i.e. have an opinion either way). The most significant year for the "no-difference" category was that of the first study (1974), coincident with the arrival of television in Frobisher Bay.

The coefficients for the last contrast "don't know" versus the rest were significant. However, only seven individuals responded with this response in the three studies; its interpretation may have little value.

Leisure Activities

This question asked the students what they did when not in school, working, or studying. The question was put in a multiple-choice format of which the respondent was asked to select one of ten choices. Since it proved somewhat cumbersome from the viewpoint of log-linear analysis, responses were, at this point, dichotomized as to their "traditional" or "non-traditional" character. Overall results demonstrated an overwhelming tendency toward non-traditional pursuits when ethnicity and study are not considered. However, the Settlement Inuit displayed far more engagement overall in non-traditional activities than did the Frobisher Inuit ($Z = 21.9$). Most striking too was the study effect over the three samplings. There was significantly more engagement in traditional activities for both groups in the later studies ($Zs = 12.1; 11.6$). This suggests a considerable resurgence in those activities following the first sudy.

The significant two-way interaction ($Z = -36.7$) is negative. This indicates that the effect of being from the settlements in the second study was less positive on non-traditional activities than the main effects of ethnic group, (i.e. being a settlement student), and study, (i.e. being sampled in study 2 or 3 combined). This may be interpreted to mean that such an effect is less of a consideration (since the coefficient is negative) than the sum of the main effects.

The implication of this is that such an interaction, which is positive for the Frobisher group, may be interpreted contrarily. Being from Frobisher in study 2 and/or three is a more powerful effect than being from Frobisher alone, or the study effect alone, or the sum of the two. This implies that the swing group is Frobisher, and that the swing occurred as of study 2, continuing and intensifying in study 3, toward more engagement in traditional activities.

Indices Summary

It is apparent that a significant swing in perception occurred following the 1974 study, related to the indices under consideration. This swing was most pronounced among, although by no means restricted to, the Frobisher Inuit groups of 1974 and 1980. It was between those two points in time that the most perceptible deviation(s) from the overall effect, to revert to the log linear terminology, occurred. The deviation continued in the third study; however, the intensity of change was somewhat attenuated in most of the indices.

It is particularly revealing that what appears to have happened was not that the swing effect was so strong after 1974. It appears that the starting point, or baseline of the Frobisher Inuit was so low in 1974 that we may consider it to have been depressed; both in terms of their deviation(s) from the Settlement Inuit students' orientations in that study, and with reference to their own

orientations in subsequent studies. This "effect" is consistent in the case of all of the indices studied.

Presumably, had influences obtained which may have acted to depress the Frobisher Inuit students' "Northerly" orientations to the indices (with the exception of employment, which was neutral in that regard) they would not have ceased to operate after the first study. Frobisher Bay, as a socio-cultural environment, was unchanged from 1974 to 1980. All of the socio-cultural influences obtaining in 1974 continued in 1980 and 1983. Others had arisen in 1980; however, there was no diminution in either presence or intensity of influences. Assuming no diminution, the regression of the Frobisher Inuit and to a lesser extent of the Settlement Inuit toward more Northerly orientations remains unexplained. Unless one presupposes that some disturbing event occurred prior to the 1974 study the oddly low Northerly orientations among the Frobisher Inuit students of that year remain unexplained as well. Had one gathered data in Frobisher prior to 1974 at an interval parallel to those between the first and subsequent studies a new baseline would have been registered from which the 1974 Frobisher results might or might not have represented a deviation.

Of most interest is the fact that all of the influences which existed in Frobisher Bay that might lead one to conclude that Northerly orientations among the Inuit adolescents were being undermined, existed in the smaller

communities as well, to a somewhat lesser extent but by no means less prevalently.

If similar influences existed in other communities something else may have contributed to Frobisher's low levels. Under the hypothesis of interest television is the principal candidate for isolation as such an explanatory factor, (i.e. we are hypothesizing that television existing only in Frobisher Bay in 1974 was to some extent a covarying agent in depressing the Frobisher Inuit students' Northerly orientations). Since no pre-1974 data exist for Frobisher Bay there is no direct comparison that may be made to test such a hypothesis. To do so indirectly a non-television community would be needed to attempt to replicate the pre-television condition in Frobisher Bay ex post facto.

Such a replication would be nothing like the conditions in pre-1974 Frobisher Bay. Being only an approximation it could not be expected to be even a facsimile. It would serve only to replicate a pre-television environment in another from a similar cultural environment, (i.e. with common linguistic and cultural groupings).

Chapter 7

Igloolik

Although conditions within the socio-cultural milieu in Igloolik in 1983 were somewhat different from those obtaining in Frobisher in 1974, as a non-television community Igloolik was considered the closest replicate that one would ever find for the non-television situation in pre-1974 Frobisher Bay.

From the point of view of development in the sense that it is used by Rogers (1969) Frobisher was more developed in 1974 than Igloolik was in 1983. In other ways, from the standpoint of services and infrastructure, the conditions were similar. Igloolik has always been a particularly culturally aware community, distinguishing itself from other communities in the Eastern Arctic. Its lack of television at the late date of 1983 was by choice, out of grave apprehension over the consequences of television for the Inuit language and culture. The choice of Igloolik as the non-television community was mandatory: It was the only Inuit community bearing enough resemblance to Frobisher, and lacking television reception, to make comparisons meaningful.

It remained to decide with whom to compare Igloolik. If the rationale for "chosing" Igloolik were to attempt to replicate the pre-1974 Frobisher Bay environment it would make the most sense, at first at least, to compare the Igloolik group with the earliest sample at GREC. As before,

separate comparisons may have been done between Igloolik's data and those of each of the three studies in GREC. However, recalling Norusis' (1985) explanation of the problem of multiple comparisons, a log-linear analysis is most appropriate, so as to examine all of the data from all of the studies simultaneously.

National Issues

Igloolik was used as the reference category for a comparison of all of the GREC-sampled groups, plus the 1983 Pangnirtung and Hall Beach samples. The object, as in subsequent analyses, was to examine the differential levels of northerly orientations among the Igloolik sample, as compared with the other groups. Note that Igloolik served as a reference category against which all of the other groups could be compared in terms of their deviation(s) from the grand mean effect; in effect, a control group.

National issues generated significant contrasts between Igloolik and all of the other groups in each of the three samplings. If one disregards Hall Beach, which included only twelve individuals, Igloolik proved to be the most northerly oriented of all of the groups. Although the overall grand mean effect for national issues was positive, (i.e. national issues were selected 10.3 to 1 using the odds calculation algorithm), Igloolik's rate of selection of national issues was far inferior to those of all of the other groups: They selected local stories by 69 to 1. The fact that all of the other groups, again leaving aside Hall

Beach, were negative bears this out.

Comparisons with the other groups to discern any trends are interesting, but problematical. In terms of selection of local stories the greatest point of depression below the grand mean effect (using Igloolik as the reference category) occured with the Frobisher Inuit group in 1974 (Z = -7). The second lowest point is among the Settlement Inuit group of 1980 (Z = -6.14). It is interesting to note that the 1974 Settlement Inuit reading was quite below that of Igloolik (Z = -5.69). At that point in time, therefore, both the Frobisher Inuit and Settlement Inuit students' selection of local stories was significantly below that of Igloolik's 1983 level.

Of interest is the observation that the Frobisher Inuit group gained ground between 1974 and 1980, but stabilized between 1980 and 1983, barely fluctuating against the grand mean effect (Zs: -3.23 to -3.22). The Settlement Inuit group, if anything, decreased in their selection of local stories as referenced to the grand mean effect (-5.68 to -6.14). However, in 1983 the Settlement Inuit group recovered somewhat and chose more local stories, although still significantly fewer than Igloolik (Z = -4.8).

In summary, in the case of the Frobisher Inuit group some kind of regression appears to have occurred between 1974 and 1980 toward toward the grand mean effect. The situation of the Settlement Inuit group is less clear. The Frobisher Inuit group's regression appears to have

"stabilized" by 1980; this did not appear to have occurred among the Settlement Inuit sample(s).

Pangnirtung, as a matter of interest, selected significantly fewer local stories ($Z = -2.65$), but still more than any of the three Frobisher or Settlement samples. Whatever influences appear to have been operating in Frobisher and the Settlements appear to have been present in Pangnirtung as well, but to a lesser extent.

International Issues

Since the students' reactions to national and international issues are known to have been correlated group similarities between the levels of the two variables should not be surprising. It is clear that there was a distinct preference for non-local stories overall ($Z = -5.69$). With Igloolik considered the reference category the pattern of the GREC-sampled cohorts from both the Settlements and Frobisher Bay is markedly similar to that for national issues. The greatest deviation is Frobisher's 1974 reading ($Z = -6.7$). Thereafter Frobisher registered an increase in their selection of local stories, although they were still well below the proportion registered by Igoolik in 1983. By and large the national and international issue question results dovetail. The one exception to the pattern of the non-Igloolik groups is Hall Beach: they reversed their selections of national and international issues, picking exclusively local stories for national issues, but 10 of 12 international issues. There being only twelve individuals,

however, I am extremely reluctant to think it much of an issue.

Travel Aspirations

As before there was an overall tendency to favour non-northern travel destinations (Z = -5.79). The greatest deviation occurred among the 1974 Frobisher Bay Inuit (Z = -5.38). However, there was a progressive regression toward the grand mean effect: In 1980 the Frobisher Inuit group was still significantly more below the grand mean effect than Igloolik (Z = -2.82), but by 1983 they were less than 2 standard deviations below it (Z = -1.46).

The Settlement Inuit groups by contrast were remarkably stable over the ten years. They picked fewer northern destinations each year than Igloolik did in 1983, and quite consistently so; (Zs: -3.81; -4.52; and -3.08). This suggests a sustained preference for non-northern destinations, whereas Frobisher's preference appears to have moved toward northern destinations. As a function of sustained development the latter tendency directly contradicts what is supposed to happen under the dominant paradigm. Generally the settlements and Pangnirtung follow what that literature has to say. In the case of Frobisher Bay, however, there is a clear discrepancy.

Choice of Working Location

Although there was a clear overall preference for northern working locations (Z = 6.59), there were no significant intergroup differences, (i.e. no Z values

exceeded 1.96 in absolute value). This preference is therefore consistent across all of the groups over time, contrary to what the dominant paradigm projects. It appears that many of the students, a majority in fact, although willing to visit the south, prefer to remain in the north on a permanent basis.

Leisure Activities

There is an overall clear preference for non-traditional leisure activities (Z = 21.9). This trend was most pronounced among the 1974 Frobisher students (Z = 3.96). However, Frobisher's preference for these activities attenuated rapidly and in 1980 they were not significantly greater than Igloolik (Z = 1.54).

