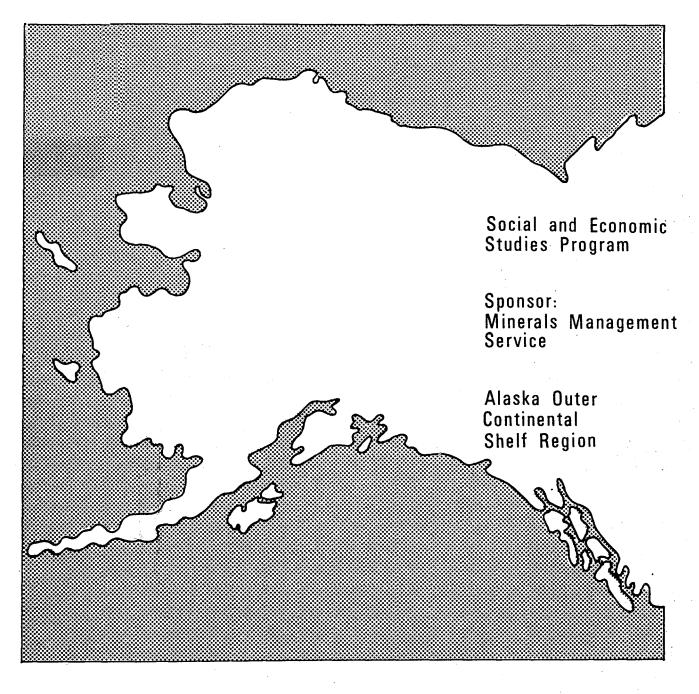
# Technical Report Number 96



Nuiqsut Case Study

ETHNOGRAPHIC STUDY AND MONITORING METHODOLOGY OF CONTEMPORARY ECONOMIC GROWTH, SOCIO-CULTURAL CHANGE AND COMMUNITY DEVELOPMENT IN NUIQSUT, ALASKA

Prepared For:

MINERALS MANAGEMENT SERVICE ALASKA OUTER CONTINENTAL SHELF REGION LEASING AND ENVIRONMENT OFFICE SOCIAL AND ECONOMIC STUDIES UNIT

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# ETHNOGRAPHIC STUDY AND MONITORING METHODOLOGY OF CONTEMPORARY ECONOMIC GROWTH, SOCIO-CULTURAL CHANGE AND COMMUNITY DEVELOPMENT IN NUIQSUT, ALASKA

Prepared by: Research Foundation of State University of New York University Center at Binghamton State University of New York Binghamton, New York 13901

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#### ABSTRACT

Nuiqsut is a traditional Inupiat village on the North Slope of Alaska. It was resettled in April 1973. The Alaska Native Claims Settlement Act and the formation of the North Slope Borough (NSB) created a fiscal, social, and political environment to make it a viable undertaking. Many of the founding families were closely related. Approximately 2/3 of the (approximately) 170 settlers remain among the 270 residents of the present village. The founding population has aged demographically and because of the uneven age distributions the numbers of births and young children are expected to increase.

Most of the 1973 settlers had kinship links to traditional users of the Nuiqsut area. This pattern continues as families intermarry and relatives move into the village. Harvested resources comprise somewhat over 50% of the food consumed in an average Nuiqsut Inupiat household. All households have some access to wage income. Most households include at least one full-time wage earner. Nearly all include at least one seasonal wage earner.

Oil development, as such, has had little direct effect on Nuiqsut. Few Inupiat work for oil companies. However, the money which supports (and is building) Nuiqsut is derived from oil through taxes imposed by the NSB. These funds (along with bond issues) are used to fund construction projects within the villages. Inupiat perceive oil development as decreasing the availability of subsistence resources, both in absolute terms and in terms of access. However, cash is now absolutely essential for the harvest of subsistence resources. Such harvesting activity is also essential as a diet consisting of all "store" food is at present neither economically possible nor socially acceptable.

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About 25% of all adult Inupiat have permanent, full-time wage positions. In addition, another 40% of adult Inupiat males are seasonally employed. Few adult Inupiat females work seasonally. Females are specializing in professionaltype full-time positions while men continue a construction/ laborer pattern. This sexual differentiation within the cash economy is also evident within the traditional economy. Women's roles are being replaced while those of men are still ideologically the center of Inupiaq values. Population composition and wage/subsistence labor force characteristics are two of the most fundamental sources of present-day social dynamics.

Although unfamiliar institutional structures have been introduced, traditional leadership and decision-making patterns are being maintained. There is a shortage of Inupiat individuals to fill the available leadership roles, however, as the boundaries of the social system have expanded. Thus, non-Inupiat have become increasingly visible. Permanent non-Inupiat populations in the villages outside of Barrow can be expected to increase the pace of social change.

Traditional Inupiaq values remain strongly held. Successful development will require change consistent with these values. New organizational and structural forms must continue to reflect such values if Nuiqsut is to remain a viable Inupiat community.

It is recommended that a program to systematically collect information monitoring these changes be implemented. This methodology should and must include the study populations as active participants. Significant variables and potential relationships are proposed, and the question of measurement (operationalization) discussed.

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#### FOREWORD

Nuigsut has been described in a variety of ways by a variety of people, as each person sees the community in a different perspective. Some have said that Nuigsut is but a suburb of Barrow--a microcosm little different from Browerville save for being a bit more distant. Others have described Nuigsut as a model of back-to-the-land native movements, where classic Inupiat values are expressed and native subsistence dominates. Several viewed Nuigsut as a frontier outpost of the North Slope Borough established to support and maintain a boundary between Inupiat settlements and the oil industry. Less charitably, Nuigsut has been called a rural ghetto--a bunch of drunks and social outcasts, living on unemployment and make-work projects. Many have seen Nuigsut as a village of very nice people. Each of these perceptions has a reality because it is held by a number of viewers. However, none provides an accurate and sufficient portrayal by itself and all seem to exaggerate certain aspects and ignore others. Clearly, Nuigsut is different things to different people.

Even the founding of Nuiqsut is somewhat cloudy, when we go beyond the relatively well-known when and how and by whom to ask why. To the question of why Nuiqsut was founded, we have heard answers ranging from the strongly valued "to reaffirm traditional Inupiat values by returning to the land" to "staking a claim on the mineral and other natural resources before they are all taken or destroyed by the oil companies". Other responses included "to get out of a deteriorating social situation in Barrow" and " to provide a point of contact and economic growth, with a new connection to 'outside'".

To the extent that these differing opinions are held by Nuigsut residents, Borough politicians and other observers,

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there is clearly a basis for a conflicting understanding of Nuiqsut's past and differing expectations for its future. Where is Nuiqsut going? How is it changing? Why is it changing? Of these questions the answer to why it is changing is perhaps the most clear, although the details may not always command agreement.

Our study was designed to provide some insight into the present circumstances and the nature of future changes. At the onset, there appear to be two alternate general trajectories for Nuiqsut's future. The first is to stay relatively isolated from the oil field development projected for its immediate surroundings, maintaining an economic system composed of cash and wage-based labor mixed with traditional subsistence and kin-based reciprocity. The second is to become a major point of access to the oil fields and the rest of Alaska--a point of land access and focus of development, perhaps rivaling Barrow as the regional services center and moving more closely to economic and social ties with the rest of Alaska. Between these two alternates, there is considerable room for many trajectories at different directions, as political and economic circumstances dictate.

To the extent that these differing trajectories are the subject of much discussion and valuation, who cares which way Nuiqsut goes? To a great extent, nearly everyone we asked cared. Nuiqsut is seen by many observers as a kind of "test case" in a number of different areas, from determining if we are able to plan development at identifiable social cost to seeing if "self determination" and "local rule" are viable concepts when the name of the game is "\$OIL". With further development planned, is it the case that as Nuiqsut goes, so goes Wainwright?

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Numerous planning and governmental bodies (North Slope Borough, Arctic Slope Regional Corporation, Kuukpik Corporation, the State of Alaska, the Federal Government, etc.) and agencies responsible for planned change (the Minerals Management Service, the NSB Environmental Protection Office, etc.) as well as Nuiqsut residents, landowners and investors and oil companies and oil field service companies will <u>all</u> be affected by change in Nuiqsut. Social scientists interested in general problems of change and development are also concerned as are other groups interested in the peoples and lands of the far North. In brief, as Nuiqsut goes, others may follow. All those who have a stake in the result should be interested in this study, as much as for what it foretells as for what it says about the present community.

Nuigsut has been changing ever since its founding--why should we be concerned about what the present situation is? Here, we need to reflect on the responsibility of the Minerals Management Service of the United States Department of the Interior, concerned as they are with the potential impact of off-shore oil development. Our purpose in conducting this Nuigsut research for them is to provide all interested parties with a base-line from which relevant changes in Nuigsut can be measured. In the future, others may wish to determine if change has occurred, measure its direction and rate of change and evaluate future conditions against those which prevailed this past winter. This would allow those interested in effecting those changes to evaluate the change and to intervene if the changes were not desirable. In short, in order to make future determinations of whether or not change had occurred, one must have a base-line study of this sort from which to make measurements. Only then can one alter policies and practices and have a reasonable expectation that the changes would be effective.

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Our present study has been hampered because it has been of short duration, we have not been able to consult with everyone we would have liked to, and we have not been able to address all issues of concern to those who live in Nuigsut. In addition, our results are subject to different interpretations and could be used in a number of political and economic arguments which go beyond those under consideration in this report. However, it is not our present purpose to judge the future uses to which these data will be put, but to make them available so that everyone, in particular the people of Nuigsut, can use them to develop responsible strategies for planning the future course of Nuigsut's growth. We do not expect that everyone will like the present situation in Nuigsut, but not everyone will dislike it either. If there are different perceptions of the community, perhaps our information can be used to determine what is important and how to maintain the desirable aspects of Nuigsut life. It is our hope that by presenting this information as it was obtained that the people of Nuigsut can take a dominant role in determining their future and that the planning powers and political representatives will be responsive to Nuigsut's needs. If that comes to pass, then our task will be rewarded and the Nuigsut people well prepared to face a future to which we have made a positive contribution.

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#### I. NUIQSUT--THE ENVIRONMENTAL AND SOCIAL SETTING

Over the past few years, volumes have been written on the geography and natural environment of the North Slope. Useful summaries for the Nuigsut area can be found in Johnson and Hartmen 1969, Arctic Institute of North America 1974, Alaska Consultants 1976, Brower et al 1977, Underwood et al. 1978, and Wickersham and Flavin 1982. Our need is not to reiterate this information here but to place some emphasis on salient environmental points which affect life in Nuigsut. Probably the most important are the structure and dynamics of the ecosystem, whose periodic rhythms range from seasonal (by the month) to daily. The wide fluctuations in environmental parameters (whether those of weather or sunshine or frozen water) affect human capabilities and subsistence opportunities. The ranges of these parameters themselves are not necessarily disruptive or threatening to basic human adaptive capabilities but it is the unpredictability of environmental factors that creates fluctuations in other aspects of human behaviors. For example, without effective management, if resources are widely fluctuating in an unpredictable fashion, we expect to observe periods of over-consumption and waste followed later by periods of privation. Traditional Inupiat storage techniques and traditional sharing and reciprocity were adaptive to such fluctuations in resources, providing an overall stability to their way of life. While the resources exploited may have changed from traditional practices, the overall utility of such adaptive strategies persists through the present day. So while the year is not without its rhythms and changes, in resources availability and human behavior, there is an overall stability whose maintenance is based on traditional Inupiat culture.

The social setting is perhaps best measured by linkages with other social groups. Here the communications network is

possibly the best representation of the structure of the social system in which Nuiqsut functions. Nuiqsut is still largely dependent upon air transportation for tangible things, exchanges, and travel. The telephone system has recently provided an important new dimension to communications between Nuiqsut and elsewhere. As we might expect, there is a structural concordance between the linkages of Nuiqsut and elsewhere in the telephone system and in the air transporation system. This structural concordance is mirrored in the frequency of linkages, with most links of transportation and telephone to Barrow. Our study demonstrates tangibly the importance of social linkages as well, with an analysis of kinship and demographic changes in Nuiqsut.

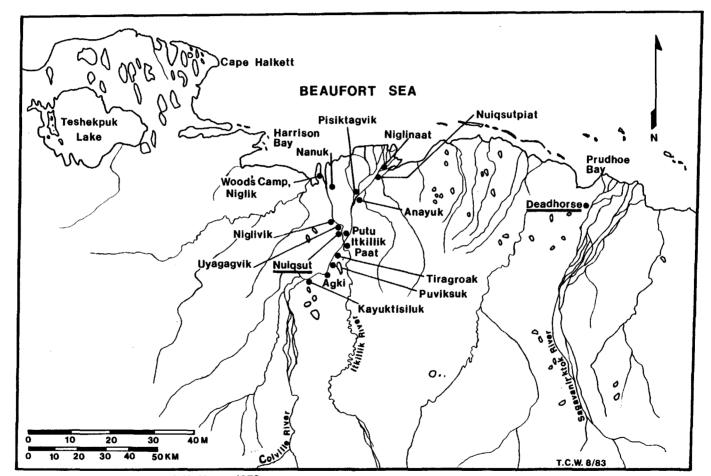
Hence, we will be examining both the geographic and social setting of Nuigsut from a broad ecological approach during the period of observation and during other periods as the data are available. While the actual content of many of the behaviors observed during our study varies from that which has prevailed in the past and may be expected to change in the future, there remains a remarkable structural continuity to these sociocultural patterns. It is our belief that this seeming paradox has led to considerable disagreement on what is "going on" in Nuigsut and to different expectations regarding the present situation and likely future changes. By utilizing an explicitly ecological systems approach to these data and by keeping careful note of differences in perspectives and scales of abstraction and observations, we will attempt to reconcile what have in the past appeared to be conflicting views and to provide a coherent base-line study of Nuigsut as it was revealed to us.

#### Introduction

Present-day Nuigsut is about 150 miles southeast of Barrow, inland from the Arctic Ocean on the west channel of the Colville River (Figures 1, 2). It shares the physical characteristics of its environment with the other communities on the North Slope of Alaska--24 hours of daylight from May through the middle of August, 24 hour nights (with twilight) from mid-November to February, a reliance on air travel since open water exists for three and one half months at most, overland travel from October through May by snow machine or dog sled or other tracked vehicle, and an average yearly temperature range of about -45°F to +50°F (North Slope Borough Health and Social Services Agency, nd). It shares with Atqasuk the problems, challenges, and opportunities of being a newly resettled community. It is unique in its location on the disputed boundary of the National Petroleum Reserve in Alaska (NPR-A). Atgasuk is within NPR-A, while Barrow and Wainwright have defined borders with it and rights within it. Nuigsut's unclear status in regard to NPR-A is part of the issue of social and political identity which faces the community.

A definitive social history of Nuiqsut remains to be written, and what follows can only add a small bit towards that end. It is our best attempt to synthesize and reconcile the existing evidence on the ground with what people have told us and the existing written accounts. We will sketch four chronological historical periods, emphasizing the last (from 1973 on). This will be our main contribution in this section.

FIGURE 2 NUIQSUT AREA



After: Libbey, Spearman, and Hoffman 1979

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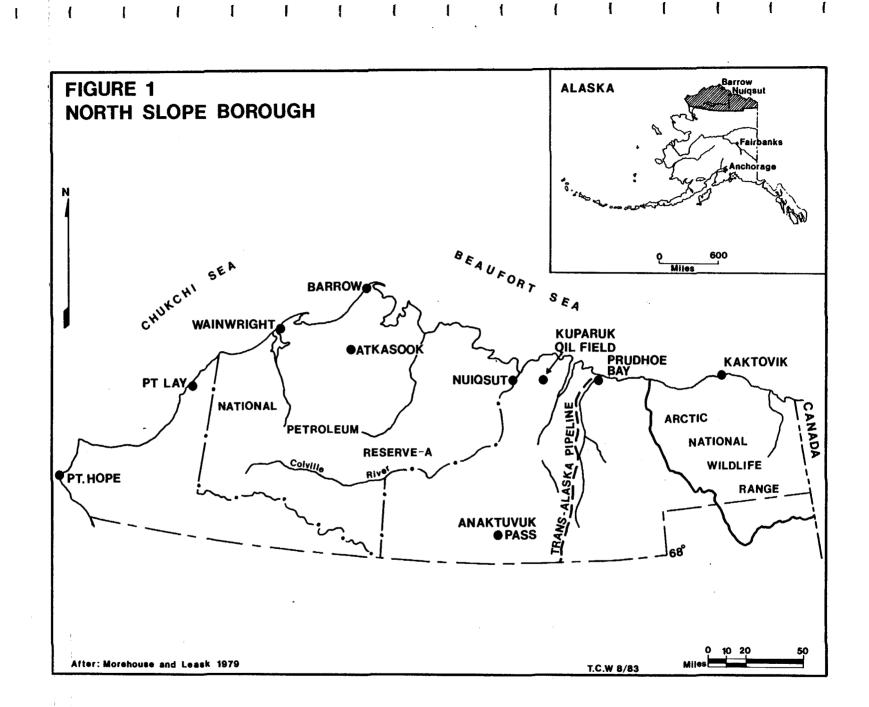
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#### Late-Prehistoric Period (Traditional Inupiat)

The prehistoric origins of those people who first lived on the North Slope are not known, nor is the date of their earliest migration. Archaeological studies have not been extensive in this region and most emphasis has been placed on the more recent past, whose cultural remains are more easily discovered on the surface of the ground. The specific area of Nuiqsut has never been subjected to archaeological investigation and we must turn to the studies of adjacent areas for guidance as to Nuiqsut's prehistoric background.

Investigations in adjacent areas include studies in conjunction with oil development at Prudhoe Bay (beginning in 1970) and studies within the Petroleum Reserve and the National Wildlife Refuge, many of which are continuing. Much information on the historic or recent period has come from interviews with Elders, in conjunction with studies of past land use or as a result of studies conducted in Barrow associated with the Utqiagvik Archaeological Project.

These data are supplemental to ethnographic studies conducted in the late nineteenth century which focused on Barrow (Murdoch 1892). This work was further synthesized by Spencer (1959) whose reconstructive ethnography has been seen as the classic and definitive work in the area. Recent research by Nelson (1969) and the continuing studies by Burch (1980, 1981) have produced an updated picture of the inhabitants of the North Slope during the historic period, providing important insight into the otherwise sparse picture available for the Colville River area itself.

The detailed picture of historic land use and subsistence activities in the Nuiqsut area can be obtained from previous studies and land use inventories of the North Slope Borough

(Hoffman, Libbey, and Spearman 1978). As background to the social history, however, it is essential to review briefly what is known of the nineteenth century Inupiat cultural heritage on whose base the development of Nuiqsut rests.

As reconstructed from various sources, many of which are more reliably indicative of the way of life at Barrow, Inupiat culture derived its subsistence from hunting and gathering the variety of seasonally available resources in the natural environment. An historical view distinguished between two distinct types of culture, one characteristic of the coast (the Taremiut) and the other of the interior (the Nunamiut) (see Spencer 1959). While these categories are still useful for comparative purposes, it is clear that intermediate types existed and that such a simple dichotomy is too gross for a discussion of particular intermediate areas such as the lower Colville River. People who occupied this area year-round subsisted on a wide range of plants and animals while participating in extensive kin-based trading and travelling networks which helped them obtain additional resources. Their travels brought them into contact with other groups who may have had access to resources not easily obtained directly from a Colville River residence, such as large sea mammals (from the Chukchi Sea coast) or caribou and musk-ox (from the Brooks Range). In exchange, the people of the lower Colville could provide fish or could act as traders of more distantly available goods. Thus, while not all resources were directly available, social connections and cultural capabilities operated to provide access to the full range of resources available on the North Slope.

Inupiat society was organized along kinship lines extended bilaterally, with the largest concentration of people being in winter settlements. However, no large winter settlement

is known to have been located on the lower Colville River and people may have passed the winter at other locations or in small household clusters. With a predominantly household level of social organization and an environment with low productivity and scattered resources, these people maintained seasonal rounds and movements characterized by great flexibility and resiliency relying on cultural emphases of cooperation and sharing to maintain their society.

While their cultural and social patterns were similar to those of other villages (such as Barrow), the people of the Colville maintained a distinctive cultural adaptation because of their different environmental and social circumstances. In the main, however, the general picture of Inupiat cultural heritage which emerges from studies of these adjacent areas can be held to describe the culture of those who lived on the lower Colville River prior to the population withdrawal to Barrow and the resettlement in 1973 which became Nuigsut.

Burch estimates the population of the Lower and Middle Colville River Kukpigmiut ca. 500 people at about 1840 A.D., but many people moved to Barrow in the late nineteenth century and few remained year-round after 1900 (Burch 1980:287).

#### Contact to the Late 1940s

Present informants tell us that during the early twentieth century they ranged from Barrow to Kaktovik, as well as inland, in their normal movements. Certainly the birthplaces listed for the current residents of Nuiqsut bear this out. While Barrow predominates, as one might expect, it is quite clear that people lived on the land well into the 1940s (the Tukles, for instance). While this is so, it is also equally clear that this period saw the increased centralization of Inupiat

population. The earlier voyages of exploration had little direct effect. However, the advent of commercial whaling in about 1850 began a period of rapid change. A stable system of subtle adaptations to a harsh and everchanging, but at the same time, sustaining and bounded environment was upset by the introduction of new resources, technologies, and dependencies (Helmricks 1983). Most of these effects were unintended and unforeseen. They were often nonetheless devastating.

The greatest of these changes must be in the rapid depopulation which resulted from Western contact and the introduction of disease and liquor. The population's demographic structure was radically altered and the kinship system fundamentally disrupted (Burch 1975). Conceptually, the system still could operate as before but the removal of many of the actual people left gaping holes in the social network. Evidence of this disruption is the extreme difficulty, if not impossibility, of collecting genealogical information from before ca. 1860. Thus Nuiqsut is an aggregation of Inupiat from different areas with different life experiences, similar in this respect to all other North Slope communities.

Many technological innovations were easily adopted into Inupiat life, but still altered it. New whaling technologies, rifles, and snow machines all enabled the Inupiat to continue harvesting traditional subsistence foods. However, in the contact context, they radically changed the tempo of life. The introduction of firearms and the growth of commercial whaling weakened the traditions of the hunt. Animals could be killed easily, in large numbers and from a distance. The cooperative corral was no longer needed to harvest large numbers of caribou. The skills of close approach were also rendered superfluous. Depopulation and the lure of employment on whaling crews or hunting for them depopulated the

interior areas (Nielson 1977:57-58).

Once firearms were accepted, there was no turning back from at least partial integration into the cash economy. Burch may state this rather too strongly (Burch 1980:282): "... by 1910, although Northwest Alaskan Eskimos still survived as human beings, Northwest Alaskan Eskimo <u>societies</u> had passed forever out of existence." Certainly dramatic changes have taken place. By 1910, commercial whaling had essentially ended due to too few whales and low market prices. Steel traps and rifles enabled Inupiat to earn cash by trapping for twenty to thirty more years, however. Trading posts, most run by non-Inupiats, sprung up along the coast. There was some tendency to return to the land in this period, at least to the extent necessary to run a trapline. It was necessary to deliver one's furs to a central fur trader (Nielson 1977:59-60).

At least one Nuiqsut informant herded reindeer in this period as well, and he spoke of another family herd as well. Reindeer herding never became commonplace, however, even though those who worked with them now remember them fondly. Trapping sustained the Inupiat need for cash for most of this period. Population dispersement was fostered by the establishment of a string of trading posts along the coast. Many people born 1910-1940 were born in or around the locations of these posts. The distribution of present native allotments is also indicative of how people were spread on the landscape at that time. Sonnenfeld (1959), at least, thinks trapping fostered a return to more of a subsistence lifestyle than that of the commercial whaling period.

However, fur prices declined in the 1930s and the last trading posts outside of major villages were closed in the early 1940s (North Slope Borough Commission on History and

Culture, 1980). People again congregated into the larger coastal communities. Additionally, the government required that all children attend school, and the only school was in Barrow. All but a few families from in and around the Colville River area moved into Barrow. It appears that one native family, the Allens, remained in the Nuiqsut vicinity. Four or five others maintained seasonal camps in the area, and one non-native family established a commercial fishing operation at the mouth of the Colville River. For the last, the wife provided tutoring for her children.

#### Late 1940s to 1973

Our information indicates that only one native household lived in the Nuiqsut area year-round during this period. One non-native couple lived at the mouth of the Colville. Several native families seasonally occupied structures in the area, mostly for subsistence activities. In addition, hunters used the area for hunts ranging from days to a month or more. These hunters came from Barrow for the most part (Personal Communications; North Slope Borough Commission on History and Culture 1980; Okakok 1981).

The events of this period have vast implications. The true extent of North Slope oil reserves and the development necessary to extract them became clear. The impacts from industrial infrastructure development and population increases and the simple need to organize, in response to these issues, ensure that the Inupiat will never be an isolated people again. In many ways, it is ironic that the assertion of Inupiat independence resulted from not only Inupiat determination, but also the desire of outsiders to integrate the North Slope into America's mainstream energy economy. The Alaska Native Claims Settlement Act (ANCSA) was the result

of an inspired group of people creating the opportunity to help decide their own future. The formation of the North Slope Borough (NSB) in February, 1972 built on this by firmly establishing a social, political, and financial base for local development. It is difficult to conceive of the ANCSA or the NSB coming into existence without the desire for oil. It is within this turmoil, the dynamic struggle of subsistence and self-determination with external economic forces and imposed change, that the refounding of Nuiqsut is set (McBeath 1981, 1982; McBeath and Morehouse 1980).

#### Oil and Government Related Activities

The period of 1942 through the early 1950s saw the construction of the DEW Line Network. We collected no specific information on the effect of this on Nuiqsut people, so the reader is referred to other sources (see Nielson 1977:43). This period saw the employment of many Inupiat men in jobs which gave them construction and heavy equipment operators skills. It thus prestaged the NSB Capital Improvement Projects (CIP) program, among other things. For the first time, Inupiat were working directly for wages instead of engaging in the harvest of subsistence resources to convert into cash. This again intensified the Inupiat dependence upon cash and the things that money could be used to buy.

Oil and government are almost inseparable to many Inupiat. This is understandable since the North Slope Borough is essentially a creation of the oil strike at Prudhoe Bay. Almost all non-Inupiat on the North Slope are somehow connected to oil. Oil money funds everything on the North Slope, either directly or through taxation. The people of Nuiqsut see oil exploration and development as one of their major concerns because of its financial benefits and potential

#### environmental/social detriments.

The Naval Petroleum Reserve Number 4 was created by Executive Order 1923. Its eastern boundary is the right bank of the Colville River, but the exact meaning of this is currently under dispute. Nuiqsut thus may be in the reserve or not. Geological mapping of the Reserve was conducted by the USGS from 1923 through 1926. Thirty six exploration wells were drilled during the extensive geological and geophysical surveys of 1944-53. Oil was found at Umiat, and gas was in evidence at several locations.

Jurisdiction over the Reserve was transferred to the Department of the Interior in 1976 and the name changed to the National Petroleum Reserve in Alaska (NPR-A). Exploratory drilling operations and seismic exploration are ongoing. Development and production are not permitted (USDI, BLM 1981:2). The most recent proposal potentially affecting Nuiqsut was a Sohio request to drill an exploratory well near Fish Creek. This is within NPR-A, approximately 32 miles northwest of Nuiqsut. It is also one of their most important subsistence resource areas both for fish and caribou.

NPR-A, of course, includes all the land west of Nuiqsut. The Prudhoe Bay and Kuparuk oil fields are actually in production to the east of Nuiqsut. Nearly all land east and south of Nuiqsut is proposed for oil leasings by the State of Alaska. The continental shelf is on the schedule of proposed state lease sales (some has been leased already). The outer continental shelf, under Federal jurisdiction, has also or is in the process of being leased. Most land offered for lease is not bid upon, but it is clear that Nuiqsut is surrounded by oil activity. One can see the lights of Kuparuk from Nuiqsut (but not vice versa).

#### Since 1973

#### RESETTLEMENT

The actual resettlement of Nuiqsut took place in April of 1973 when a group of 14 people made the first trip from Barrow. Eventually, 27 families would arrive over a period of approximately two months (Brown 1979:3). Informants in Nuiqsut listed 31 family heads as those who were in Nuiqsut the first year. As some last names appear twice, it may be that some kin-groups came formally as one household and others as two. Our very rough surmise as to the original resettlement group is listed in Table 1.

The reason for establishing the new Nuiqsut at a particular spot does not seem to be a matter of public agreement. Several non-natives, familiar with the area and capable of making such judgments, remarked that the site was rather poor for a village due to wind and poor drainage. This was not disputed, but neither was it confirmed, by native informants. The first temporary landing facilities for airplanes were five miles from the village. Transportation to the village was by boat or skidoo. The first airstrip built near the village was subject to flooding, so that at times the village was cut off from regular supply lines for weeks. These problems were not solved until the construction of a new airstrip in 1981. Meanwhile, the channel of the Colville upon which the village sits has silted in so much that access to the main river by boat is blocked.

The first draft of the Alaska Native Claims Settlement Act did not include Nuiqsut. The Bureau of Indian Affairs (BIA) did certify the village in the first amendments to the act the next year, but located Nuiqsut on the Neglik Channel by the Woods' fishing camp. Nuiqsut residents have something

## Table 1: ORIGINAL SETTLERS OF NUIQSUT, APRIL 1973

Name	Date of Birth	Name	Date of Birth
Thomas NAPAGEAK Francis Evikana Walter Archie Thomas Jr. Susie Lucy Vera	08/03/35 06/05/39 01/17/58 10/12/64 03/14/68 09/10/56 08/23/59 04/25/61	David KASAK Susie Nukapigak David Jr. Larry Harland Alice Agnes	08/10/39 02/12/45 10/08/67 09/24/56 12/13/66 10/05/67 07/07/71
Elizabeth Ellen	11/20/62 07/26/64	Clay KAIGELAK Sr. Kitty Sakalok Jimmie	09/25/15 06/15/16 08/25/42
David EVIKANA Florence Solomon Delbert Alice	11/11/37 07/22/47 03/14/64 02/25/65	Isaac Edith Susie	01/27/60 03/02/47 03/14/55
Veronica	12/13/68	Mark PAUSANNA Nannie Nayulok	12/28/18 05/19/23
Steve HOPSON, Sr. Terza Ungarnok	08/26/06 07/07/17	David Margaret Bernice	09/14/46 01/09/52 10/26/65
Raymond IPALOOK Flora Tukle Herbert	07/23/24 07/13/30 ?/ ?/59	Percy Jimmy KASAK	?/?/70
Willie SIELAK	04/07/07	Helen Ahnupkana Jimmy Jr.	03/06/41 01/11/67
Ruth Egasak Willie Jr. George	12/11/10 04/11/5? ?/ ?/60	Rhoda Jobe WOODS	12/03/61 ?/ ?/32
Frank OYAGAK	03/11/36	Alice Masuleak George	?/ ?/38 10/12/62
Irene Napageak Freddie Frank Jr. Walter	09/22/39 08/17/62 12/12/64 12/24/65	Jobe Jr. Marlene Jimmy	09/26/39 10/21/66 06/29/70
Joseph Herman	07/10/68 12/18/70	Frank LONG Jr. Hattie Matumeak Vernan	05/16/43 10/25/44 16/15/64
Jerry SOVALIK Lydia Woods Floyd Valerie Cornelia	11/16/39 04/24/41 04/04/67 07/10/64 12/22/65	Jeffrey Florence Christopher Leroy	11/20/65 01/01/68 04/04/72 03/02/73
Conrad	10/01/70	David MASULEAK Mae John	?/ ?/42 ?/ ?/43 06/10/72

# Table 1: ORIGINAL SETTLERS OF NUIQSUT, APRIL 1973, Continued

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Name	Date of Birth	Name	Date of Birth
Archie AHKIVIANA Dorcas Tukle Billy Dora Ann	07/07/40 ?/ ?/43 09/01/64 08/12/63	Mammie MATUMEAK Lucy Gordon	?/ ?/? ?/ ?/58 ?/ ?/53
Emma Lourie Lucy Mae	04/10/65 08/28/68	Robert KILAPSUK	?/ ?/?
Loila	07/03/70	Paul ORAGROOK	08/17/22
David BROWER Sr. Jane N. Kilapsuk David Jr. Karl Freddie Lucy Maria	05/16/07 12/10/29 02/15/51 09/20/63 09/26/65 09/11/61 10/24/62	Samuel KUNAKNANA Sarah Pausauna Ira Myrtha Martha Laura Mae Emma Susie Hester Ann Vera Julia	04/ ?/13 06/09/21 11/23/50 04/28/52 08/08/53 12/07/54 01/25/58 10/08/64
Neil ALLEN Annie Maggie	?/ ?/ ? ?/ ?/24 ?/ ?/45	Molly Sammy Susie	?/ ?/70 ?/ ?/67 ?/ ?/57
Ray AHNUPKANA Marjorie Kasuk Clarence Roger Harry Lottie	12/06/27 04/17/36 02/25/61 04/16/64 02/10/68 09/08/65	John AHTUANGARUAK Mae E. Evikava Cyrus Joseph Wesley Johnny Jr.	?/ ?/39 ?/ ?/29 11/14/54 01/11/56 06/23/57 07/07/58
Johnny AHNUPKANA Irene Brown Tukle Gordon Brown Gloria Brown Ben Tukle Jr.	04/06/37 ?/ ?/40 ?/ ?/65 ?/ ?/66 ?/ ?/73	Lottie Mae Evikava Delbert Evikava George WOODS Nannie Woods Abraham	10/23/32 12/23/49 ?/ ?/03 ?/ ?/05 ?/ ?/24
Wilbur AHTUANGARUAK Bernice Kanayuvak Cyrus Rodney Jeus Ellen Rose Dora	11/15/34 01/23/38 04/06/64 03/19/64 01/19/68 07/09/58 03/08/62	Norman LAMPE Annie Nayukok Robert Sandra Leonard	07/23/31 09/24/38 02/27/58 01/16/66 04/29/67

#### Table 1: ORIGINAL SETTLERS OF NUIQSUT, APRIL 1973, Continued

Name	Date of <u>Birth</u>	Name	Date of <u>Birth</u>
Edward NUKAPIGAK	02/15/25	Patsy TUKLE	06/09/33
Ruth Ahtaungaruak	01/17/25	Helen Itta	12/22/40
Joseph	12/04/48	Samuel	02/16/55
Eli	06/06/51	Donald	07/05/55
Edward Jr.	04/03/54	George	09/15/60
Isaac	04/12/57	Wallace	11/15/62
Robert	06/29/58	Leonard	10/12/62
Jimmie	07/20/60	Eunice Mae	07/21/58
Jonah	09/11/61		
Thomas Mickey	10/21/63	Joash TUKLE	06/23/26
Emily	03/04/50	Nita Tazvik	09/01/38
Martha	11/16/52	Charley	12/12/58
Dora Alice	04/19/65	Alfred	12/12/61
Doreen Alice	09/27/66	Clarence	07/05/59
Dorcas	05/15/67	Juanita	01/05/63
		Valerie Ruth	04/25/64
Bessie ERICLOOK	05/13/17	Dorothy	11/19/65
Harry	05/03/60		

of a dispute over land in this area with the only long-term non-Native residents of the Nuiqsut locale, the Helmericks, who had lived there since ca.1952. The Natives claim that the Helmericks only located there after they became aware that it was land historically used by the Inupiat. The Helmericks deny this, of course, and maintain that the Woods built their camp after the Helmericks arrived. The Helmericks do not deny that the area may have been used previously by others for Native subsistence activities on a seasonal basis. Thus, there are conflicting claims for the onset of recent continuing land use.

The present community of Nuiqsut was built next to a more-orless permanent household structure erected by Neil and Annie Allen some years previously. Patsy Tukle also had (and has) a structure several miles from Nuiqsut. Indeed, at least several people moving to Nuiqsut stopped at Tukle's before

arriving at Nuiqsut to pick up some frozen fish to take with them (Isaac Kaigelak, personal communication). No one has ventured an opinion as to why Nuiqsut was erected next to Allen's house rather than Woods' or Tukles'.

The resettlement was possible because among the responsibilities assumed by the North Slope Borough was that of educating the young. This made it practical for families with school age children to live in Nuiqsut. The Arctic Slope Regional Corporation (ASRC) assisted in their move financially and logistically, as well as by fighting for official recognition under the ANCSA (Tundra Times Ol/02/73). There are rumors, repeated by many, that Nuiqsut's location serves political/economic reasons. One scenario has Nuiqsut on top of a coal field to which the ASRC wanted to establish a claim. Another has Nuiqsut serving as a test case, to see how firmly locked up National Petroleum Reserve in Alaska (NPR-A) lands really are.

Another version, told us in Anchorage, was that when people moved back to this area they lived in tents at Putu, the Naval Arctic Research Laboratory (NARL) field facility (which was located near where Nuiqsut is today). When the time came to build, they moved to a spot some distance away. An informant says trouble between the non-Inupiat commercial fishing natives began at this time although previous relations had been good. When NARL was shut down at Putu, some Inupiat were upset because they thought a resident non-Inupiat then stole the buildings away. Natives thought those buildings would have been useful in the village and had, in fact, already been using them. This only added to the ongoing disputes over land ownership and fishing rights. That was only one among many problems caused by poor communication between Inupiat, government, and non-Inupiat.

#### DEVELOPMENT OF SERVICES

Housing is the most expensive Capital Improvement Project (CIP) in Nuiqsut. All other infrastructure development can be tied to increases in housing supply (which is of course a measure of actual or projected population increase). The new high school and the new airstrip were more costly single investments during the period of their construction, but housing is the category of largest accumulative expenditure. Utilities development is ongoing, but mainly as a result of increased demand for electricity and water from the new school and housing units. Additional infrastructure development (public roads, sewage, city dump) can also be attributed to such demand (Figures 3, 4, 5).

Services were minimal when Nuiqsut was refounded in 1973. There was no electricity, public water service, or sewage disposal. Air traffic was irregular and the airstrip was five miles away, so mail and supplies were unreliable. In such circumstances, reliance upon local resources was absolutely necessary. Ice for water was chopped from a shallow pond just north of the village (now the area between the post office and the high school). People ate mostly fish, caribou, and other local game resources. Individual "honey bucket" systems were used for sewage.