The Settlement Inuit group's preference, unanimous in 1974 in favour of non-traditional activities (no Z computable), and their inclination to non-traditional activities, persisted in 1980 (Z = 2.31). It did attenuate toward the level of Frobisher's preference (Z = .69) in 1983, indicating that there had been among both groups not so much a resurgence of traditional activities, although there was a commensurate increase, but a regression toward a more evenly divided preference set of leisure activities. This appears to have been the case in Igloolik in 1983.

Of interest is the observation that the 1983 Pangnirtung sample preferred significantly more non-traditional activities (Z = 1.965) than Igloolik. Despite their close proximity to Frobisher Bay, in 1983 at

least, they appear to have had different preference patterns on this and on the rest of the dichotomous variables, patterns which generally appear to have placed them between Frobisher and Igloolik, not significantly differing from the Settlement Inuit readings.

Internal Northerliness Attributions

As before the internal northerliness attributes were contrasted over the three studies using Igloolik as the reference category. Because these variables (preferred language of broadcasting, rating of the Inuit lifestyle, and employment aspirations) were polytomous, planned contrasts were designed so as to make more parsimonious comparisons.

Preferred Language of Northern Broadcasting

As before the four possible responses to this question were partitioned into orthogonal contrasts. The first of these contrasted English or Inuktitut against a mix of the two languages. There was a significant overall trend toward a mix of the two languages ($Z = 2.26$). Between groups and times, however, only one group registered a significant deviation from the grand mean effect - the 1974 Settlement Inuit group selected a mix significantly more often than Igloolik in 1983. This was the only time they did so; there appears afterward to have been a regression on their part toward the mean effect. The Settlement Inuit groups along with the rest showed little trend on this contrast apart from the first reading in 1974. Indeed, it seems probable that much of the significant overall trend toward a mix may

be attributed to the weighted influence of the 1974 Settlement Inuit group. The actual overall coefficient, although negative, is quite small (-.0971). A small standard error, usually the result of significant agreement on an issue, resulted in the high Z value.

English vs Inuktitut was the second contrast, yielding a highly significant Z (5.7) in the direction of English. The most intriguing aspect of this is that when the groups are contrasted most coefficients (with two significant exceptions) are significantly negative, (i.e. most groups leaned toward Inuktitut more than the 1983 Igloolik sample). The two exceptions were the 1974 Frobisher and Settlement samples. They were both evenly divided, (i.e. yielding no significant trend either way). Clearly if most coefficients are significantly negative what must cause a significant positive coefficient would be an overwhelmingly positive trend, (i.e. toward English), among the reference category, (i.e. Igloolik).* Pangnirtung and Hall Beach do not appear to have deviated significantly from the other television-equipped cohorts.

The last contrast of the "don't knows" vs the rest was quite unrevealing except for the obvious: There was little fluctuation in the rates of "don't know" answers over time and/or between groups; nor did these differ from the

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*Being normalized parameter estimates must sum to zero. If most are negative the rest, by definition, must be positive.

reference category, Igloolik in 1983.

Employment Aspirations

Four contrasts were generated for employment aspirations. The first, professional vs white and blue collar, generated no significant findings overall. Hence it was not surprising to find no significant group-time differences.

However, the second contrast, professional and white collar vs blue collar did generate a significant overall effect ($Z = -2.38$). This indicated a significant trend toward blue collar positions, something that has already been remarked upon.

The most glaring finding here was that although the overall grand mean effect was significantly negative (-2.38), all of the groups referenced had positive coefficients. This implies a high negative coefficient on the part of the reference category, Igloolik, (i.e. an extreme trend toward blue collar positions). Furthermore, the Frobisher Inuit group registered the two significant deviations toward professional and white collar work in 1980 and 1983. It is probable that this is a "GREC" effect, the provision of such curriculum options being strong there. It may also be a "Frobisher" effect, since many such job roles are observable there to an extent unknown in other communities.

The white vs blue collar contrast was significant overall. The trend was toward blue collar positions ($Z =$

-2.69). Within that by group and time there were only two significant deviations from the grand mean effect as referenced to Igloolik; both of these were from Frobisher Bay and toward white collar jobs (Zs = 2.81; 2.38) for 1980 and 1983. Clearly at these times those students had a greater orientation toward white collar jobs. We may here again be observing a "Frobisher-GREC" effect.

The fourth contrast of "don't know" responses with the rest was overwhelmingly significant overall (Z = -46.58). There was clearly a trend to answer the question. However, when the groups are compared over time what emerges is that each of the first two Inuit samplings in GREC in 1974 and 1980 had significantly fewer "don't know" responses than occurred in Igloolik. This may be interpreted as a high degree of uncertainty in Igloolik regarding the types of employment roles that may be available to the students there. The implications of this are discussed in a later chapter.

Rating of the Inuit Lifestyle

Three contrasts were designed to measure the students' rating of the Inuit lifestyle. Better vs worse generated a significant overall coefficient (Z = 4.54) indicating that substantially more Inuit students rated the Inuit lifestyle better than that in the south, than rated it worse.

No difference vs those who expressed an opinion was highly negative (Z = -6.2). The majority felt there was no difference between the two lifestyles.

Don't know vs the other three categories generated a significant coefficient indicating there were fewer don't know responses than would have been expected under independence. The value of such a finding lies in an evident lack of uncertainty among the overall samples.

With regard to the individual contrasts, considered by groups the only significant reading was that of the 1974 Frobisher Bay sample on the "better vs worse" contrast (Z = -1.97). This indicated that the Frobisher Inuit group of that year considered themselves significantly worse off than the others in any of the three years. The 1983 Frobisher Inuit group approached a significant level in the opposite direction (Z = 1.82), but what stands out are the low readings of the first two Frobisher Bay groups (Z (1980) = -1.16).

The contrast of those expressing an opinion with those seeing no difference was strongly weighted in the direction of no difference. This was particularly evident in both 1974 groups (Zs = -2.36, -2.97) (referenced to Igloolik in 1983). Although Hall Beach in 1983 approached having significantly more no-difference responses than Igloolik, the small sample size discourages much emphasis of this finding.

Most discernable in the findings are the high readings of no difference in the 1974 sample. The third contrast, that of "don't know" vs the answerers, as an index of uncertainty generated no meaningful results.

Chapter 8

Discussion

Eleven years after the introduction of television into the Eastern Arctic there appear to have been clear and present consequences for the young people who have been exposed to the medium. As is the case with much media research few overt behavioural changes have been observed. Influences appear, to the extent that they are discernable, to be within the individual. Salomon's assertion, quoted earlier (Salomon, 1985, p. 383) seems to bear some merit, but that point is really a reiteration of earlier research conducted by Noble (1975). The point is that people do not merely receive an influential agent; they use it, in the sense of employing it to some end of satisfaction to the individual. This is the entire thrust of the uses-and-gratifications approach to media research.

None of this is really disputed. However, the present study approached a more complex question, or rather the same question from a different perspective; that of communication and development. To reiterate, the whole of the development research argues that communication grows consequent to the progression of development. The argument of this research is the contrary; Development may grow from enhanced communication, but only if the communication has utility. As expressed by Inkeles and Smith (1974) and others (Lerner, 1958) the dominant paradigm literature implies that development in the way of what is called "modernization"

(Inkeles & Smith, 1974), may grow from enhanced communication. Literature of the North belies that generalization. Mayes (1972) notes in a typical study that communication influences (in the 20th Century) have tended to erode the lifestyle and contemporaneous mode of livelihood at each point of introduction; as each one has entered it has tended to undermine self-sufficiency and independence. This trend is totally contrary to the ethos of the development literature, which has been a product of principally American scholarship.

Mayo (in Middleton, 1980) has pointed out that naturalistic field studies are a perfectly acceptable means of evaluating communications impact and influence. This study has taken advantage of the type of fortuitous circumstances Mayo describes. Groups with differential television exposure levels have been compared, including comparisons with a group with no television exposure.

The first purpose was to determine whether exposure to sources of mass communication, as represented by television, enhances one's orientation to the cultural influences the media represent. This seeks to confirm or disconfirm the so-called "dominant paradigm" approach.

The second purpose was to examine the effect, if any, of increasing levels of available information and, as a corollary increased exposure to such sources over time.

The third purpose was to discern whether there was any link between an increased information level in the social

environment and young people's behaviour. The fourth purpose, which grew from the last, was to examine the effects of increasing modernity, (i.e. their artifacts of mass communications as educational influences).

Reduced to one, the essential purpose was to enquire whether an increasing level of available information would be likely to redound to people's benefit, whether in the terms of the dominant paradigm the enhanced information level would result in more "modern", "well adjusted" people, those who felt in control of their future. In essence, control is the theme of the research, and traditional development research suggests that enhanced personal autonomy is a natural outcome. Furthermore, it has been asserted that enhanced levels of material prosperity and general overall commonweal are likely to result from the availability of mass information sources. This last claim may be somewhat attenuated by now in the context of the North unless it is stated in terms of a material improvement over the past. In comparison with the rest of Canada its authenticity is dubious.

A large number of variables were examined and this further complicates the discussion of an already complex problem. Recalling again the indices under consideration, to outline the discussion:

1. Media availability, exposure patterns, most and least preferred television programs, and preferred language of broadcasting

2. Knowledge of facts about Canada
3. Perception of and attitudes toward international issues
4. Dominant national and international information sources
5. Socioeconomic orientations with respect to occupational aspirations . : travel aspirations, and evaluation of the Eskimo vs southern lifestyle
6. Leisure-time activities.
7. Internal locus of control.

Media Availability

At the time of the first sampling in 1974 television saturation had been observed a year and a half after the medium was introduced into the community. This in no way changed over the subsequent studies. If anything may be said about it at all what stands out is the speed of adoption. Given that saturation was the prevailing condition as early as 1974 a ceiling effect is observable which vitiates the prospect of meaningful comparisons with subsequent years. A comparison with pre-television Frobisher Bay, had such a study been possible, would have been valuable. None was carried out, of course, but we still have the presence of the Igloolik data gathered ten days prior to the coming of TV to that community. There, 28 of 57 students (49%) had access to a TV set. That in itself is hardly surprising; in fact what is surprising in the light of what has been observed is the fact that it was only 49%. Of real value to diffusion researchers would have been frequent periodic checks of the proportion of television

ownership, both before and after the advent of the medium. That would have given some inkling of the actual rate of adoption.