Large changes have taken place in nearly all these areas. "Honey buckets", out of necessity, remain in use in all structures except for the school, which has flush toilets. A "honey bucket" is essentially a five-gallon pail lined with a plastic bag and topped with a toilet seat. When the bag is full, it is closed and tied and dumped into the household 55-gallon drum outside (or sometimes cardboard boxes in winter, when sewage freezes rather quickly). When each household has several of these full, the city council declares a

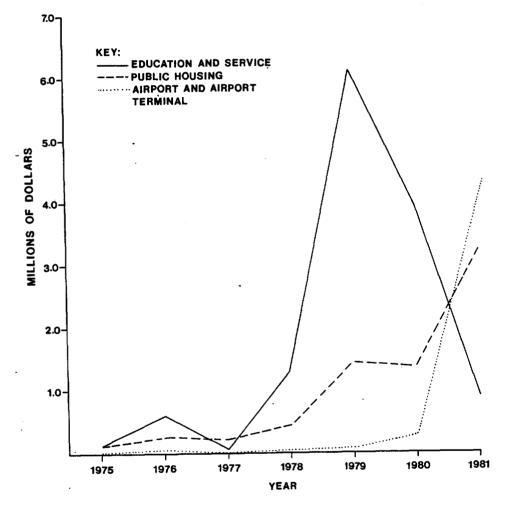


FIGURE 3 CIP FUND EXPENDITURES, NUIQSUT

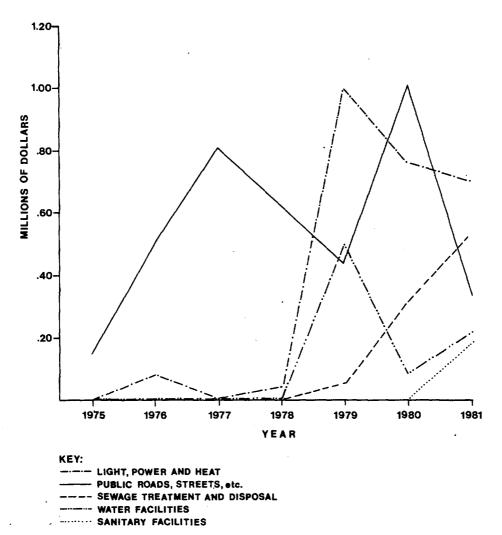
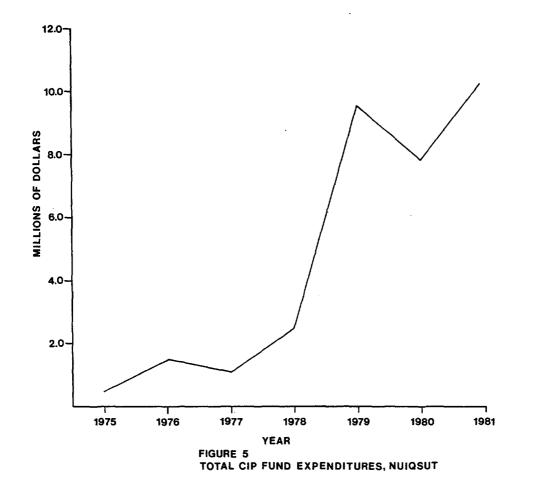


FIGURE 4 CIP FUND EXPENDITURES, NUIQSUT



"hauling day" and pays individuals \$10 for each such drum they take to the city dump for disposal. The funds come from the NSB, as that is where responsibility for sewage disposal lies. Alternatively, a crew from the NSB Public Works Department collects the drums with a tracked vehicle and takes them to the dump. Prior to the construction of the city dump, with its access roads, disposal was made at a designated spot on the tundra outside the village. The flush toilets empty into a sewage holding tank in the utilities building, which is then pumped out into the recently constructed sewage lagoon north of the school. Plans are that all village sewage will be collected and placed in the sewage lagoon, but problems with the sewage collection truck require the continued use of the dump for this purpose.

Water is now pumped from a fresh water lake south of the village to the utilities building, but this is relatively recent (1979). Here it is treated, mainly by chlorination. Delivery of water is made by pumper truck and costs nine cents per gallon. There is no charge for water if people come and get it from the utilities building themselves. People do still chop ice for water, some for their entire household supply and others only for drinking water. Two reasons are given. Utilities water is said not to taste as good as ice water, and utilities will no longer deliver water to people who do not pay their water delivery bill. Ice is chopped from the same fresh water lake from which utilities pumps its water, as the source originally used nearer the village has become rather turbid.

The original 30 houses have no running water and store their household supply indoors in 55-gallon drums or large plastic garbage cans. Newer houses sometimes have such supplies, but may also have a larger holding tank to provide water to sinks, and in some cases, to showers. Showers, like the

washing machine in the four-plex, are luxuries which are sometimes too much trouble. Due to the limited household water supplies and the cost of heating water, many people who have household showers still go to the utilities building or the school to wash. The utilities building also has three washing machines and two dryers which, along with those of the school, are adequate at present for the village.

All structures are heated with diesel fuel oil. The buildings constructed in the first building phase all have freestanding space heaters. These are connected to a fuel tank outside of the structure by copper tubing. The fuel tank is an empty 55-gallon oil drum elevated so that fuel is gravity fed to the heater. The tank is refilled by pumping oil, ususally with a hand pump, from a full 55 or 30-gallon drum which is delivered so as to be just below the fuel tank. This delivered drum is itself filled from the large oil storage tanks near the airport. Newer buildings have central heating systems, either forced air or baseboard, but must also rely on pumping fuel oil from delivered drums into the heating oil tank. Their fuel tanks do tend to be larger than 55gallon drums, as they are made to be fuel tanks. Thus, they would not have to be refilled as often. In reality, most Inupiat households buy and pump fuel oil in 55-gallon amounts. This evens the expense out over time and is easier to manage physically as most households transport their own oil using a snowmobile and a sled.

The electrical generating capacity of the village has grown steadily since 1974. However, demand has always pushed the limits of capacity due to Nuiqsut's rapid rate of growth. Present capacity has been built essentially since 1979. New housing and the school will require expansion of the utilities complex or the construction of a second generator facility

in the very near future (NSB Utilities Department, Personal Communication).

There was no telephone service or television reception in Nuiqsut when it was resettled in 1973. People did listen to the Barrow radio Station, KBRW, which served as the major communications link. A single phone, serving the entire village, was eventually installed. This required users to wait in line, sometimes for quite a time. Only recently has telephone service been extended to individual households (1982). Nearly all houses now have phones. The television set is nearly ubiquitous, even though reception has been possible for only two years. Cable facilities will be installed shortly, if the City Council will donate the lot upon which to build the antenna and is able to find someone to maintain the system. Video recorders and players are not uncommon in Nuiqsut, being owned by at least ten Inupiat and several non-Inupiat households.

### PHYSICAL PLANT DEVELOPMENT

### Housing

Housing projects have been the prime mover in Nuiqsut's growth. New houses provide places to live as well as local construction jobs. This section will discuss the different building phases and how housing has become more complicated and costly over time. A conceptualization of the physical expansion of Nuiqsut will result from this, as well as a better understanding of the spatial dimensions of day-to-day life. Figures 6-12 and Photographs 1-18 will facilitate this understanding.

When the first families moved to Nuiqsut, only one frame

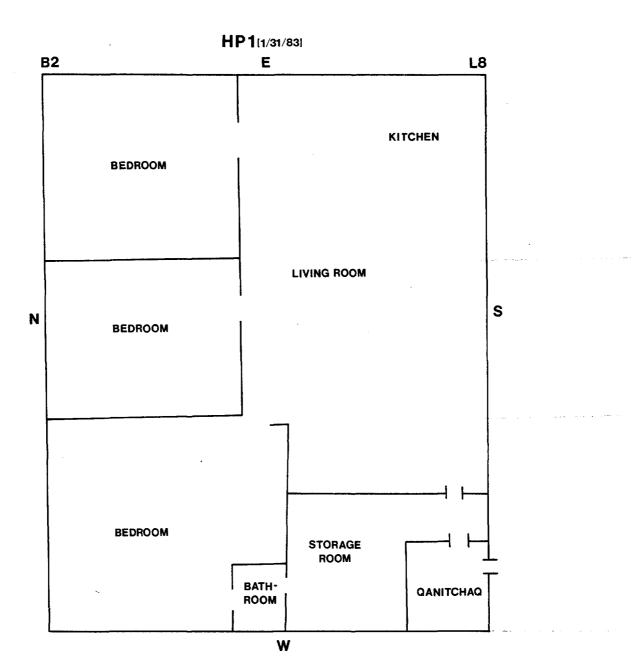
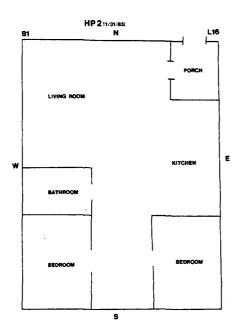
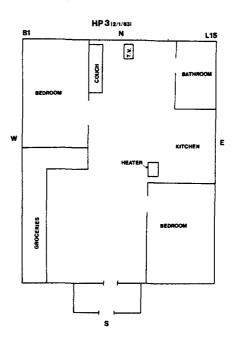
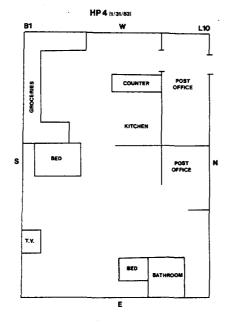


FIGURE 6









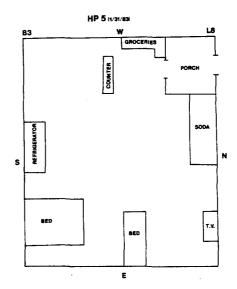
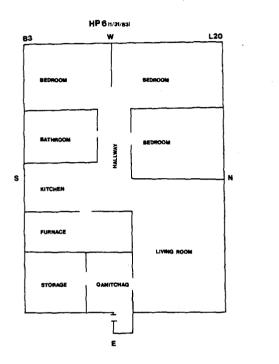
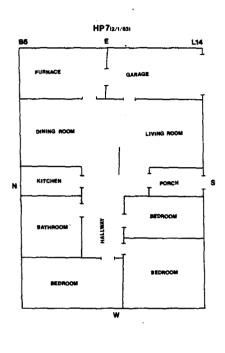
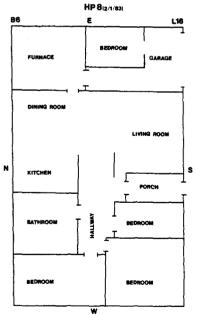
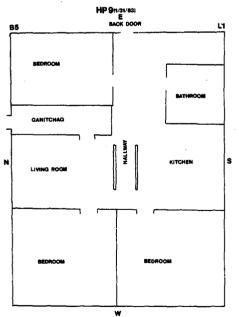


FIGURE 6









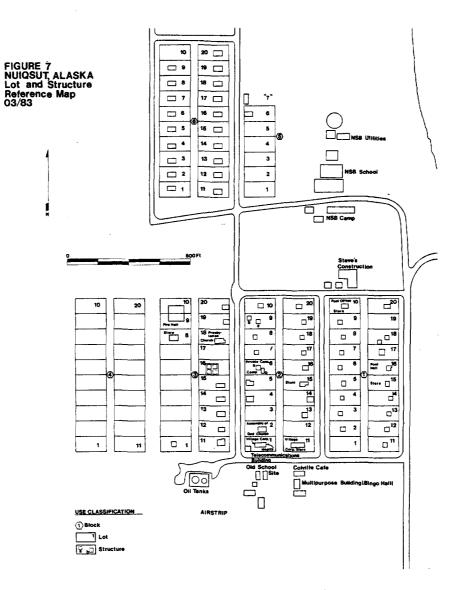
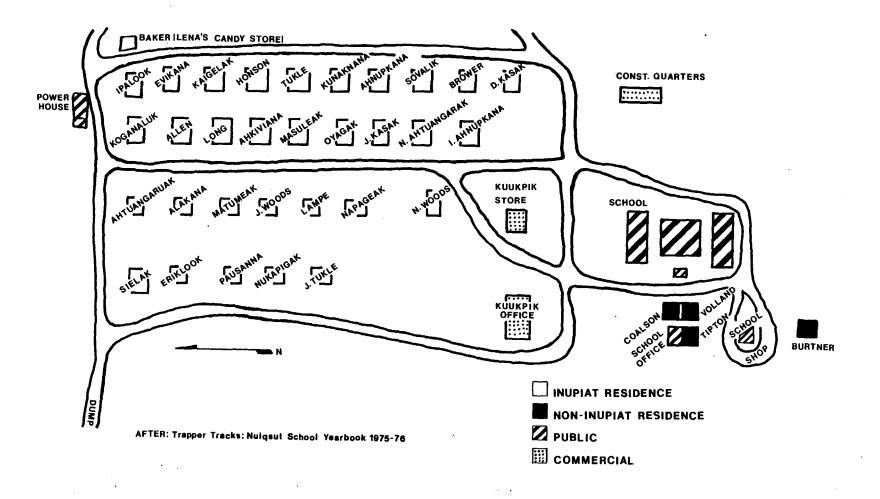


FIGURE 8 NUIQSUT LAND USE, 03/26/76



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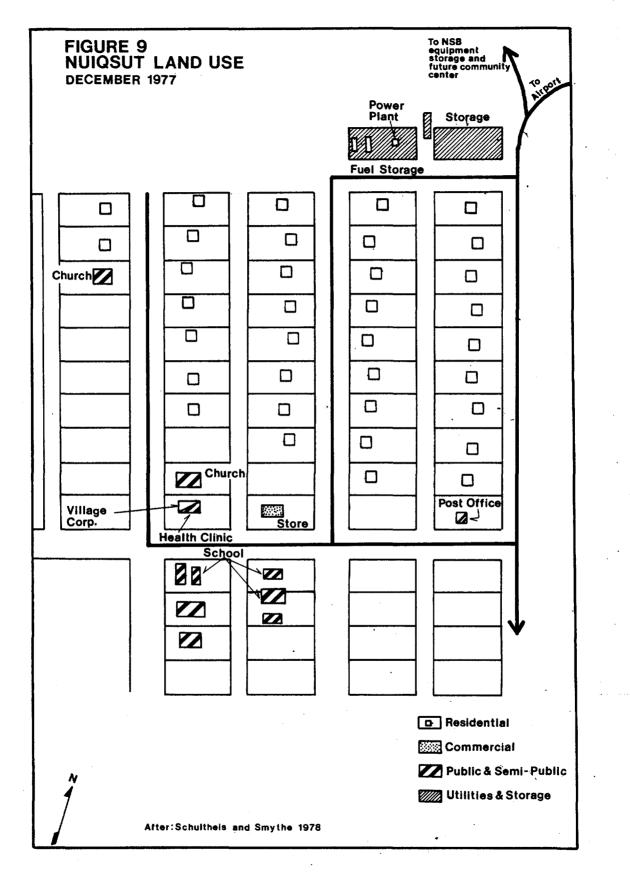
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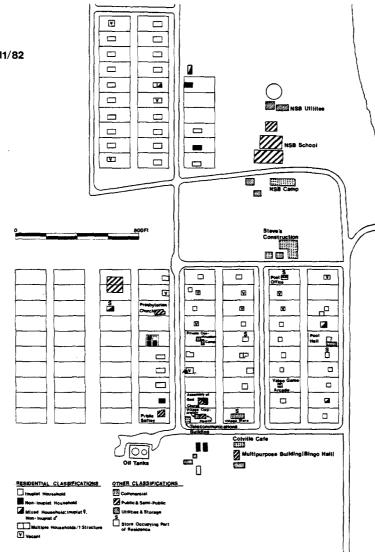


FIGURE 10 NUIQSUT LAND USE 11/82

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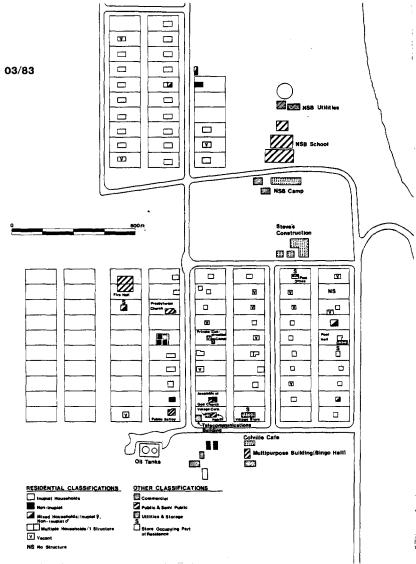
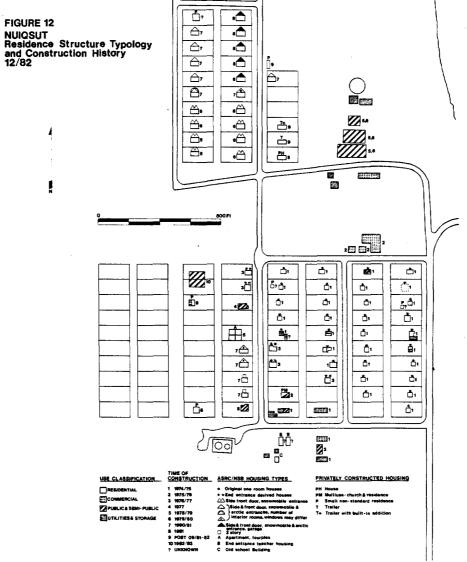
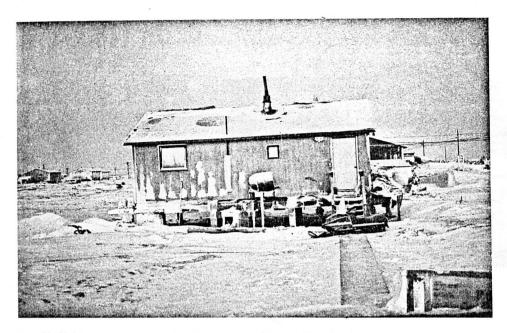
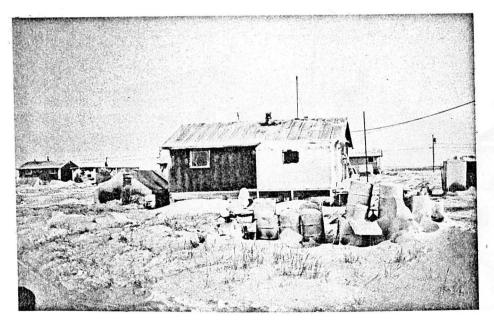


FIGURE 11 NUIQSUT LAND USE 03/83





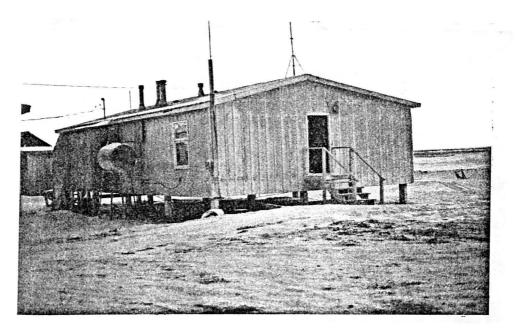
PHOTOGRAPH 1: Original Housing (1974/75)



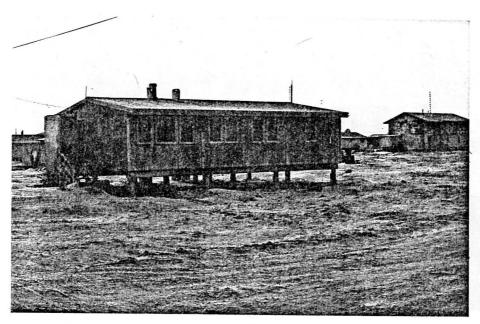
PHOTOGRAPH 2: Original Housing (1974/75)



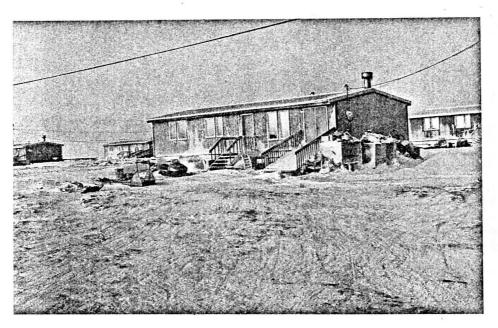
PHOTOGRAPH 3: Original Housing (1974/75) and Pool Hall (1982)



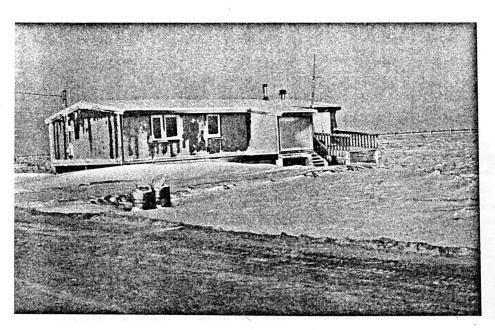
PHOTOGRAPH 4: Teacher Housing (1976/77 ?)



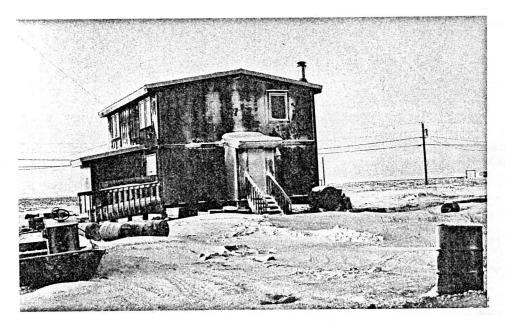
PHOTOGRAPH 5: Second Housing (1976/77)



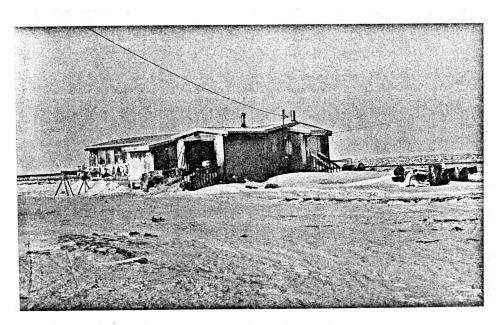
PHOTOGRAPH 6: Third Housing (1979/80)



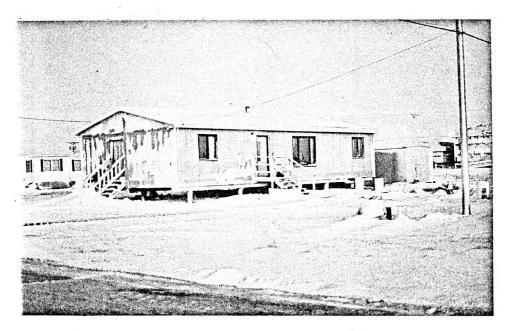
PHOTOGRAPH 7: Fourth Housing (1980/81)



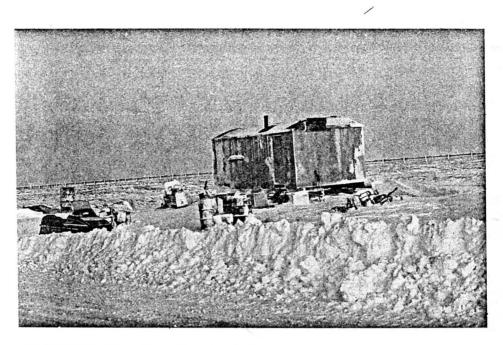
PHOTOGRAPH 8: Fourth Housing (1980/81)



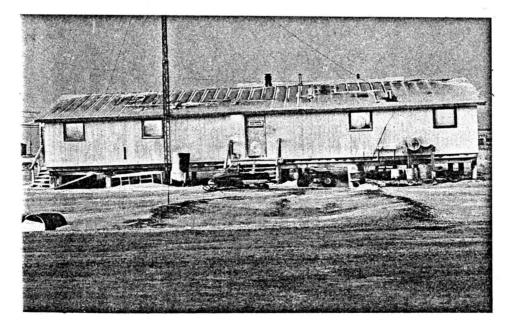
PHOTOGRAPH 9: Fifth Housing (1981)



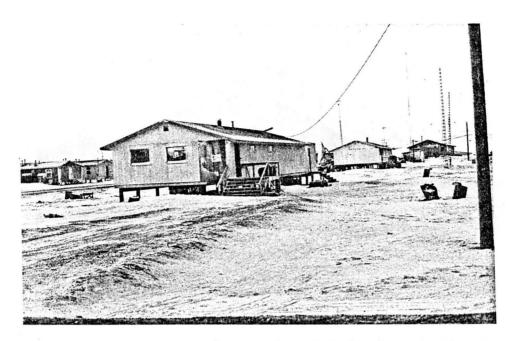
PHOTOGRAPH 10: Privately Constructed House (1981)



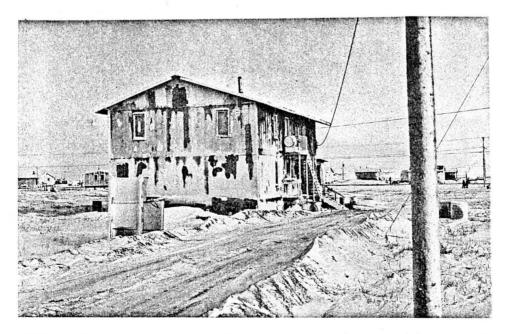
PHOTOGRAPH 11: Non-Standard House



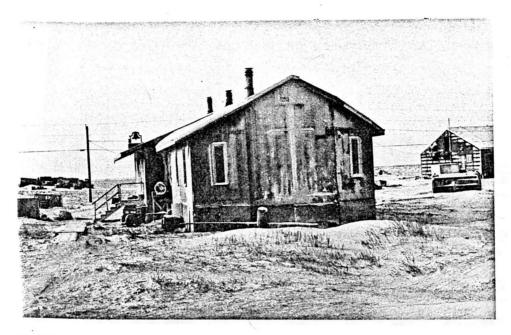
PHOTOGRAPH 12: Kuukpik Corporation Building and Nuiqsut Clinic



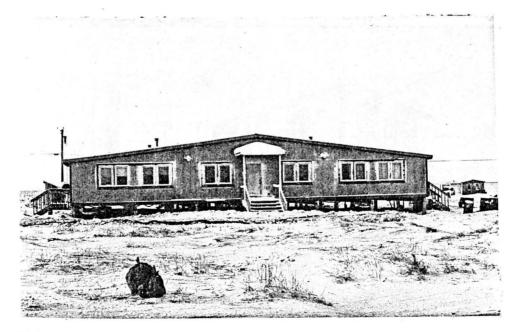
PHOTOGRAPH 13: Kuukpik Corporation Store



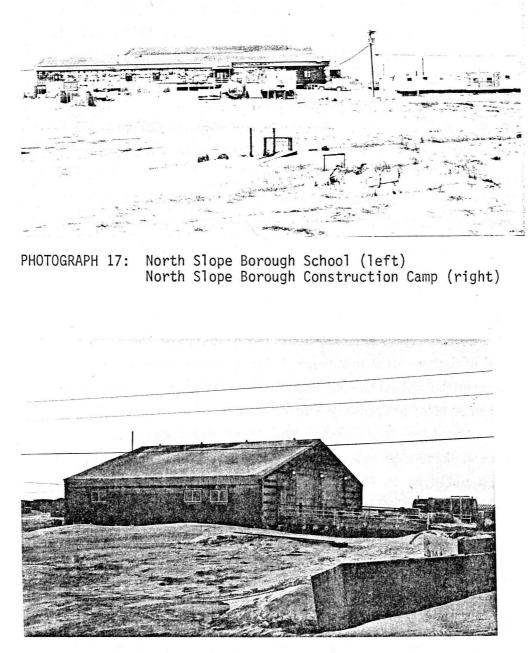
PHOTOGRAPH 14: Assembly of God Church and Parsonage



PHOTOGRAPH 15: Presbyterian Church



PHOTOGRAPH 16: Four-Plex Apartment Building



PHOTOGRAPH 18: Fire Hall

structure existed on the site. All other families lived in 10' x 10' tents or two tents sewed together. They were to live in tents for a year, some longer, until they could build the first houses in Nuiqsut. This first building phase in Nuiqsut (1974/75) was funded by ASRC. They built 30 houses, a store building, a corporation/clinic building, and school buildings. The houses were essentially 800 square foot single rooms. Houses were assigned to families by drawing lots as the houses were completed. House occupants were to purchase the house from the ASRC by paying \$100 a month for five years. However, the Kuukpik Corporation has assumed this debt as most people have made few payments.

Since their construction, most of these houses have been modified. For the most part, the doors originally faced east or west. As the prevailing wind is from the east, and secondarily from the west, most houses have been modified to move doorways to the north or south. Most of these houses have also had an enlarged exterior arctic entranceway added onto them. Photographs 1-3 illustrate these points. The structure in Photograph 1 faces south, hence there was no need to relocate the door. The structure in Photograph 2 had a door originally facing west, while that of Photograph 3's structure faced east. The first now faces south, the second north, by means of an exterior arctic entrance. The long building in Photograph 3 is a recently constructed pool hall. Note that its doorway also faces north.

Most of these 30 houses have also been internally subdivided since their construction. Examples can be seen in Figure 6, HPI-HP4. These floor plans are not strictly accurate. They were drawn by Inupiat informants, from memory, without using either an absolute or a relative scale. The number and arrangement of rooms are accurate, but not necessarily their relative sizes or shapes. Figure 6 HPI shows a house which

at the time of its construction housed a married couple, their children, and at least one grandchild. Since then, the oldest son has married and moved into a newer house in Nuigsut. The room divisions date from the more crowded times. Figure 6 HP2 shows a house in which more people live, with an accompanying decline in privacy Figure 6 HP3 depicts the home of a single individual who operates a small store. The rest of his family (parents and perhaps as many as nine siblings) have moved to a newer house in Nuigsut. He uses one bedroom as a stockroom. Figure 6 HP4 is a multi-use structure: home, store, and post office. A couple with their young children live there. As their children grow older, this family may well require more space with a higher degree of privacy. Internal partitioning, from these examples and other observed cases, seems to achieve the separation of sleeping quarters from house areas used by other household members who are no longer young children. The need for more private sleeping quarters for children is also shown by the prevalence of two and three bedroom arrangements.

The growth of Nuiqsut since 1975 has essentially been the result of the North Slope Borough Capital Improvement Projects Program. There are few buildings in Nuiqsut not built by the ASRC or NSB CIP program--one frame house, five makeshift houses, a pool hall, and two churches. Roads, airstrip, public buildings, sewage lagoon, and the city dump are all products of the CIP. Appendix B lists all Nuiqsut projects and expenditures 1975-1981, and Table 2 lists total CIP fund expenditures by year for Nuiqsut and the North Slope Borough. Figures 3-5 display the Nuiqsut totals from Table 2 graphically. Figures on CIP expenditures in Nuiqsut were not available for 1982, but the airstrip was completed that summer. Twenty-some houses are currently under construction.

	Education & Service			Public Roads, Streets, Etc.		
Year	NSB	Nuiqsut	%	NSB	Nuiqsut	<u>%</u>
1973 1974 1975 1976 1977 1978 1979 1980 1981	NA 8,215,920 3,230,888 11,330,579 22,535,951 24,400,987 25,070,133	137,932 605,124 66,683 1,330,071 6,114,055 3,946,598 881,995	7 2 12 27 16 4	NA 2,760,754 1,573,319 4,160,389 3,878,544 6,608,153 9,433,404	150,661 513,890 810,738 632,903 441,174 1,070,638 335,049	19 52 15 11 16 4
Tota]	94,784,458	13,082,458	14	28,414,563	3,955,053	14
	Public Housing			<u>Sewage Treatment &amp; Disposa</u> l		
Year	NSB	Nuiqsut	0/ ;0	NSB	<u>Nuiqsut</u>	%
1973 1974 1975 1976 1977 1978 1979 1980 1981 Total	NA 6,285,589 5,272,699 10,299,948 21,136,202 33,281,291 23,989,395 100,265,124	136,159 277,520 203,822 443,082 1,451,342 1,373,757 3,234,737 7,120,419	4 4 7 4 13 7	NA 10 1,982 217,801 2,014,803 5,036,114 21,284,054 28,554,764	NA 0 155 0 55,861 314,588 556,813 927,417	0 8 0 3 6 3 3
	<u>Airport &amp; A</u>	irport Termi	<u>nal</u>	Sanitary	/ Facilities	<u> </u>
Year	NSB	Nuiqsut	%	NSB	<u>Nuiqsut</u>	%
1973 1974 1975 1976 1977 1978 1979 1980 1981	NA 44,375 13,743 8,870 884,727 1,277,004 5,061,234	0 43,980 220 4,090 64,915 285,315 4,377,563	0 91 2 46 75 22 86	NA 6,751,969 1,498,252 4,968,634 13,181,217 3,192,699 10,163,528	0 182,716	0 2
Total	7,289,953	4,776,083	66	39,756,299	182,716	0

## Table 2: CIP FUND EXPENDITURES In Dollars

.

Table	2:	CIP	FUND	EXPENDITURES,	Continued
			In	Dollars	

	Light, Power	Water	Facilities			
Year	NSB	Nuiqsut	_%	NSB	Nuiqsut	%
1973 1974						
1975	NA	0			35	
1976	200,156	79,020	39	2,160	399	2
1977	1,835,447	4,104	0	622	155	25
1978	2,216,899	44,828	2	564,331	270	0
1979	5,033,411	1,045,990	21	1,784,870	502,369	28
1980	5,342,698	763,776	14	6,475,072	86,347	1
1981	7,641,591	706,404	9	19,377,007	220,921	1
Total	22,270,202	2,644,122	12	28,204,062	810,496	3

NSB CIP FUNDS FOR WHICH NO NUIQSUT EXPENDITURES LISTED

Year	<u>Urban Dev.</u>	Public <u>Safety</u>	Health	General
1973 1974 1975 1976 1977 1978	NA 2,132,842 380,782 391,641	NA 0 0 0	NA 174,193 243,469	NA 208,155
1979 1980 1981	362,398 544,737 2,439,153	568,544 1,989,989 3,626,717	151,469 1,721,756 643,901	356,174 494,951 143,609
Total	6,251,553	6,185,250	2,934,770	1,202,889
Year	Library/ Cultural	Communications	Parks	& Recreation
1973 1974 1975 1976 1977 1978	NA	NA 26,569,439 63,442 0		NA
1979 1980 1981	43,590 750 1,858	6,534 158,230 2,159,070	۱	75,000
Total	46,198	28,956,719	۱	75,000

c

Year	Nuiqsut	NSB	%
1973			
1974			
1975	427,787	NA	
1976	1,519,933	52,963,214*	
1977	1,085,877	14,045,369	8
1978	2,455,244	34,610,698	7
1979	9,675,706	71,938,434	13
1980	7,841,019	90,524,431	9
1981	10,496,198	131,291,804	8
Total	33,498,764	395,291,804	8
		•	

# Table 2: TOTAL CIP FUND EXPENDITURES, Continued In Dollars

 \* NSB excludes the large Communications expenditure in 1976 from CIP totals

All buildings in Nuiqsut are constructed on top of pilings sunk into the permafrost. This provides a firm foundation and also ensures that heat leakage from the house does not degrade the tundra. The air space in effect insulates the tundra from the house. In the summer, some structures are surrounded by water and elevated houses are the most functional. There has been talk of using gravel pads instead of piling, as it would be a cheaper method. It would potentially disturb drainage, however. All substantial structures are made from prefabricated components. Designs change from year to year, but the oldest houses are the simplest and there is a trend towards elaboration. An example of teacher housing, built after the original 30 houses, is shown in Photograph 4 (two teacher couples also live in the four-plex, Photo 16, as do the Presbyterian lay minister and another NSB School District couple). This structure is much larger than the original houses, and was built with three bedrooms, a living room, a family room, kitchen, large water tank, central heating, a shower, and two places for honey buckets. Whereas the original houses have no oil tanks except for the 55-gallon drums which the oil comes in, this house has a larger tank (perhaps 150 to 200 gallons).

Photograph 5 shows one of the five houses built in 1976/1977. Figure 6 HP6 is the floor plan of another of these houses. They have many of the same features as the teacher housing above, but may be somewhat smaller in terms of floorspace.

The eight houses built in the 1979/80 building phase are represented by Photograph 6 and Figure 6 HP7. Again, they are not the same structure but are built on the same design. The house appears to be somewhat larger, with the differentiation of a living/family room from the dining room. The door is moved from the end of the house to the middle of one of the sides. A second large "snow mobile" entrance is added to the storage/garage space, with an attached ramp.

Eleven houses were constructed in the building phase of 1980/81. The floor plan of the house in Photograph 7 is very similar to that of the house in Photograph 6. The main doorway does have a larger external arctic entranceway. Two of the three two-story structures which exist in Nuiqsut were built at this time. One of these appears in Photograph 8. No floor plan was obtained, but these two houses have a large living/dining room, a kitchen, a large storage space, a furnace room, and garage downstairs and

three or four bedrooms upstairs. Again, central heating, large water and oil tanks, and a shower were standard.

Photograph 9 and Figure 6 HP8 show houses built in 1981. Again, the house plan is basically the same as that of the houses built in 1979/80. Additions are an end door and a larger garage extending from the body of the house. We were told that this house design was actually intended for Barrow, where the larger garage was meant to protect automobiles. There is little need for this in Nuiqsut. One family has built a temporary additional bedroom in this garage. Permanent alterations are against NSB policy. These are the newest NSB-built houses in Nuiqsut. There are up to 22 more houses currently under construction.

Photograph 10 and Figure 6 HP9 show the only substantial house not built by the NSB or the ASRC. Photograph 11 and Figure 6 HP5 (not the same structure) show the sort of structure more commonly built by private individuals. These structures are small, built of plywood and "scrap" lumber, and are occupied by single men or couples with two or fewer young children. There are vacant houses in Nuigsut, available for rent, but prices tend to be relatively high. Prices quoted to us for one of the original 30 houses was \$400-\$500 per month. Since few people actually formally own these houses the situation is unclear, but the ASRC (or the Kuukpik Corporation) evidently lets the first occupants of these houses rent them out. The houses now under construction will only be rented by the NSB, not sold. The ownership status of other housing in the village is unclear from village informants. Individuals in Nuigsut did express a desire to own a house rather than to rent one. This could explain the presence of small self-made structures when more substantial housing remains vacant. Financing for the sale of NSBconstructed housing has become a problem. The original

houses cost \$30,000 each to build. Current houses cost 10 to 20 times that. The North Slope Borough no longer wants, or cannot afford, to subsidize housing. The only alternative funding source is from a state agency with which Natives have had poor experiences in the past. The North Slope Borough may end up maintaining title to the new houses and renting them to the new residents as the best compromise solution. Nuiqsut people simply cannot afford to buy them.

Our data allow some generalizations about housing in Nuiqsut to be made. People prefer newer houses to the older ones and prefer to buy rather than rent. Thus, a common pattern is for one of the original families to move from an old house to a new one. Either a new family moves into the old house or part of the original family remains to set up a separate household. No multi-household family at present owns/lives in more than one newer house. Thus new houses seem to be rationed one to a family, with additional family households living in old houses. Some families relocating to Nuiqsut have moved directly into newer houses, either because of their own influence or because no older house owner could afford to move at that time.