The saturation level of television availability only a year and a half after the medium's entry into the community is something of unprecedented rapidity in diffusion research. Most innovations typically take several years to make any inroads at all (Rogers, 1983). It is usually only a clear and present utility of the innovation combined with adoption by opinion leaders that facilitate diffusion. In the case of television no real change agent intervention in the physical sense may be discernable among the Inuit community. Indeed, Mayes (1972) has pointed out that the spread of media and information sources to the North has always been the preserve of external change agents, (i.e. White people coming North). Inuit did tie into these when they became accessible via Inuktitut-language content. Television had little such content and the virtual universal possession of TVs (since we may presume that even people who did not own one had access to someone else's) is that much more startling.

It is another question whether it should have been surprising. Were television as an innovation conceptualized as an innovation of the same class as many others of the types discussed by Rogers (1969, 1982), (i.e. as an innovation which is, at the risk of sounding tautological, innovative because it is new), television's "performance" as

a newly diffused innovation was remarkable. The point is, could or should one, if only by common sense, have expected anything else?

It appears that television is more than an innovation, at least as that term is defined in the diffusion research: "An innovation is an idea, practice, or object that is perceived as new by an individual or other unit of adoption" (Rogers, 1983, p. 11). One might otherwise say that it is not a "pure" innovation in that it does not enter a "theatre" in and of itself. It appears to have two components: the medium itself, (i.e. the technology), and the message it carries: adoption. It may be that the message, rather than the medium itself is the important element in the matrix of television "effects". There is no denying that television itself, as a medium and as an innovation has had a highly successful introduction to the Canadian North and to Northern people, (i.e. Inuit) leaving aside the Euro-Canadian residents for whom television may not be considered an innovation).

The Inuit's past experience with innovation adoption has been characterized by the accomodative rate at which the innovation(s) have been adopted. This rather leisurely rate of innovation came at a was such that it allowed Inuit to transform their culture to absorb the innovation(s) with a maximum of adaptibility and synthesis, and a minimum of disruption. Innovation in the pre-electronic age was attenuated by two factors: the relative slowness of

information transfer, and the physical impediment of geography. Innis' (1951) formulations of the interconnectivity between communication and culture suggested that the communications capability of the era may shape the receiving culture's response to innovation. This implied that the receiving group had to be in a position to respond to the innovation, (i.e. to formulate a cultural response synthesized to conform to previous practices and yet accomodate and transform the cultural system of the time). Of course, they had to have the time to do so. The point is that in order to develop a response to a changing situation the affected group must have the time to formulate a response, (i.e. sufficient control within a changing situation to ensure that their response could be validated as the "new" appropriate cultural reality).

This is the central feature of diffusion. It may be the case that the innovation is adopted or rejected. Contending parties, (i.e. proponents and opponents of the innovation usually have time to formulate their response(s) to the intrusion): Acceptance or rejection are the two most frequent responses if there is no middle road. Some piecemeal acceptance may occur if it can be accomodated, but it is rarely the case that there occurs a unilateral, unequivocal acceptance of the innovation in question. When acceptance occurs it is usually the result of demonstrated utility, usually through the actions of opinion leaders, or adoption by those who are "respected" (Rogers, 1983).

Adoption doesn't occur in a vaccuum.

In the case of the television saturation of Frobisher Bay by 1974 and thereafter, something very unusual appears to have occurred. It seems, furthermore, to have occurred in the absence of those factors which the diffusion literature has identified as contributory to innovation diffusion: utility and prestige. It is worthwhile to compare the spread of television access as a device with other technologies which have become a part of the Northern "scene". Although most Inuit families do own a skidoo, not all do. The spread of the device in Scandinavia is described by Rogers (1983) and it is interesting to note that it took several years to become popular in the North. Its coming to the North was roughly simultaneous with that of television coming to Frobisher Bay. As an innovation, the skidoo appears like others chronicled in the diffusion literature, ie. it was a more "conventional" innovation. At the time of its introduction it was roughly comparable in price to a colour television set. In their rapid adoption by Inuit, television and television sets were an extremely successful innovation. In terms of time taken to spread, the medium and the device seem to have been the most successful ever, despite an apparent absence of a utility factor, unlike the case of the skidoo. Probably the essential consideration is that television is an information medium, (i.e. it conveys information virtually instantaneously). The information may or may not be useful.

With the rapidity of its adoption, however, as well as the intrinsic rapidity with which it conveys its message it is to be radically distinguished from past innovations and change agents in the region. Its evident popularity, despite the absence of a utility factor, is all the more remarkable.

The subsequent anxiety of Inuit groups is all the more understandable. The medium's popularity at the early date of 1974 came with practically exclusively English-language programming. As late as 1983 only one hour of Inuktitut-language programming was offered over CBC-North. Most Inuit over the age of 35 do not speak English and understand very little (Valaskakis & Wilson, 1984, 1985). The absence of programming in their language makes the medium's popularity quite striking.

It was found in each of the three studies that the most popular television programmes among Inuit of all ages were situation comedies, fast-paced action dramas, sports, and last but most, soap operas. One soap opera or another has consistently been the most popular programme in every audience survey of television viewing habits ever done in the Northern Canada (Coldevin, 1977; Fraser, 1979, 1981; Valaskakis and Wilson, 1984, 1985; Coldevin & Wilson, 1982, 1985). These types of programming may be distinguished within the present study by a seemingly total absence of cultural relevance for Inuit. However, the subject matter of soap operas, although elaborate, is straightforward: the

eternal human triangle of lust, power, and greed. It would be presumptuous to suggest that to the Inuit that troika of the human condition would be of less interest than to anyone else. The only difference that may explain the programmes' relative popularity is the fact that with an average unemployment rate of 15% Inuit evidently have a lot of free time in which to watch that programming (Robitaille and Choiniere, 1985, p. 39). The language factor is nevertheless surprising. However, much television programming may be said to have a grammar of its own; one may infer much meaning from context alone. The popularity is therefore less surprising. The same may be said of situation comedies, sports, and action drama.

Television's use is primarily that of entertainment, something very difficult to qualify. For Inuit, however, what is depicted in such "entertainment" is culturally far removed from the Inuit cultural context. Although there is an element of commonality in programming such as in soap operas (lust, power, and greed) and action dramas (good vs evil), the cultural context may not be something most Inuit are familiar with, particularly younger Inuit, the subjects of the present study.

Given what has been revealed about the speed of adoption, together with the obvious reluctance of the people of Igloolik to accept the medium, one must conclude that Inuit fear that there is more than entertainment to be conveyed. Despite the fact that it may <u>appear</u> harmless,

much anxiety existed in Igloolik and elsewhere; sufficient to lead to the eventual establishment of an Inuit television network.

Early in this thesis it was pointed out that early research into television tended to be "friendly" toward the medium. As Noelle-Neumann (1984) points out, few today would dispute the potency of the influence of television, although many would dispute the character. Despite its apparent harmlessness, how young people may be affected by the medium has come under increasing concern in recent years (cf. Milavsky et al, 1984). What people watch as entertainment is partly governed by what they perceive to be of value to them. If Inuit, young and old, spend so much time watching television it must have some intrinsic value to them despite its cultural irrelevance. There is much in the way of human interest to attract attention. However, the value lies in the extent to which the material will help someone orient themselves to their place in the world, or in their daily life. In the vast majority of the entertainment programming offered by CBC-North it cannot be said that this attribute obtains for Inuit viewers. Superficial situational similarities notwithstanding, daily television programming cannot be said to play a positive innovative role. The presence and evident popularity of much of the daily fare is, to that extent, disturbing; Inuit communication organizers have indicated so in very strong terms (Kuptana in Brisebois, 1983).

Rogers has pointed out that innovations have two aspects: "a hardware aspect, consisting of the tool that embodies the technology as material or physical objects and . . . a software aspect, consisting of the information base for the tool" (1983, p. 12). Technology "is a design for instrumental action that reduces the uncertainty in the cause-effect relationships involved in achieving a desired outcome" (Rogers, 1983, p. 12). With regard to what information the innovation brings there are two kinds:

> Software information, which is embodied in a technology and serves to reduce uncertainty about the cause-effect relationships involved in achieving a desired outcome. . . (and) innovation-evaluation information, which is the reduction of uncertainty about an innovation's expected consequences (Rogers, 1983, p. 14).

Previous innovations to the North went through a process of adoption and accomodation, often being remade into an instrument of the Inuit culture itself, what Rogers calls reinvention. However, in the case of television the innovation in all of its aspects burst onto the scene. The technology came without any of the early stages usually associated with innovation adoption. There was never any issue of an "innovation decision"; Decisions were made above the consumer level to the effect that the innovation was intrinsically desirable (Mayes, 1972; Roth, 1982). None of the components of the olassical innovation adoption process were present.

Consequences

Much of the apprehensive attitude toward the presence of network television in the North centred around the presumed negative impact on the Inuit language and culture (cf. Kuptana, 1983). By "negative", a predisposition to gravitate toward the English language was usually implied. The loss of and a disinclination to use the native language was cited by witnesses before the Berger Commission (Canada, 1977) as a major contributor to estranging young native people from their parents. Two major issues were addressed via separate planned contrasts. They may be articulated as questions: Would students prefer either language alone as opposed to a mix of Inuktitut and English; and would students prefer English to Inuktitut?

The "mix" issue revealed that at only one point was there a significant preference for a mix of the two languages in Northern broadcasting. The 1974 Settlement Inuit group were substantially more in favour of a mix of the two languages. This was the group that would have had the least amount of exposure to the medium, after the Igloolik group of 1983, to whom they were referenced. If one were hypothesizing a link between the exposure to television and an erosion in adherence to the use of Inuktitut the prime candidate would have been the Frobisher Inuit group. They, however, in 1974 were virtually indistinguishable from the 1983 Igloolik sample, as were the rest of the groups in the rest of the studies.

What the Settlement Inuit students, newly arrived in Frobisher Bay for the Fall school term, would have heard and seen on television was (with the exception of 15 minutes a week) exclusively English-language programming. Since they arrived from non-television environments, having learned English only in school they would not be used to hearing it spoken. With the predominance of English on television it is unlikely that they would perceive any possibility other than a mix of the two languages, if that at all. Their preference for a mix may represent a desire to see an increase in the amount of Inuktitut programming on the air.

However, when those selecting English or Inuktitut alone were contrasted it is clear that an opinion change occurred over time. At the first sampling there was a slight trend among the Frobisher group toward Inuktitut; the Settlement Inuit students had no clear preference. By the time of the second study, however, there was a clear and significant preference for Inuktitut that was shared by both Inuit groups. This trend continued to 1983. To what it may be attributed is highly problematical. However, it is worthwhile to note that the first satellite experiments with the Inuit Broadcasting System, the precursor to the Inuit Broadcasting Corporation, were taking place at the point of the 1980 study. Accustomed for years to seeing a steady diet of English (and even French) programming, the innovation of Inuktitut television may have influenced many of the students to think that Inuktitut on television was no

longer exceptional.