Because the houses now under construction will be rented rather than sold, there is increased local interest in building one's own house. There is also increased interest in the older houses and the non-standard residences which exist. However, they are generally only suitable for single people, young families with few children, or older people who do not mind the lack of central heating, running water, and so on. The households in the original houses tend to be young and small, old and small, or collections of males. Newer houses are occupied by families who have moved from one of the original houses or from outside of Nuiqsut. Some

households are very large in size, but others are small. Most of the latter have elderly heads of households. The biggest households in Nuiqsut live in the newer houses.

Of the 34 older residential structures in Nuigsut, 10 are vacant. Inupiat occupy 22, with an average household size 4.83 (for 23 households). Mixed couples (non-Inupiat male/ Inupiat female) occupy two structures with a household size of 3.5. Of the 27 newer residential structures, Inupiat occupy 4 (average household size of 2.75) and 1 is vacant. The four-plex houses 3 non-Inupiat households (average household size is 2.33) and one Inupiat household. There are six non-standard structures in Nuigsut, two of which are occupied by mixed households (average size 3.5). Two are occupied by single Inupiat men. The other two are sometimes occupied, sometimes not. There are 75 residential units available in Nuigsut (The Assembly of God minister lives above his church), with perhaps 13 vacant. Inupiat households are larger in the newer housing. Teachers and other professional non-Inupiat live in newer housing. Mixed households live in older houses, non-standard structures, or partition off part of an Inupiat household for themselves.

### Other Structures.

The new high school was started in 1978 and completed 1981; the sewage plant was started in 1979 and is still being completed; the new airstrip was put in mainly in 1981; the city dump (landfill) was developed in 1981; and the new utilities plant was begun in 1979 and completed in 1981 or early 1982. In addition, a Public Safety Building and a Fire Hall have been built, although they do not appear on the NSB list of CIP fund project expenditures. The houses

now being built and the clinic, when completed, will require nearly a doubling of the present electrical generating capacity of the utilities plant. The momentum of this growth is best seen by looking at the graph of total CIP expenditures in Nuiqsut by year (Figure 5).

The Assembly of God Church (Photograph 14), the first twostory structure built in Nuiqsut, dates from approximately 1975/76 and the Presbyterian Church (Photograph 15) was built in 1977. Make-shift dwellings have appeared sporadically. The pace of change has been very quick (compare the series of land use maps, Figures 8-11). A careful study of CIP expenditures in Nuiqsut will give more of an understanding of this than any amount of narrative. It will also impress upon the reader the commitment the North Slope Borough has to the existence of Nuiqsut and the resources backing up that commitment (figures for 1982 were not available to be included).

#### The School System.

The development of the school system in Nuiqsut has closely followed that of the city itself. This could be expected, as one cause of the "abandonment" of the Nuiqsut area as a permanent residence was the requirement that families with children move into Barrow or other municipalities with BIA or other schools. The formation of the North Slope Borough, which then assumed responsibility for the educational function, allowed this policy of centralized education to be reversed. As a direct consequence, the outlying "traditional" villages again became viable as population centers since families with children once more found it possible to live there permanently. We will trace the physical and structural growth of the educational system

in Nuiqsut, and then discuss some of its present characteristics. Understanding this institution's origins, development, functions, and dysfunctions, is essential for beginning to understand Nuiqsut, and perhaps the North Slope as a whole.

The responsibility for establishing the first formal school in Nuiqsut fell to Mary Eleanor Tener (later Sanders), a non-Inupiat Presbyterian missionary. She first went to Nuiqsut in November of 1973 as a volunteer worker for the Presbyterian church. She was then convinced to stay for four to six weeks as an employee of the NSB, to help establish the school. As no one else was available to take over after this time, she agreed to stay the year (Tener 1974).

Ms. Tener supervised the classes, which were actually taught by five Inupiat women using correspondence course materials supplied through the Alaska State Department of Education. Classes were held in the tents of the teachers, which thus became very crowded at times. The first school building was completed in the last part of March 1974, which allowed all classes to be moved from tents into that building, trailers, and the Inupiat Builders annex. Other school buildings were completed late that May. Ms. Tener stayed through the school year as the supervisor and led church services much of the time as well (Tener 1974). Many people in Nuiqsut remember her fondly--as a teacher, a supervisor, a spiritual helper, and a good neighbor.

The school opened the fall of 1974 with new buildings and a new staff. The principal and five teachers (one who would remain only three months) were all non-Inupiat. The summer of 1975 another teachers' housing building was put up and two non-Inupiat teachers were added to the faculty in the

fall. An additional non-Inupiat teacher was hired the next spring. Two teachers may well have left sometime during this year as only six teacher-administrators appear in the 1975/76 yearbook (the first). The next school year, 1976/77, only one teacher remained from the year before. The principal and four other teachers were new to Nuiqsut. All were non-Inupiat.

Information for the 1977/78 school year is lacking to us. We relied on written information (yearbooks, mimeographed recollections) and casual conversations, as school officials were unwilling to discuss the topic of teacher turnover. Unfortunately, we did not examine each class yearbook. In the 1978/79 school year, only two of the teachers from 1976/77 remained in Nuigsut--one as a teacher and the other as principal. There were six additional non-Inupiat teachers and one non-certified Inupiat teacher The Inupiat teacher was a graduate and a native of the village and taught Inupiat culture courses. The next school year, 1979/80, only the Inupiat teacher and two non-Inupiat teachers remained, so it is likely that five non-Inupiats were hired. We lack information about faculty continuity for 1980/81, but for 1981-82, five new non-Inupiat faculty members were hired to replace people who left. An additional Inupiat teacher was hired to bring the total staff size to 12.

Faculty turnover has thus been a fact of life in Nuiqsut, as it has been for the North Slope in general. Non-Inupiat teachers are generally hired as couples. One such couple has taught in Nuiqsut for five years. They are the exception, however. Only one other teacher, a single woman who taught 1974-1977 or 1978, has remained over two years. There are indications that no faculty changes will be made for the 1983/84 school year.

Enrollment in the first year of operation was estimated at 62. Enrollment for 1975/76 was approximately 68, for 1978/79 it was 54, and currently it is approximately 85. As soon as school buildings were constructed, they were also used as recreational centers. As the only non-business, non-residential buildings, this was to be expected. Dances, games, movies, and other activities were held in these multi-purpose buildings after school hours. Once the new school was built, most of these functions moved there. The new school has a large gym, a library, good-sized classrooms, and excellent shop, and a small swimming pool. The old school buildings were converted to other uses (storage, a restaurant, and community activities). These recreational functions, and the operation of the school itself, are of great value to the village, but can better be discussed in a later section.

#### Eco-Political Development

This section will discuss the structure and development of village institutions in terms of Inupiat leadership arenas. This will thus prepare for a later discussion of sociopolitical structures and dynamics. Some of the institutions discussed here may not at first glance appear related to this section, but Nuiqsut lacks many of the formal differentiations found in larger, non-kin based communities. The main arenas discussed will be the Nuiqsut City Council, the Kuukpik Corporation, the North Slope Borough (as it relates to Nuiqsut), the churches, community service groups, the NSB school system, the Post Office, and private enterprises.

#### CITY COUNCIL

The Nuiqsut City Council is made up of seven members as required by Alaska State law. They are elected at large. At their first meeting after the election, they elect their officers--mayor, deputy mayor, and secretary. Informants say that the individual with the highest number of votes in the general election should be elected mayor. This was the case in the last election (1982), which was the first legal official election held.

The current Nuiqsut City Council consists of two women and five men. Two are in their late 30s, three are in their early 40s, and two are in their 50s. The oldest member, a man, is mayor. A woman in her 30s is deputy mayor and a man in his 30s is secretary. Council meetings are on the first Monday of each month, but are frequently changed. Special meetings are also common, but are many times combined with other village organizations (such Kuukpik Corporation) or unofficial meetings to give comments to governmental agencies holding public hearings. The council members receive no remuneration as such, but members do have travel and per diem paid for when they are away on city business. As elected officials, they often are asked to represent Nuigsut on various committees and boards for the North Slope Borough or other governmental units and they receive expenses for these as well. The only paid city employee is the city clerk. At present, this is a non-Inupiat female who has served since about August 1982. Before that time, village residents had served as clerk for various periods of time.

Minutes of the Nuiqsut City Council are available only since the meeting of August 1982. This corresponds to the arrival of the incumbent city clerk. She states that essentially

no prior records exist, so that minutes of meetings, records of expenditures, or even lists of former city government members are not available for the period before August 1982. Thus, this section will rely heavily upon information gathered from interviews and informal conversations.

As has been described, Nuiqsut was refounded in 1973. Kuukpik Corporation (the ANCSA village corporation) was formed in Barrow in the months prior to this event so that officers of Kuukpik Corporation, and especially its first president, were instrumental in the resettlement movement. The president of the corporation also served as city mayor. The council at this time was informally organized. The situation them was as Worl et al described (Worl et al. 1981:185-186);

Currently, issues between the city government and the village enterprises are relatively easily resolved because of the small number of persons involved, the ties among them, and the multiple hats worn by key individuals. For example, the mayor is also the president of Pingo Corporation and represents the community concerns to the ASRC; he has other duties as called upon. He has occupied these and other roles simultaneously for a number of years. Undoubtedly, his philosophy, as it is shared by the sentiments of the community (as represented on the village council), will have a powerful institutional influence on the future of Nuigsut. The burden of wearing these different hats sequentially and simultaneously has provided him with a significant opportunity to shape the future of the village and has also placed stressful burdens on him.

This informal arrangement persisted until 1981, when the first actual election was held. At that time, the role of the first mayor was legitimized by his formal election as the first official major of Nuigsut.

Nuiqsut had developed greatly in that time. The first 30 houses, along with the first public buildings (school, government, corporation, and utilities buildings) had been funded through ASRC, no doubt in large part through the efforts of the first mayor. Capital Improvements Programs had constructed other housing and buildings. The village had grown, and yet maintained its claim to a subsistence way of life.

The community asserts itself through the village council. As interpreted by Mayor Thomas Napagiak, Nuiqsut is pursuing both traditional ways and values and some degree of economic development (Worl et al. 1981:185)

However, the first election in 1981 was ruled invalid, due to procedural irregularities. Thus, it was necessary to hold another election. At this time, only three of the seven then-serving council members were retained. The first mayor was not among them, and this was attributed to his being too "prodevelopment". The new mayor, who had moved from Barrow a year or so before, had a more "traditional" orientation.

Unfortunately, this traditional dichotomy does not describe the case fully. Of the three members returned to the council, one was associated with the Kuukpik Corporation and is now president (the first mayor is now vice president of Kuukpik Corporation). More significant than the issue of development/ traditional seems to have been the fact that villagers were uncomfortable with the influence of non-residents ("outsiders") who were hired as consultants but often took on more authority than was truly legitimate in terms of their job descriptions. Since, before this second election in 1982, "...Mayor Napagiak resides in Anchorage in order to run the affairs on Pingo Corporation," (Worl et al. 1981:186), he found it necessary to hire a resident city administrator. Voters evidently decided that a resident mayor was desirable.

The man elected mayor was a recent arrival in Nuigsut and not even a shareholder in the village corporation. However, he moved from Barrow (where he is a shareholder) for the same subsistence and ideaological reasons as the original settlers did. He is also well known for his role in the passage of the Alaska Native Claims Settlement Act and the formation of the North Slope Borough. His wife is a shareholder in Kuukpik Corporation. The Inupiat city clerk, who had been a council member, was not re-elected but remained the city clerk. He probably had been acting as city administrator in the mayor's absence. Later a non-Inupiat woman was hired as city clerk, but it is unknown if the position was vacant at that time or not. The former Inupiat clerk is an officer of the Kuukpik Corporation. There is also some confusion as to who, if anyone, was actually mayor at the time of this second election. Several people evidently claimed this role at that time.

Ties, interests, and cooperation between the Nuiqsut City Council and the Kuukpik Corporation are no longer as close as they were (indeed, of that early time people remarked that they were one and the same). No one at present serves as a member of both boards although the present mayor is the father-in-law of the present Kuukpik Corporation president.

## KUUKPIK CORPORATION

The Kuukpik Corporation is the village corporation set up under the provisions of the Alaska Native Claims Settlement Act. As such, all 208 original enrollees in Nuiqsut (now about 230) are shareholders. All adult shareholders can vote. All enrollees are, of course, Inupiat. The corporation has five officers, whose public titles vary somewhat: president, vice president, chairman, treasurer, and secretary, with "land manager" being another name or title for one of them. There are also two board members elected from the membership at large. These members change fairly frequently. The officers also change yearly, but tend to switch titles, so that there has been a good deal of continuity from board to board. An annual meeting is held during which officers are elected and necessary business conducted. Any shareholder may attend and speak, but meetings are closed to non-stockholders. The financial records are also open to all shareholders, but few (or none) take advantage of this to monitor the conduct of the corporation. Board meetings are held at irregular times during the year, when necessary, and special shareholder meetings have been called occasionally.

Other permanent employees of Kuukpik Corporation, besides the officers and at-large board members, are a non-Inupiat accountant, a secretary, a fuel clerk, two fuel delivery men, a store manager, and two store clerks. Many people, mostly men, are seasonally-employed on construction and similar jobs. Kuukpik Corporation has also set up subventures, such as its own construction contracting corporation, which have separate boards of directors. Kuukpik also has on-going coventures with other village corporations and the ASRC, which sometimes have boards or directing committees of their own upon which Kuukpik Corporation has representation.

The Kuukpik Corporation was formed in Barrow before the village was resettled, with the man who assumed the first mayorship as president and two present-day officers were officers then as well. Two members of that first corporation board are now members of the Nuiqsut City Council. Since then, several different men have served as president, with the first mayor and president serving subsequently as vice president or on the board.

This should perhaps be elaborated as an indication of leadership specialization in Nuigsut. The first city mayor. who was also Kuukpik Corporation's first president, spends most of his time in Anchorage as he is the President of Pingo Corporation. Clearly, having a permanent representative of the Kuukpik Corporation in Anchorage is perceived to be an advantage. Much of the financial activity taking place in Alaska is centered in Anchorage, and commercial transactions are facilitated by a presence there. Indeed, corporation officers are often absent from the village attending to business in Anchorage. Just as clearly, the titled president can function best in Nuigsut. His signature is required on many documents and his advice required during frequent meetings. People also expect the "head man" to be available and familiar with local situations. Having as enterprising a businessman as the first mayor on the Kuukpik Corporation's Board of Directors, but not as President, serves both imperatives. The shift of personnel from the City Council to the Kuukpik Corporation Board (and back) with no current overlap also demonstrates the locally felt need for cooperation between these two entities as well as the realization that their interests are not completely the same.

Since the Kuukpik Corporation is a for-profit corporation, its central concern must be with economic enterprise. This creates some tension, especially in regard to the local store and fuel facility that Kuukpik operates, but also in the balance of economic development with subsistence protection. Kuukpik's aim is to make money and provide jobs. They have done this in the past mainly through construction subcontracts with the North Slope Borough on Capital Improvement Projects, either directly or through Pingo Corporation. Pingo Corporation was set up as a joint effort with all the non-Barrow village corporations of

the North Slope Borough, but evidently has always been spearheaded by Kuukpik Corporation and the first mayor, the present president of Pingo. More recently, Kuukpik has set up its own construction contracting firm, so as to bid more effectively on NSB Capital Improvement Projects slated for Nuiqsut. This fosters more use of Nuiqsut employees since if Pingo wins such contracts, they may well have to import some non-Nuigsut Inupiat workers to maintain an employment force representative of its corporate membership. Kuukpik Corporation has also recently formed a joint venture with ASRC. This was a friendly, but almost forced, deal. Kuukpik owed ASRC \$1,400,000. This severely hampered Kuukpik Corporation's day-to-day operations. In return for discounting this debt by more than 50%, Kuukpik transferred a share in the surface rights of 1,500 acres of its land to ASRC. However, Kuukpik acquired a share in the subsurface rights of this land through this transfer, rights which previously had belonged solely to ASRC under ANCSA. The purpose of the transaction was to form a venture for the extraction and sale of gravel from Kuukpik land from which Kuukpik Corporation could benefit. Because the status of gravel as surface or subsurface is unclear, and the fact that subsurface and surface rights are separated as to ownership on village corporation land, the deal was made to allow Kuukpik Corporation to share the profits and so be able to repay its debt. The venture also obtained working capital this way. Snags have developed, but interesting in themselves as examples of the village-village corporationborough-regional corporation interrelations and leadership patterns which will be developed later.

## NORTH SLOPE BOROUGH

The North Slope Borough is headed by a strong, directive,

Mayor. This is a legacy from the first NSB mayor as much as anything else. The NSB Assembly consists of seven members, most of whom are from Barrow. One, however, is a resident of Nuigsut. He recently moved from Kaktovik. where he lived following a political career in Barrow. When NSB Mayor Eben Hopson died in 1979, this individual returned to politics and "...helped forge the political coalition which enabled the Borough to meet the difficult period of transition" (campaign literature 1982). He is acknowledged to be one of the most influential men on the North Slope and clearly is a major power broker. He was instrumental in the Inupiat land claims movement and the passage of ANCSA, and served as a member of the ASRC board of directors for eight years. He is also a Presbyterian lay minister with considerable education and travel experience.

The North Slope Borough has a number of departments, but several have more apparent influence than others, either through design or historical leadership development patterns. Utilities, Public Works, and Public Safety seem to predominate. The first two are primarily staffed by Inupiat and are a training ground for Inupiat leadership. The last, while overseen by the Inupiat NSB Assembly, is primarily non-Inupiat. It is charged with keeping public order and so has a visible presence, especially in Barrow. Because of their role in developing leaders and the recent rise in CIP expenditures, the former two departments have acquired special prominence, both in terms of their influence on Nuiqsut and apparently within Barrow and NSB politics as well.

The history of the political formation of the North Slope Borough is not totally germane here and several detailed sources are available, among which McBeath and Morehouse

(1980) seems the clearest. The NSB was officially organized in 1972. It was a direct response to the production of oil on the North Slope. Nuigsut was refounded as a result of the Alaska Native Claims Settlement Act, also a response to oil exploration and production. The two, the NSB and Nuigsut, are not inherently linked, because the two responses are independent and complementary. The NSB is governmental, aimed at taxing resource production and thus redistributing revenue being generated from the extraction of mineral natural resources. Nuigsut, and especially the native corporations, are economic entities aimed at the conservation of land-subsistence resources and the investment of a cash settlement payment from ANCSA so as to attain a sustained yield for their shareholders. The corporations have not been consistently successful, although they have been providing some job opportunities for wage employment. The NSB and the corporations agree to some extent on major issues, although there are occasional differences of opinion. The NSB, as a redistributive agent, has had a great effect on Nuiqsut.

The CIP program design was essentially completed in 1974 with a simple but very ambitious goal:

This is ... a program designed to provide a basic level of public facilities and services which should be in existence now and should, in fact, have been here for many years. It is a program to provide basic public facilities and services that do not now exist - that have never existed here... (NSB 1974).

Since 1975, an average of 8% of total NSB CIP funds have been spent in Nuiqsut each year, somewhat more than would be expected on the basis of population alone (Table 2). Expenditures have been especially high since 1979, in some years approaching \$50,000 per capita. The NSB has also been looked to by the residents of Nuiqsut when problems

have arisen which are beyond the apparent capabilities of village institutions.

#### ARCTIC SLOPE REGIONAL CORPORATION

Our direct information on ASRC is very sparse and general. ASRC has no direct representation in Nuigsut and our research time in Barrow was very limited. ASRC's business ventures with Nuigsut entities were not matters of public discussion, and the parties involved were understandably reluctant to talk about them with the researchers in private. Also, at present, there appears to be a schism between ASRC and the NSB in Barrow. In the last election, the defeated incumbent moved immediately into a Vice-Presidency at ASRC. It is said that when he was mayor of Barrow, he forced the man who is now mayor of Barrow to leave his (then) position in the Utilities Department. The first mayor of Nuigsut reportedly supported him in this. Given the connections between this individual and the Kuukpik Corporation, and the parallel interests of Kuukpik and ASRC in private industrial development, such an alliance would not be surprising. ASRC provided the loan funds for the first 30 houses and other assorted buildings in Nuigsut during 1974-75. ASRC also helped with moving expenses and educational expenses in 1973, when Nuigsut was re-established.

#### THE CHURCH

The church in Nuiqsut does not formally exert a great deal of overt pressure. The Presbyterian Church has the strongest presence in Nuiqsut. Indeed, the Assembly of God Church has only a very small active congregation and a non-Inupiat pastor who is frequently out of the village. The

Presbyterian lay minister does not so much exort his congregation as he tries to gently lead them. While his congregation is larger than his colleague's,he sometimes feels quite frustrated by his apparent lack of influence on their everyday behavior.

Most of the original settlers were nominally Presbyterians. Only two families belonged to the Assembly of God. Nonetheless, the Assembly of God Church was built first (in 1975/76) and used by both congregations. The Presbyterian Church went up in 1977. Both were built by local volunteer labor.

The role of the church in Nuiqsut, and the relationship between the two congregations, is not quite as dynamic as in Barrow. Nonetheless, Klausuer and Foulks (1982:36-43) trace the development of both on the North Slope and their description of Barrow could prestage the future situation in Nuiqsut. Nuiqsut's churches still look to Barrow a great deal for guidance. The Presbyterians may do so primarily because of kin ties, while the Assembly of God depends on Inupiat leadership infusions from Barrow. The political overtones which can accompany denominational affiliation in Barrow have yet to appear in Nuiqsut politics, due to the smallness of the Assembly of God congregation.

The formal structure of the Assembly of God Church is unclear. Services are attended by only three or four individuals so formal offices are not held as such. The Presbyterian Church has formal elders and deacons. The same people tend to be repeatedly rotated in and out of these.

The lay minister of the Presbyterian Church is a recent arrival in Nuiqsut. He is one of the most influential men

in the village, however, as he is a NSB Assemblyman and linked with key Barrow political figures. He was involved in the ANCSA struggle and is well-respected across the borough.

# COMMUNITY SERVICE GROUPS

As a community grows, the number of organized groups within it is expected to grow. These groups often serve to train people for leadership in broader roles. The number of such groups, their functions, and the extent of membership overlap can be useful indicators of community changes. The most obvious such groups in Nuiqsut will be outlined in this section.

#### Health Board.

The Health Board essentially oversees the functioning of the clinic. It has run bingo for three years to raise funds to help pay for transportation for medical cases. Members are all females, although this is not a formal requirement. They are elected/appointed by the City Council.

#### Mother's Club.

The Mother's Club was formed in October 1974 to raise and administer a fund to help people in need. They began running bingo games a year ago for this purpose. The Health Board and the Mother's Club work closely together and have an overlapping membership. Leadership of the Mother's Club has been fairly stable from October 1974 to the present.

#### Search And Rescue.

Search and Rescue was just recently formed and is predominantly male. Women are members only of the ambulance team, as nurse aides. Leadership is provided by those who already were leaders in other community spheres. This has caused some dissatisfaction among the younger members, since they feel that a small number of people are trying to run the entire community. The initiative for the formation of Search and Rescue came from the completion of the Fire Hall (the NSB) and the frustration of the Public Safety Officer (PSO) of being responsible for emergency searches because no one else was trained to do so. This is not a PSO function and PSOs have been instructed not to leave the village on non-criminal matters. Simply, their job is to maintain public order and they cannot shirk this responsibility by leaving the village to conduct a search. Thus, non-Inupiat or at least non-village forces were instrumental in the formation of this group.

# Subsistence Activities.

Fish and Game Advisory Boards and other groups that deal with subsistence resources have a long and checkered history. Nuiqsut Inupiat seem to lump all of them together, whether state, federal, or regional, and to treat all public hearings as a pipeline to the outside. The only exception is the Eskimo Whaling Captain's Association, which is a native organization. Kuukpik Corporation people tend to represent village interests on these boards. At public meetings, they and the mayor and other council members tend to be speakers.

## PRIVATE ENTERPRISES

Essentially the only private businesses that can be seen on the ground in Nuiqsut are the stores, the cafe, and the pool hall. They are discussed at length in the cash economy chapter. When the village was refounded, only the corporation store was open. Shops have opened and closed since then, but there seems to have been two additional stores to the Kuukpik Store for some time. Non-store private commercial activity is relatively new in Nuiqsut.

## COMMUNITY INSTITUTIONS

# The Post Office.

The post office has changed locations since the village was formed and several different people have served as postmaster. It is still run out of the postmaster's house. At present, the postmaster is a fairly recent arrival from Barrow. He is also head of NSB utilities and runs a store with his wife. The post office, in operation, is still run as it was in 1973 except that mail planes come and go more often (daily instead of weekly). It serves as a meeting place in that everyone picks up the household mail there (as there is no door-to-door delivery).

# School.

Several points must be made about the school as an institution as opposed to the school as a physical plant. The school developed from a tent school administered by one female non-Inupiat with several village women as teachers

to temporary building quarters with mostly non-Inupiat teachers to a multi-million dollar physical plant with nearly all non-Inupiat teachers. Village satisfaction with the school sometimes seems to be in inverse proportion to the money invested in the physical plant. Clearly, village residents see the school as an invading institution which in some ways teaches their children non-Inupiat ways. The school advisory board does not always reflect these views. The dominant person on the board favors a non-Inupiat education for students so that they may compete on fair terms in the wider world (outside of Nuiqsut). He sees cultural survival as a family/household/village responsibility, not as a task for the formal education system. He believes that Inupiat culture cannot be taught from 9:30 a.m. to 3:00 p.m. at the school. Rather, culture is a consistent way of viewing the world and living one's life, and connot be segmented into time slots.

The secretary of the Board has contrasting views, but seldom expresses them. He favors an all-Inupiat school, with no non-Inupiat teachers. While the principal and teachers exercise control over access to certain resources, namely education, no teacher in Nuiqsut has as yet tried to assume a position of general leadership or control. They have considered that inappropriate.

# NON-INUPIAT INFLUENCE

We will have to consider the roles of non-Inupiat in the village. The general effects of Inupiat wage labor under non-Inupiat direction, transient non-Inupiat workers, and imposed institutional forms are generally recognized as important. The effects of specific individual people may also be significant, partly because of these more

general effects. Clearly, several non-Inupiat have acquired a great deal of influence over village institutions due to their expertise. This is especially true of the Kuukpik accountant and the City Clerk. To a lesser extent, the opinion of the Public Safety Officer frequently carries weight with people because of the strength of this individual's convictions. The opportunity for non-Inupiat to have such influence is structural in nature. The development (creation) of Inupiat institutions faster than the development of Inupiat leaders to operate them is the fundamental problem. Phrased another way, the imposition of non-Inupiat institutional forms upon the Inupiat before the development of enough trained Inupiat to adequately man them creates a need to rely on non-Inupiat experts (Worl et al. 1981:186). We have only begun our discussion of this topic and will return to it later. It is one of the crucial issues and much work remains to be done.

# Kinship and the Community

# SOCIAL HISTORY AND KINSHIP RELATIONS

In April 1973, the original settlers of Nuiqsut were divided into 31 households. Many of the kinship ties of these original households can be traced to individuals and families who used the mid-Beaufort Sea region throughout the late eighteenth - early nineteenth century (NSB 1980). Kinship ties in traditional North Alaskan societies and in contemporary Inupiat communities have been described as important factors for establishing subsistence use areas by the native population (Spencer 1959, Burch 1975). Burch (1975) discusses the Inupiat principles of consanguinity (blood relations) and affinity (relations to non-blood kin through marriage ties). All kin related through direct biological

descent are recognized as consanguineal kin.

"The traditional Eskimos did not distinguish between actual and ideal descent" (Burch 1975:45). All known biological connections between generations were considered "good", even when the sexual relations which produced a child were not. Bilateral consanguineal relationships represent the strongest set of kin ties. Relationships formed through marriage were secondary. Such affinal ties included one's spouse, the spouse's consanguines, and the consanguines' spouses (Burch 1975:49). There are two systems of recognizing affinal relatives: (1) affinal excluding system where all real affinal kin are distinguished from real consanguines, and (2) affinal incorporating kin where many affinal kin are incorporated into the consanguineal category (Burch 1975:49). In our discussion of the role of kinship in the resettlement of Nuiqsut, we refer to consanguineal kin ties as relations of direct biological descent and affinal kin ties as relations of individuals through marriage. We also discuss the relative strength of consanguineal relations over affinal relations.

Through the use of kinship data from the Barrow genealogy and our own collection in Nuiqsut, we were able to characterize the settlement of Nuiqsut in 1973 as a kin-based group of 31 households. Almost all household groups had both consanguineal and affinal links to traditional users of the Mid-Beaufort Sea Region. In fact, many household heads of the 1973 settlers were born in the Colville River area. We traced the kinship ties of the original settlers of Nuiqsut in 1973 to the pre-1940s populations with the assistance of the Barrow genealogy (MacLean 1971).

Of the 31 original households in 1973, there were 29 male household heads and two female household heads. Of the

29 male household heads, 19 were linked to Nuiqsut land use through direct descent, 8 were linked to Nuiqsut land use through close or distant affinal ties, and two had undeterminable kinship ties. The two female household

# Table 3

# ORIGINAL SETTLERS OF NUIQSUT AND KIN RELATIONS TO THE PRE-1940s TRADITIONAL LAND USE OF THE MID-BEAUFORT SEA REGION

<u>Kin Ties</u>	Male Household Heads	Female Household Heads	Total	Spouses of Male Household Heads	
Direct Descent	19	2	21	17a	
Affinal	8	-	8	2	
Unknown	2	-	2	8	
	<b></b>				
	29	2	31	27B	

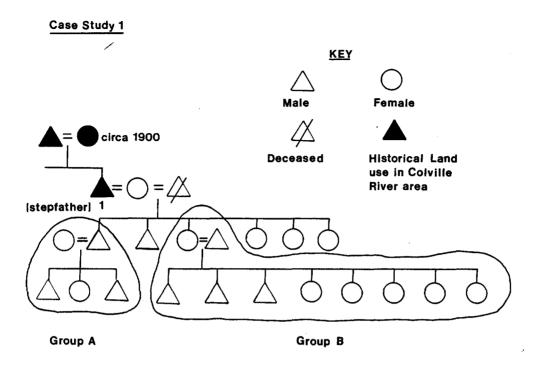
a Includes 10 husband and wife household units where both male and female spouses have direct descent ties.

b Two male household heads do not have spouses.

heads had ties to Nuiqsut land use through direct descent. One of the women was single and lived with her adopted son. The other woman, the granddaughter of a pre-1940s family, lived with two unmarried children. Her son-in-law also established a household in Nuiqsut at this time.

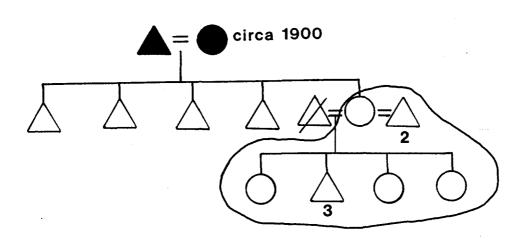
We then examined the kinship ties of the 29 male household heads' wives to the documented users of the Nuigsut area. Of the 27 wives of male household heads, 17 women had direct descent ties to users of Nuigsut land, and the remaining 10 had affinal links through their husbands or could not be traced. Ten of the 31 original Nuigsut households were cases in which both the husband and wife had direct descent kin ties to traditional Nuiqsut land users. This would indicate that one third of the original Nuigsut household heads derived from an intermarrying population located in the Colville River area. Although marriage propinguity is often noted for aboriginal Inupiat, the fact remains that many of the Mid-Beaufort populations during the twentieth century had moved to Barrow and other North Slope areas. Therefore, we must conclude that kin ties to the Mid-Beaufort region and the Colville River remained effective throughout the twentieth century, despite dispersal of family groups. Kinship and marriage ties continued to perpetuate an earlier pattern of traditional land use in this region. Several case studies will be used to illustrate the nature of these ties and importance of kin relations in the traditional and comtemporary settlement of Nuigsut and its surrounding environs.

Case study 1 involves two of the households which moved to Nuiqsut in 1973. The male head of household A is the brother of the wife of the head of household B. Their natural father, their mother's first husband, is dead. His parents were probably historical users of the Nuiqsut area. Their mother's second husband, individual 1, was the son of parents who had lived in the Colville River area before 1940. Thus both household groups have distant affinal claims to local Nuiqsut land use. Group A has a one stop tie through the male head of household whose stepfather (affinal link) has traditional ties to the Nuiqsut area. Group B has a



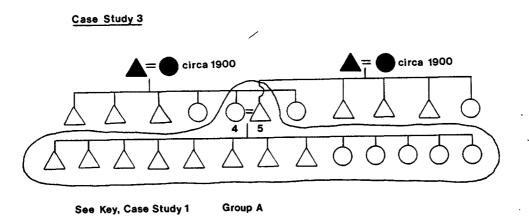
two step tie through the wife (affinal link) of the male head of household. The wife's stepfather (a second affinal link) then connects this group to the traditional use of land in the Colville River area. These relationships of distant affinal ties by Group A and Group B to historical use of the Nuiqsut area are important in understanding the dynamics of the modern-day settlement. The political and social strategies (whether conscious or not) must be to increase their networks within the community, most obviously by marriage, to reinforce their right to local land and resource use. This is especially important for Group B, whose male head of household is from another North Slope community. He is, in fact, among the most politically and economically active men in Nuigsut. Some of his children have married into other Nuigsut households. Members of household A are much less active. Their children are still too young to marry.

Case Study 2



# See Key, Case Study 1

In case study 2, one of the original families in the 1973 Settlement of Nuigsut was a male household head (individual 2) who was the husband of a woman who had direct descent ties to pre-1940s users of this area. This woman, her husband, and children set up residence in the 1973 settlement. Ten years later in 1983, the woman and her second husband reside in Barrow and rent their Nuiqsut dwelling to another village family. They maintain ownership of the house. The woman's children from her first marriage remain in Nuigsut. Her daughters have all married men who have established households in Nuigsut (two newer houses, one older). Her son has married and started a household of his own in one of the newer houses. There is little need for this family to establish any stronger claims on local land use. Their marriages integrate them into the community. Their mother's brother is head of the largest household in Nuigsut. The households are all young, financially stable, and have few overt political ambitions as yet.



In case study 3, both Individuals 4 and 5 (husband and wife) have direct descent ties to families who used the Mid-Beaufort Sea area Prior to 1940. These individuals had a very extensive kinship network in the 1973 settlement of Nuiqsut. In 1983, their offspring who reside in the village have political and occupational positions in the village corporation and the North Slope Borough. They have intermarried with several families and represent the single strongest kin grouping in the village. For the most part, they are related to "everyone" in Nuigsut. We have discussed the high frequency of original households in the 1973 Nuigsut settlement of households in which both husband and wife have direct descent ties to individuals who maintained traditional subsistence resource use in the Mid-Beaufort Region. This is simply the most extreme, strongest example.

These three cases illustrate how kinship ties operate through both affinal and consanguineal principles in several Nuiqsut households. The knowledge about and the consequent ability to make use of the Colville River and the Mid-Beaufort Sea was passed on through consanguineal and affinal kinsmen to the present day occupants. A majority of male household heads of the original 1973 settlers had direct descent ties

to the pre-1940s populations who used this region. This is true of the male heads of household in 1983-84 as well. A small group of 1973 male household heads had only affinal ties to the traditional population of this region. Of this group, most male household heads are married to women who have direct descent ties to the pre-1940s users of this region. In two cases, distant affinal ties through a mother's second husband occur. In these cases, the individuals have increased their social and political networks through other positions and roles. As stated earlier, consanguineal ties represent the most enduring kin relations. One third of the original households of 1973 had such relations to traditional users of the Colville River area through both the male head of household and his wife. However, other factors enter in as well. Less than one half of these kin embedded households maintain social and political networks in comtemporary Nuigsut which equal or expand their 1973 situation.

## CONTEMPORARY KINSHIP IN NUIQSUT

Of the Inupiat households enumerated on the November 1982 census, all but ten are original households or split from original households due to marriage, growth in family size, or some other reason. The ten "new" families are essentially seven cases, as there is one case of two brothers each having a separate household, one of a father and son in the same situation, and one of a father and his son-inlaw. In each of these three situations the two men arrived in Nuiqsut together. Six of the seven cases have ties to traditional users of the Nuiqsut area through relatives of the spouse of the male head of household. Three cases have such ties through both the head of household and his spouse. The male heads of households are presumed to be registered

as members of other village corporations. The registration of their wives is unknown. Four of the male heads of households came to Nuiqsut to provide the town with expertise in some area, that is, to fill a specific skilled wage position. A fifth may have done the same, but sufficient information to say is lacking. The sixth may actually be registered in Nuiqsut, which would make his moving back understandable. The seventh case involves one of the most influential men in the village, to whom ordinary circumstances do not apply. He would be at home anywhere on the North Slope, since his kinship network is so wide, his personality so engaging, and his influence so pervasive.

Of the ten families with the strongest link to the land in 1973, four have maintained and expanded their position in the village. The other six, through death, lack of children, or advanced age in 1973, have not been able to add additional linkages to bolster their tie to the land. The adults of the four original families mentioned above, along with five of the six newest families, and the Nuiqsut individuals their family members have married, essentially make up the core of political Nuiqsut.

In contemporary Inupiat communities, kin networks are the foundations upon which political factions may be formed. In Barrow, the division of major family groups and their political interests have been summarized by one informant who stated his interpretation of Barrow politics as, "the Browers own the town, the Hopsons run the town, and the Leavitts work for the town." Political support in Nuiqsut is mediated through kinship in a less conspicuous manner, but the influence from Barrow is clear. All but one of the original Nuiqsut households is recorded in the Barrow genealogy. This one family has lived in and around Nuiqsut since before the 1940s. Therefore, Nuiqsut

households maintain vital support from kin-based factions in Barrow as well as kin-based factions in Nuiqsut. In some political respects, we believe that Nuiqsut is in its early stage of kinship factionalism within major political arenas.

The major political arenas of Nuigsut are the Kuukpik Corporation, the Nuiqsut City Council, and the North Slope Borough. In the first two political membership occurs by election, and in the case of North Slope Borough villagers are employed in positions within the North Slope Borough government. The village corporation holds elections for the positions of chairman, president, vice-president, treasurer, secretary, and two members. All positions are salaried except the two elected members. They draw no salaries as council members. The City of Nuigsut has transferred all powers except for recreation and cemetaries to the North Slope Borough Assembly Board (an elected body). In this sense, the North Slope Borough Assembly represents a substantial but unseen political entity in Nuiqsut except for the presence of one assemblyman who moved to Nuiqsut in the last year. The political presence of the North Slope Borough is directly tied to the employment positions and occupational status held by Nuiqsut residents.