The question was phrased in such a way that it did not ask the respondents to distinguish between "Inukshuk" and CBC-North. At that time (1980) the two systems used different television channels, creating a clear distinction between them for most viewers. This, incidentally, was a different situation from that which exists today. IBC shares the same channel with CBC-North, and has since its inception in 1981. At the allotted times IBC takes over the channel. In fact, on questioning in 1984, many Inuit of all ages were not aware that IBC is an entity separate from CBC-North (Valaskakis and Wilson, 1984). It may be that at that early point of 1974 a mix of the two languages refelected the Settlement Inuit students' desire to have more Inuktitut on television. By that time the Frobisher Inuit students, a year and a half after the introduction of TV may have come to have accepted the situation.

The advent of IBC and its precursor "Inukshuk"" may have enhanced the likelihood of students replying in favour of Inuktitut after 1980. The fact of there finally being an alternative to CBC-North's mostly English-language offerings may have suggested or instilled the idea that all-Inuktitut TV was an alternative.

Igloolik responded overwhelmingly for English, the origin of the overall positive coefficient. To what may this be attributed? Without further testing one may say very little. It might be expected that over time Igloolik

would register a migration away from English toward Inuktitut as the other groups have. One would have to retest in Igloolik to establish that, however. With the continued presence of IBC on the scene, however, it is difficult to think of anything else happening other than a slow migration toward Inuktitut, or at least a mix. This is intrinsically significant from the diffusion standpoint.

When television arrived in the North it did so unilaterally, at the behest of external authorities. There was no real diffusion in the sense that the literature uses the term, since the medium arrived and spread so rapidly that its advent was not an adoption process. It had, for example, none of the characteristics of enhancing decision making by reducing uncertainty over an issue. The term to describe a spread so rapid as to be irresistable is "viral" (Rogers, 1983). It arrived and took up a role which was primarily one of entertainment, although as has been shown this does not mean people did not retain any of the information, even when they did not understand it! Nor does it mean that it had no influence on them. In an environment like the North people are acutely sensitive to novelty; television certainly was that.

A so-far undiscussed question on the questionnaire enquired whether students watched the programmes put out by "Inukshuk" and IBC in 1980 and 1983, respectively. In 1980 only two students among the Inuit samples indicated that they watched "Inukshuk" at all. This had risen sharply in

1983 (with the exception of Igloolik). By 1983, Inuktitut television had begun to make some inroads among the younger audience. In fact, an audience survey of the eastern Northwest Territories in early 1984 found that IBC was highly popular among the Inuit population and that younger viewers (those under 25) watched in about half the numbers of the older people (Valaskakis & Wilson, 1984). However, the shift toward Inuktitut occurred at the second sampling, December, 1980. If at that point only two Inuit students indicated watching Inuktitut television this does not imply that the rest were unaware of it. Comments indicated that many were aware of it but did not list the programmes among their favourites, which was what the question actually asked.

The 1980-1981 ANIK-B experiment's early programming was of two types: in-studio interviews and features, and pre-taped and/or pre-produced features (Valaskakis, Robbins, and Wilson, 1981). Subject matter was overwhelmingly topical, (i.e. current events oriented), with the exception of some films and cartoons produced by the NFB. As such it was not likely to appeal to younger viewers; nor did it. Its presence, however, the very fact of having exclusively Inuktitut-language television on the air, may have engendered a perception that such an innovation was within the realm of the possible; this may have contributed to the upsurge of Inuktitut responses in 1980.

One cannot say that it was the cause of the upsurge; in

the social sciences one may not say that there is really cause for anything, in the strict sense. Things do exist, however, and people make decisions on the basis of the information available to them at the time. To the extent that they chose to believe the information it will become a factor influencing the decision. This, according to the diffusion literature, is what innovation adoption is based on (Rogers, 1983).

The data reveal that students in the first study seemed to have felt that the most they could have would have been a mix of the two languages. The Settlement Inuit students were more inclined to this view than the Frobisher Inuit students; they were more in favour of English. By the time of the second study and continuing into 1983 students seem to have seen the emerging possibility of Inuktitut televsion. Responses on the questionnaire indicated substantial numbers of IBC programmes listed as favourites. This possibility was unknown to the Igloolik students. Their lack of experience with the medium may have left them with the view that English was the dominant language and likely to remain so.

It should be borne in mind that Igloolik had resisted the introduction of television for years on precisely the grounds that the medium would bring an influx of predominantly English programming culturally unsuitable for its young people. This attitude could not have failed to influence the young people; referenda were held periodically

since television came North in 1973. Periodically the proportion of those voting in favour of television increased. This seems to have been related to the increasing numbers of young voters, this being the fastest-growing element of the Northern population (i.e. the median age of the population is growing progressively younger). It is widely believed to have been the preponderance of younger Inuit voting in favour of introduction which eventually swung the ballot in favour of introducing the medium. Given this predisposition toward the coming of television, by which was meant CBC-North, the affinity of Igloolik's youth should not be surprising. Another survey would address the issue of whether the availablity of Inuktitut television via IBC may raise the level of acceptibility of Inuktitut television in Igloolik. Progressive exposure to CBC-North with its nightly IBC component may enhance Inuktitut television's attractiveness and desirability.

One is tempted to conclude from this that people take what they get from television and consider it desirable and acceptable until they encounter an alternative. This is actually compatible with most of the development and diffusion literature. There is, however, an inconsistency in that an innovation usually has to go through a trial adoption period before it becomes widely accepted. This did not occur with network television (i.e. CBC-North). In the case of IBC, however, it did seem to occur, particularly

among the young. This may be the generating factor of the rise in affinity for Inuktitut as the language of broadcasting. It could not have come from watching CBC-North unless it was by way of a discontinuance effect, which is a form of rejection. The data, however, indicate no diminution in the popularity of CBC-North's offerings. Nor is there any such fall-off evident in two surveys of audience-viewing behaviour in the Eastern and Central Arctic (Valaskakis and Wilson, 1984; 1985).

Employment Aspirations

The two most significant findings for this index are difficult to relate to television exposure or the lack of it. Nevertheless they are highly significant with regard to considering the North as a region under development. The first concerns the relative preference for blue collar vs professional and white collar jobs among the Inuit students. This preference has been prominently observed among the 1980 Settlement Inuit group. It is most prominently seen among the Igloolik group.

Overall a negative coefficient indicates a preference away from professional and white collar jobs, (i.e. toward blue collar which is the other component of the contrast). When the groups are compared over time, referenced to Igloolik, all of their coefficients are positive! This indicates that the reference category, (i.e. Igloolik was highly negative), since all coefficients for a given comparison must sum to zero. A strong trend is visible

among Igloolik to favour blue collar jobs. This should not be too surprising since professional and white collar positions are quite rare in Igloolik. Most professional positions would be held by White southerners (whatever was available) and most white collar would be at the clerk-secretary level. With the exception of some teachers no Inuit would fill professional positions.

One could make a case for the absence of television increasing a tendency to select blue collar jobs. Without television they would have had no exposure to the large number of professional and white collar positions depicted by the medium in both fictional and non-fictional contexts.

It was noticed in 1980 that the Settlement Inuit students selected far more blue collar jobs than Frobisher, but that this was believed to have been closely related to the large proportion of that cohort in the Settlement Maintenance curriculum option at GREC. In this longitudinal contrast (professional and white collar vs blue collar) two groups are shown to have selected substantially more of the former; both the 1980 and 1983 Frobisher Inuit samples. As mentioned earlier this may represent a GREC effect and as such it would tend to be support for the dominant paradigm's assertions with regard to the effect of education. To what extent the prolonged exposure of the Frobisher Inuit by that time (1980) had contributed to their predominant orientation to professional and white collar work is problematical. Some of the proportions of grade membership in the three

studies are interesting. Over the three studies the Frobisher Inuit groups are highly academically oriented. However, the Settlement Inuit were not that much less academically oriented. Of the 1980 Settlement Inuit group 37% were in non-academic curriculum options. Of these, about half were in the Settlement Maintenance option (19%). Nevertheless, 39% in the 1980 sample selected blue collar positions (among which I do not include clerical-secretarial options, which are white collar fields). The point is that all of the groups selected more professional and white collar options than Igloolik. Since all of them had some kind of television exposure, with the exception of Igloolik, one may suspect television exposure as having influenced their choices.

Two circumstantial points may support such a line of reasoning. The first is that the groups which most resemble Igloolik's response pattern for this question on this contrast were the Settlement Inuit groups of 1974 and 1980. The second is the afore-mentioned responses of the 1980 and 1983 Frobisher Inuit groups, who were also the most television-exposed groups.

Further, and this flows from the previous section's discussion of language, the one group which most resembles Igloolik on the general exposure and cultural variable was Hall Beach (1983). In fact, the Hall Beach Inuit are geographically very close to the Igloolik people: 80 miles away. Culturally, there are differences, although no more

than between Frobisher and the other Settlement Inuit. Furthermore, only Hall Beach had television. In the case of language and employment aspirations Hall Beach inclined toward the stances of the television communities; the contrast coefficient for professional and white collar vs blue collar for Hall Beach was just below the .05 siginficance level (Z = 1.87).

Two other contrasts were performed. These compared the professionals with the white and blue collar selectors. The overall result was quite inconclusive, indicating that any division of opinion is centred between the professional and white collar selectors on the one side, and the blue collars on the other. Only one comparison, the Settlement Inuit group of 1983 registered a near-significant reading (Z = 1.9). This was toward the professional side and although non-significant is nevertheless suggestive.

In the North, however, the principal sources of employment are either blue collar positions working in the various community and Government infrastructure areas, or professional and/or white collar. As stated earlier, the professional positions in any Northern community are filled by White southerners, people who would have the required university preparation these roles require. The only exception is that of education where some progress toward professional training has been made. This has been chiefly as a result of McGill University's Teacher Education Project (TEP), whereby Inuit teachers may pursue their Bachelor of

Education degrees "in situ". What effect this may have on young Inuit is as yet undetermined. In the absence of Inuit teachers few young Inuit could be expected to aspire to teaching roles. In fact, in the Igloolik sample there was only one teacher role selected as a desired career.

At least in socio-economic terms the contrast of white with blue collar is another demarcation of sorts. Education does stress first professional, then white collar pursuits. Overall, as noted, the trend was toward blue collar jobs, although as in the previous instance, all of the group-time coefficients were positive, (i.e. toward white collar jobs). This specifies an overwhelmingly negative coefficient on the part of the reference category, Igloolik; (i.e. toward blue collar jobs). A schism appears to exist between the blue collar preferences and the other two. The students do not appear to particularly distinguish between white collar and professional; they do, however, distinguish between blue collar and the rest.