The Kuukpik Corporation administration, in 1982-83, consists of five salaried positions. Two positions, president and treasurer, are held by siblings from the largest family in the village. Of this family's 14 siblings, five are married, three to village residents. In their parents' generation (50-60 age group), their mother and father each have one married sibling residing in the village. This family could well continue to dominate politics in the village corporation, and may in subsequent years attempt to elect younger

siblings to major positions. Already, in City Council discussions where the city's interests have been in conflict with the Kuukpik Corporation's, other Nuiqsut residents have been quick to voice their resentment against this family's dominant political and economic interests in the village corporation and land distribution.

Another interesting aspect of the composition of the Kuukpik Corporation is that all elected officers come from the 31 original households which settled in Nuiqsut in 1973. Three of the members, the secretary and two elected, unsalaried members come from families in which both the male household head and his spouse had direct descent ties from families who had occupied the Mid-Beaufort sea region before 1940. In these three cases, this has afforded these individuals considerable political support from kinsmen.

The chairman of the Kuukpik Board of Directors has a small network of kin-based support through his first marriage to a family with some influence in Nuiqsut. The Chairman's role has been to preside over the Board of Directors' meetings. This individual appears to be a "behind-thescenes" man who also is the foreman for many of the projects operated through the Corporation. The vicepresident, who was the founding president of the Corporation and the first city mayor, has some kinship based support. By and large, his political base comes from recently established linkages, his dynamic personality and financial acumen, and success as a whaling captain.

The City Council hierarchy consists of a mayor, a deputy mayor, a secretary, and the other four council members. The city mayor elected in 1982 has only recently moved to Nuiqsut. The majority of his kin-based support comes from his wife's kin who consist of several of the original

households in the 1973 settlement. Although the mayor is technically an outsider (he is a member of the Barrow and not the Nuigsut native corporation), he profits from a well developed kin-based betwork in Barrow. He and his family reside full-time in Nuiqsut, his personality projects a low-keyed and decisive political style unlike that of younger politicians in Nuigsut. Two of the six councilmen are also arrivals to the village within the last two years. One of these two new residents of Nuigsut is the head of the Public Works Department. This individual has been able to use his political network from Barrow to help obtain an employment position in the local Borough government in Nuigsut - and obtain a new political position as council member. This individual also derives some kin-based support through his wife's family who is one of the original households in the 1973 settlement of Nuigsut. He is the brother-in-law to another council member.

Four of the six council members come from the 31 original households in 1973. One woman council member also serves the position of Village Coordinator, a position salaried through the North Slope Borough. The other woman council member is a North Slope Borough health aide. Three of the six council members thus have jobs in the NSB <u>and</u> hold elected positions in the village. One member is related to the current Mayor of Barrow. The membership of the City Council shows much stronger ties with the North Slope Borough organization, both in kinship relations and actual employment positions, than does the Kuukpik Corporation Board. Also, more council members have ties to Barrow through former residence (the mayor and two recently arrived members) than do Kuukpik Corporation Board members.

# Nuiqsut in Brief

Nuiqsut was founded, or refounded, in 1973 in response to a welter of complex pressures. The area has a long history of use for subsistence hunting. The passage of The Alaska Native Claims Settlement Act and the formation of the North Slope Borough allowed people with links to that history of use to return to the Colville River. The return was not to a strictly subsistence way of life, however. Subsistence resources support only a very limited number of people in any event, but the settlers wanted to combine a subsistence lifestyle with improved housing, health care, education, and similar products of modern Anglo-American society.

Nuiqsut grew very quickly in response to the demand for housing and a developed physical plant. Wage income is now an essential element of the Inupiat economy. New political and economic institutional forms have been introduced to administer the development, which has thus introduced social orginazational changes as well. These issues will be elaborated in later sections, as they are central to the Inupiat of Nuiqsut. How can Inupiat control the changes that having cash as an important part of their economy produces in their way of life? How can Nuiqsut people continue to behave and think as Inupiat while in the midst of such social and institutional change?

Kinship as the basis of social organization was developed as one such continuity. Traditional Inupiat society was centered on kinship relations. The population which resettled Nuiqsut in 1973 was closely related to the historical users of the Nuiqsut area. Kinship continues as an important element in Nuiqsut's political, economic, and social organizations. Later chapters will expand on this theme. Politics and leadership must especially be examined with

an emphasis on kinship and marriage relations.

The North Slope Borough supports the existence of Nuiqsut through the CIP program and the provision of most community services, but by the same token, Nuiqsut is nearly totally dependent upon the NSB. Oil companies provide the source of income for the NSB (and hence Nuiqsut) but also impinge on the life that Inupiat would like to live. Nuiqsut, then, is a village caught between private industrial development on the one hand and public regional government development on the other. It must try to balance these forces against its own separate identity and strong commitment to traditional values and continued use of traditional subsistence resources. A need for such dynamic adaptation is inherent in all situations of rapid change. This chapter has described the outlines of change in Nuiqsut and introduced the topics to be treated at greater length.

#### III. DEMOGRAPHIC DESCRIPTION

# Introduction

Demographic analysis for Nuiqsut is constrained by the lack of registration of vital events (births, deaths, and marriages). This is true for nearly all of the Arctic (Freemen 1973). We will thus limit our dicussion primarily to those features of the population which can be elucidated from household census data.

The most important gap in Nuiqsut demography at present is mortality, for there are no indirect means of ascertaining death rates from the available data. Because of the small size of the population, several years of mortality statistics would be required to build up a sample sufficiently large to make meaningful statements. The lack of mortality data places a severe restriction on the assessment of the Nuiqsut population. Mortality is an important aspect of demographic analysis for many reasons:

... Uniformities and differences of mortality within a country reveal the distribution of other related factors. Similar conclusions can be drawn from the evidence of [mortality] trends. The patterns of mortality [e.g. age and sex patterns] are sometimes valuable indications of the levels of health, having considerable medical significance. Changes of mortality also are a basis for appraising the effects of a program that seeks to improve public health. Estimates of mortality are a step, usually the most reliable step, in estimating the size of the population at dates before or after a census. Finally, analysis of mortality contributes to the study of replacement and population growth... (Barclay 1958:123).

A second area of concern in this analysis is the estimation of individuals ages. Again, due to the lack of vital registration, an accurate assessment of ages is difficult. Many of the ages used are self-reported. Where possible, these

have been checked against other sources, in particular, school records and the Barrow genealogy (MacLean 1971). Where discrepancies exist, priority is given to the Barrow genealogy, then to school records, and lastly to reported ages. Where there is no recorded age for an individual, attempts were made to place him or her in an age bracket (e.g. under 15 years, 15 to 44 years, 45+ years), for purposes of computing sex ratios, dependency ratios, etc.

The demographic data for Nuiqsut come primarily from four unpublished sources:

- A listing of the individuals who left Barrow to settle in Nuiqsut in April 1973. This listing was compiled from interview data.
- A household listing of residents for July 1981. This listing was compiled by a native resident for genealogical and other research purposes for the Alaska Department of Fish and Game, Subsistence Division.
- A household listing of residents for July 1982, from Alaska Consultants. This listing enumerates everyone expected to be in Nuiqsut, and was put together by native informants.
- Three household censuses taken during the course of field research for this project. The census dates are November 18, 1982, January 15, 1983 and February 22, 1983.

Our censuses differ from the previous listings in that only those individuals physically present in Nuiqsut on the day of the census were included. They are limited in that they are not door-to-door enumerations. That would have taken much more time than was available and was not feasible in terms of community relations. Rather, we periodically sat down with informants with our latest list of residents listed

by household and asked who was still present, who had left (for where, when, for how long, and why), and who new was present. No one informant knew everything. We had to talk with several informants for each data date, and cross-check the information we received. Much of the detailed information (exact dates, destinations, reasons) is incomplete. For our purposes, the data are reasonably good, and much better than any other information available.

The data were numerically coded for computer analysis. Individuals were coded for household membership, sex, age, birthdate (if known) ethnicity, and presence/absence in Nuiqsut by household residence for each of the census and listing dates, hereinafter called "data dates" (April 1973, July 1981, July 1982, November 1982, January 1983, February 1984). In order to insure anonymity, no names have been coded into this, or any other computer file constructed in the course of this research.

## General Description of the Population

The average population size of Nuiqsut during our field research based on our three censuses is 268; of this total approximately 85% are Inupiat (Table 4). This average is somewhat lower than the July 1982 figure of 301 residents, which is more representative of a maximum population size in that it includes all individuals considered residents of Nuiqsut, whether present or absent. The July 1981 figure is somewhat low, especially the non-Inupiat population. It appears likely that many of these individuals were omitted from the listing, as their inclusion would have been irrelevant in view of the intended use for the listing.

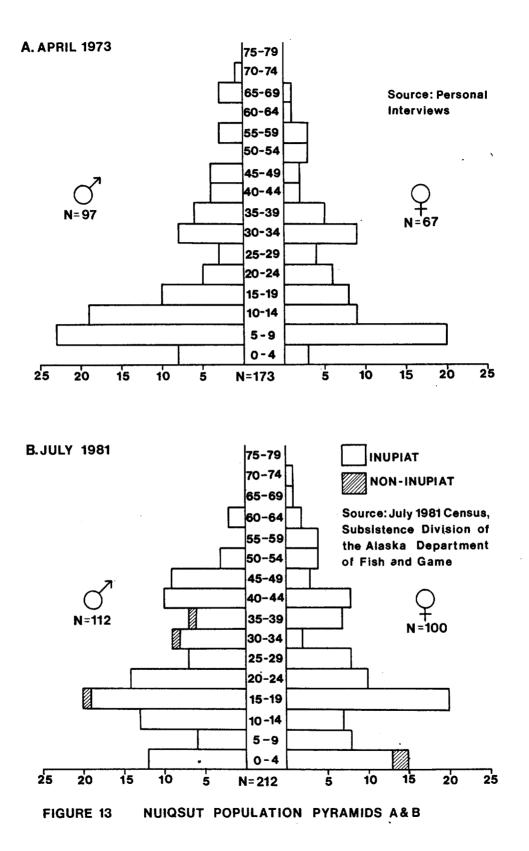
	Inupiat		Non-Inupiat		
Date	Number	Percentage	Number	Percentage	<u>Total</u>
04/1973 <sup>a</sup> 1974 <sup>b</sup> 1977 <sup>c</sup> 1980 <sup>d</sup>	175	100.0	0	0.0	175 145 157 208
07/1981 <sup>e</sup>	214	99.5	10	4.5	224
07/1982	262	87.0	39	13.0	301
$11/1982_{0}^{9}$	227	83.8	44	16.2	271
01/19839	239	86.0	39	14.0	278
02/1983 <sup>9</sup>	215	84.3	40	15.7	255

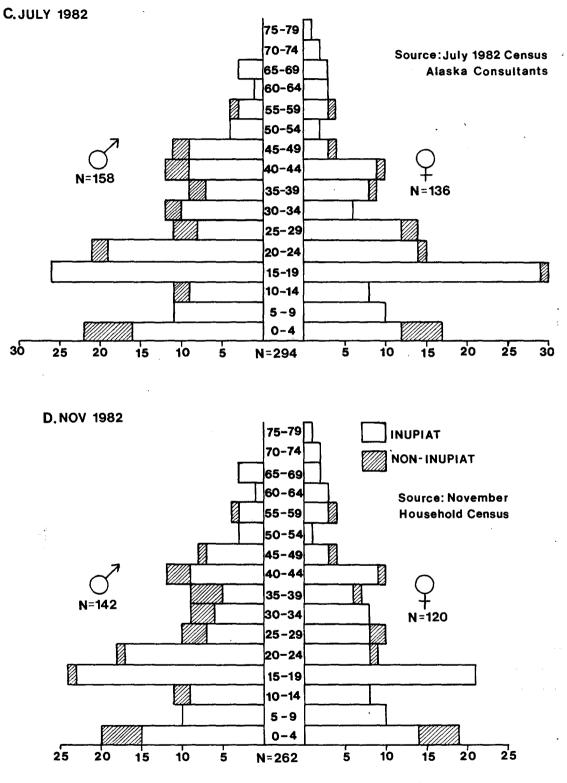
## Table 4: TOTAL POPULATION OF NUIQSUT

a<sub>Reconstructed</sub> founding population University of Alaska North Slope Borough U.S. Census fSubsistence Division, Alaska Department of Fish and Game Alaska Consultants for the North Slope Borough Field data

The population pyramids for the six data dates are shown in Figure 13 (the numbers differ from Table 4 due to a small number of individuals whose ages are unknown). One of the most prominent features of the population is the irregular shape of the pyramids, particularly a constriction of the age groups 5-9 and 10-14 in the current population and in the 0-4 age group of the original population.

The overall sex ratios for Nuiqsut are high (Table 5). This is especially true for the founding population, who seem to have brought a preponderance of male children with them. Figure 13a indicates that most of this imbalance is found in the 10-14 age category. This imbalance is reflected in the generally higher sex ratio among individuals of reproductive age in the current population, as compared to the founding population. Thus, among individuals aged 0-14 years, the sex ratio has decreased from 156 to a mean of 118 during the period of field research, while the ratio for 15-44 year

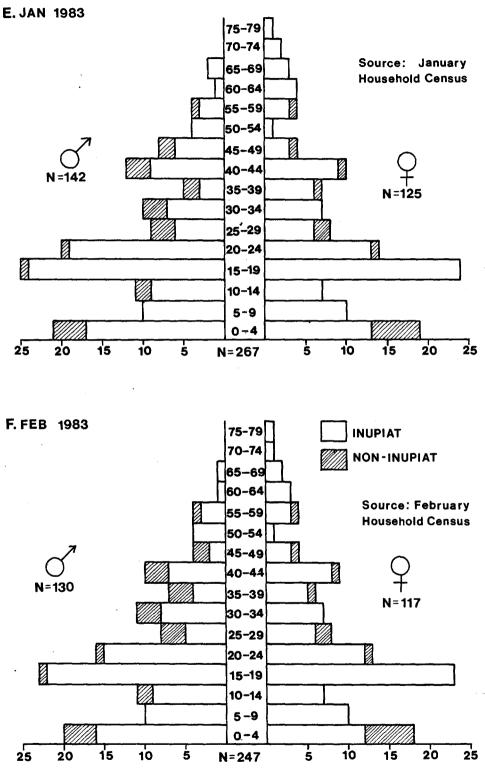




**FIGURE 13** 

1

NUIQSUT POPULATION PYRAMIDS C&D





olds increased from 109 to 122. The sex ratio imbalance appears to be largely limited to a cohort of the founding population, at least for the Inupiat residents.

Table 5: NUIQSUT SEX RATIOS - TOTAL POPULATION

		April 1973	July 1981	July 1982	Nov 1982	Jan 1983	Feb 1983
Overall	Male Female Ratio	98 77 127.3	117 103 113.6	163 138 118.1	149 122 122.1	148 129 114.7	136 118 115.3
Ages 0-14	Male Female Ratio	50 32 156.3	31 30 103.3	47 35 134.3	42 37 113.5	43 36 119.4	42 35 120.0
Ages 15-44	Male Female Ratio	37 34 108.8	70 55 127.3	93 84 110.7	87 67 129.9	84 72 116.7	79 66 119.7
Ages 45+	Male Female Ratio	11 11 100.0	15 14 107.1	23 19 121.1	20 18 111.1	21 21 100.0	15 17 88.2

Sex ratios do not include 3 children of unknown sex. Sex ratios do not include 1 infant of unknown sex.

Sex ratio = # of males/# of females x 100

The dependency ratio provides an estimate of the number of dependents per 100 potentially economically active individuals. It is based on the number of potential producers, as opposed to those actually employed in either wage labor or subsistence activity. The dependency ratio for Nuiqsut is currently quite low (Table 6), indicating a proportionately small number of very young and very old individuals. This contrasts sharply with the dependency ratio of the founding population, which was excessively high. The aging of the population is clearly seen in the movement of the large, dependent cohort of the founding population into the economically active age categories of the present population.

#### Table 6: NUIQSUT DEPENDENCY RATIOS

April 1973	98.9
July 1981	44.7
July 1982	41.9
November 1982	47.3
January 1983	45.8
February 1983	47.7

Dependency ratio is computed as:

- 4

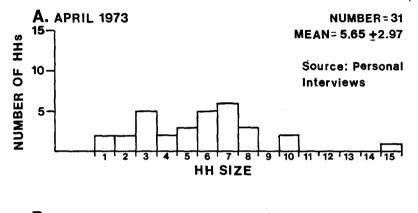
Population aged 0-14, 65+ Population aged 15-64 x 100

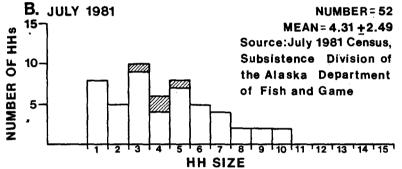
#### Household Size and Composition

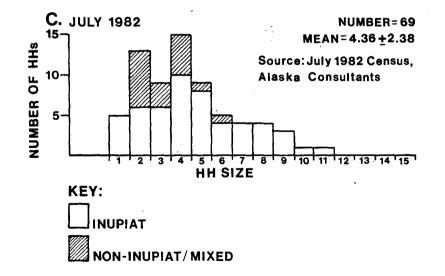
The average number of individuals per household varies between 3.9 and 4.4 for the four most recent data dates, with an average of 66 households for the village. Figure 14 shows the distribution of household sizes, with mean and standard deviation, for each data date. The number of non-Inupiat and mixed households (those with both Inupiat and non-Inupiat individuals) is also designated for the three census dates. Inupiat households clearly show a tendency to be larger than non-Inupiat and mixed households.

Most households consist of nuclear families (Table 7). As used here, the term nuclear family designates couples or single adults with their offspring (biological or adopted), and couples without offspring. The next largest category is that of composite households, which includes a variety of relationships among individuals; in general, such households include at least one individual who is not a member of the nuclear family (if one even exists in the household). The compositions of the composite households for the November census are given in Table 8, to illustrate the type of

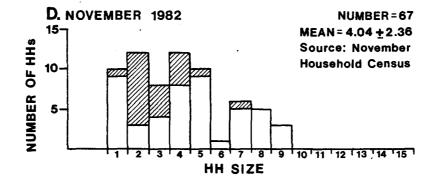
FIGURE 14 NUIQSUT HOUSEHOLD SIZE

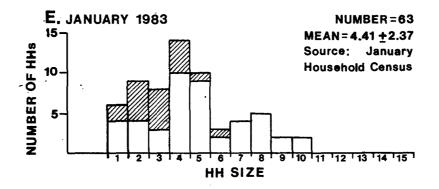


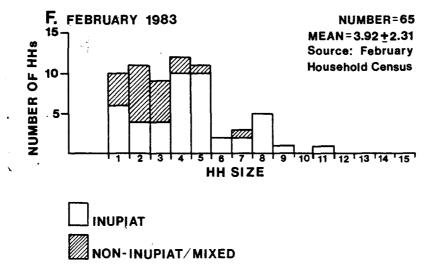












#### Table 7: NUIQSUT HOUSEHOLD COMPOSITION

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	Single Person Households		Nuclear Family		Composite Related		Composite Unrelated		Unknown Relationship	
	# of Hhs	# of HHs	Mean # of Ind	# of HHs	Mean # of Ind	# of HHs	Mean # of Ind	# of HHs	Mean # of Ind	
April 1973	2 (6.5%)	23 (74.2%)	5.3 ±2.2	3 (9.7%)	7.7 ±2.1	-	-	3 (9.7%)	9.7 ±4.7	
July 1981	8 (16.7%)	18 (37.5%)	4.4 ±2.1	7 (14.6%)	5.4 ±2.1	-	-	15 (31.3%)	5.5 ±2.6	
July 1982	5 (9.6%)	28 (53.9%)	4.9 ±2.4	11 (21.2%)	4.9 ±1.6	-	-	8 (15.4%)	6.4 ±2.8	
Nov 1982	9 (19.2%)	22 (46.8%)	4.9 ±1.9	10 (21.3%)	5.7 ±2.0	-	-	6 (12.8%)	6.5 ±2.5	
Jan 1983	4 (8.9%)	25 (55.6%)	5.0 ±2.1	11 (24.4%)	5.5 ±2.5	-	-	5 (11.1%)	7.0 ±1.6	
Feb 1983	6 (13.3%)	24 (53.3%)	4.9 ±2.1	10 (22.2%)	4.8 ±2.1	-	-	5 (11.1%)	6.0 ±2.6	

#### INUPIAT

NON-INUPIAT

	Single Person Households	Nuc Fam	lear ily		osite ated		osite lated		nown onship
	# of HHs	# of HHs	Mean # of Ind	# of HHs	Mean # of Ind	# of HHs	Mean # of Ind	# of HHs	Mean # of Ind
April 1973	-	-	-	-	-	-	-	-	-
July 1981	-	3 (75.0%)	4.3 ±0.2	1 (25.0%)	3.0	-	-	-	-
July 1982	-	13 (76.5%)	2.9 ±0.9	1 (5.9%)	4.0	-	-	3 (17.6%)	4.0 ±.94
Nov 1982	1 (5.0%)	12 (60%)	2.9 ±1.1	3 (15%)	4.7 ±2.1	2 (10%)	2.5 ±0.7	2 (10%)	2.0
Jan 1983	2 (11.1%)	11 (61.1%)	3.0 ±0.9	3 (16.6%)	4.3 ±1.5	1 (5.6%)	4.0	1 (5.6%)	2.0
Feb 1983	<b>4</b> (20.0%)	11 (55.0%)	2.9 ±1.0	3 (15.0%)	4.7 ±2.1	1 (5.0%)	2.0	1 (5.0%)	2.0

relationships that may exist between individuals residing in such households. The two households with unrelated individuals present were designated as such due to the presence of members of the research team.

Single person households form a fairly large proportion of the Inupiat population for the November census (19.2%).

In January, this proportion decreased to 8.9% (4 out of 45 households). It increased again somewhat in February to 13.3% (6 out of 45 households). The decrease in single person households was due mainly to the addition of other individuals to the household, either visitors from out of town or relatives from other households. A secondary cause is the temporary absence of some individuals, whose subsequent return in February then increased the proportion of single person households again.

For the Inupiat population, there has been an increase in the proportion of composite households, from 10% in April 1973 to approximately 22% in 1982-83. The number of nuclear family households has remained fairly stable, with 23 nuclear families in 1973 and an average of 25 in 1982-83. The percentage of nuclear family households has declined, however (from 74% to about 50%). How the July 1981 population compares to these figures is not clear, since there are insufficient data for the classification of 31% of the households.

# Table 8: COMPOSITION OF COMPOSITE HOUSEHOLDS NOVEMBER 1982

Household Composition	<u># of Households</u>
Nuclear family + grandparent(s)	1
Nuclear family + grandchild(ren)	5
Nuclear family + niece/nephew	2
Nuclear family + individuals with a variety of kin ties to the family	4
Co-residence of kin-related and/or unrelated individuals where head-of- household is <u>not</u> part of a nuclear family	2
Insufficient information on some member(s) of the household	1

As seen in Table 7, composite households are generally larger than nuclear households, and Inupiat households are generally larger than non-Inupiat/mixed households. Household size has decreased since the original population settled in Nuiqsut. However this difference is not statistically significant, when a t-test is performed for nuclear family household size. The difference could be easily explained by the extreme conditions faced by the founding population and the increased availability of housing in recent years.

The majority of households are headed by both a male and a female in Inupiat and non-Inupiat/mixed households (Table 9a-f). The non-Inupiat and mixed households are too few in number to warrant detailed assessment. For the Inupiat population, single person households are predominantly male. For nuclear and composite households with only one head, the three census data dates show a majority headed by females, while the listing data dates show a more equal balance between the sexes. The preponderance of females in the census data probably reflects the temporary absence of male spouses or mates from the household. For the November census data, the average difference between Inupiat spouses or mates was found to be  $3.9 \pm 4.78$ .

#### Fertility

The founding population shows a definite constriction in the 0-4 age category, which is subsequently reflected in the 5-9 and 10-14 age categories ten years later. Masnick and Katz (1976:43) provide a population pyramid for Barrow in 1970 which shows a similar constriction of the 0-4 age category. They attribute this reduction to the introduction of modern contraceptive technology in the late 1960s. It seems likely

#### Table 9: HEAD OF HOUSEHOLD BY HOUSEHOLD TYPE

	Inupiat			Non-I	ixed		
НН Туре	Male & Female	Male Only	Female Only	Male & Female	Male <u>Only</u>	Female Only	<u>Total</u>
Single Person Nuclear Family Composite Unknown	22 3 2	2 1 1			NONE		2 (6.5%) 23 (74.2%) 3 (9.7%) 3 (9.7%)
Total	27 (87.1%)	4 (12.9%)					31

#### a. April 1973

	Inupiat			Non-Inupiat/Mixed				
<u>HH Type</u>	Male & <u>Female</u>	Male <u>Only</u>	Female Only	Male & <u>Female</u>	Male <u>Only</u>	Female Only	<u>Total</u>	
Single Person Nuclear Family Composite Unknown	13 4 10	5 4 1 2	3 1 2 3	3 1			8 (15.4%) 21 (40.4%) 8 (15.4%) 15 (28.8%)	
Total	27 (51.9%)	12 (23.1%)	9 (17.3%)	4 (7.7%)			52	

# b. July 1981

	Inupiat			Non-I			
НН Туре	Male & Female	Male Only	Female Only	Male & Female	Male Only	Female Only	Total
Single Person Nuclear Family Composite Unknown	22 6 4	5 3 2 3	3 3 1	13 1 1	1	1 .:	5 (7.2%) 41 (59.4%) 12 (17.4%) 11 (15.9%)
Tota]	32 (46.4%)	13 (18.8%)	7 (10.1%)	15 (21.7%)	1 (1.4%)	1 (1.4%)	69

#### c. July 1982

	Inupiat			Non-I			
НН Туре	Male & Female	Male Only	Female Only	Male & <u>Female</u>	Male Only	Female Only	Total
Single Person Nuclear Family Composite Unknown	18 7 3	7 2 1	1 3 3 2	10 2	1 2 2	1	9 (13.6%) 34 (51.5%) 15 (22.7%) 8 (12.1%)
Total	28 (42.4%)	10 (15.2%)	9 (13.6%)	12 (18.2%)	5 (7.6%)	2 (3.0%)	66

d. November 1982

.

#### Table 9: HEAD OF HOUSEHOLD BY HOUSEHOLD TYPE, Continued

	Inupiat			Non-I			
НН Туре	Male & Female	Male Only	Female Only	Male & Female	Male Only	Female Only	<u>Total</u>
Single Person Nuclear Family Composite Unknown	20 6 2	4 3 2	2 5 1	11 2	2 1 1	1	6 (9.5%) 36 (57.1%) 15 (23.8%) 6 (9.5%)
Total	28 (44.4%)	9 (14.3%)	8 (12.7%)	13 (20.6%)	4 (6.3%)	1 (1.6%)	63

#### e. January 1983

	Inupiat			Non-I			
НН Туре	Male & Female	Male Only	Female Only	Male & Female	Male Only	Female Only	<u>Total</u>
Single Person Nuclear Family Composite Unknown	17 4 2	6 3 1 1	4 5 2	10 2	4 1 1 1	1	10 (15.4%) 35 (53.8%) 14 (21.5%) 6 (9.2%)
Total	23 (35.4%)	11 (16.9%)	11 (16.9%)	12 (18.5%)	7 (10.8%)	1 (1.5%)	65

#### f. February 1983

that the lower ratio of the Nuiqsut founding population reflects the continued use of contraception prior to leaving Barrow. The constriction of the 5-9 and 10-14 age categories of the current Nuiqsut population suggests that contraception continued in use at a similar level after the move to Nuiqsut. Within the last five years, however, there has been an increase in the number of children as seen in the expansion of the base of the population pyramid.

The increase in the number of individuals aged 0-4 is probably related to the aging of the population. Individuals who were 5-14 years of age in 1973, and who comprised 41% of the population, are now 15-24 years of age and beginning their reproductive careers. This cohort comprises 26% of the present population, which is a 10% increase over the same age group of the founding population. Thus, even if individual fertility were the same now as ten years ago,

the number of births per year in Nuiqsut would be increasing.

It is not possible to compute age-specific fertility rates from the census data due to the unknown mortality and adoption rates. For an assessment of Nuiqsut fertility over time, the only measure suitable to the data is the child-women ratio, which must be used with caution due to its indirect nature. The child-women ratio is the number of children under five years of age per 1,000 women of reproductive age. The ratio is affected by mortality, but since it is a group measure rather than an individual measure of fertility, it is less likely to be affected by adoption practices unless the number of 0-4 year olds adopted into the community is substantially different from the number of adoptions out of Nuiqsut.

Table 10 provides child-women ratios for the six data dates, and for Barrow in 1970. As can be seen, the ratio has remained fairly constant, with the exception of April 1973 and July 1982. In April 1973, the lower ratio is clearly due to the very small number of young children brought to Nuiqsut (see Figure 1a). The low ratio for July 1982 appears to be due to the inclusion of a large number of older adolescents in the household listing, who may not have been regular residents of Nuiqsut.

- -

Nuiqsut Clinic data indicate there were four births in Nuiqsut in 1982. However, since most births take place in Barrow, this number does not adequately reflect Nuiqsut fertility. A better approximation may be found in the number of pregnancies as an estimate of the number of births, a crude birth rate of 52.4 is obtained for 1982. The actual crude birth rate is probably somewhat lower, as some proportion of the pregnancies actually represent 1983 births. Even so, Nuiqsut appears to have a rate of fertility at least as high as that found among native Alaskans in the

# Table 10: INUPIAT CHILD-WOMEN RATIOS<sup>a</sup>

Date	<u>Location</u>	<u>Ratio*</u>
1970	Barrow	490.6 <sup>b</sup>
April 1973	Nuiqsut	323.5
July 1981	Nuigsut	454.5
July 1982	Nuigsut	359.0
November 1982	Nuigsut	483.3
January 1983	Nuigsut	461.5
February 1983	Nuiqsut	459.0

a <sup>b</sup> See discussion in text. From Masnick and Katz 1976

* Child-women rat	io <u># o</u>	f children f women 15	under 5	years 🚬	100
is computed as:	# 0	f women 15-	-44 years	of age ^	100

## Table 11: NUIQSUT CLINIC PREGNANCIES AND BIRTHS

Age (	Groups	Preg	inancies	<u>Births</u>	Abortions	Birth <u>Control</u>
Ages	<u>Total<sup>a</sup></u>	<u>#</u>	% of Total	<u>#</u>	<u>#</u>	<u>#</u>
15-19	25.5	7	27%	2	0	3
20-24	12	3	25	0	0	0
25-29	12	3	25	1	0	2
30-34	7	1	14	0	1	1
35-39	8.5	1	12	1	0	1
40-44	9.5	0	0	0	0	1

<sup>a</sup> Based on mean number of females in age category in July and November populations.

1950s (Alaskan Health Survey Team 1954). Appropriate data to compute crude fertility rates from more recent reports were not available. For example, numbers of births would be given without corresponding population totals for the same geographic area or similar period.

When the clinic fertility data are broken down by five year age categories, it can be seen that almost 50% of the pregnancies (and Nuiqsut births) occur among 15-19 year olds. It appears that women enter their reproductive careers early, and continue to have children at a high rate throughout their twenties. The reported use of contraceptives seems to be more evenly distributed across the age groups, with the exception of the 20-24 year olds (Table 11).

A high teenage pregnancy rate is a common phenomenon throughout the North Slope (Barbara Bathany, personal communication). Reasons for early childbearing are complex and may range from a strong cultural value for children, and cultural systems for shared childcare and adoption, to a lack of sex education in the home or at school, or simply individual or peer group phenomena. Nuiqsut could be structurally different from other North Slope villages because of its recent founding, however.

The abortion rate in Nuiqsut appears to be quite low, with only one individual appearing in clinic records for abortion counseling. However, this low rate may simply be a reflection of the high cost of abortion, as the woman must go to Anchorage for this service. Those women who do go may very well make their own arrangements, rather than working through the clinic.

The increase in the number of young children coincides with increased expenditures for housing in Nuiqsut. Beginning in 1977, expenditures began to rise, and tripled between 1978 and 1979 to almost \$1.5 million (Figure 5). By 1981, this amount had again doubled, to almost \$3.2 million. This increase in housing may have made larger families or earlier formation of families more feasible in recent years.

A decrease in the number of births in Nuiqsut is expected in ten to fifteen years, due to the constriction in the number of individuals currently aged 5 to 14 years. If the present increase in the number of young children is largely due to an earlier age at first birth among women, and if these women subsequently limit the number of offspring they have, a reduction in the number of births within five years is possible. If, however, the increase represents a change in attitude concerning the desirability of a large family, the number of children born per year will remain high for the present, decrease somewhat in 10 to 15 years, and then increase again when the present cohort aged 0-4 years reaches reproductive age.

#### Population Movement In and Out of Nuigsut

In order to assess the movement of individuals in an out of Nuiqsut, a binary coded variable was developed. This variable consists of a string of six integers, each integer position representing a time of observation. If an individual was recorded in the listing or census for a given date, the appropriate integer position was coded with a "1". If an individual was <u>not</u> recorded, the integer was coded with a "0". For example, suppose there were three individuals (A, B, and C) with the following residence patterns:

Individual	4/73	7/81	7/82	<u>11/82</u>	<u>1/83</u>	2/83			
A B C	Present	Absent	Present Absent Present	Absent	Absent	Absent			
They would be coded as follows:									

Individual	<u>Binary Movement Code</u>
А	111100
В	100000
С	001101

A master computer file incorporating all individuals known to have resided in Nuiqsut was developed, and a movement variable was generated for each individual in the file, as outlined above. Analysis of this variable indicates two basic types of residence for Nuiqsut - continuous residence, and sporadic residence.

Table 12 summarizes the data on continuous residence. In interpreting this table, the following points must be kept in mind:

- The first three data dates (April 1973, July 1981, and July 1982) are listings of all individuals considered to be residents of Nuiqsut, whether actually physically present at that time or not.
- The last three data dates (November 1982, January 1983, and February 1983) are censuses

Table 12:	CONTINUOUS	RESIDENCE	IN	NUIQSUT <sup>a</sup>
-----------	------------	-----------	----	----------------------

		,	Arrival in Nuiqsut By:									
			04/73	<u>07/81</u>	07/82	11/82	01/83	01/83				
Least:	04/73	Binary Code <sup>b</sup> # of Indiv. % of Total	000001 42 15.97%									
until at	07/81	Binary Code # of Indiv. % of Total	000011 4 1.52%	000010 6 2.28%								
in Nuiqsut until	07/82	Binary Code # of Indiv. % of Total	000111 5 1.90%	000110 6 2.28%	000100 14 5.32%							
	11/82	Binary Code # of Indiv. % of Total	001111 0	001110 4 1.52%	001100 3 1.14%	001000 2 0.76%						
Residence	01/83	Binary Code # of Indiv. % of Total	011111 12 4.56%	011110 3 1.14%	011100 4 1.52%	011000 0	010000 0					
	02/83	Binary Code # of Indiv. % of Total	111111 78 29.66%	111110 36 13.69%	111100 36 13.69%	111000 5 1.90%	110000 3 1.14%	100000 0				
		Total	141	54	57	7	3	0				

 $^{\rm a}$  Table includes only individuals of known age greater than 10 years in

<sup>1982.</sup> <sup>b</sup> See text for explanation.

- of only those individuals physically present in Nuiqsut on a specific date.
- It is not known how much movement in and out of Nuigsut occurred between the data dates.

A total of 302 Inupiat have resided in Nuiqsut at some time since April 1973. Of these 263 or 87% fall into the "continuous residence" category, which consists of those individuals who appear to have taken up permanent residence in Nuiqsut at some point. The remaining 39 individuals show a pattern of "sporadic residence", moving in and out of the village.

Almost one-half (45%) of the original founding population has been in continuous residence in Nuiqsut. Of those who left, most had left permanently by July 1981 (24% of the original number). Another 16% has taken up sporadic residence (see Table 13). As of February 1983, there were 158 Inupiat with continuous residence in Nuiqsut (52% of the total number ever residing there). In addition, all but three individuals included in the sporadic residence category were present in Nuiqsut for at least one of the censuses taken during the field research period. Thus, almost two-thirds of those Inupiat ever residing in Nuiqsut maintain membership in the community.

#### Discussion

Adequate knowledge about a community's demographic structure does not ensure successful economic and social needs planning. The lack of such knowledge severely hinders the ability to plan, however. The data from Nuiqsut are incomplete, but can serve as a foundation. Recommendations as to future vital statistics collection will be included in our monitoring

<u>Binary Code<sup>b</sup></u>	Male	Female	<u>Total</u>
000101	1	2	3
001101	0	1	1
010001	1	1	2
010100	0	1	1
010101	1	0	1
011101	0	2	2
100001	0	1	1
100111	2	1	3
101000	1	0	1
101110	2	1	3
110011	1	0	1
110100	1	0	1
110101	1	· 0	1
110110	1	2	3
110111	1	4	5
111001	1	0	1
111010	0	1	1
111011	1	0	1
111101	_3		_7
Total	18	21	39

<sup>a</sup> Table includes only individuals of known age greater than 10 years in 1982

<sup>b</sup> See text for explanation

methodology. Here we will confine ourselves to statements on the information currently available.

Total population appears to be increasing, but it is difficult to say how fast due to the different methods of census collection. This makes determining the absolute population size difficult as well. Alaska Consultants (1982:27), based on past growth trends and a 1982 population of 302, assumes a seven percent annual growth rate through 1987 and two percent thereafter to the year 2000. Kruse et al. (1983:C-20) assume a rate of increase between two and three percent until 2010 and a 1980 base population of 208. The Inupiat population is increasing due to net in-migration as well as the natural increase of present residents. The non-Inupiat population has also been increasing, due almost entirely to in-migration to fill positions at the school. As the school is now complete, the resident non-Inupiat population will probably not substantially increase. One teacher-couple has had a baby while in Nuiqsut.

Our expectation is that total population will continue to increase along the line of Alaska Consultants' projection. Their base population seems too high, but a period of relatively large scale in-migration can be expected until the housing now under construction is fully occupied. This could increase village housing units by nearly 33%. Thereafter, natural increase offset by out-migration will slow the rate of increase. Natural increase, or fertility, will depend on the demographic characteristics of the population, cultural practices, and individual desires. Outmigration will likely depend upon economic opportunity and individual choice.

Detailed demographic information with time depth is perhaps the best source of measures for what is going on. Growth or

decline, differential in- or out-migration, changes in average household size, and the age and sex structure all reflect the socio-economic pulse of the community. We will discuss these issues briefly in Chapter VII and later suggest how systematic collection of demographics information should be central to any monitoring methodology.

#### IV. CASH ECONOMY

#### General Introduction and Orientation

Table 14 provides a quick overview of Nuiqsut's cash economy as of March 1983 (the end of our fieldwork). Two employers, the North Slope Borough and the Kuukpik Corporation, dominate. Together they account for 78 of the 97 positions listed. Women comprise about 1/3 of the Inupiat labor force, but only 1/4 of the non-Inupiat labor force. Table 14 is probably not complete in that seasonal construction projects were in the start-up phase. It will serve as a platform for more detailed discussion, however, after the general village context is briefly described.

#### INUPIAT WAGE ECONOMY

Jobs are very flexible in Nuiqsut. It is not at all uncommon for people to substitute on very short notice at the Post Office, the stores, or the restaurant. Turnover in such departments as the NSB Utilities, NSB Public Works, and the NSB School has historically been high. For Inupiat workers, two factors seem most important. First, individuals sometimes find that a steady job interferes with their preferred style of life. This is not always the case, and in fact may not be the most common case (even though many non-Inupiat seem to consider it so as a matter of course). Kruse et al. (1981:67) found that most North Slope subsistence hunting occurred in the evening and on weekends, implying that it is scheduled around work activities. Also, since 1975 and especially since 1978, North Slope Borough Capital Improvement Projects have been in operation every summer. As the wages are substantially higher than those paid to year-round employees, the temptation exists to trade a long-term, lower paying job

	Inu	piat	Non-1	[nupiat	
Employer	Men	Women	Men	Women	<u>Total</u>
NSB Utilities Department Public Works Clinic Public Safety School	6 4 0 0	0 0 2 <sup>a</sup> 0	0 0 0 2	1 0 0 0	7 3a 2
Teachers, Adm. Maintenance Support Other	0 2 0 7	· 2 3 5 1	5 1 1 3	5 0 0 0	12 6 6 11
City of Nuiqsut	0	0	0	1	1
Kuukpik Corporation Permanent Officers "Office" Staff Store Staff Seasonal	5 3 0 12	0 1 .3 0	0 1 0 0	0 0 0 0	5 5 3 12
Blackstock	0	0	3	0	3
Post Office	1 <sup>C</sup>	0	0	0	1 <sup>C</sup>
NSB Presbytery	1	0	0	0	1
Self-Employed <sup>d</sup>	2	3	1	0	6
Prudhoe Bay <sup>e</sup>	2	1	0	0	2 <sup>e</sup>
Other	$\frac{4}{48}$ f	<u>1</u> 22	<u>3</u> 20	<u>0</u> 7	$\frac{6}{97}$ f

## Table 14: EMPLOYMENT IN NUIQSUT, 3/83

<sup>a</sup> Two full-time health aides. Substitute fill-in not counted.
 <sup>b</sup> Fluctuates widely during the year, depending mostly on construction activity within the village. As of 3/83, these numbers were increasing. The maximum in years past has been approximately 60.

c Not counted in column totals. Postmaster also works for d NSB Utilities.

Does not include craft activities (see text).

e Long-term employees only (greater than 6 months - see text). f See note c. for a short-term, higher paying one.

A job with the utilities department, at about \$12.50 an hour, yields gross earnings of \$500 a week. There is little opportunity for overtime. A summer construction job or similar work starts at \$25.00 per hour and usually guarantees at least 2 to 4 hours of overtime a day. This yields gross weekly earnings of \$1,375 to \$1,750. We were told that on the cat train, transporting bulky items across the tundra, workers are paid \$30 an hour base pay, but have a workday 20 hours long. Gross weekly earnings on the cat train would thus be at least \$3,900 for a five-day week. Extra days and possible double-time would increase this. So long as CIP funds are expended on the North Slope and Nuiqsut, such a "trading" strategy will indeed make economic and cultural sense.

There are no clear relationships between Inupiat household size, the number of adults, and the number of wage earners (Tables 15, 16). Seventeen households (33%) have two or three wage earners while 21 (40%) have one. The three households (6%) with no wage earners are very small--one or two people--and so would seem to be households that could very easily live on subsistence products and the exchange of these for non-subsistence product items. The "sporadic" worker households (7 or 13%) also tend to be small. The 5 "unknown" households (9%) have the same sort of distribution as the "sporadic" worker households. All households larger than 4 people have some sort of steady cash income (though our information on 2 of the 9 five-member households is very scanty). Households with more working age adults tend, logically enough, to have more wage earners. Mothers with large, young families tend not to work. However, one or two young children are not a great barrier to wage employement, especially if an older child or a third adult lives in the household.

# Adults			Н	lous	eho	ld	Siz	e			Tota	1	% of
	1	2	3	4	5	<u>6</u>	7	8	9	10+	Households	Adults	<u>HH</u>
1	4	2	•		•		•				6	6	11
2 3		3	8 1	3	3 1	1	2	1	2	1	24 11	48 33	45 21
4			-	1	3	-	2	-	-	-	6	24	$\overline{11}$
5					2		1	1			4	20	8 2
6 7							1				T	6	2
8										1	1	8	2
Total	4	5	9	11	9	1	7	3	2	2	53	145	100

## Table 15: NUMBER OF WORKING AGE ADULTS<sup>a</sup>/INUPIAT<sup>b</sup> HOUSEHOLD BY HOUSEHOLD SIZE 3/83

<sup>a</sup> "Working age adult" is an individual between the ages of 15 and 65 and no longer in school. Thus, high school students employed only in the summer are excluded. Inupiat head of household or Inupiat spouse.

## Table 16: NUMBER OF WORKING ADULTS<sup>a</sup>/INUPIAT<sup>b</sup> HOUSEHOLD BY HOUSEHOLD SIZE 3/83

# Workers			ŀ	lous	eho	ld	Siz	e			Tota		% of
<u></u>	1	2	3	4	5	6	7	8	9	10+	Households	Workers	<u> </u>
0	2	1									3	0	6
Spor- adic <sup>c</sup>	_	1	2	3	_		1				7 <sup>C</sup>	C	13
1 2	2	1 1	3 3	3 3	6 2	1	4	1	2	1 1	21 14	21 28	40 26
3 Unknown	1	1	2		1		1	1			3 5	9	6 
Total	4	5	9	11	9	1	7	3	2	2	53	58	100

п

a See Note a, Table 15. b Inupiat head of household or Inupiat spouse.

С Not currently working, but has history of seasonal or unsteady wage employment. Households listed as 1, 2 or 3 can also include "sporadic" workers as well.

It is clear from Table 16 that most Inupiat households have at least one steady wage earner (38 of 53 or 72%). Many of these households also include people who work "sporadically" or seasonally, either because the work itself is of that nature or they have other commitments to fulfill as well (school, subsistence, child care). In addition, Table 16 lists 5 households (9%) as unknown and 7 households (13%) as having only "sporadic" wage earners (one or more). Thus, only 3 households (6%) are listed as having no wage income. This is likely to be an overstatement of their numbers as not all jobs inventoried in Table 14 are firmly allocated in Tables 16 and 18.

Information from an informant familiar with most of the payrolls in Nuiqsut confirms this general picture of relatively easy access to cash. The average <u>household</u> income was estimated as at least \$30,000 per year, which agrees reasonably well with the 1980 NSB housing survey median household income figure of \$24,167. While not excessive when the costs of living in the Arctic and the size of some households are considered, this is still not an inconsiderable sum. The articulation of subsistence activities and wage employment will be dealt with elsewhere.

Cash requirements vary from household to household, depending on type of housing, household composition, and consumer preferences. Housing payments (rentals) range from \$100 to \$500 per month. Heating oil, at about \$112 for 55 gallons, costs about \$485 a month in winter. Food costs are relatively high and since about 50% of consumed food comes from the store, probably \$500 to \$800 per month is spent in this way. Households which drink spend a considerable amount on liquor. Phone bills average \$150 per month. Travel expenses are common. An average cash requirement of \$1,500 per winter month per family would not seem like an unreasonable estimate.

The employment pattern of non-Inupiat households is very clear. All working age adults are employed full-time. Households size does not seem to matter (Tables 17, 18). As no non-Inupiat household has more than two adults, household size measures marital status (or presence of spouse) and number of dependents. Of the four non-Inupiat couples with dependents, one has arranged for Inupiat babysitters. Another has one young child and a teenager who cares for him much of the time. The third couple has a visiting nephew fully capable of looking after himself. The fourth couple relies on the teenager of the second couple and also takes advantage of the flexibility of their work schedules to take turns with child care.

# Table 17: NUMBER OF WORKING AGE ADULTS<sup>a</sup>/NON-INUPIAT HOUSEHOLD<sup>b</sup> BY HOUSEHOLD SIZE 3/83

<u># Adults</u>	Household Size	Total	
	<u>1 2 3 4 5</u>	Households Adults	<u># of HHs</u>
1	2	2 2	20
2	4 2 1 1	816	80
Total	24211	10 18	100

<sup>a</sup> See note a, Table 15.

<sup>b</sup> Both head of household and spouse non-Inupiat. Excludes construction camp personnel. There is one male who has been in Nuiqsut long enough to perhaps be considered another household of 1. This would not alter the pattern however, although it would change the % s of 1 and 2 (working) adult households.

# Workers	Household Size				ize	Total	
	<u>1</u>	2	<u>3</u>	<u>4</u>	<u>5</u>	Households Workers	<u>% of HHS</u>
1	2					2 2	20
2		4	2	1	1	8 16	80
Total	2	4	2	1	1	10 18	100

# Table 18: NUMBER OF WORKING ADULTS<sup>a</sup>/NON-INUPIAT HOUSEHOLD<sup>b</sup> BY HOUSEHOLD SIZE 3/83

No direct information was obtained on non-Inupiat household income but it can reasonably be estimated to be at least \$70,000. The starting salary for an inexperienced teacher with a B.A. is \$36,000. They are generally employed as couples, and can supplement their earnings by supervising after-school activities. Teachers are the largest single group of non-Inupiat. Some non-Inupiat earn more, some probably less, but an average household income of \$70,000 to \$80,000 represents a good guess.

Material goods to make life in Nuiqsut more pleasant were much in evidence. One major topic of conversation among non-Inupiat was the saving of money and what that person or couple intended to do with it once they had saved enough. Of the ten households listed in Tables 17 and 18, three never talked about their plans for "after Nuiqsut." It was clear for all three that they would not retire and stay in Nuiqsut but that for now their work was there and they were satisfied with it. For four of the ten households, there was a definite short-term commitment to staying in Nuiqsut. Most seemed to indicate five years or so in their time tables. They do not foresee remaining in Nuiqsut beyond that. One household seemed quite willing to leave the village soon, and one other was uncertain as to future plans. Information on the last household is not available. It is clear, however, that the income earned in Nuiqsut will be used by most of these non-Inupiat households to fund post-Nuiqsut plans.

This contrasts with the transient non-Inupiat, who were not listed in the tables as they were not part of any household. They essentially pass through the village on a short-term job basis. Such people include construction workers. researchers, geologic consultants, and so on. Their incomes can be substantial, but little information is available on how it is spent. Many seem to have future, post-North Slope, plans that they enjoy talking about, but few had as yet taken steps to put them into effect. Some had been on the North Slope for ten years or more and showed few indications of changing. Their pattern is work for 8 to 17 weeks and then to take a break in Anchorage, Fairbanks, Seattle, or elsewhere. Informants say they always return to the North Slope however, as they can't stay away. No suggestions as to why, or even if, this pattern persists, can be made as no data exist on the topic. The effect on Nuiqsut of this non-Inupiat population will be impossible to assess until better information is available. This topic should be investigated.

#### Inupiat Wage Employment

#### INUPIAT WAGE EMPLOYMENT OUTSIDE THE VILLAGE

Referring once again to Table 14, it is clear that few Nuiqsut people choose to work outside of the village. Three people have become regular employees at Prudhoe Bay and two other Inupiat men who work in Barrow are included in the "other" category. While we were conducting field work, eight

young to middle-aged Inupiat men began work at Prudhoe Bay. Each returned shortly after he had begun, apparently as his own decision. Interference with subsistence activities is somewhat of a factor, but not an overwhelming one. Individuals who work full-time within the village (and one who spends much of his time in Anchorage) have managed their time to accommodate both wage employment and subsistence activities, as will be dicussed below. Rather, other factors seem to be at work.

Most Nuiqsut people hired at Prudhoe (and perhaps all) are hired through Pingo Corporation, a corporation set up by and for all of the North Slope communities except Barrow. They are ideally suited to recruit for the oil companies "minority hire" program. However, as one Nuiqsut former Prudhoe employee put it, over there minority hire means "...Puerto Ricans, South Americans, and others from the lower 48." The opinion that oil companies do not really want to hire Inupiat workers is common. Individuals say that the oil companies policy of having only one Inupiat per drilling crew makes it extremely difficult for them, due to their feeling socially isolated and different.

It is interesting to note that the two long-term employees in Prudhoe from Nuiqsut do not work on drilling crews but in a central maintenance garage, where they can readily associate with other Inupiat after work if not during it. The pace of such work also allows more for breaks to visit and such, whereas the rapid and dangerous drilling jobs do not. Informants say that what is needed is a program to train drilling crews comprised entirely of Inupiat. They believe this will reduce the prejudice often displayed towards them on mixed crews, increase their feeling of comfort, and lead to very tightly integrated crews. This is also clearly an attempt to apply a traditional form of social organization

and group recruitment to a "modern" setting. Indeed, it may be beneficial to both the Inupiat and the oil companies to try to adopt the whaling crew model for oil rig drilling crews. No information was available on industry reaction to such a proposal, although it was mentioned to us in the village with great regularity. It is commonly acknowledged that the more inexperienced people there are on a drilling crew, the more dangerous it is to work on that crew.

The two people from Nuiqsut known to be working in Barrow still have a primary identity as being from Nuiqsut. Their reasons for being in Barrow are singular and particularistic, and not necessarily long term (beyond the end of summer). In this regard, they can perhaps be regarded in the same way as people who visit Fairbanks, Anchorage, Hawaii, and so forth.

#### MALE INUPIAT WAGE EMPLOYMENT

Of the 72 men of employable age in Nuiqsut during March 1983, 48 (67%) had wage earning jobs. Of these, 25 (35% of employable men, 52% of men's jobs) were permanent, year-round positions (Tables 14, 19). This compares with a figure for employment of 25% for March 1977, the only information available for comparison (Kruse et al 1981:52). Kruse's information is from a limited number of informants and so is only an estimate. Also, 1977 was a year of relatively low CIP expenditures. The high employment figure given for a period during 1977 was 60%. Employment in Nuiqsut is expected to reach well above what it is at present as the CIP projects for the summer of 1983 have yet to reach full manpower.

# Table 19: NUIQSUT EMPLOYMENT STATUS BY SEX AND ETHNICITY March 1983

Employment	Inupiat		<u>Non-In</u>	
<u>Status</u>	Male	Female	Male	<u>Female</u>
Unemployed Full-time Seasonal	24(33%) 25(35%) 23(32%)	50(69%) 19(26%) 3(4%)	2(9%) 14(64% 6(27%)	1(12.5%) 7(87.5%) 0
Total	72	72	22	8

## EMPLOYMENT STATUS BY ETHNICITY

	<u>Inupiat</u>	<u>Non-Inupiat</u>	<u>Total</u>	2
Full-time Unemployed	44	21	65	x <sup>2</sup> =16.6, df=1 hypothesis of no significant
& Seasonal	100	9	109	difference must
	144	30	174	be rejected

# INUPIAT EMPLOYMENT STATUS BY SEX

.

	Male	Female	Total	2
			<u></u>	x <sup>2</sup> =25.4, df=2
Unemployed	24	50	74	hypothesis of
Full-time	25	19	44	no significant
Seasonal	23	3	26	difference must
	72	72	144	be rejected

# INUPIAT WORK STATUS BY SEX

	Male	Female	Total	<b>)</b>
				x <sup>2</sup> =13.4, df=1
Full-time	24	19	43	hypothesis of
Seasonal	35	3	38	no significant
	59	22	81	difference must
				be rejected

From Table 19, it is clear that Inupiat men have a higher employment rate than do Inupiat women. This is due to the almost total lack of seasonally employed females. Full-time employment for Inupiat men and women is fairly comparable. The Inupiat employment rate is much lower than the non-Inupiat employment rate. All these differences are statistically significant (Table 19).

Information on how many people work at some point during the year would obviously complement knowing how many people work at specific times during the year. Our March 1983 inventory (Tables 14 & 19) is point-time information. For yearly information, we relied on informants' reports as to past work histories. We collected this information for everyone who appeared in any of our censuses. Transient non-Inupiat were not included as this was beyond the scope of our field effort. We then coded these by employment status (unemployed, fulltime or seasonal work, unknown), ethnicity, sex, and age group. The total sample size was of course larger than the March 1983 inventory (for which the population figures of the February census are applicable). This confirmed the results of the March 1983 inventory: 24 (26%) Inupiat males were employed full-time and 35 (38%) seasonally for a total of 59 (65%). Eight (9%) were unknown and 24 (26%) did not work. As last year there were not as many CIP construction projects as this year, employment is expected to be higher. This anticipation was felt especially toward the middle of March, when we had to leave the field.

The differential employment of Inupiat men and women found in March 1983 is also demonstrated by the constructed annual data (Table 20). Full-time employment is about the same for each (25% of the population) but men have much greater opportunities for seasonal employment. In fact, seasonal male wage earners out number full-time male wage

# Table 20: NUIQSUT EMPLOYMENT STATUS BY SEX AND ETHNICITY CONSTRUCTED ANNUAL DATA

Employment	Inupiat		Non-II	nupiat
Status	Male	Female	Male	Female
Unemployed Full-time Seasonal Unknown	24(25%) 24(26%) 35(38%) 8(9%)	57(67%) 21(25%) 4(5%) 3(4%)	2(12%) 14(82%) 0 1(6%)	1(12.5%) 7(87.5%) 0 0
Total	91	85	17	8

## EMPLOYMENT STATUS BY ETHNICITY

	<u>Inupiat</u>	<u>Non-Inupiat</u>	<u>Total</u>	2
Full-time Unemployed	45	21	66	x <sup>2</sup> =33.5, df=1 hypothesis of no significant
& Seasonal	<u>    120    </u> 165	<u> </u>	<u>123</u> 189	difference must be rejected

## INUPIAT EMPLOYMENT STATUS BY SEX

	Male	Female	Total	2
				x <sup>2</sup> =38.4, df=2
Unemployed	24	57	81	hypothesis of
Full-time	24	21	45	no significant
Seasonal	35	4	39	difference must
	83	82	165	be rejected

# INUPIAT WORK STATUS BY SEX

	Male	Female	Total	2
Full-time	24	21	45	x <sup>2</sup> =13.2, df=1 hypothesis of
Seasonal	35	4	39	no significant
	59	25	84	difference must be rejected

earners. There are very few female seasonal wage earners. Thus, only 25% of Nuiqsut Inupiat men do not work for wages during at least some part of the year, compared to 67% of Nuiqsut Inupiat women who do not. Also, non-Inupiat are again seen to have a higher employment rate than do Inupiat.

The constructed annual data also shows the age patterning of Inupiat wage earners (Table 21). The young and the old have higher unemployment rates than the middle-aged. This interacts with the sexual distinction so that women apparently enter the wage force later and leave sooner than do men. Men aged 21-30 are mostly employed (at least seasonally), and stay that way until after age 50, when unemployed men again out number employed ones. Only in the 31-40 age category do employed women narrowly out number unemployed women. The pattern is the same for both sexes, but women must combat both age and sex factors while men need only overcome age (or experience). We suspect that this is again the effect of most seasonal wage earners being men.

Men occupy a relatively well-defined set of occupations within the village. As has been stated above, few men work outside of the village for any length of time. Kleinfield et al (1981) document this pattern for the North Slope Borough as a whole. Our information from Nuiqsut fits this case well. However, with the more detailed information available, we can refine the analysis as it pertains to Nuiqsut.

The primary distinction has already been made between permanent and seasonal or temporary employment. Temporary employment, for men at least, nearly always involves construction, heavy machinery operation, or other physical labor. Language skills and formal education needed are minimal. A worker need not commit himself to work a

# Table 21: INUPIAT EMPLOYMENT STATUS BY SEX AND AGE CONSTRUCTED ANNUAL DATA

	Ma	<u>le</u>	Fem	Female		
Age	Unemployed	Seasonal & Full-time	Unemployed	Seasonal & Full-time		
16-20	13	11	20	3		
21-30	6	16	15	8		
31-40	1	13	6	7		
41-50	1	17	5	4		
51-65	2	1	7	2		
66+	· 1	1	4	0		

#### MALE INUPIAT EMPLOYMENT STATUS BY AGE

Age	Unemployed	Seasonal & Full-time	<u>Total</u>	x <sup>2</sup> =10.7, df=1 hypothesis of no
16-30	19	27	46	significant dif-
31+a	5	32	37	ference rejected
	24	59	83	at 0.001 level.

<sup>a</sup> There are too few males aged 51+ for a chi-square with three age categories to be computed.

# FEMALE INUPIAT EMPLOYMENT STATUS BY AGE

Age	Unemployed	Seasonal & Full-time	<u>Total</u>	x <sup>2</sup> =7.2, df=2 hypothesis of no
16-30	35	11	46	significant dif-
31-50	11	11	22	ference rejected
51+	11	2	12	at 0.001 level.
	57	24	79	

longer period than he wishes. This has been seen as a work pattern which reinforces, or is at least compatible with, subsistence resources harvesting (Kruse 1982:39). The evidence of such a pattern in Nuiqsut is clear. Table 2 lists the yearly expenditure of NSB CIP funds in Nuiqsut, and shows that Nuiqsut consistently has about 8% of such funds expended on village projects. As these are mostly construction projects, much of this money goes for wages during the summer, the only time when such work has taken place. The scope of such expenditure and activity can be gauged from 1981, when \$131,209,658 was spent on Nuiqsut. That is about \$500,000 per capita. As of March 1983, approximately 20 Nuiqsut residents were so employed in Nuiqsut. These were spread among CIP construction projects and a project to move the Nuiqsut dredge to Atqasuk.

A similar distinction must be made when permanent wage positions are addressed. Here there is one group of jobs which fit the description of what had previously only been seasonal work--maintenance, heavy equipment operation, machinery repair, and such. The creation of these jobs is a direct result of CIP projects. Once a physical plant is built, it needs to be maintained. The second group of permanent jobs are those which require an ability to understand and use Inupiaq and English, and to operate beyond a villagebound system. The complexities of modern society bear down most directly on these people who must try to serve the best interests of the village through instruments and institutions introduced from outside.

Of the 22 permanant jobs held by men, all but 6 are of the first sort. They require no training or skills beyond those already possessed by many Inupiat men. The North Slope Borough Utilities Department in Nuiqsut employs 6 Inupiat men ranging in age from 20 to 40. Their duties are to

maintain and deliver the water supply and to maintain and operate the electrical system. Electricity is locally generated using diesel generators. All employees may have to drive heavy trucks. All could reasonably be expected to learn how to take meter readings. Little actual maintenance is involved as mechanics from Barrow handle most complicated problems. The head of utilities in Nuiqsut is a relative newcomer who has lived in Barrow but is enrolled as a member of the Doyon Regional Corporation. He is not the only utilities employee with college education, but he is recognized as having the best formal education. In addition, he has experience from his military service. The typical utilities employee has a high school education and is enrolled in Nuiqsut as a shareholder of the Kuukpik Corporation.

The Public Works Department employs three Inupiat men, with characteristics similar to those of the Utilities Department employees. The head is again a man from outside the village in the sense that his enrollment is not Nuiqsut and he thus is not a shareholder in Kuukpik Corporation. The school employs two Inupiat men as maintenance people, and the village corporation employs two Inupiat males to dispense and deliver fuel oil. One Inupiat man (perhaps two now) is employed at Prudhoe Bay, one Inupiat man is a storekeeper, and a third manages a restaurant (co-operated by his wife). Two other Inupiat men help their wives with stores for which the wife is mainly responsible.

The five officers of the Kuukpik Corporation, the Kuukpik Corporation fuel clerk, and the Presbyterian lay minister who is also a NSB Assemblyman, all fall into the second group of wage earners. Their work requires language skills and training of an advanced nature. Perhaps the heads of NSB Utilities and NSB Public Works in Nuiqsut belong in this category as well. After all, they oversee agencies on which millions of

dollars are spent (see Table 2; Figures 3, 4). They are both from outside the village and perhaps were chosen because people with the necessary skills had not yet developed in Nuiqsut. Male employment opportunities as they have developed on the North Slope may well have contributed to this. There have been few incentives hitherto for individuals in Nuiqsut to develop such skills because of the seasonal abundance of work for which no new training was needed. Barrow, as the largest local community,could have been expected to develop the most diversified and segmented economy, and the first cadre of local leaders. Thus, connections between skilled positions in Nuiqsut and Barrow through the transfer of personnel should come as no surprise.

In addition, there is the Inupiat man who operates a store, as well as the man who runs the restaurant. It is difficult to say to what degree they are economically viable enterprises. The volume of business at the store would not seem to warrant the effort to keep it open, but no hard information is available on this. The restaurant apparently does an adequate business but has yet to attract a large and steady clientele. This private service area could well be a third sector or type of job situation for Inupiat men. In this regard, it should be noted that the head of utilities also operates the post office.

Inupiat men are beginning to acquire more formal education. At utilities and public works, everyone has a high school diploma. One utilities worker has a vocational degree while another has some college. The head of utilities is less than a year from a college degree. The store proprietor of the previous paragraph has been to college. Several of the Kuukpik Corporation's officers have college experience. This increased educational experience is not reflected in Inupiat male employment patterns in Nuiqsut, however. Most men still work as equipment operators and laborers.

Kuukpik Corporation is at present still seen as a conduit for North Slope Borough money in providing construction jobs. The Corporation is beginning to try to develop economic plans of its own. This corporate growth requires internal managerial growth and the development of political solutions for what at first seem to be economic problems. A salient question with regard to Inupiat wage employment has always been its effect on subsistence. We will continue in this chapter to discuss wage employment in Nuiqsut, and turn to subsistence and the articulation of the subsistence and cash economies in the next chapter.

#### FEMALE INUPIAT WAGE EMPLOYMENT

The community of Nuiqsut has experienced the increasing participation of Inupiat women in the work force. This trend, which has been characteristic of America in general, may continue as overall job opportunities for both men and women increase due to the development of economic resources. Nuiqsut patterns of female wage labor employment reflect the generalized pattern of class and occupational status of contemporary Inupiat women. In this section, we shall contrast traditional economic and productive roles occupied by Inupiat women with their emerging roles based upon American class and occupational structure.

Our perspective of Nuiqsut women in the contemporary work force parallels a more general study of Inupiat employment conducted by Kleinfield, Kruse, and Travis (1981) in 1976-1977 for the North Slope Region. The data collected from Nuiqsut on female wage labor employment is based upon observations made by researchers from November 1982 until March 1983. Therefore, our understanding of wage labor employment with regard to changing women's roles is

observational and specific in contrast to a generalized and quantitative analysis of survey information collected from respondents' answers to questionnaires. Our findings on Native women's employment are a base-line measure--one point in the changing trends of women in the Nuigsut work force.

Women in contemporary Inupiat society hold positions within both the paid labor force and the domestic household sphere. Native women who work for wages contribute substantially to the cash income of their immediate or extended kin group. The transfer of cash income into the domestic household unit and its articulation with the subsistence economy is crucial to our understanding of the pivotal position that women have come to play in both economies. In this sense, women's productive capabilities are still perceived and exploited as "economic resources" within the traditional subsistence sphere. This shall be discussed following the presentation and summary of the Nuigsut employment data.

In 1982-1983, during the field work period, information on jobs or economic opportunities open to Nuigsut women was compiled by both field researchers. Table 22 shows the 22+ job positions held by Native women in Nuigsut. With the exception of one woman who worked year-round at Prudhoe Bay, all of these positions were held in the Village of Nuigsut. Women in Nuigsut very rarely travel to Prudhoe Bay for employment. One young woman, when asked why she did not seek higher paying employment at Prudhoe Bay, stated that it would interfere with her family and household responsibilities in Nuigsut. This particular woman was responsible for providing a cash income for her mother, a younger sibling, and her own child. When women dicuss the necessity for new job opportunities in Nuiqsut, they are concerned that wage labor does not remove them from their families. In the past, there was strong sentiment of Nuigsut women for a day-care

# Table 22: NUIQSUT 1982-1983 WAGE LABOR POSITIONS OCCUPIED BY NATIVE WOMEN

Unskilled Labor	Number of Positions
School maintenance (NSB)	3
Dredge camp bull cook	1
Kuukpik Store cashiers	2
(village corporation)	
Service garage employee (Prudhoe Bay)	1
(Seasonal construction work 2/20/83)	1-5

### Skilled Labor

School teachers (NSB)	2
School teacher aides (NSB)	2
School cook (NSB)	2
School secretary	1
Village Coordinator (NSB)	1
Public Health Aides (NSB	2
Kuukpik Corporation secretary	1
Kuukpik Store manager	1

Self-employment

*Store managers/owners	3
*Air charter service/mail pick-up	1
Craft production (skin sewing, masks)	5+

22+ full or part-time positions occupied by Native women on a yearly basis.

1-5 seasonal construction jobs occupied by Native women.

5+ individuals who participate in craft production.

\* in partnership with husband.

center which would allow them greater freedom to take on wage-labor employment. However, it was our observation that most employed women were able to find immediate or extended kin to assist in child-care. Due to the greater flexibility of familial obligations in child-care in Inupiat society, child-care facilities are probably not as essential for the female work force as in contemporary Western communities.

Some of the positions listed in Table 22 such as school employment or dredge camp bull cook are not year-round positions, yet they do require more steady employment than seasonal construction jobs. The few positions as seasonal construction workers held by women were available from February 20, 1983 through the month of March and could last into the summer. These construction jobs were semi-skilled labor positions in the construction of new housing in Nuiqsut.

There were approximately five individuals who participated in craft production activities. Local crafts are sold mostly at the local stores, but one women does send everything she makes to shops in Fairbanks and Anchorage. Retail prices in Nuiqsut and Barrow were similar to each other. Skin masks ranged from \$50 to \$100, snow shirts ranged from \$25 to \$50, parkas with fur linings ranged from \$300 upward, and seal skin or leather mukluks ranged from \$250 to \$350. Craft production does not represent a substantial aspect of the cash economy as no one person produces a great deal to sell. However, craft activities do provide some supplementary cash income, primarily to women.

Craft production in Nuiqsut is predominantly restricted to women's crafts, unlike the craft production in Barrow which includes both men's and women's crafts. The absence of ivory carvers, baleen basket-makers and other men's craft activities in Nuiqsut may be a result of the relatively small population

size of Nuiqsut and demographic accident. There are few men in the 50 to 60 year old age group who might have learned traditional crafts. However, four Nuiqsut men do trap and clean furs, a type of subsistence/craft economy. Both furs and women's craft items are usually displayed in the Kuukpik Store.

Of Inupiat women employed in Nuiqsut, seven occupy unskilled labor positions, twelve occupy skilled labor positions, and four (excluding individuals involved in craft prodution) are self-employed. Table 23 lists seven additional positions held by non-Inupiat women. There were approximately 48 male Inupiat wage earners in Nuiqsut in 1982-1983 (Table 19), so clearly fewer females than males engage in wage labor.

# Table 23:NUIQSUT 1982-1983WAGE LABOR POSITIONS OCCUPIED BY NON-NATIVE WOMEN

Skilled Labor	Number of Positions
School teachers (NSB)	5
Utilities Department clerk (NSB)	1
Village of Nuigsut clerk	1

7 full or part-time positions occupied by Non-Native women on a yearly basis.

Our observations are consistent with the findings of Kleinfeld, Kruse, and Travis (1981:8-9). In Nuiqsut and the five other North Slope Borough villages outside of Barrow, male wage earners predominate. In Barrow the reverse is true. Female wage earners outnumber male wage earners on a monthly, seasonal, or annual basis. We believe that several reasons may contribute to an explanation of why male employment is greater than female employment in Nuiqsut and other North

Slope villages. In the case of Nuiqsut, there are fewer wage labor positions in occupations defined as women's work. Positions in Nuiqsut held by women include clerical and secretarial work, health and social services jobs, store management, and work in education. A majority of wage labor positions in Nuiqsut, and perhaps in other villages, are defined as men's work (i.e., jobs in Public Works, the Utilities Department, Dredge Camp employment, management jobs in the Kuukpik Village Corporation, and rotational labor positions on oil rigs or camps in Prudhoe Bay). Therefore, we would expect that unless Nuiqsut undergoes further administrative and bureaucratic development, Inupiat males will dominate the work force.

The wage labor positions held by both Native and White women in Nuiqsut appear to follow the traditional development of women's occupation in American society (Table 24). Future economic development in Nuiqsut will likely result, as in Barrow, in increasing wage labor employment for Inupiat women, with a proportionately slower growth in wage labor employment opportunities for Inupiat men.

The high participation rate of Inupiat women in the wage economy results from a number of favorable positions. On the labor demand side, the specific type of development that has occurred on the North Slope had brought large numbers of jobs which the majority culture has conventionally defined as women's work. Since the 1960s, government has been a steadily expanding industry, and government employs large numbers of clerical, education, health and social service workers (Kleinfeld, Kruse, and Travis 1981:19).

A shortage of Nuiqsut women trained in clerical secretarial skills may exist since two of these positions are currently held by white women. There is a publicly advertised preference for Native hire. However, in both cases it may be that non-Native women are employed because they represent

## Table 24: NUIQSUT 1982-1983 A CLASSIFICATION OF EMPLOYMENT OF AMERICAN WOMEN AS REFLECTED BY EMPLOYMENT STRUCTURE OF RESIDENT NUIQSUT WOMEN

Unskilled Labor	Domestic Help/Maintenance Construction Work Service Garage	Total	6-10
Skilled Labor with High School Ed.	Clerical Staff Secretaries Cashiers School Teacher Aides	Total	6
Labor requiring Professional skills	School Teachers Village Coordinator - Administrative Ass't. Health Aides	Total	13
Self-Employment	Craft Production Management of Air Charter Service and Mail Pick-Up Store Management/Ownership	Total	9+

nonpartisan positions in jobs where political factionalism in the economic or social spheres of the Native community may readily compromise the job security of Native women holding such positions. In the position of city clerk, the employee is responsible for handling important secretarial duties, minutes of the council meetings, and communications written by the Mayor of Nuiqsut. This position also requires considerable tact because the city clerk's office is housed in the same building as the for-profit village corporation. The position of the utilities clerk also entails a certain degree of non-partisan participation. In this position, the clerk must handle all utilities and water accounts for each village household. Additionally, this individual is responsible for billing each household and collecting the monthly payments.

Many wage positions on the North Slope are dependent upon characteristics which differentiate Inupiat women from Inupiat

men. Some of these characteristics are acquired (learned) and others are a product of Inupiat culture and socialization (Kleinfeld, Kruse, and Travis 1981). These characteristics include: 1) educational background, 2) experience and proficiency in the English language, 3) additional vocational training, and 4) cultural values which encourage women to provide the productive stability of the domestic household unit. In Table 25, we have outlined the approximate minimum level of English language skills or proficiency that a person must have to hold the jobs that are currently held by Native women. The same kind of break-down may be expected for jobs held by Native men, although some job descriptions would not apply to Inupiat men in Nuigsut. For example, there are no male clerks, secretaries, health aides, or school teachers. There are at least two men who have translation skills in Inupiag and English. The Presbyterian lay minister and a former para-legal aide have assumed occasional responsibilities as bilingual translators. In general, however, it appears that Inupiat women in the para-professional and professional fields represent a relatively highly educated sector of the population.

The greater numbers of Inupiat women who have paraprofessional or vocational skills can be attributed to the greater emphasis placed upon Inupiat women completing their high school education and the availability of additional training for jobs defined as women's work. Also, Inupiat men in Nuiqsut have a far greater range of unskilled employment opportunities available, within Nuiqsut and at Prudhoe Bay and the other North Slope communities. Nuiqsut males may seek employment in seasonal construction work, rotational shifts at Prudhoe Bay, as members of cat-train crews, and at other blue collar jobs in the neighboring communities of the North Slope. In addition, Inupiat men can also work for the North Slope Borough or the Kuukpik Corporation within the village of Nuiqsut.

#### Table 25: NUIQSUT 1982-1983

## CLASSIFICATION OF JOB POSITIONS OF WOMEN AND APPROXIMATE LEVEL OF ENGLISH LANGUAGE SKILLS/PROFICIENCY\*

Spoken Command of English	3 2 1-5 2 1	School Maintenance Workers School Cooks Seasonal Construction Workers Kuukpik Corporation Cashiers Garage Employee
Spoken/Written Command of English	1 7 2 1 2 1 3	School Secretary School Teachers (5 non-Inupiat) School Teacher Aides Village Coordinator Public Health Aides Village of Nuiqsut Clerk (non-Inupiat) Kuukpik Corporation Store Manager Store Management/Owner
Translation Skills in English and Inupiat Languages	1 1 1	Village Coordinator Kuukpik Corporation Secretary School Teacher of Inupiat Culture and Language Special Education Teacher
No English Skills Necessary	5+	Craft Production

\* Individuals holding these positions may have a greater command of the English or Inupiat languages; however, these categories represent the bare essentials of language skills to conduct the jobs held by the individuals. The relative mobility of Inupiat men, both in their traditional roles as hunters and their contemporary roles as wage laborers, allows them a flexibility and variety in employment opportunities that Inupiat women lack. Inupiat men appear, on the whole, to be less concerned with staying in the village close to their families, although some men might state a preference for village life and there may be several interacting factors involved. Women seem to marry at a younger age than men and more jobs are available for men than for women. The last is especially true for young men and women--one of the more mobile age groups. It may be that the opportunity for work draws more men than women away from the village.

Women, on the other hand, are more closely tied to their families, their children, and the village. Employment opportunities for women are for the most part confined to jobs which require skills and proficiency in English. However, greater educational and para-professional training gives the Inupiat woman a better chance for obtaining those sorts of positions when they are within the confines of her community.