The case of the Hall Beach group is again very interesting since they were the closest in all terms to Igloolik. Looking at the professional and white collar vs blue collar, the group that has the highest contrast coefficient from Igloolik (after the two Frobisher Bay groups which have already been discussed) is the Hall Beach group ($Z = 1.87$). Hall Beach, therefore, on all of the contrasts sides <u>with</u> the television-exposed groups, not with its neighbour Igloolik.

Perhaps the most thought-provoking result in employment aspirations was revealed in the contrast between those who responded "don't know" or didn"t respond at all (the latter were collapsed with the "don't know"s), and those who did answer the question. All of the contrast coefficients were negative, (i.e. refelecting a tendency to answer the question). Some were so large that they reflected the fact that some groups had no non-answerers. This resulted in standard errors of zero for those coefficients, and hence the absence of a computable Z score. With the exception of the 1983 GREC samples, Frobisher Inuit and Settlement Inuit, all of the coefficients were significantly negative.[8] This again implies a large positive coefficient for Igloolik, thirty-two percent of whom responded with "don't know" answers. Hall Beach, furthermore, had no "don't know" answers.

There is clearly a large degree of uncertainty in Igloolik regarding career choices. The absence of television exposure appears to have contributed to a greater orientation toward the community, (i.e. inward, in terms of information). In a sense the people of Igloolik may represent an artifact of an earlier era of Northern development. Unfortunately, no surveys of those indices were done at that time, so it is very difficult, in fact speculative, to make such an observation.

The consideration of their future career prospects appears to have evoked a high degree of uncertainty existing

among this group. Consider here the findings on external Northerliness attributions reporting levels of information awareness. Igloolik was found to be the most Northerly oriented of all the groups in all of the surveys. On both national and international issues Igloolik selected significantly more local stories in comparison to the television-town students. To a certain extent these findings really reflect what one might expect to have found by common sense. Consider the exposure index, the additive scale of attributes reflecting exposure to the world beyond the community. Of the three interval-level variables of interest, internal locus of control, Canadian facts, and cultural exposure, the last two were highly correlated. On actual exposure and on Canadian information both Igloolik and Hall Beach proved to be the least exposed and the least informed; so much so that they formed homogenous subsets to themselves at the low ends of the scales when a oneway analysis of variance was performed. Of the two communities, Igloolik was the lowest on both indices (means for exposure 1.07; information 2.67).

Given the lower information levels Igloolik's tendency to chose more local stories is understandable. Not understandable, or at least readily explainable, is a lack of a parallel tendency among the Hall Beach group. One may attribute this to the presence of television in Hall Beach. What is further interesting is that the levels of Igloolik and Hall Beach are far lower on the exposure variable than

Frobisher and the Settlement Inuit groups ever were in any of the previous studies.

On the information variable Igloolik and particularly Hall Beach were roughly comparable in level with the 1974 Settlement Inuit group. Igloolik is about a point lower than Hall Beach.

Overall then, Igloolik appears to have had far less exposure to the world outside the community than any of the other sampled groups. Within the community, despite what they would have been learning in school very few job potentials would appear. Professional positions would, with the exception of teaching, be non-existent. Some white collar positions would be visible; clerk and sales positions either in Government offices or in the local Hudson's Bay store or Co-operative. Apart from those, jobs which Igloolik students would see would be blue collar. Significantly only six professional positions were chosen in Igloolik: one teacher, one doctor, and four managers. All of the other expressed choices were white or blue collar, evidently a realistic expectation of the possibilities that the students saw open. Those would be all that they would have had available as role models and in the absence of other information sources not shared with other communities, (i.e. television), those would be all they would be likely to have been aware of.

One may reason in favour of some kind of television effect here. The high proportion of "don't know" answers in

addition to the high blue collar orientation among the Igloolik sample, as contrasted with those of the television-town students strongly suggests that television has, to some extent, contributed to giving the television-community students some ideas about employment that, in the absence of the medium, they may have been unlikely to have acquired.

External Northerliness Attributes

Leisure Activities. Early studies of television effects have stressed the attention-grabbing power of the medium. Such studies have been replete with accounts of deserted streets, truancy, and creating an overall impression of people glued to their TV sets. Ten years after television entered the North this was found not to be the case. In that vein, however, one anecdote is worth recounting.

It concerns the introduction not of CBC-North to Frobisher Bay but of "Inukshuk", IBC's predecessor. "Inukshuk"'s 1980 air times were in the late afternoon. Here again, the stories of deserted streets reappeared, only in this instance pertaining to Inuktitut television. In 1974 Coldevin found that television watching was the most frequent leisure activity among that student population, capturing a minimum of 84% of the Inuit students. This was halved by 1980, and remained relatively unchanged to 1983.

All television-town students expressed a preference toward what I refer to as non-traditional leisure-time

activities. A conspicuous exception to this pattern was observed in the case of Igloolik in 1983. In that year Igloolik registered the highest proportion of traditional activities of all the groups examined in the three studies. (47.6%). In the absence of television Igloolik could have been expected to have had a different configuration of leisure-time activities. Nevertheless, when all leisure-time activities are considered discretely, (i.e. not collapsed into the traditional-non-traditional dichotomy), none of Igloolik's readings are exceptional. With the exceptions of television, which was absent, and radio listening, Igloolik's pattern of leisure activities was not remarkably different from those of the other communities of that year. More students did listen to radio than in any other community that year, so radio may have filled a role somewhat akin to television in the other communities. However, considering that CBC radio has a high proportion of Inuktitut-language programming, this is not surprising. There is furthermore the presence of the local FM radio station, broadcasting exclusively in Inuktitut, a feature absent from Frobisher Bay to this day (1986).

Traditional activities, hunting, fishing, sewing, and trapping, were higher in Igloolik than anywhere else, in any year. This coincides with other findings: Igloolik is overall a more traditionally oriented community than others with television reception. The exposure index confirms this. Radio programming, other than CBC is local, treating

local concerns. That offered by the CBC is of largely a regional nature, as is much of the English-language programming put out by CBC-North. The absence of the largely culturally irrelevant content of CBC-North television may be a contributing factor in the relative persistence of Igloolik's cultural outlook, something that has been long noticed.

It is also of great interest to follow the decline of television watching as a leisure-time activity. From 1974 to 1980, as earlier observed, television halved and stabilized between 1980 and 1983. Radio listening did not vary appreciably over the ten years, leaving the traditional pursuits to account for the change in the activities pattern.

Young Inuit do seem to be watching less television, but this does not imply that they have lost interest. Audience surveys carried out for IBC in 1984 and 1985, and for the OKalaKatiget Society of Northern Labrador in 1985 indicated that the hours at lunch time and in the two-hour period following the day's end of classes formed the periods of "prime-time" viewing for younger Inuit (Valaskakis and Wilson, 1984, 1985; Wilson, 1985). This is not inconsistent with the programme preferences given by the Inuit students. There is, however, after the 6PM news hour time a sharp drop in young Inuit's watching of television which may account for the resurgence in traditional pursuits reported in 1980 and 1983. The early fascination with the medium appears to

have been a temporary phenomenon; young Inuit appear to be reverting to a more traditionally balanced pattern of in- and out-of-school activities.

Information. These items comprised the indices on Canadian and international information. It is quite clear that the television-equipped communities are far more nationally and internationally aware than the Igloolik students. Given the relative similarity of the two types of communities one would have a pretty hard time searching for some explanation other than the absence of television in the community to which to attribute Igloolik's evidently lower level of information awareness at the national and international levels.

The relative increase in the selection of local concerns after 1974 may be attributable to two factors. The first of these is the advent of Inuktitut television in the form of the "Inukshuk" Project, precursor to IBC. Even if the programming was not of a nature to appeal directly to younger viewers, one cannot underestimate the impact such an innovation would have had on young people in terms of raising their awareness of what would have been going on in the community and in the region. Rogers has pointed out that very little of the information which flows from the "top down" in communication development projects is actually retained. In fact it is usually of little utility even though many of the receivers may be aware of some of its content (Rogers, 1977). This type of communication does not

appear to provoke much development, suppositions of the dominant paradigm literature notwithstanding.

However, alternative approaches to development have stressed that development may flow from enhanced communication, (i.e. mass communication), if several preconditions obtain. This has been termed "self-development" (Rogers, 1977), or "bottom-up" development" (Stoehr and Taylor, 1982). The principal functions of these types of development projects are the provision of technical information about problems of development and the use of new technologies. Typically innovations are used as answers to specific problems of development in a particular setting. Another role is to circulate "information about the self-development accomplishments of local groups so that other such groups may profit from others' experience and perhaps be challenged to achieve a similar performance (Rogers, 1977, p. 232-233). This type of approach has been particularly useful in agricultural development projects in African countries (Middleton, 1980). Inukshuk's and IBC's purpose was to establish the means by which Inuit could participate in the development process. The provision of information of local and regional concern was an early priority of IBC: The 1980 and 1983 studies in Frobisher Bay indicate that at least some of this material had gotten through. As noted earlier, it could not have come from other sources of mass information such as CBC-North radio or television. The

relatively high level of local information awareness in Igloolik suggests that early television impact in Frobisher Bay as measured by the 1974 study was not of a developmental nature. Gathered within a year and a half of the medium's arrival the material the students seem to have retained was of the "top-down" externally oriented definition of what was important, something which is not always, if ever congruent with local concerns. Development cannot be said to flow from that type of communication despite the fact that development of the Canadian North appears to have been conceived with dominant-paradigm-like rationales (Canada, 1977).

There appears to have been an unspoken assumption that development and the transmission of information are co-incident; one cannot begin without the other, and without the other each will be impossible. As a corollary we may say that anything that conveys the information is ipso facto an act of communication. I may conclude from the findings of the longitudinal study that development and information are not co-incident. However, communication and development may be. The flaw in the dominant paradigm's approach seems at this point to have been the assumption that the conveying of the "top-down" externally directed flow of information constituted the communication that was to be co-incident with development.

Travel Desires. Reactions to the travel aspiration question may be similarly accounted for. To a certain

extent the desire to travel to Northern destinations appears correlated with information indices, (i.e. as Northern information awareness has increased so too has the desire to travel to Northern destinations). This is revealing since it again contradicts what should have happened given the dominant paradigm's insistence that increased information flow is one of the "chief inculcators of individual modernization" (Inkeles and Smith, 1974, p. 146). Not that this does not seem to have been the case immediately after the introduction of the medium in 1974. At that point 90% of the Frobisher and 78% of the Settlement Inuit students selected non-Northern destinations. However, one would not have expected these attitudes to have attenuated with prolonged exposure to the medium.