Furthermore, women participate in subsistence procurement less than men; therefore, it is easier for women to take on full-time, year round employment than it is for men who may wish to engage in seasonal subsistence activities. The role of the subsistence economy in wage labor employment of Inupiat men and women is expressed by Kleinfeld, Kruse, and Travis (1981):

In sum, Inupiat men maintain moderate levels of activity in both the subsistence and wage economies. The pattern is typical of young men as well as the older generation. In contrast, Inupiat women maintain levels of activity comparable to men in wage economy but are less active in the subsistence economy. Young

Inupiat women especially appear to be more attached to the wage economy and less active in the subsistence sector (Kleinfeld, Kruse, and Travis 1981:21).

In Nuiqsut, men participate in the majority of subsistence activities such as caribou and moose hunting, bird hunting, fishing and netting, and fur-trapping. Village women mostly participate in the subsistence activities of winter ice fishing, and the hunting and the fishing activities at summer fish camps. Therefore, the strong dichotomy between female wage labor employment and male subsistence activities (a sexual division of labor) has not occurred to the extent that it occurs in Barrow (Kleinfeld, Kruse, and Travis 1981).

#### INUPIAT WAGE EMPLOYMENT--MEN AND WOMEN

The pattern of employment shown by our March 1983 job inventory (Tables 14 and 19) is basically the same as that exhibited by our constructed annual data (Tables 20 and 21). As Table 19 shows, there were 72 Inupiat men of working age in Nuiqsut during March 1983. They were divided as follows: 25 (35%) permanently employed, 23 (32%) seasonally employed, and 24 (33%) unemployed. Of 72 working age Inupiat women, 19 (26%) were permanently employed, 3 (4%) temporarily employed, and 50 (69%) unemployed. The difference is clearly in the availability of seasonal work for men and not for women.

Construction and heavy machinery work are considered men's work. Such jobs tend to be seasonal. Clerical work and inside work in general, which tends to be more year-round, seems to be within the female sphere. Thus, school maintenance is logically enough carried out by more women than men (though there is a mixture). Cooking is also logically feminine, as is health care. Interestingly enough, managerial-administrative positions also gravitate towards

women. The Kuukpik Corporation Store is run by women. the village coordinator has always been a woman (and not always the same one)., and teachers and teachers' aides are women. We noticed this same pattern among non-Inupiat hired administrators within the village. The Kuukpik Corporation seems to be the only organization whose administration is composed entirely of men. There are female members of the board of directors. Kuukpik Corporation at times seems content to be a conduit for North Slope Borough money. This view would have the corporation be primarily responsible for creating temporary jobs for men. Clearly men as a group fill jobs requiring less formal training than do woman, and the North Slope Borough and Kuukpik Corporation have been successful in creating such jobs on a seasonal basis.

About equal numbers of men and women are permanently employed. The types of permanent positions the two sexes hold are quite different, however. Men essentially monopolize unskilled and semi-skilled jobs, as well as those involving machinery. Women hold clerical positions or function within a nurturing and/or domestic situation such as the village clinic or the school. Men are perceived as the primary providers and main wage earners. In all age classes, more men than women are engaged in some form of wage labor (Table 21). This is especially true on a percentage basis for those age groups likely to have children (ages 26-50, which aggregate to 33 out of 40 or 82.5% men employed compared to 12 of 29 of 41% women employed). These are also the age groups with the highest percentages of working adults.

Of 49 Inupiat households, 9 have female heads of households (Table 26). Of the nine female heads of households, none has a wage job. They are all widows (eight) or never married (one). They are all elderly or other wise not employable. In six of these households (67%), men provide wage income.

		cof of HH	<b>-</b>		cof of HH			cof of HH
Age	Male	Female	Type of <u>Wage Earner(s)</u> b	Male	<u>Female</u>	HH <u>Size</u>	Male	<u>Female</u>
16-20	1		M-S	11	3	1	4	0
21-30	4		M-P, F-P	9		2	1	3
31-40	11		M-P	5	2	3	5	1
41-50	18	1	M-S, F-P	5	1	4	6	4
51-60	4	2	None	3	2	5	8	1
61-65	0	2	M-P, F-S	3		6	3	
66+	2	4	· M-P, M-S	2		7	5	
			M-S, F-S	2		8	4	
			F-P	0	1	9	2	
			F-S	_0		10	_2	
Total	40	9		40	9		40	9

#### February 1983

 $^{\rm a}$  Excludes 3 Inupiat female permanent wage earners living in mixed households.  $^{\rm b}$  M = male, F = female, P = permanent, S = seasonal.

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				Туре	of Wag	e Earne	er <sup>b</sup>				
<u>HH Size</u>	<u>MS</u>	M-P, <u>F-P</u>	<u>M-P</u>	M-S, <u>F-P</u>	None	M-P, . <u>F-S</u>	M-P, <u>M-S</u>	M-S, <u>F-S</u>	<u>F-P</u>	F-S	<u>Total</u>
1 2 3 4 5 6 7 8 9 10	1 2 4 4 - 1 -	- - 2 2 1 1 1	1 - - - - 1 - -	- - 2 - 1 2 1 2	212	- 1 - - - 1					4 6 10 9 3 5 4 2 2
Total	14	9	7	6	5	3	2	2	1	0	49
Age Head of HH											
16-20 21-30 31-40 41-50 51-60 61-65 66+	1 2 4 1 -	- 2 5 1 - 1	- 1 3 1 - 1 1		1 - - 2 1			2		- - - - -	2 3 11 19 6 2 6
a							_				

Table 27: INUPIAT HOUSEHOLD WAGE EARNER CHARACTERISTICS<sup>a</sup>

 $^{\rm a}$  Excludes 3 Inupiat female permanent wage earners living in mixed households. SEE TEXT

<sup>b</sup> M = male, F = female, P = permanent, S = seasonal.

of these men, two are permanently employed and four work more seasonally. In five cases (56%), these men provide the sole monetary income for the female-headed household. Women provide monetary income to two (22%) of the female-headed households and are the most regular monetary supports for their households (one is the sole support). Both have permanent jobs. Two households (22%) have no apparent source of earned cash income. Males are thus the primary wage earners for these nine households. In the three cases where there is no male wage earner, two are households with no known wage earner and one has no male member of employable age.

Of the 40 male head of household cases, three (8%) have no identified wage earner (Table 26). Eighteen (45%) are dependent solely upon male wage earners (5 permanent, 11 seasonal, and 2 combinations of the two). None are dependent solely upon female wage earners. In five cases (13%), females appear as the primary wage earners, with males providing seasonal wage income. Three cases (8%) have the opposite situation. In nine cases (23%), both male and female household members have permanent jobs, and in two cases (5%), male and female members have seasonal jobs. Thus, female wage income is a significant factor in 19 of these 40 cases (48%). Women provide the steadiest source of income in five of the 40 cases (12.5%) while men do so in 21 cases (52.5%). The contribution is about equal in 14 of the 40 cases (35%). For all 49 Inupiat households, the figures for the most regular source of cash income are men 26 (53%), women 7 (14%), and equal 16 (33%). This is basically the same as for the two subsamples. Household size and age of head of household do not have any simple relationship to the type of wage earner(s) present (Table 27).

This describes the <u>regularity</u> of cash income flow to households, but not the amount. This issue could have logically

been dealt with when discussing male Inupiat wage labor by itself, but has wider application that can be developed here. For the most part, seasonal work pays much better than steady, year-round employment in terms of an hourly wage. Everyone in Nuiqsut realizes this. Department heads have remarked to us that turnover used to be very high, since men would quit in the summer to work construction, the cat train, or something else. A regular job pays a straight wage for eight hours and occasionally time-and-a-half for overtime. Summer construction pays at least twice that straight rate, and guarantees perhaps as many hours a week of overtime as straight time. The cat train pays no less than construction in terms of straight pay and pays an employee for 20 hours work out of the 24. Thus, a seasonal employee can earn much more than a permanently employed individual, or at least the same amount in a much shorter time. Given this situation, the pattern of seasonal male employment is not difficult to understand; nor is the relative lack of seasonal positions for women then much of a mystery. What is surprising is the number of permanently employed males with skills that would enable them to be hired on seasonal projects who have expressed satisfaction with their lower-paying permanent positions. In the absence of long-term information, we will present what informants tell us has been the case and what they expect the future to bring. Their expressed rationale provides an important clue to the future situation.

Both the utilities and public works department are expected to be fairly stable. Present employees evidently favor a lower but more regular income to higher but irregular income. They give several reasons for this. First, it is easier to budget expenses when one knows what one's income is and when it will be available. Second, there is no uncertainty as to whether one will have an income from year to year. Third, there is never any need to try to find work outside of

Nuigsut, even if for some reason no CIP projects for Nuigsut materialize that year. Fourth, these people want to make Nuigsut their home, and a steady job not only helps an individual to become a constant part of the community, it also helps define a stable structure within and of the community. These jobs are essentially the long-term results of shorter-term CIP projects. The jobs they provide are at least as important a contribution to the community as the capital improvements and services themselves. Fifth, these jobs offer advancement in terms of a career. While this is limited in the number of people who can take advantage of it. the number of people who would wish to may also be limited. Such advancement would most likely mean relocation to at least Barrow, and perhaps elsewhere. At present, this has worked in reverse. Both the head of utilities and the head of public works are originally from Barrow. This is not expected to always be the case.

All of the employees of the two departments discussed are men (except for the clerk, a non-Inupiat female, who will be discussed below). All wish to be a stable part of the community. All except one have started a family, and he has demonstrated a wish to establish a family (whenever that may happen) in Nuiqsut. The reasons given above, therefore, seem reasonable, and answer the original question by turning it around. These men have taken the opportunity to convert a short-term surplus (CIP projects) into long-term sustenance (steady employment). As the job tasks are all traditionally male (although some females have worked on CIP projects) and as males are perceived as primary providers for their households, the maleness of these departments should cause no wonder.

Other areas of wage employment are not so transparent. Turnover at the school has apparently been high. Inupiat

are employed as two special purpose teachers, up to five teacher aides, up to five maintenance people, two cooks, and the secretary. The teachers, the cooks, and the secretary have all been stable positions. They are also occupied by women. The teacher aide positions, also mostly held by women, tend to be open most of the time. Two were filled for most of our research time, but only one individual was a teacher aide for the duration of our stay in Nuiqsut. The maintenance people were in constant flux, but tended to consist of more women than men. It was the only position Inupiat men held at the school.

It seems apparent that maintenance is the only suitable male job at the school, and that it is only marginally so. The school appears as part of the domestic and nurturative sector of Nuiqsut, and so is a proper sphere for female employment. The relatively low pay also makes it relatively unattractive for males. While all the utilities and public works employees are married or formerly married, male Inupiat school employees are young and single. Female Inupiat school employees tend to have dependents (8 to 10) and to be older. It appears that males only work at the school until something better comes along. We have been told that the maintenance positions are especially subject to turnover.

Only women have been health aides. Only women have been the NSB village coordinator. Only women work at the Kuukpik Corporation Store, although men do operate private stores of their own. Only men are officers in the Kuukpik Corporation and a man serves as fuel clerk, selling fuel and keeping records. A woman works as secretary. Two young, unmarried men work for Kuukpik Corporation delivering fuel. Only men have so far been hired on the construction projects starting in the village. The sexual domains of employment are again clear.

#### Non-Inupiat Wage Employment

It is clear from looking at a job census (whether that for March 1983 or our constructed annual data) that Nuiqsut is "home" to Inupiat in a way that it is not to non-Inupiat. Whereas roughly one-third of total Inupiat adults are permanently employed and another one-third to one-half of Inupiat adults are men seasonally employed, nine-tenths of the total non-Inupiat adult population is employed permanently. A non-Inupiat does not live in Nuiqsut unless he or she has a job there. This is even more true if one includes the construction workers who are only temporary village residents. We will only deal with non-Inupiat with relatively permanent residences in Nuiqsut, however.

There are 17 non-Inupiat adult men and 8 non-Inupiat adult women. Five of each are school teachers and can be dealt with as a group. The remaining women, all married to non-Inupiat men also in the village, work at various jobs. One is the NSB utilities clerk. Another is the city of Nuiqsut clerk. The third has no paying job but is the wife of the Assembly of God minister. As such, she has clear community duties. Of the men not married to school teachers, two are Public Safety Officers (PSO). One PSO is married to the utilities clerk, while the other's wife has not yet arrived in Nuiqsut (housing has not yet been found for them). The husband of the city clerk is the head of the physical plant at the school. One man is the Assembly of God minister.

Of the 8 non-Inupiat adult men remaining, 6 are married to Inupiat women. Two of these men are currently unemployed (one worked for the NSB school until recently). Two of the others work for the NSB, one in the school and the other maintaining NSB housing. One runs a store, and the last is a plumber for a subcontractor in the village.

The cook at the NSB Dredge Camp is single and has certainly been in Nuiqsut longer than most of the other non-Inupiat. He has no residence in the village as such (other than the Dredge Camp) but has been in Nuiqsut long enough for people to feel that he belongs. This is of course still only a partial integration into the village.

The last non-Inupiat, the former Kuukpik Corporation accountant, is a special case. His status as of the end of our fieldwork was unclear, so he is included in the employment figures. He was under investigation for embezzlement. He fled and his present whereabouts are unknown. He was charged, tried (even though absent), and convicted. At least part of the money was traced to Swiss bank accounts, and connected to prior embezzlements committed in the state of Washington. He had been in Nuiqsut less than two years, spent more time away from the village than in it, and seemed to be indispensable to the corporation officers. He was paid well and no business was conducted without his advice. His role was more as chief executive than as mere accountant. At the same time, few people trusted him. He was respected for his business sense and ability to keep the corporation viable even with its large debt load. Corporation officers really had no way to judge his performance, business practices, or character, however. This issue and its implications will be explored in a later chapter.

In any event, it is clear that non-Inupiat come to Nuiqsut for the express purpose of making money. They also provide skills that, for the most part, Inupiat do not yet have. Most non-Inupiat work for the North Slope Borough, which has a Native hire preference (except for public safety officers). It is thus clear that job performance is the criteria in these positions held by non-Inupiat. At the same time, turnover has been historically high. Eight of the ten teachers were new in September, as was the school physical plant manager and the Nuiqsut city clerk (actually starting in the summer). The PSO and the utilities clerk have been in Nuiqsut about 18 months. All have received good comments on their work, and most express hope that Inupiat will someday replace them (if possible, by this afternoon). This means that the presence of non-Inupiat workers essentially measures the work skills that Nuiqsut Inupiat lack. They are either certified positions, such as school teachers, or positions where specific learned and general managerial skills are needed, such as city clerk-administrator, utilities clerk, plant manager (and chief fixer), and accountant. Outsiders are accepted in Nuiqsut for what they are and why they are there. There simply is not an adequate pool of Inupiat talent to man all the village's needs as yet.

It is interesting that both non-Inupiat with administrativemanagerial duties are women. Their husbands do what is traditionally men's work which is, on the whole, less socially sensitive. This reinforces the male/female division of jobs among Inupiat wage earners. There also seems to be a division between the types of positions held by non-Inupiat married to local Inupiat and those held by non-Inupiat from "outside". The former "local" non-Inupiat often occupy positions that Inupiat could hold just as well in that they require no skills that most Inupiat do not already possess. School study hall supervisor, store manager/owner, and school maintenance are not special skills. Plumbing and house maintenance are, but use some of the skills Inupiat already have. In the future, the division of jobs between Inupiat and non-Inupiat will be increasingly interesting. This will measure the development of local Inupiat skills as well as the growth of the local non-Inupiat population.

#### Commercial Business

A segment of the cash economy we cannot ignore is that of commercial businesses. Although it is not greatly developed in Nuiqsut as yet, it has great importance as an economic indicator of dependence or independence from other market centers, the development and specialization of supply and demand, and the direction and pace of change. The current situation is also ethnographically interesting (Table 28).

The white pages of the Nuigsut telephone book list phone numbers for seven commercial establishments: three stores, one construction company, an airline, the village corporation, and the telephone company. When field research began, there were 13 that were physically evident: five stores, two dormitory construction camps, one pool hall, one arcade, one restaurant, the village corporation, two airlines, and the telephone company. The last had no employees in Nuigsut. When research ended, there was one less store and the arcade had closed. Information from the North Slope Borough tax office on business licenses indicates four stores, the village corporation, one pool hall, and one game room. One of the store business licenses is in the name of the owner/ operator of the restaurant. State of Alaska business licenses indicate six stores, one cafe, a game room, a pool hall, two security companies (apparently operated by non-Inupiat) and two establishments owned by non-Inupiats. These and the security companies apparently did not operate long in Nuigsut or have suspended operations for a while. There was little evidence in the village for their existence. Thus, Alaska State business licenses seem to overstate certain types of commercial activity in Nuiqsut. The best indication of commercial establishments is undoubtedly personal observation. Nuigsut itself has no formal regulations governing commercial businesses or licensing them.

	Telephone Book			<u>Observation</u>
Stores Construction Camps Pool Hall Arcade Restaurant Village Corporation Airline Telephone Company <sup>a</sup> Security Company	3 1 1 1 1	4 1 1	6 1 1 1 2 b 2 <sup>b</sup>	5 2 1 1 1 2 1
Other Total	7		2 <sup>0</sup>	14

#### Table 28: COMMERCIAL BUSINESSES IN NUIQSUT, 1982-1983

a No employees in Nuiqsut.

Licenses issued to non-Inupiat names. There is no evidence that these businesses ever operated, nor were they ever mentioned except in direct response to questions asked of the license holders.

#### STORES AS COMMERCIAL BUSINESSES

The five stores existing in Nuiqsut on November 16, 1982 were not at all the same sort of businesses, even though people often talk about them as if they were. Table 29, a simple breakdown of shelf inventory composition, demonstrates this. Store A, the village corporation store, is by far the largest store in the village. Many of the "different" product types are merely flavor differences but the line of products it carries still is far greater than that of the other stores, all of which are owned and operated by individuals. These are all located in homes of the basic one-room design. It will be useful to describe the operational characteristics of each store, and also to discuss each in terms of the economic opportunities it provides its owners/ employees and the economic role it plays in the village.

# Table 29: NUIQSUT STORES NUMBER OF DIFFERENT PRODUCT TYPES IN INVENTORY January 1983

	Store A	Store B	Store C	Store D	Store E
Number of Different Product Types in Store Inventory	551	48	75	78	13
Food Product Types in Inventory	269	34	23	76	8
Percent Food Items	49	71	31	97	62

Store A is the only store with employees. All the others are run by their private owners. As the village corporation store, Store A is caught in an operational bind. It is obligated to make a profit, as Kuukpik Corporation was organized as a forprofit corporation. At the same time, the Kuukpik Board of Directors and the residents of the village want prices to be as low as possible. In a purely economic operation, the extension of credit would be closely monitored, while village people prefer the convenience of charging orders to their name (or head of household's name). A compromise seems to have been reached for these situations. Everyone has the option of buying on credit. This means, pragmatically, that the store constantly carries a certain level of uncollected debts. Our informants did not tell us if there was a limit beyond which credit was not extended, but we assume that this is the case. Thus, a bill could be outstanding for a long time but the absolute size of bills outstanding would be limited. Prices have been set, it seems, to allow for this debt load, or deferred payment of bills. Prices tended not to be the highest in the village on items available elsewhere as well, but also tended not to be the lowest (see Table 30).

## Table 30: COMPARISON PRICE<sup>a</sup> LIST - GROCERIES

.

		Nuiqsut A 2/14/83	Nuiqsut B 2/14/83	Barrow 2/14/83	Anchorage _2/14/83	Seattle 12/2/82	Binghamton 12/2/82
STAPLES							
Flour Rice Corn Flakes White Bread Margarine Mayonnaise Sugar Cola drink Toilet paper Fresh milk Ice cream Butter Evap. milk Powdered milk Eggs	10 lb 28 oz 18 oz 1.5 lb 1 lb 1 qt 10 lb 6 pack 4 rolls 2 qt 2 qt 1 lb 13 oz 14 qt 1 doz	\$ 6.78 2.29 2.24 1.28 4.08 8.52 5.10 2.88 4.28 1.84	\$ 2.59 11.95 5.40 3.13 4.28 1.39	\$ 6.69 2.19 2.45 2.15 1.09 3.89 7.35 4.20 3.35 3.55 5.39 3.35 1.05 9.84 2.05	\$3.25 1.49 1.49 .79 2.09 4.25 2.65 .99 1.49 2.39 1.99 .59 5.99 1.05	\$2.30 .82 1.69 .75 1.55 3.70 1.69 1.15 1.12 1.59 1.85 .53 4.99 .88	\$1.90 .83 1.25 .63 .79 1.19 3.54 2.29 1.49 .99 1.79 1.79 1.79 .49 6.38 .85
MEAT	•						
Chuck roast Hamburger Pork chops Bacon Wieners Frying chicken Precooked "	1 1b 1 1b 1 1b 1 1b 1 1b 1 1b 1 1b	7.22 3.67 Unpriced 3.02		3.75 4.25 2.09 1.39	1.89 1.49 1.79 2.79 1.69 1.59	1.59 1.29 1.69 1.99 1.69 .79	2.28 1.48 2.28 1.89 1.38 .54
PRODUCE, 1b							
Apples Bananas Oranges Potatoes Onions Carrots Lettuce Cabbage (red) Tomatoes		b Unpriced		1.66 1.22 1.26 1.08 1.26 1.19 1.10	.79 .69 .59 1.39 .65 .97 .59 1.49	.69 .47 .29 .13 .20 .30 .59 .33 .99	.38 .35 .38 .08 .13 .19 .79 .17 .99
CANNED							
Juices Grapefruit Tomato Orange-frozen Pears Peaches Fruit Cocktail Corn Tomatoes Baby food Coffee Mushroom Soup Tomato Soup Tuna Fish	46 oz 46 oz 16 oz 16 oz 16 oz 16 oz 16 oz 14 oz 4½-5 oz 3 lb 11 oz 11 oz 9 oz	.93 2.22 .68 12.90 1.27 2.57	3.53 1.68 1.70 1.80 1.52 1.60	2.95 2.79 3.69 1.45 1.59 1.45 1.18 1.29 .69 11.95 1.45 .79 1.95	1.49 .99 1.89 1.12 1.25 .69 .77 .33 7.23 .45 .37 1.05	1.15 .85 1.55 .59 .67 .51 .65 .28 6.00 .39 .31 1.18	.89 .83 1.39 .69 .79 .54 .65 .27 6.87 .40 .26 1.80

<sup>a</sup>Price per stated unit. If a store did not have the exact size, price was computed. <sup>b</sup>Blank means item not available.

Table 29 clearly indicates that Store A is a grocery and general merchandise store. As the main outlet in Nuiqsut, this is what could be expected. The model of Stuaqpak in Barrow seems applicable. The total inventory is split about evenly between food (49%) and non-food (51%). Non-food items include clothes, hardware, toys, kitchen and household items, drugstore and cosmetic items, and Inupiat crafts.

Shelf items available also seemed to vary tremendously over time, a problem all stores except Store D seemed to have. A consistent inventory is difficult to maintain in the face of uncertain weather (all items at present are transported by air) and unpredictable and fluctuating demand. Personal income, and hence cash flow, is sporadic for the most part except for the summer construction period. A certain base level is established by the permanent jobs which exist in the village, but the variation possible is very great. The population of the village can fluctuate widely, depending upon events and conditions elsewhere. All these factors can make managing an inventory a huge problem. In some respects, it is more difficult for a large store than a small one. More people depend upon the large store and the short-term fluctuations in demand, patronage, payment, etc. possible are thus far greater in magnitude. More items must be stocked but the inventory of each item may not be much larger than that which a smaller store would maintain, because storage space in Nuigsut is currently at a premium. How the stores deal with these problems will be discussed below.

Store A does guarantee a certain income to its three employees, all of whom are women. Thus, irrespective the volume of business and the profitability or unprofitability of pricing policy, the manager and the two cashiers can depend upon earning a known amount of money each week. They also know

they will earn no more than that amount, but this security of income is something that no other store can provide. The corporate owner of the store has apparently not, up to this point,been adversely affected by the deficits generated by the store. Whether the bottom line for Store A is positive or negative is unknown to the researchers, but our impression was that Store A was not a profit maker.

Stores B, C, D, and E are all owned and operated privately. Three are run by Inupiat, one by a non-Inupiat. Store B and Store D are primarily grocery stores, although Store B has a substantial number of non-food items. The other two are special purpose stores and operate intermittently. Store C is primarily a gift and snack food store. Store E must be discussed as a special case as it has the appearance of a grocery/general store but is much to viable, even in Nuigsut (or perhaps especially in Nuigsut).

The proprietor of Store C left Nuiqsut in mid-December and did not return until late February. His store was closed while he was gone. No comments were heard that people were inconvenienced by not being able to shop at Store C, even though his store is the only Nuiqsut outlet for many of the items he carries. The owner/operator is a single male who spends a significant amount of time away from Nuiqsut. It would thus be difficult for him to run a grocery store or other sort of store where he depends upon repeat customers who in turn depend on him to have what they want. He is not open regularly enough to generate a clientele of regular customers for items such as groceries, as they would find themselves going elsewhere anyway when Store C was closed. It thus makes sense for the proprietor to specialize in terms of what he sells.

His "food items", which comprised about one-third of the different types of things he had on the shelves March 2. 1983, were mainly all candy or snack foods. He did carry two types of rice and one of macaroni, but clearly was orienting his edible products toward those of small size/light weight, rapid and/or immediate use, and long shelf life (so that his inventory would survive his absences). They are all also relatively low in price (\$.30 to \$.65 for candy bars, \$2.29 for 10 oz. of hard candy, \$3.29 for 8 oz. of potato chips). He can thus order things sent by mail, but need not worry too much about spoilage. The expense of shipping is lower for him per dollar of merchandise ordered because of its size and weight. His inventory sells relatively quickly and appeals to a consumer group, school age people and young adults, with the money to buy and the acquired tastes to want to.

Store C's non-food items range from \$.89 Bic Shavers and \$1.95 key chain cap pistols (\$.60 for caps) through knives, perfume, pens and mirrors priced at \$10 to \$30 to more expensive electronic equipment. The highest priced cassette recorder costs \$159.95. The two sorts of items which seem to be featured are jewelry and home decorations. The former is mostly Southwestern Indian in appearance, with a great deal of silver and blue. There is a wide assortment of rings and necklaces. The home decorations are such things as Orientaltype bamboo scroll paintings, religious wall plaques, and varnished wooden Bibles open to short but significant verse. Many homes display one or more of these items, and most came from Store C.

Store C is probably not the proprietor's main source of support. He has worked as clerk in the village before, and undoubtedly at other jobs as well. He is included as a full-time store

keeper in our employment census, as that is how he tends to identify himself. His wage earning history is nearly unknown to us.

Store E is by far the smallest store, both in terms of numbers of different items carried and the size of the inventory of each item. This store went out of business (at least temporarily) when the family moved from their old house to a new one. This has been the pattern of this store in the past. The female proprietor orders an inventory and sells it out, after which she is inactive (commercially) for a while. She may reorder several times before closing down temporarily. She also has a full-time wage position, so her store is open only after 4:00 p.m. on weekdays. Thus, her operation is limited in somewhat the same ways as Store C is. Her customers cannot depend upon her always being open or having what they want. However, the primary object of her business is not to earn money. She told us that the store was run for the tax benefits it provides. As it is run out of her home, certain household expenses become deductible as business expenses. The inventory also allows the household to stockpile certain consumer goods (canned milk, bread, pilot biscuits, tuna fish, paper goods) while at the same time these goods are not subject to community sharing expectations. Clearly the reasons behind the operation of this store are economically sophisticated, and they allow the store to function as an outlet for her husband's furs as well. The store insulated the woman's wage income and the husband's cash income from fur sales from government taxation (extraction).

Stores B and D are serious commercial efforts and sell mostly groceries. Store B is run by a female Inupiat whose husband works full-time for wages. Thus, especially since it is run out of her home in similar fashion to Stores C, D, and

E, there would be household tax advantages even if the store lost money. This store is much more fully stocked than Store E, however. It does tend to have highly fluctuating inventory, but is seldom out of many items unless the proprietors are away on vacation. As the post office is also in this house, a steady stream of potential customers is assured. The store is normally open all day. Staples and other canned goods constitute most of the items carried.

None of the above three stores extend credit. It is usually possible to cash a paycheck at Store B, or at the post office, but not Stores C and E. This does limit purchases to some degree, but also clearly prevents customers from using kin ties or other social sanctions to keep a large balance outstanding. The lack of credit, relatively small inventory, and small cash supply combine to keep the level of economic activity relatively low. Such an establishment can have advantages for someone already resident in the village, but could not support an outsider relocating to the village.

Store D, established in 1982 and run by a non-Inupiat male married to an Inupiat, provides a comparison case. The inventory of Store D is almost all groceries, and in size is second only to Store A. Store C appears to have as large an inventory as Store D, but in fact specializes in quite different things and actually has a very limited inventory. Store D is essentially the grocery competition for Store A. Its selling points are a greater availability of meat and lower prices. Most prices are indeed lower (Table 30). It also extends credit and so can generate more cash flow than the other private stores. The amount of credit available to each household is determined on a case by case basis. The owner/operator does have a large cash base to rely upon, so that carrying a debt load is easier for him than it would be for the other private stores. He has a non-local partner

with whom he also owns income generating property in Fairbanks. This serves to buffer his Nuiqsut operation in much the same way that Kuukpik Corporation buffers the operation of the Kuukpik Store. Store D is clearly profit-making, however. Store D will also cash checks, subject to the availability of cash.

Store D is patronized by essentially the same people who shop at the Kuukpik Store. The Kuukpik Store is still their primary place to buy most store food. Store D started as a specialty store for meat and has been gradually adding items. Plans are for Store D to expand, but this depends upon the availability of space or the feasibility of construction and the consent of the community. The residence which Store D is part of is not a North Slope Borough structure and no formal lot designation was ever made to its occupants. Public opinion often is against the owner of Store D as he is rather vocal in the expression of his opinions and strong in the exercise of his rights. Also, he never asked the City Council for permission to open a store. There is no legal necessity to do so but there is an informal feeling that such permission should be sought. Even with these vague ill-feelings, his store is used to complement items available at the Kuukpik Store and it is conceivable that, pending the resolution of community conflicts (which is probable, given store owner D's wife's village kinship ties), he could become a strong competitor of the Kuukpik Store.

Store D tends to have the most stable inventory in town, a strongly competitive point that residents of the village did not yet seem to value highly (no one mentioned it) but which should prove more important if Nuiqsut continues to grow. All other stores, Kuukpik included, have highly sporadic inventories due to the problems with air shipment. Store D circumvents this to some degree by transporting goods over-

land from Prudhoe Bay via snowmobile and sled. Calculations show that for meat and heavy grocery items this is a competitive means of transporation, if men willing to do it are available. Public opinion is not unanimous against Store Owner D, because there are Inupiat whom he regularly employs for this sort of work. Some are close relatives of his wife. Store D's inventory does become rapidly depleted once Kuukpik Store runs out of an item, however, as it has not as yet begun to try to service that large a part of the village population. Store D would need more storage space before trying to capture a larger share of the market.

Store D also has a competitive position in that the owner's partner in Fairbanks can buy goods in bulk at sale prices and send them to Nuiqsut via Prudhoe Bay/Deadhorse. The other stores must buy through more regular, higher-priced, outlets. The conclusion seems to be that Store D demonstrates how a private store can operate competitively in Nuiqsut. The corporation store, even with the advantage of size, is beaten consistently on price. Inventory control and control of consumer credit seem to be the areas of major advantage for Store D, along with product specialization (meat).

Of the three other stores in Nuiqsut, one specializes in non-food items not available anywhere else, one seems to operate mainly as a tax shelter/storeroom for its owner, and the last depends upon its location by the post office and prices consistent with the Kuukpik Store's to convince people of the convenience of picking up occasional staples instead of going across town to Store A or Store D. It is interesting, and perhaps to be expected, that the private store which seems economically most viable is that run by an outsider who is in many respects marginal to the community at large. In fact, Store D thus escapes some of the social pressures which hinder the Kuukpik Corporation store in its operation.

It can have a rational credit policy and need not balance a profit motive with a feeling for service to the community. The net effect may be the same, as in this case the profit motive seems to have resulted in a store providing better service at lower cost to customers. Whether this competitive advantage can be maintained if Store D does expand its line of goods remains to be seen.

#### OTHER COMMERCIAL ENTERPRISES

There are three enterprises comparable to stores in that they are attempts at generating a cash income. A pool hall was opened by an Inupiat family in 1982, and for most of our research period was the sole monetary support of the family. The income from this source was not great and was probably meant to be supplemental to seasonal wage labor. A video arcade operated briefly before our research began but was closed due to insufficient profits. The Colville Cafe is a restaurant run by an older Inupiat couple. During our research, their business was generally slow, but there were fewer transients than in the summer, and residents have less expendable income in the winter than in the summer. The restaurant probably netted no more, and perhaps less, than the pool hall. These three establishments are discussed further in the section on recreation.

The security companies and other businesses owned by non-Inupiats are obvious attempts by temporary residents to capitalize on their skills and the fact of being in Nuiqsut. The two security companies are now dormant, if they ever operated at all. The other two enterprises never seem to have been in operation. They were formed in case economic opportunities should arise. Non-Inupiat residents consistently display a greater preoccupation with long-range monetary plans than do Inupiat residents.

The airline, headquartered in Barrow, maintains a warming house for passengers and temporary storage. They also retain an agent in Nuigsut to sell tickets, give information to local people, relay weather data to Barrow, and to handle incoming and outgoing freight. This agent is also the NSB village coordinator and a member of the Nuigsut City Council. She is helped by her husband, a non-Inupiat who is in charge of the maintenance of the North Slope Borough owned housing in Nuigsut. This couple was one of the most active in the village. Near the end of our field research, a second airline (specializing in charters) began to base a plane in Nuiqsut. This was due to the happy chance that the Assembly of God minister was a qualified pilot and owned a plane. He then hired both to the charter service, which could then provide faster and cheaper service for Nuigsut. It cuts out the flight from Barrow to Nuiqsut to pick up those hiring the plane. This is especially beneficial in case of medical emergency.

The telephone company has no employees in Nuiqsut. In evidence is a satellite receiving dish and a small structure housing switching equipment. When repairs are needed, people from outside come in. There is talk of constructing a ground station for cable television reception, but this is still in the planning stages. This would involve at least one local employee as an installer-repairman.

#### KUUKPIK CORPORATION

The Kuukpik Corporation is the for-profit village corporation of Nuiqsut. It was actually formed before people returned to rebuild the village in 1973. Barrow, the source of most of the people who moved to Nuiqsut, was where the corporation began. There are still some obvious ties between Kuukpik Corporation, Barrow, the North Slope Borough, and the Arctic Slope Regional Corporation.

Kuukpik Corporation operates a store, discussed above. They also maintain the village's oil supplies and keep records of sales. When their truck is operable, they deliver the oil. Kuukpik Corporation subcontracts with the North Slope Borough to provide labor for the NSB's Capital Improvement Projects in the village. Kuukpik Corporation is the main place where people can cash their paychecks, as there is no bank in Nuiqsut and no one regularly has much cash. Stores B and D can cash checks occasionally, but not as a matter of course.

Kuukpik Corporation enters into joint ventures with other corporate entities such as the Arctic Slope Regional Corporation, the North Slope Borough, and the other village corporations. Non-corporation employees have varying degrees of influence on these corporations, but such joint ventures are considered the main avenue by which the Kuukpik Corporation can generate local jobs. The Kuukpik Corporation is currently trying to develop local gravel resources in concert with ASRC. They are, as part of Pingo, working with the other NSB villages in providing oil field services to oil companies.

The Kuukpik Corporation and the North Slope Borough provide most of the employment in Nuiqsut. The Kuukpik Corporation cannot be considered merely an economic entity, however. Kuukpik Corporation is as much political and ideological as it is economic. Its board, employees, and shareholders (listed in order of active interest shown in the day-to-day affairs of the Corporation) are by no means in agreement on all things. There are too many cross-cutting loyalties. As a separate economic entity, the Kuukpik Corporation's interests cannot be the same as those of the city of Nuiqsut government, the North Slope Borough, or the Arctic Slope

Regional Corporation. At the same time, cooperation with all of these bodies is necessary. As we shall see when discussing socio-political structure and leadership, these governmental economic bodies are the main political arenas. This is understandable, as the corporations control to a great extent what the governments feel they are mandated to regulate and distribute, as well as individual access to resources. Such conflicts were inherent in the Alaska Native Claims Settlement Act, and it is no wonder that village corporation shareholders who also are regional corporation shareholders and residents of a particular village and the North Slope Borough are sometimes bewildered trying to sort out what alternative action(s) benefit(s) them most. That the most common response is withdrawal or inaction should be no surprise. We will address these issues, especially Kuukpik Corporation - City of Nuigsut interrelation, in the socio-political chapter.

#### NORTH SLOPE BOROUGH

The North Slope Borough is not a commerical enterprise as such, but is the source of much of the income in Nuiqsut. The North Slope Borough maintains a construction camp in Nuiqsut which houses not only NSB employees temporarily in Nuiqsut but also accommodates many of the other outsiders who must be in the village for a short time. There is a set daily charge for this. The service is useful and necessary because there is no other facility in Nuiqsut to house transients. As such, the camp assumes great importance both as the outsiders' main contact with Nuiqsut, and as a means to minimize the unwanted or non job-related impacts on the visiting population.

As with the Kuukpik Corporation, the North Slope Borough is not simply a "one-sphere" organization. This political entity is also a strong, and perhaps the strongest, economic entity on the North Slope. The Alaska Native Claims Settlement Act set up Native corporations, but in the North Slope Borough these corporations have had to deal with a political entity with great resources and better access to managerial expertise. The NSB Capital Improvements Program has hitherto had much greater effects upon the Inupiat population than any activity of the village corporations. In fact, the village corporations have mainly been used as ways to implement (at least partially) such projects. We cannot address this issue in general, but will examine the North Slope Borough - Kuukpik Corporation relationship in the socio-political chapter and discuss ways Kuukpik Corporation is trying to wean itself from dependence upon the NSB. Economics and politics are never too far from each other. On the North Slope, especially with subsistence concerns thrown in, they seem to be one and the same.

# Inupiat Wage Labor and Cash Economy: Predictions and Future

Nuiqsut conforms to the occupational and employment structure of other North Slope communities. The study made by Kleinfeld, Kruse, and Travis (1981) shows that more men are involved in wage labor than women. They compare monthly employment statistics for 1976-1977 for village males and females with monthly employment statistics for 1976-1977 for Barrow males and females (Tables 3 and 4, Kleinfeld, Kruse, and Travis 1981). Two trends in this comparison are: 1) Inupiat village males hold a higher percentage of jobs than Inupiat village females (the opposite is true in Barrow), and 2) Inupiat village males are more likely to participate in seasonal labor, therefore resulting in monthly percentage fluctuations of village male

employment, while Inupiat village females occupy permanent full-time positions (this parallels trends shown in the Barrow case). The employment structure in Nuiqsut may follow future <u>trends</u> similar to Barrow employment as it was in 1976 and 1977.