Similarly for the choices of working locations, one would not have expected given the constant information inflow to have seen a diminution in the proportion of Inuit students wishing to work in non-Northern locations. Igloolik's level of 70% in favour of Northern working locations is not significantly different from any but the 1974 Frobisher Bay sample. That group selected significantly fewer Northern locations. It is of interest to note the evident reluctance on the part of Inuit students to leave the North on a long-term or permanent basis, which is implied by the working location question. Although many students did express an interest in non-Northern travel at all points in the study, there is apparently a reluctance to

leave the North permanently. This should not be surprising since a disposition to modernity and interest in visiting and seeing non-Northern locations is to be expected. It is furthermore to be expected that this disposition would increase with exposure to the television-conveyed inflow of information about such places. The reluctance to leave the North permanently or semi-permanently, however, seems have to have stabliized after an initially destabilizing influence, as indicated by the evident indifference toward such a move on the part of the 1974 Settlement Inuit group. Only the Frobisher Inuit group of that year was affected; in comparison with the Settlement Inuit group of that year and the non-television Igloolik group of 1983, it is apparent that there was some amount of attraction toward the south conveyed to the then-television-naive Frobisher Inuit group. However, the steady trend back toward a relatively even choice as well as the lack of any trend among the subsequent Settlement Inuit groups suggests that such an "effect", to the extent that it may have occurred, was a relatively short-lived one. Television may have some affect in drawing people away from their backgrounds, but it appears to be a weak one.

Locus of Control

Looking at the locus of control variable as an eleven-item scale the 1980 Frobisher Inuit and Settlement Inuit groups proved significantly different, with the Settlement Inuit group significantly more internal than the

Frobisher students. Although the two 1980 Inuit groups were not significantly different there was very little change from the 1980 levels of each group. In fact, when each group was measured across time using T-tests neither of the 1983 groups was significantly different from their 1980 counterparts. Such a shift as must have occurred would then have been very small. The two 1983 groups appear somewhat less dissimilar in their mean scores in the sense of having approached each other, (i.e. the Frobisher Inuit's 1983 mean was somewhat higher (6.65 vs 6.81) and the Settlement Inuit's mean was somewhat lower (7.29 vs 7.12) than each of their 1980 counterpart groups). Not too much may be made of this, however, since these appear to have been random fluctuations.

The Euro-Canadians, however, at all points were significantly more internal than any of the Inuit samples. This is consistent with results found by Lefcourt (1977) to the effect that North American aboriginal peoples tend to be more externally oriented than the general population.

I had expected in the 1980 study to find this and to find also that the Settlement Inuit students, less exposed to people and the world outside the the North, would tend to be more internal than the Frobisher Inuit students; this was confirmed. However, that result was not replicated in 1983 although ANOVAs across the two studies on the locus of control scores by group revealed no significant differences. Nor were there any observable differences between any of the

Inuit groups in the 1983 sampling.

Much of the adverse publicity surrounding television concerns its supposed effect upon the external behaviour of the individual; the bulk of this revolves around violence. The internal state has also been a concern and much literature has been devoted to this (eg. Salomon, 1984). Forbes et al. (1984) in their Alaskan work found that internal behavioural effects on the individual as measured by the locus of control were minimal. In this I must concur. Despite the multiple regression procedure which found a significant fit, only six percent of the variance in the locus of control scores was "explained".* This result meant that one was able to establish a significant prediction of that six percent, (i.e. isolate it). Hence, one may conclude that with those independent variables one may confidently predict six percent of the variance in the locus of control scores, or more properly, in what the instrument measured.

The NBC Panel Study (Milavsky et al, 1984) after ten years, thousands of subjects, and an enormous budget, invoking some very exotic statistical analyses, was able to predict with their fitted regression equations none of the variance in the dependent variable, observed peer-reported violent behaviour. One's internal locus of control is conceptually a rather more subtle phenomenon than observed

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* As measured by Multiple R-Square.

violence. Furthermore, locus of control, as a concept, is now thought to be multidimensional (Lefcourt, 1981). Although reducing the number of dimensions by principal components analysis (PCA) has been shown an effective means of analysis, it still does reduce the available variance.

It may be that the amount of variance that television watching and television-watching behaviour that may be predicted is small from the mathematical perspective. Conceptually, however, in its effect upon the individual one may be looking at something more significant.

The effort at dimension reduction yielded more intuitively graspable variables: hard work, luck, autonomy, and adjustment. Two significant results were observed. Only one, however, involved Igloolik. The Igloolik students were more inclined to believe in luck vs hard work in bringing success, than were any of the other groups. And, the Settlement Inuit and Hall Beach students were more believing in fate as opposed to autonomous action, something not unrelated to the first observation.

Although interesting, however, this indicates little if anything about the effects of television watching. One may not conclude that the difference on the second of the four generated principal components had or had not any relation to television. It appears, upon reflection, to suggest that there is little value in extracting principal components in the first place. Within the matrix of the four principal components only 47% of the total variance in all of the

locus of control items was explained. Locus of control may be a multi-dimensional construct; however, more than half of its variance was left "unexplained" in the four emergent factors. This suggests that PCA is not a particularly lucrative tool for parsimoniously interpreting locus of control when short instruments are used.

Recent research work with the construct has aimed at dimension reduction. This work has relied on increasing the number of items in each supposed dimension of the instrument, resulting in a much larger instrument. However, this approach was unacceptable for administration to Inuit students whose English may be shaky. The eleven-item instrument was really a trade-off in that although short it was believed to give more information than an incomplete longer one. The results suggest, however, that it was probably too short for the purposes of PCA.

The overall results for the locus of control instrument cannot be separated from those of the exposure index and information scale. In both the 1980 and 1983 studies these three variables were highly intercorrelated. Nor can locus of control be separated from the amount of television watched. The results from the multiple regression done on locus of control indicate that the best predictors were the information score of Canadian facts, and the amount of television watched. However, the direction of correlation between internal locus of control and television watching was predominantly positive, (i.e. television watching is

associated with enhanced internal locus of control). This seems to run counter to what the literature has suggested. In the context of the Canadian North it may represent the presence of IBC and Inuktitut television, although this is not directly measurable. The finding appears to confirm the earlier discussion of the culturally stabilizing influence of IBC, particularly among the Frobisher group, who were the longest exposed before the advent of IBC.

This study cannot reflect upon suggestions in the literature that sustained television watching appears to improve school achievement among so-called "disadvantaged" groups (Salomon, 1977; Fetler, 1984). Educational performance measures could not be obtained due to confidentiality provisions in the Northwest Territories education act. Fetler (1984) has noted that sustained television watching appears to help disadvantaged groups, but only to a point. Beyond that point television watching appears to significantly degrade school achievement in all groups. Moderate television viewing, however, appears to be correlated with higher achievement. Foremost among the variables of concern appeared to be the types of programmes watched, which were qualitatively different between heavy and light viewers. Heavy viewers tended to dramas, soap operas, and action shows, precisely the type of fare found most popular in the North. Light viewers watched public affairs, educational, or performing arts programmes, very much like the content of the Eastern Arctic's equivalent of

public television - IBC.

The parallels are quite striking, although not too much may be made of them in view of the geographical and cultural separations involved. However, the finding of a significant model fit for television watching and the Canadian information score to internal locus of control is striking. It suggests that some degree of television watching is associated to the internal orientation with respect to locus of control, and that information awareness plays a role. Actual cultural exposure, although highly correlated with information is not a significant predictor; it is removed in a backward regression. The information is, in fact, the single most powerful predictor, suggesting that information and locus of control act in concert, something not inconsistent with the prognostications of the dominant paradigm literature (cf. Inkeles & Smith, 1974).

These findings cannot be separated from the earlier-reported longitudinal findings of the log-linear analyses. Recall that all of the information-related items showed a reversion of sorts over the ten years from extremely externally oriented stances toward more evenly balanced, and in some cases predominantly Northern stances. This may be a reversion toward the norm, where Igloolik's stance represents what we may define as the pre-television norm. Associated with the norm is a high degree of personal uncertainty as revealed in some of Igloolik's orientations toward work and their future. This uncertainty appears to

occur in the presence of a highly Northerly orientation toward the information items, both those representing Canadian facts, and the reported news items. Interestingly, however, Igloolik's locus of control mean is indistinguishable from that of Frobisher Bay in either year that the latter group was measured on this index.

One may surmise that Igloolik has much in the way of Inuit cultural re-enforcement that is absent from Frobisher Bay. This may act to provide those students with a positive sense of cultural identity and ability to cope in their environment. Could one expect to see their internal locus of control decline after the 1983 advent of TV? This would appear unlikely, particularly given the counterbalancing influence of IBC which would have come to Igloolik with the rest of the CBC-North inventory. In fact, the provision of Inuit programming of a quality and quantity to suit their preferences was one of the preconditions for the acceptance of television in the community.

There appear to be several types of information content which act upon the internal locus of control, to the extent that they may be measurable. This extent is quite limited as is the actual influence which may be detected using present statistical techniques. The issue may be addressed toward the result for the individual. It should be recalled that the exhaustive NBC Panel study could explain a mere one-fifth of one per cent of variance in their criterion variable - observed violent behaviour - through exposure to

television. Despite this, controversy still rages over whether this is or is not a significant finding (Kenny, Milavsky, et al, 1984). Six per cent in that context explained in the locus of control variable then, does seem significant, particularly when one reflects on the slight findings of the rigourous and elaborate NBC project. Further, that six per cent appears quite robust, (i.e. there is a statistically significant prediction for the six percent).

Continued exposure to southern cultural norms may inculcate values. This may have the effect of enhancing viewers' attitudes toward those values the media convey. Although some studies have reported such findings (Budd, Craig, & Steinman, McIlwraith & Shallow, 1983; McIlwraith & Josephson, 1985), I am inclined to put them down to conjecture. Moderate television watching appears to be associated with increased internal locus of control levels, something not inconsistent with Fetler's (1984) findings. Increased information levels appear to be associated with television watching, and this information does not appear to have been conveyed by school or radio, since Igloolik which has those services had the lowest information scores of all the Inuit groups over the ten years. There is the suggestion that when television watching surpassed what may be called a "critical" level, some diminution in the information orientation toward local concerns may be expected. This appears to have been the case in 1974 among

the Frobisher Inuit group. The relatively low internal locus of control in 1980 suggests further that there may be a carry-over effect of such information orientations on the internal locus of control, an effect which seems to attenuate in the culturally re-enforcing presence of native language television of a largely public informational content.