The contemporary situation in Nuigsut shows that the North Slope Borough is the main employer of Inupiat residents in Nuigsut. The North Slope Borough also manages the Capital Improvement Project which provides seasonal construction jobs for Nuiqsut residents. At this particular point in time, most employment is provided by the Borough except in areas where the village corporation and private enterprise provide a small number of jobs. Since the Borough is the chief employer of Nuiqsut residents, we expect that its role shall remain central to the employment structure of Nuigsut. In this sense the employment structure dominated by the governmental sector will be centered on health and social services, the welfare of its constituents, and the administration and bureaucratization of such services. Therefore, if the North Slope Borough continues to dominate the employment structure, employment of Inupiat women will continue to increase and will eventually exceed the employment of Inupiat men. Women will continue to sharpen their English language skills and para-professional training in clerical, secretarial, health, education, and management fields. This trend will result in raising the class and occupational status of women, and the slower increase and perhaps stabilization of permanent employment of Inupiat men. The net effects should reflect the Barrow situation in which men fill a majority of wage labor positions, many of which are tied into a seasonal labor pattern of blue collar work.

The Capital Improvement Program is the chief employer of male seasonal blue collar labor throughout the North Slope Borough.

The CIP provides the necessary infrastructure (roads, facilities, physical plants) for North Slope communities. However, Inupiat men employed for seasonal construction jobs sponsored by CIP are faced with a short-term strategy for entry into the cash economy. As necessary infrastructure for the community of Nuiqsut is developed and the CIP program winds down, there shall be a concomitant decrease in the number of seasonal wage labor positions for blue collar laborers. Those Inupiat males who count upon seasonal construction jobs during the summer months shall eventually find themselves in a double bind. There will be a decreasing number of available construction jobs through CIP and they will have only acquired skills suitable for short-term rather than long-term wage labor employment in the community of Nuigsut. Furthermore, the permanent long-term employment opportunities (desk or service jobs) created and filled through the North Slope Borough will be occupied by Inupiat with more experience or training in such jobs. From a mainstream Anglo-American perspective, seasonal unemployment of blue collar workers will become structurally institutionalized.

In terms of an economic development program, such a pattern makes local capital accumulation (saving) difficult. The seasonal wage laborer receives a large amount of cash over a short period of time, and then receives little for a longer period of time. The short-term benefits of seasonal employment for the average Nuiqsut man create a system of boom or bust cycles. This characteristic cycle of cash flow in Alaskan Native (and white) employment creates a major flow of cash resources into expendable consumer goods and entertainment.

Within Nuiqsut, Inupiat seasonal constructional workers who are employed at Prudhoe Bay or on CIP projects in the village experience this boom or bust cycle in an Inupiat

cultural context. This cultural value system emphasizes the ethic of prompt sharing and dispersal of cash acquisitions through the redistributive network of family kin and friends. Various debt and bill payments also contribute to the rapid depletion of cash. Among younger Inupiat adults, sudden cash windfalls accrued through seasonal wage labor (which pays higher hourly salaries than long-term permanent employment) may be redistributed through the use and sharing of drugs and alcohol as well as in the provisioning of family, kin and friends with food and consumer items. The purchase of large expendable items, some of which may be used for subsistence hunting, occurs during the boom part of the cycle. Within the context of the village economy, economic resources acquired in employment outside of the village will most likely be transferred quickly into more traditional, redistributive levelling-off mechanisms.

While some villagers understand the western ethic of "saving for a rainy day", this is not an easily realized ideal in Nuiqsut. There are formal institutional and informal social and cultural barriers towards adopting a policy of "saving cash resources." First of all, there are no formal banking arrangements in Nuiqsut. All saving and checking accounts must be operated through Barrow. Secondly, the Inupiat do not view cash resources as stored items in the same manner as they regard storage caches of food, fuel, or equipment. The uncertainty and vicissitudes of Arctic survival have always required that Inupiat live in the present to provide for the future. All these cultural factors, in addition to the lack of a formal banking institution within Nuigsut, contribute to the "bust" aspect of the cycle. When Nuiqsut villagers speak about necessity for more wage employment opportunities in Nuiqsut, they may be expressing their own dissatisfaction with the consumption pattern fostered by seasonal wage labor.

The boom or bust consumption cycle does have a logic of its own, separate from that of a more steady-state (Anglo-American) economic model. "Saving" may be defined in different ways, or accomplished by different mechanisms, in the two cases. The object of saving, for an individual, is to ensure that at some future time that individual will be able to call upon and use certain resources. Anglo-Americans tend to treat "savings" as a noun to which very specific ownership rights are attached and "spending" or "consumption" as an activity which uses up savings. Inupiat do not seem to make these same distinctions. For them, immediate consumption through redistribution is a culturally valued sharing mechanism, and indeed, makes economic sense within an Inupiat context.

Averaged over a long period of time, a traditional Inupiat hunter could provide for his family unit. However, there would be periods of time when he would be very successful and others when he would get no game. This variability would be a hardship and perhaps even fatal. The dangers of this time-variable success rate could be minimized by cooperating with other hunters and their family units. The group expectation of sharing the fruits of the hunt buffers the entire group from temporary (and inevitable) individual hunter failure. It is the same statistical solution which governs group insurance policies. For the traditional Inupiat, it is not likely that production exceeded consumption (or demand) by very much, due to the sparseness and unpredictability of the resource base which required this sort of group cooperation in the first place.

Thus sharing and redistribution (consumption) are mechanisms of investing resources that are at present surplus to an individual so as to ensure the future availability of similar resources to that individual. Traditional Inupiat had no

bankable resources, or rather, the system of rights and obligations created by sharing rules constituted their banking system. Resources were used, not passively conserved. In Nuiqsut today, sharing network resources are still more liquid than money in many respects. There is no easy access to bank accounts as the nearest bank is in Barrow. Even with a banking account, there is often too little money in Nuiqsut for a person to be able to cash a check. Even with money the stores often do not have what a person wants to buy. Very often such items can be obtained from friends or kinsman.

The earnings from seasonal labor are thus redistributed in a way similar to the fruits of a spectacularly successful hunt. They are invested in the redistributive system. After debts are paid and consumer purchases made, redistribution is the only real option left. Money must be converted into tangible objects or into "social credits." No other money storage mechanism exists. Bank accounts tend to be used more as lines of credit than as stored funds. "Social credits" place an obligation on the receiver of gifts or entertainment to reciprocate in a similar way in the future. When this takes place, the debt is reversed (not canceled). "Social credits" thus are at some future time converted into consumable resources, but usually cannot be reconverted into money. They establish a general social relationship, not merely a narrow or limited economic contract or agreement.

In traditional Inupiat society, this mechanism worked well to spread risk. Hunters were differentially successful and often experienced bad luck. The redistributive system evened out the unavoidable variation in individual production with the constant level of individual need (consumption . within the community over time. However, in Nuiqsut the redistributive system may now be amplifying variability in

Individual production (income) throughout the year. Whereas one hunter's success was more or less independent of another's, seasonal wage earners have incomes that are almost perfectly synchronized. Seasonal wage earners all experience the good times and the bad times at the same time. This makes for boisterous boom times while the work lasts, but for very depressed bust times when the work ends. The case is not totally bleak, of course, as there are approximately 50 full-time wage positions in Nuiqsut. Most seasonal workers have kin relationships to people with permanent jobs. This suggests that in the summer seasonal wage earners can amass social credit, which they use up during the rest of the year when permanent wage earners can gain social credit. There should, logically, be a point of optimal seasonal/permanent wage labor balance. At the present time, especially given the synchronicity involved, the system appears to be too rich in seasonal work and too poor in permanent work.

Further increases in seasonal labor among Inupiat males would provide only relatively narrow opportunities for blue collar laborers. Although seasonal construction jobs do give many Inupiat experience and training in a wide range of skilled and semi-skilled labor, these skills may not be transferable to more permanent wage positions. One development scenario that may alleviate the lack of transferable skills among seasonal construction workers is actual development or establishment of industry within Nuigsut. The exploitation of oil, natural gas, and coal provides "outside" industry external to the "sphere" of Nuigsut community life. In some other Alaskan native communities, village councils have specifically requested that "industrial development", including that of natural resources exploitation, occur away from the community because of the disruptive influence of outside laborers (Morehouse and Leask 1978). Industrial development within or near the village may allow

for the establishment of more permanent blue collar wage labor positions. Canadian researchers (Hobart 1975) have weighed the advantages and disadvantages of rotational labor away from the village or the development of labor forces in local industry within the confines of native communities. The former has fewer obviously disruptive influences on the community, but requires difficult adjustments on the part of the Inuit workers.

The effect of transfer payments (Social Security, unemployment, and various welfare programs) remains to be assessed. Total income from these sources cannot be large at the present time. Statistics are not kept at the village level, however, so numbers of recipients and benefit amounts are unknown. The availability of such incomes makes eligible individuals household assets. They become, in essence, another form of savings or investment. The elderly, the unemployed, and the unwed mother with her child can then be included within the village redistributive system as people with a steady access to outside resources. This certainly reinforces the Inupiat value of respect for the aged, since the elders then have resources with which to maintain their role in the household. Unemployment benefits could reinforce the seasonal work pattern by buffering the slack time. Benefits are much lower than wages, however. We have no information on the receipt of any sort of welfare payments.

The Nuiqsut employment structure shows a concentration and major dependence upon local government employment. The situation, typical throughout the North Slope, is satisfactory insofar as the municipal government's tax base from oil revenues continues to generate enough income (and support for bond issues) for it to remain the major employer of Nuiqsut residents The issue of wage labor is of major importance to most residents. During state and federal lease sale hearings, Nuigsut residents complain that oil companies provide neither jobs nor cheaper fuel for Nuiqsut residents. Consistently, Nuigsut people express a great desire to enter into employment with the private sector. This underlines the finding that actual participation in industrial (and specifically oilrelated) wage employment may underestimate desired participation, and that economic growth may increase desired participation (Huskey 1982:77). This will become increasingly important as seasonal CIP employment declines. The CIP program, when complete, will generate only a limited number of jobs. There is a necessity to train Inupiat workers (male and female) at all levels of industrial employment, as such programs are for the most part non-existent (Nebesky 1982:150:51). Seasonal wage labor on dredging projects, oil rigs, and other industrial blue collar positions only allows the Inupiat worker to enter at the bottom of the private sector's employment structure. Long-term strategies for improving employment of Inupiat residents would improve relationships between the villagers and the private sector of the oil industry.

To date, the most formal linkage between Nuiqsut and other non-Barrow North Slope communities and the oil industry is through the Pingo Corporation. A former mayor of Nuiqsut is the Pingo Corporation president. Pingo Corporation provides oil fields services for the oil companies. These services include recruiting of native laborers for employment and equipmental rental. As such, a possible socio-economic development scenario may be the establishment of Pingo as an effective conduit for Nuiqsut employees and the oil industry. Nonetheless, this kind of middle-man position may not necessarily encourage other private sector development within North Slope communities.

In summary, there are several predictable trends in wage labor employment in Nuiqsut. The most pervasive trend suggests that further development of community infrastructure through the CIP program under the North Slope Borough government provides a short-term advantage, but long-term disadvantages to blue collar labor in Nuigsut. Seasonal construction labor under the jurisdiction of the North Slope Borough or through private industries creates a "boom or bust" cycle of cash resources for the individual Inupiat worker. This cycle is exacerbated by an Inupiat value system which does not recognize cash resources as "storable" items for future consumption. Blue collar positions are threatened by the exigencies of the CIP program and the "boom and bust" cycles of cash accumulations among workers. The new North Slope Borough infrastructure of schools, clinics, utilities department, public safety, public works, and administration built under the CIP program does provide full-time employment for a limited number of individuals with relatively high acquisition of English language skills. Inupiat women will probably fill a majority of jobs created by the bureaucratic and administrative structure of the North Slope Borough, especially in areas where clerical, secretarial, educational, and para-professional health training is required. The dependence upon the North Slope Borough for major employment opportunities can only be replaced by an increased role of the private sector in economic development within the confines of the village community. Involvement by the private sector may include strengthening of native corporations' role in private industry or actual presence of private industry within the village area.

The petroleum industry's major exploration efforts in the Harrison Bay area and continuing development of the Kuparuk oil field are promising in this regard. Fields east of Prudhoe Bay, as well as Prudhoe Bay itself, will continue to

offer employment opportunities. Even if only 15% of such employees are local hire (Nebesky 1982: 147 gives this estimate for total production phase OCS employment) the Inupiat population is small enough for this to be significant. Such work, most often arranged on a rotational shift basis (two weeks on, two weeks off), could fit the requirements of Inupiat men very well. CIP jobs will be at a much lower level, but Inupiat need for a cash income will continue. Inupiat men have worked away from their homes in the past, and it may be that a two week rotational shift could be considered a hunt for money interspersed with other subsistence activities. Oil field work would thus continue to allow the flexibility needed for a cash/subsistence lifestyle. The relative lack of success of Nuigsut men, and northern Natives in general (Hobart and Kupfer 1975), in oil-related jobs only makes the need for oil industry - Inupiat cooperation greater.

The potentially disruptive effects, if such male oriented full-time jobs are not created, will not be confined to the economic sector, however. Economic organization has direct effects upon all other spheres of social relations. A continued and even exacerbated discrepancy between typical male and female work schedule will further strain the marriage tie. Seasonal work provides time freedoms which steady work does not. The more work duties separate people, the more difficult it is for them to share activities and to maintain a healthy relationship. Male-female relationships in Nuiqsut are currently subject to stresses which create severe personal and social problems. Additional stress produced by still more of a dichotomization of males and females into seasonal and year round employees will alter the nature of Inupiat family and household structure. It is this structure which will then be the context for the socialization of young Inupiat. What values will remain to be taught is the haunting question.

#### V. SUBSISTENCE ECONOMY

## Introduction

The Inupiat of the lower Colville, known as the Kukpikmiut (Stefansson 1914:10), exploited the sea mammal resources of the Beaufort Sea and land mammal and fish resources from the terrestrial and riverine environments of the tributaries of the lower Colville and delta area. The traditional Inupiat of this region relied upon caribou and riverine fish the most. (Burch 1980:287). Sea mammals, polar bear, moose, waterfowl, and fox, wolf and wolverine were less hunted resources. The strategies for subsistence hunting described by Nelson (1969) for the Wainwright area could be applicable to harvest practices in the Colville region, with a far greater concentration on strategies related to the hunting of caribou and fishing on inland streams and the delta. The harvesting of these resources by the aboriginal and historical populations resulted in the settlement of the lower Colville by family groups. The particular advantage of settlement of nomadic groups of Eskimo on the lower Colville was expressed by Stefansson (1910) who spent a winter on the lower Colville above the delta because he knew that fish resources could be procured throughout the winter on the lower Colville.

The Colville Delta also served as a summertime location for the trade fair of Nigliq where the inland groups traded with the coastal groups of the Arctic Coastal Plain. From a historic standpoint, the Colville Delta afforded a rich subsistence base. It was also a natural geographical buffer zone for several different subsistence areas and thus a logical and convenient location for important economic and social interaction of different Eskimo societies.

The relative abundance of the mainstay of caribou and fish was complemented by a variety of mammals, sea mammals including bowhead and beluga whale, spotted and ringed seal, and a wide variety of waterfowl species. The major fish resources included seasonal harvest of Arctic char, grayling, whitefish, ling cod, salmon, and cisco. The successful exploitation of caribou and fish by Eskimo populations continued on the Colville until the early 1940's when relative depletion of caribou, decline in the value of fur sales, and general depopulation due to factors of western acculturation (including disease and illness) led to an abandonment of settlement in this area of rich subsistence resources. The 1973 resettlement at Nuiqsut confirms the overall importance of the lower Colville Delta for procurement of subsistence resources.

# General Subsistence In Nuiqsut

The annual subsistence cycle for hunters in Nuiqsut (Figure 15) demonstrates the importance of caribou as the single most available food source. This species represents the greatest harvest from one source (Hoffman et al 1978:51, Underwood et al 1978:143, Brown 1979:25, Nelson 1979:5, Pedersen 1979:9). However, this resource is not necessarily stable. Total caribou population fluctuates widely, evidently in a cyclical fashion. Migration patterns vary from year to year, so that predicting where concentrations of caribou will be is not always possible (Pedersen 1979:9, Nielson 1977:53). Nuiqsut hunters say that caribou are usually available at any time of the year within snowmobile range of the village.

Freshwater fish resources can also be exploited during the entire year except for a small hiatus during the late spring early summer months. Sea hunting is generally confined to the months of March and April except for a small degree of fall

# FIGURE 15 NUIQSUT YEARLY CYCLE

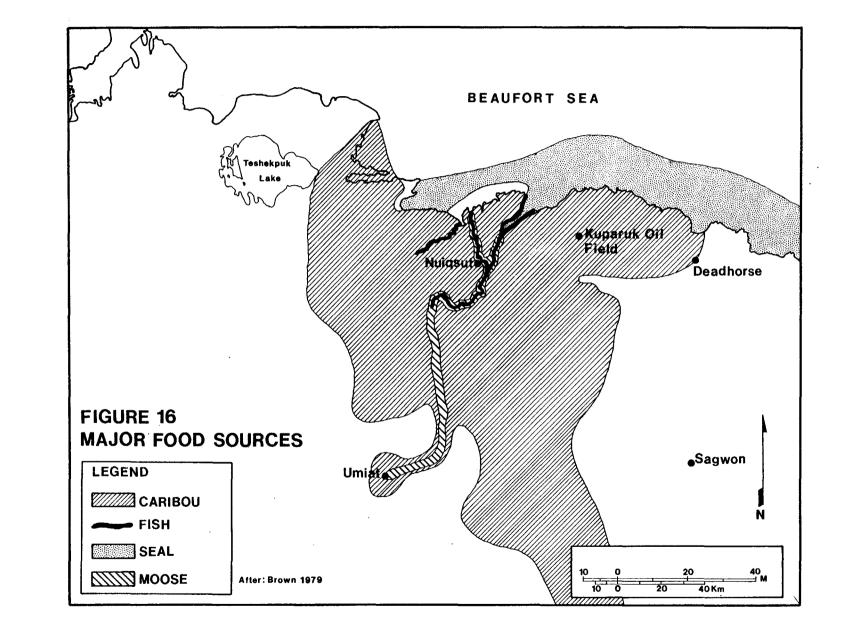
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# After: Libbey, Spearman, and Hoffman 1979

•	Jan Feb Mar Winter	Apr May Jun Spring	Jul Aug Summer	Sep Oct Fall	Nov Dec Winter
Whales			l		
Seal/ Ugruk					amm
Walrus	NA				·
Polar bear				ATTIM	Tummin
Birds/ eggs			Mannan		Mannan
inverte - brates	NA				
Caribou					
Moose					
Grizziy Bear					
Furbearer hunt/trap				m	
Smail Mammais		annthi			
Sheep	NA				
Fresh- water fish					
Ocean fish	NA		-		
Berries/ Roots/ Plants			maaa	~	

and winter sealing (Libbey et al 1979). We did not observe any sealing while we were in Nuiqsut. Whaling, often carried on in the Beaufort Sea near Flaxman Island, is restricted to the fall months since whales migrate too far offshore during the spring. There is a relatively high frequency of moose harvest from late August through November. Furbearing animals such as fox, wolf, and wolverines are harvested during the winter and spring months. A monthly description of the subsistence resources available to Nuiqsut hunters is presented by Hoffman, Libbey, and Spearman (1878:37-44). Their reporting of the scheduling and seasonality of subsistence hunting was based upon mapping projects from six Nuiqsut hunters (NSB Contract Staff 1979:Plate 2). More specific information is pretty much absent in all sources.

Hunting and fishing remain a major activity of many Nuiqsut residents. Individual hunters and small parties travel by snowmobile during most of the fall, winter, and spring months for caribou. Most hunting and activities during November through January are diminished by the period of darkness. However, the period of four or five hours from about 10:00 a.m. to 2:00 or 3:00 p.m. affords the Arctic caribou hunter enough time to travel away from the settlement to good hunting areas. Fishing, both with nets and hook and line, takes place on all of the lower Colville tributaries during the summer months. Permanent fish camp locations on these inland rivers have been documented from the early twentieth century to the contemporary period (Brown 1979). Ice fishing occurs in and around the village area during the late winter and spring months. Jigging for grayling and ling cod during the period of fall freeze-up is a common activity for women and children. In addition, bird hunting, moose hunting and other inland subsistence activities contribute to the subsistence diet of Nuiqsut residents (Figures 16, 17).



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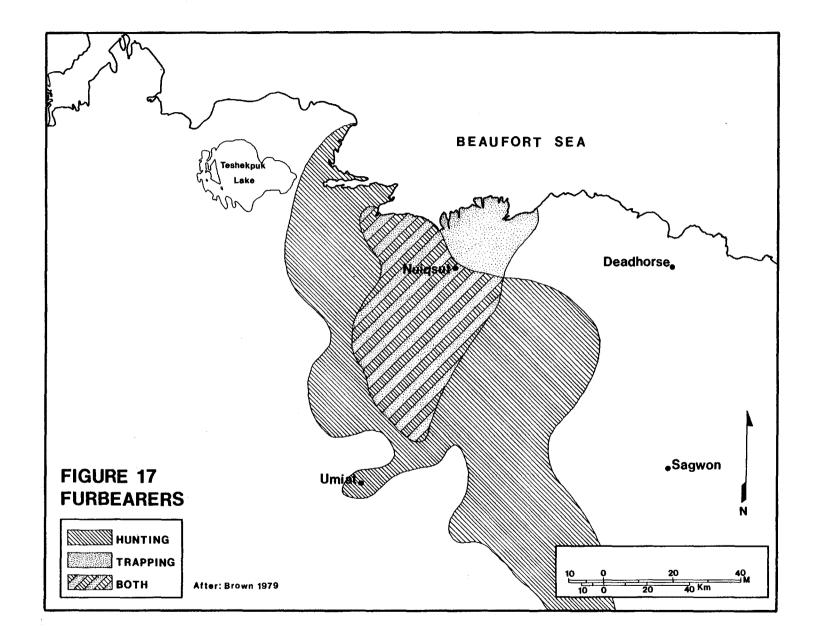
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# The General Significance of Subsistence

The importance of subsistence hunting and fishing to native livelihood has been documented at great length (Spencer 1959, Nelson 1971, Pedersen 1979, Worl 1980). However, detailed information on the harvest of subsistence resources in the Nuiqsut area is lacking (Pedersen, personal communication). Indeed, such harvest information is generally unavailable. When it does exist, it is fairly old. Aggregate harvest figures are given for five North Slope villages by Patterson (1975) and earlier coastal harvest data come from Foote (1959, 1961). These sources do not really apply to Nuigsut, however. Most recent work on the North Slope dealing with subsistence activities has concentrated on land use--where people go in the pursuit of various subsistence resources. Specific kill sites were not solicited as much as general hunting/fishing/gathering areas were delimited. The question was phrased in terms of where people look for resources rather than in terms of what people actually harvest. Pedersen (personal communication) says that such land use information is much less sensitive, and thus easier to collect, than actual harvest data. He will eventually, with the help and cooperation of Nuigsut villagers, try to obtain such information to aid the village in its documentation of the importance of subsistence. He and they realize that documenting the use of land for subsistence does not necessarily establish the importance of that use. Information on harvest amounts is needed for that. This sort of project has been completed in Kaktovik, and Pedersen hopes to apply the same techniques in Nuiqsut. This is still in the preliminary stages, however.

Subsistence concerns are addressed by a number of state, regional, and local organizations. Several institutions are directly tied to regulating subsistence resources so that

Nuiqsut's representation is potentially very important. The North Slope Borough Fish and Game Management Committee is a NSB regulatory agency. The Eastern Arctic Fish and Game Advisory Committee is a regional body which comments on (and proposes) state and federal regulations. The Alaskan Eskimo Whaling Commision was formed to counter pressures to reduce subsistence whaling from the International Whaling Commission. Nuiqsut has several active representatives, although as yet only one whaling captain has conducted whaling from Nuiqsut. Representatives to these bodies are appointed volunteers and most are active in the Kuukpik Corporation. The mayor is also asked to serve on these sorts of boards in his role as spokesman for the people.

The importance of the procurement of subsistence foods for the Eskimo in general has been addressed from the perspective of its dietary and nutritional importance (Draper 1977, Draper et al 1979). In 1982-1983, we also observed the necessity for contemporary Inupiat communities such as Nuiqsut to continue subsistence harvesting for social and cultural reasons. Subsistence food is most often shared among family, kin, friends, and visitors. The Inupiat ethic for sharing and reciprocity through the distribution of game and fish is a central theme in village life. The community feasts at Thanksgiving and Christmas, held in the Nuigsut school, both involved the distribution of muktuk, fish, caribou, and duck to all village families. Although the distribution of some store-bought, non-native foods such as pilot bread and white bread was also observed, by and large most cases of food redistribution required subsistence items.

Before the 1982 Christmas feast, several households discussed the necessity of contributing frozen fish for redistribution, since the actual number of community members who had participated in fall fishing was quite low. The harvest of a wide

variety of items thus serves a social purpose as well as nutritional, dietary necessities for the Inupiat. The spirit of redistribution and sharing among village families is expressed not only during feasting periods but is also the foundation of daily household etiquette. Visitors are usually offered food if they arrive at meal times. Meals with a high percentage of subsistence items are relished and often shared with non-household members such as kin and friends.

The Inupiat subsistence economy continues to reflect the traditional and contemporary values of Nuigsut residents. The hunt itself, a seasonal and sporadic activity, engages the individual in the main activity tying him to land and sea. The individual's extraordinary knowledge of environmental conditions and the behavior of migratory game, and his cognitive mapping of essential subsistence resources gives that individual a sense of mental and physical well-being. The fact that snowmobiles, rifles, and motor boats have changed the nature of subsistence hunting in the twentieth century is self-evident. The Inupiat experience which requires an intimate knowledge and relationship between the hunter and the environment persists and continues despite the influx of western values. "To be a hunter is to be Inupiat", remains the ethos of contemporary Inupiat. In this sense, we may argue that the harvesting of subsistence resources is a central organizing principle in the world-view of Nuigsut residents.

In the following sections, we present our observations of subsistence practices in Nuiqsut, their bearing upon household consumption patterns, and the relationship of subsistence to the cash economy. Consumption occurs year round, while subsistence activities are seasonal and highly variable. Due to storage, consumption of subsistence foods continues

throughout the year, although the amounts no doubt vary. For this reason, as well as the limited time available for field research, we will concentrate on consumption rather than production (or harvest).

## Measurement of Subsistence Activity in Nuiqsut

# INTRODUCTION

Information on the harvest of fish and game is difficult to obtain, and is often of questionable reliability. Recall as to time and place, and sometimes even quantity, is uneven even if the wish to cooperate exists within the informant. When there is reason for the informant not to trust the questioner to protect the informant's self-interest, or if the informant for some other reason does not want his "take" and/or resource area known, the information is misleading as well as uneven. Thus, observation is about the only accurate way to collect such harvest information. The limited time available, the lack of adequate personnel, and the feeling that the village could only accommodate a limited level of research at any given time excluded our systematic gathering of such harvest data.

This is not to say that such information was ignored. Hunters' general statements that they now prefer to travel to the west and north were common. The east was said to be closed off due to oil development activities (not closed legally, but the quality of the game there was said to be low). People do hunt south of the village but do not talk about hunting there as much as they do about hunting to the west orientation, but hunters were also observed to hunt to the east with success. The disparity between verbal description and actual behavior is interesting. The Kuparuk (and Prudhoe) oil fields are to

the east and are in production. NPR-A, where production is for the present banned, is to the west. Fish Creek, perceived as one of Nuiqsut's primary subsistence resource areas, is to the northwest. Perceptions of environmental disturbance rather than actual behavior differences may account for the disparity in reports. In any event, our total number of observations is too small to consider adequate, either in number of hunters observed or pieces of information about any one hunter. The same is true for counts of animals actually harvested.

Our main information about subsistence activity approaches it from the other end. People eat or sell what they harvest. As it is legal to sell handicrafts made from materials obtained from hunting but not the food product of the hunt itself, what people eat and in what quantities is a measure of the amount of effort devoted to subsistence activities. "Subsistence activities" must be taken to mean more than the act of hunting in this context. The primary mechanism by which households procure subsistence resources is by directly harvesting them. However, the products of the hunt are also redistributed, so that participation in an exchange network becomes subsistence activity. Our observations of such exchanges in Nuigsut fell into two sorts. Those that tended to even out over time (delayed reciprocity) were between friends or same generation kinsman. Those that tended to be primarily unidirectional were from one kinsman to a senior kinsman (usually female). The later case involves what Burch would call "local families" (Burch 1980). These are closely related kin groups which occupy more than one household but often function together. The former case may or may not be similar. In any case, while exchange within such local families may be unidirectional, exchange between local families (within Nuiqsut or with a family in a community outside Nuiqsut) again tends to even out over time. This

fits the most recent enthnohistorical models of localized Inupiat groups (Burch 1980). Thus, since the subsistence resources eaten in any one household are either harvested by that household, a near kinsman, or eventually "paid for" by a return gift of subsistence food, consumption can be taken as a gross indicator of participation in the subsistence economy. The use of subsistence resources to make products sold for cash is relatively insignificant in Nuigsut.

Consumption of subsistence resources is of course a direct measure of the economic importance of subsistence activity, as the relative amounts of harvested versus store-bought foods can be directly observed. The cultural importance of subsistence activity of course goes beyond this economic aspect. We will concentrate on economics here as a way to determine a minimum value for subsistence in Nuigsut. We will later discuss the social/cultural value of subsistence activities to evaluate the central place these activities hold in Inupiat life. The two sorts of values are not incompatible, but are not easily convertible into each other. Subsistence activities evaluated in merely economic terms can be easily replaced with money to buy substitute foods. When seen as the manifestations of central Inupiat belief systems, however, the question of substitution becomes much more difficult. All societies undergo value change over time, but imposed value change is tyranny. Inupiat understand this point much more clearly than most Americans and even most social scientists. The economic discussion which follows simply sets a minimum value using a reasonable rigid, readily quantifiable, method.

# Methods.

Opportunistic observations were made of what people were eating (or comments were elicited about past meals) whenever this could be done without being obvious, disruptive, or a cause of anxiety (our own or the informants). In addition, we made more systematic observations of a small sample of households. This included interviews about food preferences, practices, and consumption with those willing to do so. This sample consisted of eleven native households, two mixed-marriage households, and three nonnative households. Characteristics of the sample are tabulated in Table 31.

Table 31:	NUIQSUT H	HOUSEHOLD	CONSUMPTION	SAMPLE	CHARACTERISTICS
11/16/82 - 3/9/83					

Household No.	HH Type <sup>a</sup>	HH <u>Size</u>	Age & Head			sh ome <sup>b</sup> SPO	Time Lived In Nuiqsut	Est. % <u>Harvested</u> C	Est. % "Store"	<sup>#</sup> 0bs.d
1 2 3	I I I	6 4 4	44 56 68	M F M	0	Н,S Н,О	6- 10 10	75 10 35	25 90 65	4 5* 12*
1 2 3 4 5 6 7	I I I	8 2 9 5 8	68 77 57	M F M	0,0 0,0	0 Н,S	10 10 3	80 70 65	20 30 35	3* 4* 4*
7 8 9 10	I I I	5 8 4 5 7	50 43 71 35	M M F M	S S H	0 H 0,0 S	10 10 10 ?	75 60 40 40	25 40 60 60	4* 3* 3 3
10 11 12	i M	5 7 2	50 45	M	s н,s	Н,О	10 3	35 10	65 90	3* 3*
13 14	М	4	44 34	M M	H,S H,S		4+	30 0	70 100	3* 9
15 16	C C C	5 3 2	38 30	M M	H,S H,S		2 5 1	0 0	100 100	3* 4

 $^{a}$  I means Inupiat household, M, means non-Inupiat male head of household with

Inuplat industrial, m, means non-inuplat male head of household with
 Inuplat wife, C means non-inuplat household.
 F-T means full-time wage employment. SPO means sporadic wage employment and is usually seasonal construction work. H is head of household, S is spouse, 0 is other (usually child of head of household).
 c This estimate must be intermeted with such as the intermeted with set of the set o

<sup>C</sup> This estimate must be interpreted with extreme caution. SEE TEXT. <sup>d</sup> Number of main meals witnessed and/or participated in. "\*" indicates conversation about food and diet both in general and for that particular household. Estimates were based on these observations, interviews, and additional reported information if the latter seemed to be reliable. Records were made of what was eaten, by whom, the relative amount of each food eaten, what was present that was not eaten, who was present, time of day, and any special circumstances. No weights, volumes, or other direct measurements were taken. Rather, eyeball estimates of amounts consumed were made on a relative basis in terms of serving size or area of plate covered. This was converted to a more absolute scale for comparison with other meals and other households after the meal was over by calibrating the relative measurement units. This was a compromise between obtaining no quantitative data at all and introducing a more obtrusive data collection technique into Inupiat households.

This system enabled us to estimate the "percent of harvested foods consumed" by each of the 16 households in our sample (for our observations, during the time period we were in the village). These estimates are thus very rough. No confidence levels or ranges can be placed around them.

Before discussing the data, some of the methodological problems should be pointed out. These are fairly numerous and should convince the reader that at best these figures are rough indicators of current behavior. To rely on them as completely accurate measures would be doing an injustice to both the people of Nuigsut and the researchers.

An attempt was made to collect meal information from informants, but this tended to elicit responses that were normative and incomplete. That is, unusual foods were left out and common foods usually overstated in importance. Recall of amounts consumed was very unreliable. This is our conversational data base, but is not at all adequate to talk about what people are actually eating. Thus, our best and most reliable information had to come from personal observation. Because

of the need to base recorded data on observations and not self-reports, the sample is small.

The sample is representative in terms of the types of housing in Nuiqsut (old housing is approximately 50% of the existing housing stock) and the range in size of household. No household headed by an Inupiat individual younger than 35 is in the sample, and there are eight of these in Nuiqsut (and two more with a household head aged 35). Thus, the sample may be somewhat too old. This is further suggested by the length of residence in Nuiqsut, where eight of the eleven Inupiat households have been in Nuiqsut since it was refounded. Thus, more traditional food habits may be somewhat over-represented.

Observations on the sample were confined to household consumption. Family members not eating in the home were thus not represented. These would be mostly school age children, school employees, and young adults to about age 25. All school children and school employees eat lunch at the school, which serves 100% "store" food. Children and young adults tend to eat snacks bought at a store or to eat at the restaurant much more commonly than do older people. The restaurant, like the school, serves only "store" food.

The sample observations were not made at random times of the day, so not all of the variety of food activity was necessarily observed. Observations clustered around lunch time, dinner time, and evening "parties" (socializing). Breakfast was not observed very often because it quickly became clear that it was pretty much a "store" food meal for nearly everyone who ate it. It was also not a time of day that we felt we could impose our visits upon people. Eggs and cereal with bacon or sausage predominated. Some people did talk about having caribou kidney for breakfast, but no subsistence food was observed to be eaten at breakfast. Lunch was also often a "store" meal, especially for the young who were used to such food in school. This meal also tended to be informal, so that it lent itself to the use of lunchmeat for sandwiches and such. However, among older people, lunch consisted almost exclusively of subsistence food. Again, it tended to be informal. Mostly people at quag (frozen fish, frozen caribou), muktuk, or leftovers from previous days (soups, stews, roasts). The idea seemed to be to keep preparation time to a minimum.

Dinner, then, was the meal where the most mixture of subsistence and store foods was observed. Whereas breakfast was 100% store, and lunch tended to be either 100% store or nearly 100% subsistence (except for tea, crackers, etc.), dinner could consist of nearly any proportions of subsistence and/or "store". Dinner was also the main meal of the day.

A factor which could be too easily overlooked is that the household consumption information covers only a limited time. Our field research was conducted from November 16, 1982 to March 9, 1983. The consumption survey itself began in December 1982. There is little reason to suspect that food consumption patterns are the same throughout the year. Thus, our three or four month information, no matter how accurate it is, cannot be extrapolated beyond the time period in which it was collected. Too many factors vary throughout the year, and the effects of one may carry through many yearly cycles. A year's information is the minimal amount which can realistically be interpreted. The more time depth that is added, the more meaningful the interpretation can be. We will attempt to put our information within a wider context by transmitting some of the special circumstances which Nuiqsut Inupiat verbalized to us. We cannot hope that this is complete, however. These will be discussed in the next section, after the data are presented.

#### The Data.

With the qualifications stated above and below, our survey indicates that a little over 50% of the food consumed in Inupiat households is harvested food. This can be compared to the estimate of 50% to 67% for Southwest Alaskan Natives some time near 1978 (Knapp and Panruk 1978 cited in Fienup-Riordan 1983:45) and the figures from Kruse's (1982) North Slope survey (Table 32). Mixed households (non-Inupiat male, Inupiat female) consume 20% harvested foods and 80% "store" food. Non-Inupiat households do not use subsistence resources. We will discuss these cases in reverse order (in order of complexity).

The three non-Inupiat households sampled made no use of subsistence resources. Two of the households never hunted. The head of the third non-Inupiat household did go hunting with some of the villagers, but the product of the hunt went to the Inupiat participants. Two of these households have eaten subsistence food and can appreciate its taste, but neither makes it a regular part of their diet. One household does regularly eat the subsistence food shared at public village feasts.

The two "mixed" households in our sample made less use of subsistence resources than did all but one of the Inupiat households. The pattern of use was not the same for each of these households. In one, the non-Inupiat husband hunted quite regularly and supplied a substantial amount of the household's meat in this way. Other meats (ham, poultry, pork, beef) were also an integral part of the diet, as were starchy accompaniments (bread, potatoes, pasta, rice). The adults also fished quite a bit and stored fish for yearround use. Overall, subsistence resources provided perhaps 30% of their total food. The wife's mother (who maintained

# Table 32: FOOD OBTAINED FROM SUBSISTENCE ACTIVITIES

Food Obtained from <u>Subsistence</u>	NSB, All <u>Villages<sup>a</sup></u>	Other than Barrow <sup>a</sup>	Other than Barrow <sup>a</sup>	<u>Nuiqsut<sup>b</sup></u>
Most Half	30% 15	37% <b>]</b> 12 }	49%	55%
Some	42	35	35	36
None	13	16	16	9
Respondents	290	136	136	11

Sources: L

Kruse (1982:18)

Nuiqsut Household Consumption Survey 1982-83

her own household) also partook of their subsistence harvest. The second "mixed" household did little or no harvesting of subsistence resources. The husband was never known to eat subsistence food. The wife sometimes ate with her parents ' however, which is the basis for the 10% estimate for this household. Subsistence foods are much less a part of the <u>household</u> diet than they are in the case of the first "mixed" household.