Implications for Broadcasting Policy

Inuit organizations had lobbied intensely for years to establish a Northern broadcasting policy that was to emerge as the Therrien Report (Roth, 1982). IBC grew from initiatives that emerged from the sentiments contained in that Report, as so ultimately did the Northern Native Broadcast Access Plan (NNBAP). At this point, however, there is no clearly articulated Northern broadcasting policy. Evaluation of the NNBAP (Abramson et al, 1986), due in the summer of 1986, may clear the way for such a policy initiative by the Conservative Government, particularly in the light of free trade negotiations with the United States and worries about "cultural sovereignty". The implications for such a policy stemming from the present study are several and extend to the rationale for that entire Northern broadcasting programme.

Television broadcasting came to the North as an innovation of little immediate utility to the people who were to become its biggest consumers. It was quite different from previous innovations which had gone North and

been received by the Inuit with a clear and present utility, often culminating in what has been called "reinvention" (Rogers, 1983). Had nothing else happened this would have been of immediate concern to all Northerners since the medium had long been identified as an alien presence. Statements of this belief have had to await the process of political evolution in Northern Canada by which native organizations emerged to represent opinion. This led to the advent of native broadcasting in Northern Canada which is now an integral part of the Northern political process as national broadcasting is in the rest of Canada.

A role seems to have emerged for the medium out of its previous non-utility. It appears to have taken some time, however, far longer than previous innovations which enjoyed immediate utility. That utility, from the perspective of this study, is one of cultural counterweight. At this point (1986) the NNBAP has the 3rd highest operating budget of any Federally funded communications programme, after the CBC and the National Film Board of Canada. By the establishment of a native broadcasting system this utility has been effectively recognized by Government, who fund the Programme. The upcoming NNBAP evaluation to the extent that it is favourable, will re-enforce this.

Government has had, by dint of political pressure, to recognize a need for native broadcasting. The results of the 1974 Frobisher Bay study, the extreme non-Northerly orientation among the Frobisher students, suggested an

imperative. Results from subsequent studies have shown that Northern native broadcasting may play a useful role in re-enforcing cultural integrity and impart a more Northerly perspective to Northern broadcasting; features not available through CBC-North. To that extent the evaluation of native broadcasting as a continuous innovation which may play an important role in cultural development and conveying information, both integral Programme objectives, may be highly favourable. In any case the innovation has taken root and become a part of the cultural landscape. The fallout from the native broadcasting programme going back to the "Inukshuk" Project has been a native broadcasting system which sees itself in a cultural counterweight role (Brisebois, 1983). Some broadcasting societies' objective at this point in time (1986) is to make a break with the CBC and obtain a dedicated Northern satellite transponder. Since the satellites are owned by the Crown Corporation, TelSat Canada, Government broadcasting policy which regulates leasing arrangements for satellite channels may be subject to review.

Chapter IX

Synthesis and Conclusion

Over ten years many changes appear to have occurred in the television landscape in Northern Canada, and in the Eastern Arctic. This study began as one longitudinal study. Developments in Northern broadcasting in which I was able to play a role (References) have become entwined in the research and in the end became a part of it. The development of IBC has thrown CBC-North into relief. Without IBC an appraisal of the "effect" of ten years of sustained satellite television would have been problematical, and ultimately not as enlightening.

Rosemarie Kuptana, the current President of IBC, has referred to satellite television relayed North as a kind of cultural neutron bomb; it leaves people alive but kills the culture (Brisebois, 1983). An emotionally-laden statement, it is indicative of the depth of concern over the medium that led to the advent of a native-language television system in the Eastern and Central Arctic. That concern revolves around an innovation in an area with a long history of adapting to and incorporating external innovations brought by change agents. These innovations have had their reciprocal reflections upon the culture itself. We may call this process "development"; all these innovations played their role in an orderly process of change whereby Inuit moved from a hunter-gatherer to an urban one in less than fifty years. In cybernetic terms, the feedback system in

the orderliness of change, by which I mean change that was absorbable and constructive, probably broke down in the mid-1950s. At that point urban development along the lines of what has become known as the dominant paradigm entered the scene to indirectly but conceptually direct the course of Northern development.

Later disillusion among development scholars with this approach should not be surprising, given what has since become accepted as a reliable account of that development process' results (Canada, 1977). Clearly, that was not what the dominant paradigm approach had projected. Indeed, the dominant paradigm was a model of heady optimism. In terms of Northern development, however, it seems to have been inappropriate.

Northern development had historically come at a rate that permitted people to control their cultural and personal adaptation to the process. The communication process prior to World War Two was slow enough to allow this. After World War Two, however, innovation and communication accelerated rapidly to the point where satellite-relayed television entered the Eastern Arctic in 1973. Communication and innovation became synonomous with that step. This study has shown that the most drastic effects of television exposure occurred among the Frobisher Bay Inuit after television's coming to their community. These effects appear to have been most pronounced on indices related to the level of information awareness, and to a somewhat lesser extent on

those related to individually-held perceptions of one's place in the world. These effects, although intense, do not appear to have been long lived, at least observably so. There is no long-term means of establishing the significance of these effects except by repeated follow-up studies. In as much as television is a permanent fixture in the North now, further studies of this type will be unlikely to be able to discern much more of the innovation effects of the medium. There is one exception, however; a follow-up study in Igloolik would be valuable in this regard. The immediate effects which one would have expected to see would have been similar to those observed in the 1974 Frobisher Bay group, followed by a slow reversion to the norm over time. If there were to be another study to serve as the final word on the subject it would be that. Given Igloolik's known antipathy to researchers in general, however, such a study is unlikely, unless conducted under the aegis of an organization like IBC.

That television has altered the North's cultural landscape seems undeniable. It is probable that such changes are permanent; audience surveys have shown that television is part of the Northerners' daily regimen. It seems to have taken some years, however, for the medium to have been integrated to a role of purposeful utility. Very little of the early fare of the medium appears to have served any use at all, except for that of contributing to cultural destabilization; what Berger has called a

"pathology" (Canada, 1977).

The last study, of 1983, revealed that this role of television has probably been checked. Two factors appear to have figured in this. The first was probably a slow burn-off of the immediate novelty effect of the medium. The decline in reported television watching was 50% from 1974 to 1980; it remained at that level to 1983. It may be that people became saturated with the medium and had integrated it into their daily lives, ceasing to regard it as unusual. Of course, they did not stop watching it. That there was some effect seems undeniable, although it may be that such effects as the medium has are not as powerful as has been speculated. It appears that their immediate observability is of a limited duration; however, the individual is likely to retain those influences for a long period. What was probably observed was the initial "disturbance" effect, followed by a gradual accomodation over the ten years. The disturbance took the forms we have seen of some cultural alienation (in the literal sense of the word). This appears to have passed.

A second factor may have played a role in its passing: The presence, after 1980, of IBC, brought Inuit-designed television programming to the North. The upsurge in 1980 in reported news stories of local and regional concern probably cannot be isolated from this innovation. The diffusion process had gone full circle at this point, to reinvention. It is difficult to see where else the information could have

come from. Its effect is very clear in the longitudinal log-linear analysis. Clearly IBC was designed to act as a cultural counterweight. To the extent that the data reflect a reversion toward more Northerly orientations by the students, it may be considered a qualified success.

The actual influence that television has on the individual is difficult to assess. Efforts at quantifying such effects on people are less than satisfactory. This may be a deficiency of the mathematical technique used, or of the analytical concepts being applied. However, they may reflect, if only inexactly, the presence of a real contribution to the individual's behaviour. Since the final chapter on human behaviour has yet to be written one may be justified in viewing six percent of variance explained as an advance; something that was not known before. As Kenny notes, referring to violence: "A weak effect (in field research) is not surprising when we realize that laboratory research generally tells us only the maximum effect of television" (1984, p. 181), or anything else, for that matter.

The level of uncertainty regarding career paths was high in non-TV Igloolik. Development may flow from the advent of television there and act to reduce that uncertainty. To that extent development may be seen to grow from enhanced communication. In the case of the other communities this seems to have already occurred.

The inclusion of Igloolik and Pangnirtung had been

intended to establish a continuum of television exposure with no, some, and heavy exposure, the latter represented by Frobisher Bay. The settlement students were believed to represent a medium exposure level. The three-point scale did not reveal much, however, since the television communities were, with some exceptions, like Frobisher Bay. In a way this was a favourable outcome. It left television vs non-television as the only distinguishing analytical feature enabling clear comparisons. The television effect, particularly in Frobisher's case was quite visible.

Earlier I pointed out that the essential context of the problem addressed in this study was that of uncertainty. The first purpose of the study was to establish whether the dominant paradigm approach had much explanatory power in the Northern context. Clearly it does not. An increased level of information, at least in the initial phases, does not appear to enhance adaptation to change. It merely seems to supplant what orientations are already held. This appears to obtain as long as that information source is unchecked or unchallenged. It appears that a massive inflow of information, irrespective of its content, does not necessarily aid in adaptation, or induce "modernization". The quality of the information must play a role, as the influence of IBC demonstrates. Without this, the value of the communication, (i.e. that of the information content) is very low. Although some of the information may be retained, it may have an alienating effect in the mind of

the individual.

An increase in the actual information level as conveyed by the innovation of television may have undesirable consequences, as the Frobisher results have suggested. Mass communication, (i.e. television) may in such a case have a diseducational effect, something that never emerged from the dominant paradigm writers.

Implications for the Development of Educational Technology

The implications for the development of educational technology in the Eastern Arctic may be considered long term, and not at all fully visible at this point in time. However, several points are worth considering.

At the present (1987) a situation exists in the Arctic region whereby the establishment of some form of distance education system may be envisioned. The actual form such a system may take is problematical; it will not be initiated presently. It might take a decade or more to implement. However, the existence of an Inuit broadcasting system demonstrates the feasibility of such a hardware innovation. The other side of the coin - the software - becomes enticing.

IBC is currently in the production phase of programming designed for pre-adolescent children. It is anticipated that broadcasting of 45 minutes per week in Inuktitut will begin in April, 1987 (L. Osgood, personal communication, January 26, 1987). The advent of such programming may be considered to represent a distinct boundary between starting

up Inuit television, and progression toward formal educational technology. In and of itself Inuit-produced television does not constitute an educational technology approach to development. I differentiated earlier between the hardware of television and the programming software. In taking control of media output Inuit have acquired access to hardware disposition; in producing their own programming they acquired access to software disposition. However, that alone would not constitute an educational technology approach, if it stopped there.

We may define such an approach to development as some effort to achieve a specific educational goal, or in Romiszowski's (1981) model, to address a specific problem, having first determined that instruction is an appropriate solution. Instruction in what, however? To that end I apply the turn of phrase used by Kuptana (Brisebois, 1983). IBC intends to offer what may be loosely called instruction in culture, intended to redress that "neutron bomb" effect Kuptana cited. One may recall that Kuptana herself is from the Western Arctic, a region which has undergone a far longer and more intensive process of cultural destabilization in its encounter with outside cultural influences (Canada, 1977), than that experienced in the Eastern Arctic. Hence, the emotional "neutron bomb" analogy.

Nevertheless, the application of children's educational television, which is intended to redress a cultural

imbalance in the television software offered to Inuit children, may be considered an educational technology approach to resolving the problem. That problem is the diseducational influence of satellite television in the North, examined in the Eastern Arctic over ten years. Initiating children's programming may be thought of as using the medium, with one's own software to approach the problem; it may thereby be considered an educational technology approach. Considered in that light it may now be the primary solution to the problem. This, of course, does not imply that it is the only one.

There is no shortage of educational technology applications to selected problems in the development literature, before and after the passing of the dominant paradigm. One that is often cited as an example of mis-application of the educational technology approach was the SITE programme in India. However, as Starosta & Merriam (1986) point out, lacunae in the results seem to have been tied to lacunae in software aspects of the programming. No one seems to have blamed the hardware, (i.e. the principle of using satellite television as an instructional tool) for the poor performance of the SITE Project. The very slow progress toward educatipnal software development, (i.e. educational programming) thus appears valid in the case of IBC. Funds are limited and exhausting them on ill-conceived software development vitiates IBC's own utility as an approach to the overall cultural problem,

which it defines by its existence under the NNBAP.

It is easy to invalidate IBC's children's television approach with reference to the funds expended. The amounts are very small, however; and, such research does address a problem. It is important to establish that the initiative to begin the Inuit broadcasting system arose from Inuit political organizations, which have recently gone on to negotiate political changes in the structure of the Northwest Territories (1987). Clearly, that process of self-organization continues as these groups gain political maturity.

Herein lie further implications for an educational technology approach to self-development. One may expect IBC and similar groups to be pressed into service as "voices" in that pursuit. As currently specified by NNBAP objectives such a role would not be self-contradictory. The term "control", (i.e political control) may assume new dimensions outside the role of culture, although it is arguable that the two are linked.

This type of development carries implitations beyond the sphere of communications, which at face value IBC's advent would seem to represent. This may be a function of the dual-tiered nature of innovation diffusion; hardware and software. The dual-tiered aspect of innovation has its analogue in the educational technology approach (Romiszowski, 1981). It is expressed as a question of product and process, although the terms "hardware" and

"software" are used as analogies. This differentiation of the two aspects of the innovation and educational technology phenomena calls into relief the experience of the SITE Project in India. Hardware (product) was innovative; software (process) was severely handicapped. This may have been due to lacunae between the producers' and the intended consumers' perceived needs and objectives in the Project (Stanosta & Merriam, 1986).

Schramm (1977) has detailed repeated cases of successful educational technology innovation using radio in third-world countries. Indeed, developed countries too have experienced comparable success in using the medium for educational purposes (McGinnis, Patrick, 1986). In this instance, of course, radio is the medium of concern; the software aspect constituted the innovation. In the case of SITE, both hardware and software appear to have been the innovations. There was no familiarity on the part of the Indian villagers with the television innovation, product or process. Without familiarity with at least the product it appears that successfull innovation in an educational technology approach to a specific educational problem may be jeopardized. In the case of IBC, familiarity with television's hardware aspect is universal in the affected region. If countervailing strategies of self-organization are brought to bear, such as are represented by IBC and the other societies under the NNBAP, it appears that some of the acculturative stress induced by an unrestricted and

uncountered information flow may be mitigated.

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APPENDIX A

SURVEY QUESTIONNAIRE AND LOCUS OF CONTROL INVENTORY

PLEASE TRY TO ANSWER EACH OF THE FOLLOWING QUESTIONS AS COMPLETELY AS YOU CAN.

I. 1. What settlement are you from? _____

2. Have you lived anywhere else other than in your settlement or Frobisher Bay?

Yes _____ No _____

If Yes, Where? _____

When? _____

3. Have you travelled to the southern part of Canada?

Yes _____ No _____

If Yes, Where? _____

When? _____

For What Reason? _____

4. Have you travelled outside of Canada to other countries?

Yes _____ No _____

If Yes, Where? _____

When? _____

For What Reason? _____

II. 1. How old are you? _____

2. What grade are you in? _____

3. Are you male? _____ or female? _____

4. What languages do you speak? _____

5. What language do you usually speak at home with your parents?

_____

6. What language do you usually speak with your brothers and sisters?

_____

7. What language do you usually speak with your friends?

_____

8. Do you read Inuktitut? _____ Yes _____ No

If Yes, how did you learn to read Inuktitut? _____

III. 1. Do you have a television set in your home or where you are presently living? Yes _____ No _____

If Yes, is it Colour? _____ or Black and White? _____

2. How often do you watch television <u>each day</u> during the week from Monday through Friday?

_____ None at All - Don't Watch Television

_____ 1 to 2 hours

_____ 2 to 3 hours

_____ 3 to 4 hours

_____ 4 to 5 hours

_____ 5 to 6 hours

_____ more than 6 hours

3. How often do you watch television <u>each day</u> on Saturday and Sunday?

_____ None at All

_____ 1 to 2 hours

_____ 2 to 3 hours

_____ 3 to 4 hours

_____ 4 to 5 hours

_____ 5 to 6 hours

_____ 6 to 7 hours

_____ 7 to 8 hours

_____ more than 8 hours

4. What are your <u>three</u> most favourite television programs?

_____

_____

_____

5. What are your three least favourite television programs?

_____

_____

_____

6. What do you think should be the main language of television in the North?

_____

7. Do you ever watch the programs made by the Inuit Broadcasting Corporation (I.B.C.) and Taqramiut Nipingat Incorporated (T.N.I.)?

Yes _____ No _____

If Yes, how often do you watch the programs made by IBC/TNI?

_____ Almost Every Time That They Are On

_____ Occasionally (From Time to Time)

_____ Very Rarely (Hardly Ever)

What IBC/TNI programs do you like the best?

_____

_____

_____

What IBC/TNI programs do you like the least?

_____

_____

_____

8. Who mostly decides what kinds of television programs you watch in your home?

_____ My Parents (Father or Mother) or Grandparents

_____ My Brothers and Sisters

_____ Myself

IV. 1. Do you know the name of the Prime Minister of Canada?.

2. How many provinces are there in Canada?

3. What are the names of the three main political parties in Canada?

4. Do you know the name of the political party in power in the Canadian Government?

5. What is the name of the capital city of Canada?

6. What is the name of the capital city of the Northwest Territories?

7. What are the two official languages of Canada?

V. 1. What do you think are the main problems in the world today?

2. Who is the most important person in the world that you can think of?

3. In getting information and news about what is happening in the world, which one of the following sources have you found to be the most important in answering questions about international issues?

_____Friends	_____Newspapers/Magazines
_____Family	_____Shows in the Theatre
_____Teacher(s)	_____Books/Novels
_____Textbooks	_____Television
_____Film or Video-Cassettes in School	_____Church
_____Radio	_____Other Sources (Please Say What These Are)

VI. 1. What do you think are the main problems in Canada at the present time?

_____

_____

2. Who is the most important person in Canada that you can think of?

_____

3. In getting information and news about what is happening in Canada, which one of the following sources have you found to be the most important in answering questions about Canadian issues?

_____Friends	_____Newspapers/Magazines
_____Family	_____Shows in the Theatre
_____Teacher(s)	_____Books/Novels
_____Textbooks	_____Television
_____Film or Video-Cassettes in School	_____Church
_____Radio	_____Other Sources (Please Say What These Are)

VII. 1. How far do you want to go in school? (Circle one of the following)

Grade 7 8 9 10 11 12

2. How far do you think you will go in school? (Circle one of the following)

Grade 7 8 9 10 11 12

3. Would you like to go on to university if you finish high school?

   Yes _____ No _____

4. If you had a choice, what do you think would be the most interesting job to have when you are ready to start working full time?

   _____

5. What kind of job do you think you will actually have when you are ready to start working full time?

   _____

6. If you had a choice, where would you prefer to work?

   _____In Frobisher Bay or a Northern Settlement

   _____Somewhere down South

7. Where do you think your actual place of work will be?

   _____In Frobisher Bay or a Northern Settlement

   _____Somewhere down South

8. What place(s) would you most like to travel to?

   _____

9. If you could live anywhere in the world that you wanted to, where would that be? _____

10. Do you think that life in the North is better, worse, or no different than life in the South?

    _____Life is Better in the North than in the South

    _____Life is Worse in the North than in the South

    _____Life is no Different in the North than in the South

11. If you could be like any one person in the world, who would that person be?

    _____

IX. 1. When you are not working or studying, which one of the following activities do you do most often?

_____Read Books

_____Read Newspapers or Magazines

_____Go to See a Show in the Theatre

_____Listen to the Radio

_____Watch Television

_____Engage in Arts, Crafts or Hobbies

_____Go Hunting, Fishing or Trapping

_____Do Some Sewing or Knitting

BELOW YOU WILL FIND ELEVEN STATEMENT PAIRS. PLEASE PLACE A CHECK TO THE LEFT OF THE ONE STATEMENT IN EACH PAIR THAT BEST DESCRIBES HOW YOU FEEL.

1. _____ a) Good luck is more important than hard work for success.

OR

1. _____ b) Working hard for success usually pays off better than trusting in luck.

****

2. _____ a) People who accept their condition in life do better than those who try to change things.

OR

2. _____ b) People who try to change things end up further ahead than those who accept things as they are.

****

3. _____ a) I need a good education if I want to get a good job.

OR

3. _____ b) Even if I get a good education, I'll have a hard time getting a good job.

****

4. _____ a) I would work very hard to get ahead in the world.

OR

4. _____ b) Getting ahead in the world is more a matter of breaks than hard work.

****

5. _____ a) If I could change, I would be someone else.

OR

5. _____ b) I'm happy the way I am.

****

6. _____ a) Success often depends upon who was lucky enough to be in the right place first.

OR

6. _____ b) A person's success is due to his or her own actions.

****

7. _____ a) I am able to do most things well.

OR

7. _____ b) I sometimes feel that I can't do anything well.

****

8. _____ a) The average citizen can have some say in government decisions.

OR

8. _____ b) The government is run by a few people in power and the average citizen doesn't have much say in the way the country is run.

****

9. _____ a) I feel that I don't have much control over what happens in my life.

OR

9. _____ b) What I do with my life is up to me.

****

10. _____ a) I like work that asks a lot of me.

OR

10. _____ b) I don't like work that demands a total effort.

****

11. _____ a) The success of a particular person is mainly due to the type of family that he or she is born into.

OR

11. _____ b) A person can do whatever he or she wants to in life no matter what type of family he or she comes from.

****