The Inupiat households sampled can be divided into three groups of estimated percentage of household consumption of harvested resources (Table 33). The low subsistence resource consumption group (one case) has a diet of about 10% harvested food and 90% "store" food. The medium group (4 cases) consumes 35-40% harvested food and 60-65% "store" food. The high group (6 cases) consumed 60-80% harvested food and 20-40% "store" food. Probably 80% is as high a dependence upon subsistence resources as is currently practical given the use of tea, sugar, crackers, and other snack foods. We shall examine the characteristics of each

# Table 33: NUIQSUT HOUSEHOLD CONSUMPTION SAMPLE USE OF SUBSISTENCE RESOURCES November 1982 - March 1983

Use of Subsistence Resources	Inupiat	Household Type Mixed	<u>Non-Inupiat</u>
High Medium Low None	6 4 1	1 1	3

of these consumption groups and then compare cases to see what sort of processes affect the availability and use of subsistence resources.

The "low" group consists of only one case, Household 2. The head of the household is an older woman. She does not hunt or work for wages, but may fish on occasion. There are no men in this household. The other household members are a non-hunting female who works full-time, a female high school student, and a young boy. There are thus no household personnel available to harvest subsistence resources. Close family relations in other households have responsibilities which prevent their giving more than occasional contributions of subsistence foods. Thus, this household relies a great deal upon its cash income and store food.

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The "medium" group consists of Households 3, 9, 10 and 11. All these households include hunters as members. Two of the households have elderly heads (one male, one female). The other two have middle-aged heads. One is 35 and the other 50. Each is his household's main hunter. The older man hunts more than the younger, who is employed full-time. However, the older man has a larger family and children who are older and eat more. Further, the older man's children have acquired a taste for "store" food in school and as his wife is employed full-time, his household has the resources to buy such food. The older man also traps, fox for the most part. He sells these for cash, and his wife uses some for skin sewing. Because of the different composition of these households, their consumption pattern appears the same even though their level of effort devoted to subsistence activities is quite different. Good information on how these households fit into subsistence exchange patterns is not available to us.

The two other households in the "medium" group also serve to emphasize the effects of household composition on subsistence consumption. Household 9, is headed by an elderly woman who lives with a son, a grandson, and a granddaughter. She is the recipient of shares of subsistence food from hunters from other households. This is usually expressed in terms of exchange and sharing among kinsmen, but the degree of kinship need not be close and indeed sometimes cannot be reliably stated (this is generally true of all exchange within the village). The son and grandchildren are all in their twenties and the two men occasionally will hunt. They also work for wages on an intermittent basis and are most steadily employed in the summer when CIP projects start up. They eat out quite often and have a taste for "store" food. Household 3 is headed by an elderly man who is the household's primary hunter. He also is a meat supplier for several other households in the village and is one of the most accomplished hunters in the village. Other household members are a son and a grandson. Neither has been out to hunt in the last year except perhaps for geese. The household head went out for caribou twice while we were in the village. His subsistence activity was relatively low (compared to his reported past activity), and the consumption of store food in the household relatively high, for a number of reasons:

- the head of household eats meals at other people's houses quite often, most commonly when they are having some traditional subsistence food,
- the head of household was in relatively poor health for much of this time, and spent more than a month out of the village seeking medical help,
- in the household head's absence, either visiting within the village or on stays outside the village, his son and grandson prepared mostly "store" food, along with caribou and muktuk from their storage shed; and
- another son, head of Household 1, is a frequent and successful hunter and shares his meat with Household 3.

In this regard, still another (older) son has recently returned to Nuiqsut and joined this Household 3. He had started to go out hunting (along with a male member of Household 1) and seemed to be capable of supplying an abundance of meat. He had gone out twice, and each time came back with several caribou. Indeed, the "non-hunting" son of the household, who had left for Barrow to work for wages, said that this was what he had expected. Thus, subsistence resource use and dependence can be expected to increase for this household. The dynamics of household greatly. The difference in food consumed in this household greatly. The difference in food choice between age groups is also quite important. It operates in all of these "medium" group households to some extent and also is a major reason for caution in interpreting the numbers as isolated and "objective" measures.

A difference between Households 3 and 9 on the one hand and 10 and 11 on the other is that both Households 10 and 11 include steady full-time wage earners and are complete families with young children. Households 3 and 9 are partial

families with more sporadic wage earners and no young children. Households 10 and 11 are larger than Households 3 and 9. Again, stage of household development and household composition are very important.

The "high" subsistence dependence group is our largest group consisting of Households 1, 4, 5, 6, 7, and 8. They all have different sets of specific circumstances. Household 1 and 8 have middle-aged male heads of households who are employed full-time (on a seasonal basis) and are successful hunters. In addition, the spouse in Household 8 has a full-time, steady, wage job. The families are complete nuclear (2 generation) families with young children. The heads of Households 6 and 7 are older, and neither has a wage income as such. One is known as an excellent hunter, especially of furbearers and caribou. He also fishes with his wife. The other reverses those priorities. The spouse in Household 7 has a full-time, steady, wage job. The three children are all 18 or older and work for wages seasonally. Household 6 contains individuals from three generations and includes some young children. There are two steady wage earners in this household and three (including the head) who work for wages more sporadically. Household size, composition, and access to money seem to be the significant differences which account for a similar outcome.

Household 4 is headed by a very traditional older male and consists of his wife and their children. Both he and his wife eat mainly subsistence food (as do the adult couples in Households 6 and 7). Their children eat more "store" food than do the parents. It is unclear whether anyone from Household 4 hunts on a regular basis. However, they do receive regular shares of the subsistence harvest from other people in Nuiqsut, as well as items from Barrow unavailable in Nuiqsut (seal, etc.). This sharing is through kinship

lines, both patrilateral and matrilateral. Household 5 consists of an elderly woman and her unmarried son. He is a trapper and a hunter, and may occasionally work for wages. She is an active fisher and skin sewer and their household is a center for the exchange of subsistence items. Her married son is the head of Household 11. She receives frequent gifts of harvested food from other households.

## Discussion.

From an examination of these three groupings and the various sets of factors that seem to have produced our estimate of subsistence dependence, certain variables stand out:

- access to cash income--whether wage earner, head of household, spouse, or other(s);
- sharing--how much the household is involved in a network of subsistence product sharers; and
- composition of household--numbers and ages. Certain statements about these factors can be made and then elaborated by reference to the cases above.

Access to cash income, at least on a part-time or sporadic basis, is fundamental both to preferred consumption patterns and to subsistence activity. Cash income is needed both to buy food stuffs from the store and to obtain the items needed to be able to hunt effectively. Hunters tend to be seasonally employed, whereas other members of the household are more likely to be employed year-round. Households with no active hunter are either active in an exchange and distribution network or else rely primarily upon "store" food. Households with people of younger age (especially 10-25) tend to consume more "store" food, while "older" households tend to consume more harvested foods. Thus, households with high use of harvested foods are likely to be characterized by:

- one older seasonal employee who hunts, other household members with full-time employment, and a higher average age, or
- household members with full-time employment and active participation in a kinbased network of resources sharing (age composition is not as important in households which obtain harvested resources through exchange).

All households, in the sample, have access to cash income (see Table 31). Household composition determines who is available to work for wages and who can hunt. The two are not mutually exclusive categories, of course, but are being discussed in functional terms. They each place certain time demands upon household personnel. One person can fulfill both, as in Household 10 where the head of household is employed full-time and is also the household's main hunter, but this is unusual. His subsistence needs are at present not very large, the tastes of his young family are more "store" oriented, and in fact the household's subsistence consumption is only moderate. He is the only sample hunter employed full-time all year (see Table 34).

The obvious counterpoint to this case is Household 5, where the hunter's sporadic work appears to be the only cash income source. However, this hunter sells furs (as well as exchanging them) and his mother sews masks and clothing which are also sold and exchanged. The consumer needs of this household are very small. Their meals consist of harvested resources in the main, with store food being mostly bread, crackers, tea, rice and other such introduced staple extenders. The household contains no young children with their acquired tastes for "store" food. The house is one of the oldest in the village and so requires much less oil to

# Table 34: NUIQSUT HOUSEHOLD CONSUMPTION SAMPLE INUPIAT HOUSEHOLD EMPLOYMENT

	Employment				
Households with Hunters	Full-Time	Sporadic	None		
Hunter(s) <sup>a</sup> Other(s)	1 4	7 4	1 1		
Households without Hunters	2	0	0		

<sup>a</sup> Hunters need not be heads of households.

heat, has fewer electrical appliances, and has overall lower maintenance costs, than the newer house occupied by Household 10. Household 5 is also much more involved in the sharing network than is Household 10. This seems to be partly age dependent and partly kin dependent. The two are not separate, as the aged usually have more kin and more who also live in Nuiqsut than do the young. Age in itself is respected in Nuiqsut, and sharing is one way to show respect.

Looking at the cases with elderly heads of households (cases 3, 4, 5, and 9) reinforces this point. All rely on a kinship based network of harvested resource sharing in one form or another, and their dependence on subsistence resources is in large measure reflective of the utility of their social-kin network. Household 5 has been discussed, as has Household 3 to some extent. Household 5 receives a good number of subsistence food contributions, whereas the head of Household 3 shares a fair number of others' meals. Household 4 and 9 are more similar to Household 5 than they are to Household 3. However, the younger members of these households eat less subsistence food than do the older ones, which is a central characteristic of Household 3. Of interest is that these

elderly head of household cases also contain all but one (3 of 4) of the cases of households with no full-time wage earners. Only one of these cases has a household member with a full-time job, and clearly in this case house expenses as well as "store" food for younger household members are the main expenses. The other three households live in older housing. Only one non-elderly head of household case, Household 1, relies solely on sporadic labor for cash income, and this household is one whose consumer needs, at least in the way of "store" food, are not great. Two of their children are infants, the parents prefer subsistence food, their teenage son lives with his grandfather (Household 3), and their teenage daughter eats elsewhere fairly often. Recently, the head of Household 1 did go to work full-time on construction and a cousin (father's brother's son) has been visiting and going out hunting (as well as working for wages a little).

These cases are those in which one would expect to find difficulties arising from the lack of appropriate people to fulfill the necessary tasks, either because there are too few people in the household or the people in the household are too old. As among most people, elderly Inupiat tend to do less in terms of economic production as they grow older, and the fragmentation or segmentation of the extended family into separate households can aggravate a manning problem resulting from this. Other mobility increasing factors also affect this. Household 4 has no hunters because this couple's sons have mostly moved out into houses of their own. This couple relies on their sons and other kinsmen to hunt for them. These kinsmen all have jobs which require their time, and frequently must leave the village. The extent of Household 4's sharing network is testified to by its continued reliance on subsistence foods in such circumstances. Household 9 includes some sporadic wage

earners and occasional hunters, but they tend to be fairly mobile. Thus, they cannot supply a steady supply of harvested food. Household 4 thus relies on money and cash income more. Household 5 solves its problem of lack of a wage earner by having few needs for which money is required, transforming subsistence products into money, and relying on an extensive kin network. Household 3 also is a case where children have moved out of a parent's house after marriage, but where support still continues. Clearly, this household uses kin ties to maintain a supply of subsistence food, as at times it uses these ties to distribute a surplus. Wage income is also of importance to supplement subsistence.

Related to these cases is Household 2. Household 2 has a manning problem similar to that of Household 4. Married children have moved out, leaving a single parent with a household of unmarried individuals. There is no one with the skills and qualifications to be a hunter, but there is a person available to work for wages. However, Household 2 receives much less subsistence food from other households than does Household 4. The head of Household 2 is not so old as that of Household 4, and the other members of Household 2 are younger than those of Household 4. The underlying reasons for this difference in the use of sharing networks are not clear.

These "problem cases" aside, we can now deal with the typical, fully-manned cases. Note that the typical cases comprise only 5 or 6 of the 11 Inupiat households in the sample, however (since Household 1 does have a fairly steady wage earner now, but did not when the consumption survey began). These are households in which there are recognized hunters/ fishers and full-time wage earners. They are all family units, but only in one case are there three generations. In only one case is the hunter also the full-time wage earner.

In all cases, the food habits of the younger household members are different from those of the older. In some households, this tends to be indicated by people eating at different times. Other households simply have meals that mix store and subsistence food in a compromise proportion between the preferences of younger and older members.

These cases have all been discussed previously, but are worth looking at again from a slightly different viewpoint. Households 8, 10, and 11 are all young families, and consume a middle to somewhat high proportion of harvested foods. Households 6 and 7 have essentially grown families and consume mostly subsistence foods. This pattern of "store" food being preferred by younger people is evident in the other cases as well, although not as clearly perhaps. Young children eat in the household, whereas teenagers and young adults more often have the choice of eating elsewhere. This seems to confirm that parents and children do have different food preferences.

Observations in other contexts confirm this interpretation. Young field assistants preferred to be paid by the researchers every day. They frequently used their money to eat at the restaurant (hamburgers and such) and to buy snacks at the store. The shopping patterns for the people in whose household our researcher lived were as clear. The head bought staples and occasional treats. A 22 year old male brought staples, soda and assorted non-staple food items. A teenage male usually bought candy, soda, cookies, canned fruit, and canned pudding.

# Cash in the Subsistence Economy

Nearly everyone agrees that modern equipment is necessary for the successful harvest of subsistence resources and that such equipment is not inexpensive (Underwood et al. 1978:313, Hoffman et al. 1978:45). The history of social contact and change producing this result is well outlined by Kruse (1982:9-13). Simply put, with the development of commerical whaling, traditional subsistence resources (whales for the commercial market, other game animals to feed the whaling crews) gained commercial value. The Inupiat were forced to choose between traditional sharing obligations and western goods. The introduction of new technology such as the rifle aggrevated this split by allowing individual hunters to succeed where before groups of hunters acting in cooperation had been necessary (most notably for caribou). Traditional weapons and ritual were replaced by a reliance on a new technology. Disease, alcohol, and western religion caused further population dislocations and reduced the viability of traditional Inupiat society through the drastic reduction in population size and the sapping of a culture's strength.

From the time of these dislocations, cash (or exchange eventually contacting westerners) became an essential element for Inupiat subsistence activity. The old subsistence techniques were gone. Firearms for both land and sea hunting were necessary if a hunter were to be successful. Steel traps were standards, especially after the declining in whaling, and furs became the only subsistence resource with any real commercial value. The dictates of an outside market economy were to a large extent determining Inupiat subsistence activity.

The exploration of NPR-A, the extension of social programs to Alaska, military construction, and private oil development

increased opportunities for Inupiat wage employment. For the first time, this was a non-subsistence resource context. This potentially creates a conflict situation requiring people to choose either to engage in subsistence activities or wage activities. Whereas before the product of subsistence activities could be converted into cash, now the two spheres are separate and perhaps mutually exclusive. It was the purpose of Kruse's 1977-78 study to assess this situation and to determine the effect of energy development (and wage employment) on subsistence activity (Kruse 1982). As his results are directly applicable to Nuiqsut, we will summarize his findings.

Household incomes have understandably increased since oil development began and the NSB was formed. Nearly all Inupiat households consume subsistence foods, and 45% obtain half or more of their food from subsistence resources. This compares to 59% in the NANA region and 55% in the Yukon-Porcupine region. Kruse suggest that the significantly lower subsistence food consumption in the North Slope region is due to the relatively higher per capita income of the region. Kruse further notes that within the North Slope region, personal income is higher in Barrow than in the other Native villages and that consumption of subsistence foods is higher in the other Native villages than in Barrow. He concludes that wage income and subsistence food consumption are inversely related (Kruse 1982:18-19). To put this in perspective, Kruse notes that Inupiat per capita income is still relatively low. Also, there simply are not enough wage labor jobs for Inupiat on the North Slope to allow for the complete substitution of subsistence resources by cash, even if the Inupiat wished to do so. Jobs available have increased, but so has the number of people looking for jobs. He concludes that dependence upon subsistence resources may well be declining but that wage employment opportunities alone are not great enough to provide

the economic base for the North Slope (or at least the resident Inupiat population). "Without these subsistence products, the average living standard of the North Slope Inupiat would drop far below that of the vast majority of Americans" (Kruse 1982:20).

While Kruse suggests a decline in subsistence resource consumption on the North Slope, he indicates that young Inupiat are as interested in subsistence activities as their elders, at least for men. Women's interest in subsistence activities may be declining (Kruse 1982:27). Kruse's information is based on self-reports of the number of different subsistence activities engaged in and the number of months during which some time was spent on subsistence activities. This does seem a better indicator of interest than of actual behavior, since self-reports of the time and frequency of behaviors are notoriously unreliable. He suggests that men and women differ for perhaps two reasons. New technology has increased a hunter's effectiveness and mobility but done nothing to ease women's subsistence activities. Women may also be focusing on acquiring the skills needed for professional and semi-professional wage positions rather than spending the time necessary to learn traditional subsistence skills. Men tend to take mainly unskilled labor, seasonal jobs (Kruse 1982:29, see also "Cash Economy"). Outside education seems to reduce women's interest in subsistence activities, but not men's. Increased interest in subsistence activities is directly related to household incomes (Kruse 1982:31-32). This means that either wage employment and subsistence activities are not incompatible or that different household members specialize in one or the other. It certainly suggests that cash availability heavily influences the degree to which a household can participate in subsistence activities.

Kruse examined whether the time spent on wage employment reduced the time spent on subsistence activities. Historically the two have not been in major conflict because both were seasonal. When the two did conflict wage labor usually took precedence. The time conflict has been put off technologically by use of firearms which improve the chances of a kill and the use of motor transportation (snowmobiles, outboard motors, etc.) which increase mobility and the speed of a hunt. This reduces the time needed to hunt, but increases the resources needed in terms of cash greatly (Kruse 1982:35). Kruse finds that male subsistence activities and wage employment are currently compatible. Indeed, subsistence activity increases in direct relation to months worked (and, one assumes, income) (Kruse 1982:39). This does not necessarily contradict the inverse relationship suggested between income and subsistence food consumption, however.

Kruse does not claim to measure the time or effort devoted to subsistence activities, but speaks in terms of interest in subsistence activities. He measures this by counting the number of different subsistence activities an individual reports that he or she engages in as well as by counting the months that each individual reported were spent at least partially on subsistence activities. His findings could then reflect a pattern of those Inupiat with higher incomes being able to purchase expensive equipment to engage in wider variety of subsistence activities, especially those which yield high prestige but relatively little in the way of subsistence food (trapping and hunting fur bearers). Most subsistence activity is reported to take place on weekends and in the evening (Kruse 1982:35). Thus, those with higher incomes are able to easily engage in quick hunts and trips to subsistence resource areas that those without such income (and the equipment it can buy) cannot make on a regular basis. Higher income Inupiat can thus engage in higher prestige

subsistence activities, but ones that yield a lower return of subsistence foods, than can lower income Inupiat. The latter concentrate on a few cost-efficient activities of subsistence food harvest. Thus, it is likely that cash is being used to widen the range of subsistence activities engaged in by reducing the time required (Kruse 1982:35-39). The differential availability of cash determines who can do so, however. Kruse does not examine the relationship between his measure of interest in subsistence activity and actual subsistence food consumption, unfortunately.

The situation for women is more complicated. There is no evidence for conflict between subsistence and wage activities, but Kruse cites different reasons than he does for men. Fewer Inupiat women, especially older women, work for wages than do men. Women who do work tend to work for 9 months or more. Third, women's subsistence activities are likely to occur in and near the home. Thus travel time is zero. Inupiat women who work for wages and engage in subsistence activities report that the latter take place mostly on weekends or in the evening (Kruse 1982:39-40). Women as a whole seem to be reducing the time spent on subsistence activities, however.

Kruse establishes that subsistence resources are currently essential in an economic sense. Available cash resources available to residents of the North Slope are inadequate to buy a completely "store" food diet even if they wished to. He also notes that subsistence activities may serve as a socially binding force. Subsistence resources have a predominate role in sharing networks. Subsistence activities are not a cure-all for the social stresses accompanying rapid social change, however (Kruse 1982:43-44). They do provide one of the few links of continuity to a meaningful past:

Current subsistence activities on the North Slope, particularly whaling, appear to provide most of the opportunities that today's Inupiat need to maintain a viable social fabric. This view, however, is yet to be supported by research. Of the many facets of subsistence that require further study, perhaps its social role is most critical (Kruse 1982:45).

# Women in the Subsistence Economy

Women have always occupied essential roles in the Inupiat domestic economy (see "Social History"). Their participation in subsistence activities seems to be declining, however (Kruse 1982:29). This certainly seems to be the case in Nuiqsut, especially among younger women. This may be a combination of several factors. Younger women are seeking semi-professional wage positions, are spending a great deal of time in school rather than in the home from ages 5-17, and do not want to spend a great deal of time skin sewing or making traditional clothes when commercial substitutes are available. They would rather work for cash to buy something commercially available. Even those women who do sew traditional garments often use imported fleece or calfskin.

We observed no women hunters, although we were told of past instances when women from Nuiqsut have gone out hunting. Women did go out fishing through the ice in February and March, often accompanied by their husbands but sometimes alone or with other women. All these women were at least 30. One was the oldest person in the village. Nets were not set under the ice as people do not like the work involved in deicing the net. Hook and line fishing can be very productive, but was not during the period of our fieldwork. Men usually cut the holes through the ice after which women could keep them open.

The few active crafts people in Nuiqsut are women, most of whom are middle-aged to elderly. They make masks and clothing to be sold and/or given to kinsmen. This activity does not generate much income as no one person makes very many items. The school has taught skin sewing, but only one or two young women continue to make hats and mittens for sale outside of this class. These young women do not make anything more time consuming to sell. In fact, only snow shirts, hats, mittens, and masks were made for sale, only older women made parkas, mukluks, and other time consuming items and then only for kinsmen. The one women in her 30's who had made a pair of mukluks said that it would be her last as it took too long.

Women are still responsible for preparing meals, especially those including subsistence foods. The one seal we saw eaten in Nuiqsut (an exchange from Barrow) was skinned and prepared by the spouse of the head of the Household 4 of our consumption survey. The head of Household 3 ate at other peoples' houses partially because there were no females in his household to cook and he preferred not to. No unmarried female was observed to have prepared subsistence food, but that was not something we specifically looked for. We did observe many unmarried females preparing "store" food, however.

At the present time in Nuiqsut, it appears that the primary role of women in the subsistence economy is as food processors. Men skin the caribou they shoot and the animals they trap, but women are responsible for everything else. This is similar in many respects to (sterotyped) Anglo-American society at large and may parallel the developing role of Inupiat women in the wage economy. Inupiat women are partial suppliers of fish, but their role as clothing manufacturer has been supplanted by commercial suppliers for the most part. Some

Inupiat males have expressed a desire for a traditional Inupiat life with a traditional Inupiat wife, but their wives seem not to have taken this to heart. One rarely, if ever, sees a skin parka made with anything but fleece. Commercial parkas outnumber skin parkas, especially for people 40 and under. Less than ten people wear mukluks on an everyday basis, although many more wear them on special occasions. A women's primary domestic function is clearly as a food processor and housekeeper, however.

### Nuigsut: The Cash and Subsistence Economies

The situation of Nuigsut in particular seems to be so of the NSB in general (Kruse 1982). Men continue to be more active in subsistence activities than do women. Hunting traditionally had higher status than domestic activities and continues to have higher status. Access to cash largely determines the subsistence activity level of any given household. Such access is usually directly through a wage earner but can be achieved through kinship based sharing networks. It is unusual for individuals to combine the functions of full-time wage earner and hunter. Hunters are much more likely to be sporadic or seasonal wage employees (Table 34). Full-time wage earners tend to be non-hunters. Just who works and how much depends upon actual household composition and available support groups. Sharing, traditional values, and village social organization all shape a household's consumption pattern.

A general assessment of how our sample represents Nuiqsut must be made. Overall, it would appear to overestimate the dependence on subsistence resources somewhat. Our sample was skewed towards older individuals. It was a household sample and so did not take into account the vast amounts of store

food eaten at the school, or the snacks obtained at the stores by both school children and adults, or the meals eaten at the restaurant. Rough estimates can be made of these amounts, and can be credited mostly to people below the age of 26.

Probably our sample adequately represents the hunters of Nuiqsut, in terms of percentage. Our sample includes the three or four people most often pointed out as good hunters, however, and so may over represent the better hunters. Our gross estimate that perhaps 50% of food consumed comes from subsistence sources is somewhat greater than would be expected from Kruse's Table 2 but we would expect that our assessment is not too far off the mark (see Table 32). We have taken our three groupings and simply relabeled them so that high use is half or most, medium use is some, and low use is none.

The model developed to explain the mixture of store and harvested food consumed in any given household is that of rational beings trying to solve a problem within given boundary conditions. All households go through certain developmental stages--married couple, married couple with young children, etc. All families or households have certain sets of resources available, and not all sets are equivalent. Some have more kin than others, some have more workers available than others, and so on. The developmental stage of a household (that is, the composition of each household in terms of age, sex, and ability) seems to be the most important consideration in explaining the percentage of household food obtained from harvested fish and game. Most Inupiat households appear to try to maximize subsistence food use, subject to household composition constraints.

All households need cash income, both for store purchases and to participate in subsistence activities. Small households made up of older adults, with fewer "store" tastes, need the least cash income. Large households with many children, especially school age children, need the most. Households with grown children have the most flexibility as they can contribute either cash or subsistence resources to the household. At the present time, with a minimum cash income being necessary for effective subsistence activity, it is easier to support oneself on wages than by hunting. It is almost, if not totally, impossible to support a family with children by hunting and fishing alone. The demographics of Nuiqsut thus ensure that the cash economy is an absolute prerequisite for subsistence activities. There simply are too many dependents for the available providers using a traditional subsistence resource base. This problem is being solved by resorting to a different set of production resources, that of the wage economy.

Nuigsut households have certain predictable characteristics. Parents with young children tend to have wage income jobs, although subsistence hunting is not thereby precluded (sample Households 8, 10, and 1). Parents with school age children require even more wage income due to the acquired store food tastes of the children (sample Household 11). Somewhat older children can provide for themselves, thus requiring less household cash expenditure (Households 6 and 7). Older heads of households depend upon others present in the household or their kinship network in the village and the relative strength of these resources determines the harvested food available (sample Households 3, 4, 5, and 9-while 3 may appear to be a problem, it is explicated above). Households with no available hunter and school age children will almost certainly rely on cash income (Household 2). Thus, household composition characteristics--how many adults

and how many children, who is available to work for wages and who is available to hunt, how many males and how many females--to a large extent determines the pattern of household consumption. Food preferences, which appear to be the product of age and socialization experiences, are also factors. They can be included when considering household age composition, however. Other factors that must be considered for the argument above are:

- school age children are usually not productive individuals in Nuiqsut, at least not during the school year;
- infants and young children eat less than older children and adults;
- school age children tend to acquire a taste for "store" food;
- Inupiat subsistence food producers are primarily (but not always) men; and
- the child-women ratio in Nuiqsut seems to currently be increasing.

All indications seem to be that the Inupiat are succeeding very well in articulating wage labor with subsistence activities. However, the disparity between the sexes in full-time wage labor functions and degree of participation in subsistence activities may cause severe social strains. This is especially likely if these trends continue. There is also speculation that if technology has been substituted to some degree for traditional subsistence hunting skills that a decrease in the availability of cash would cause a decrease in subsistence activity. Men who had not needed such skills due to snowmachines and powerful rifles would not be able to successfully hunt, lacking the financial assets to acquire and maintain the necessary equipment. This substitution does indeed seem to have occurred (Nelson 1969:111, 131, 384; Kruse 1982:33). Kruse maintains that at the present such equipment is expensive but affordable for most Inupiat households. Our information from Nuigsut confirms this in general but suggests that the situation is far from comfortable. There is well under one operational snowmobile for each Inupiat household (see "Well-Being" chapter). Borrowing of snowmobiles, or teaming up with one snowmobile and sled, is not uncommon. The resources that are concentrated on are those that are least expensive to harvest. Fishing near the village requires little equipment and no snowmobile, although a snowmobile is handy to transport one's catch. Caribou are usually nearby enough so that the expense of running a snowmobile is not great and the time required is short enough so that a borrowed one can be used. No distant fish trips were undertaken by villagers during our period of field research. Such activity has evidently declined, at least temporarily, as there was very little fish distributed at the Christmas Feast.

There are several possible explanations. One is that longrange transportation is too expensive. Another is that wage labor does interfere with this sort of subsistence activity. Not incompatible with this, we were told that last summer large catches could not be made near the village because the gravel dredging operation contaminated the fish on the drying racks with too much sand. Such nearby fish camps are the cheapest way to harvest subsistence resources.

Those resources that are most expensive to harvest are not sought after as much. Only two individuals maintain a number of traps, and even they no longer run a regular trapline. Trapping requires ownership of a snowmobile and traps, and gas to run the snowmobile. These same men are the only men who regularly hunt wolves and wolverines. These are chased down on snowmobile, and thus use up a great deal

of gas. Such usage is also hard on snowmobiles. The only subsistence activity more expensive than this is whaling (Hoffman et al.1978:49). Only one man has captained a crew from Nuiqsut, although other men have made plans to do so in the future. The one active Nuiqsut whaling captain has not whaled every year. He is justifiably held in high esteem for his past whaling activities.

Seals are cheaper to hunt than fur bearers, but do not confer as much status. It is cheaper to pay to have seal shipped from Barrow than to hunt it (Hoffman et al. 1978:49-50). It is nearly impossible to buy a wolf or wolverine pelt as most hunters use all they can obtain. Thus it is not surprising that no seal hunting took place during the period of our field study but that fur bearer hunting did. People said that seal hunting was not a regular activity for them.

If wage employment opportunities were to become fewer, as appears likely to be the case now that the NSB CIP program is nearing completion, subsistence activity would decrease or focus still more on inexpensively harvested resources. Oil development is unlikely to create many new jobs for Inupiat (Nebesky 1982:153, Brown 1979:39). The permanent jobs created by building Nuiqsut's infrastructure will not offset the loss of seasonal construction jobs. If and when wage employment opportunities decline, adjustments will no doubt be made. Subsistence activities will not cease, as they will be even more economically necessary than before and it would be logical for them to increase by emphasizing more efficient harvest. Other alternatives would be population migration (probably not too likely) or more use of transfer payment programs (unemployment, welfare, etc.).

Until better information on what subsistence harvesting activities are actually going on and by whom is available,

further speculation about the future is groundless. One can make statements about the future wage economy in Nuiqsut because it is observable. Subsistence activities, taking place far from the village in many cases, are all but invisible. Consumption studies at least potentially use observable measures of subsistence activity that are on a par with readily observable measures of wage activity. The problem that wage activity is essentially public while subsistence activity remains essentially private still constitutes a major obstacle when examining their relationship to each other.

# VI. SOCIO-POLITICAL STRUCTURES

### Ethno-Historical Socio-Political Structures

Contemporary Inupiat behaviors are rooted in traditional Inupiat social organization, and are linked to traditional sets of norms and values associated with the yearly pattern of aboriginal social organization of villages and camps (Spencer 1959, Burch 1975, 1980). It is thus necessary to extend our contemporary analysis by including an ethnohistorical account of former patterns of Inupiat social organization. Unfortunately, most reliable information concerns coastal groups rather than inland or riverine Inupiat. As was referred to in "Social History", it is unclear to what degree such groups were truly different (Burch 1980, Nielson 1977). Most of the people now living in Nuigsut came from Barrow. Before living in Barrow they or their parents most commonly had an unsettled history of living on the land interspersed with periods of time spent in Barrow or other population centers. Thus, what follows may not apply so much to traditional Kukpigmiut as it does to the ancestors of present day Nuiqsut Inupiat. The ethnohistorians do agree that all Inupiat societies shared enough in common so that the following outline is not misrepresentative.

### MARRIAGE AND INUPIAT SOCIAL ORGANIZATION

In traditional Inupiat society, distinctions between men's and women's roles were defined through the institution of marriage and the structure and functioning of the domestic household unit. The differences in male and female roles is a vital aspect of the division of labor in the traditional hunting economy. The complementarity of roles between the sexes is

clear: men are hunters of sea mammals, caribou, and other game while women are providers of small game, responsible for retrieval of game, butchering and processing meat, and the domestic chores of cooking, housekeeping, and child care. The argument often made by ethnographers of traditional Inupiat society (Spencer 1959: Rainey 1947; Freuchen 1961) is that marriage and sexual relations between men and women were regulated through the economic necessity of the man-women partnership for survival in Inupiat society.

In fact, more contemporary ethnographers such as Burch (1975, 1979) discuss the <u>brittle</u> and <u>fragile</u> nature of traditional marriage ties. Marriage is viewed as an economic necessity, unmarked by actual ceremony or associated taboos, and without change in social position as much as change in economic role and position of husband and wife.

The complete absence of ritual recognition of establishment of the basic marital relationship in traditional society indicates the low position held by the relationship in the Eskimo view of their own social world. Not only was the relationship institutionalized as weak--as I shall argue later--it was regarded as a more or less utilitarian arrangement by means of which the problems of daily existence could be most efficiently handled (Burch 1975:82).

This attitude towards Inupiat marriage seems to espouse the view that marriage is an utilitarian and economic necessity, vital for the proper functioning of the domestic household. Both men and women contributed to the overall functioning of the households in separate, vital, but not equally rewarded in terms of status, productive roles. Burch (1975) also emphasizes that authority roles in the household were unevenly divided. The husband held authority over the use of weapons, tools, and boats, while women were responsible for all household goods, including the butchered and processed game placed in ice cellars or storage rooms. Their power to alienate such goods remains unclear. An individual hunter had the privilege to distribute his own kills (non-whale) as he chose, but game or meat placed in the cellar or storage area was then under the jurisdiction of the wife's authority as part of the household items and was usually used for household needs. Despite these apparent references to the complementarity of male and female roles, the overall position of most ethnographers has been one which emphasizes a woman's subservience to her husband and her generally lower status and less powerful (or independent) position in Eskimo society.

In the discussion of traditional patterns of wife-exchange, this mechanism for sanctioning extra-marital sexual relations seems to have had an economic basis. Rainey (1947:242) explains wife exchange as a mechanism for extending kin status to hunting partners and their offspring.

Out of this, I believe, grew the practice of wife exchange, which at Point Hope was generally a practical, not an emotional, arrangement. The immediate families of men who exchanged wives were considered to be blood relatives, and thus their children would expect mutual support. Moreover, when one man exchanged wives with another, he might expect to borrow his boat or hunting gear when a critical need arose. The practice drew unrelated families together for mutual support and protection and was a recognized method of extending the family membership (Rainey 1947:242).

Although Rainey also mentions that women often found wife exchange unsatisfactory and complained of these imposed sexual relations, it seems apparent that sexual relations promoted and strengthened economic ties.

Burch (1975:109) found among his informants that the most plausible explanation for co-marriage was the extension of kin relatives over a short period of time. He then asserts

that exchange or co-marriage furthered alliances between different regional Eskimo societies. Clearly the formal sanctions of extramarital relationships through the mutual consent of all four members of both couples served as a mechanism for extending fictive kin relationships. We have seen that sexual relationships between a man and woman combined with co-residence constituted marriage as an economic institution. Given this, sexual relationships governed through principles of wife exchange mediated a set of economic and social relations through principles of fictive kin affiliation which then could be extended beyond the shared sexual partners themselves.

The threat of infidelity and jealousy was seen as one of the major threats to marriage and economic and social stability. In the case of divorce, the breaking of the residential tie was usually a result of either infidelity and jealousy or the lack of economic participation of one marital partner. Burch (1975:92) states that neither partner had recourse to legal sanctions in marital grievances. In the case of a husband's grievances, a man always had the option of resorting to physical coercion through wife-beating. A wife, on the other hand, usually employed the informal sanction of nagging her husband. In some cases, she might call upon her brothers, fathers, and relatives for support against her husband. Here the use of kin ties to impose informal sanctions in marital strife confirms the impression that although marriage did promote affinal kin affiliations, it was a brittle form of alliance that could be overridden by consanguineal kin ties.

There are several principles which are inherent in the institution of marriage in Eskimo society. First, if the contention that marriage has a stonger economic function than a social function is correct, then values associated with traditional Inupiat society would stress: 1) marriage as the

institution which resulted in the production of children as economic insurance in old age, and 2) marriage sanctioned sexual and social relationships which promoted the economic partnership and division of labor between sexes in a viable household unit. The dissolution of marriage would be seen as having an "economic" impact more than as a loss of social status or sexual privilege. A spouse who did not fulfill economic responsibilities in the economic sphere was breaking the very basis for this tie. Moreover, infidelity resulting in jealousy could be viewed as "breaking" the property basis for the marriage tie. Unsanctioned sexual relations outside of marriage would threaten the "economic" bond. In any case, the argument must be made for traditional Inupiat societies that: 1) sexual relations which usually accompanied marital status cemented economic and productive ties between husband and wife; 2) as in most societies, non-sanctioned sexual relations outside of marriage relationships threatened the stability of marriage (whether socially or economically important); and 3) sanctioned co-marriage or wife-exchange governed social and sexual relations so as to extend economic or social ties to non-kin and their respective families.

### MALE STATUS

The traditional cultural system of the Inupiat emphasized the equality of status among adult male hunters, the seasonal variation of subsistence hunting and social organization, and the complementarity of male and female roles within the domestic household unit. The process of stratification of individuals by wealth, power, or prestige was severely limited by the ecological conditions of the environment and the productive capabilities of the economic system. This point requires elaboration.

Traditional Inupiat social organization has been characterized by a settlement pattern of large winter coastal settlements in which village cohesion was influenced by organization for communal whale hunts. The social foci of whaling were/are the <u>umialik</u> or leader in the whale hunt, the <u>karigi</u> or the mens' house which represents membership in certain whaling crews, and nuclear or extended family households practicing a loose pattern of virilocal residence (Spencer 1959; Burch 1975, 1980). Summer residence camp groups were large multifamily or smaller household units depending upon the kinds of resources hunted, their overall availability, and the necessity for group effort hunting.

This model of hunter-gatherer social organization implies principles of flexibility and fluidity among camp and village groups. These principles govern the formation (cohesion) and disintegration (dispersal) of group membership due to seasonal variation in settlement pattern. The principles of flexibility and fluidity of groups would be applied to the organization of labor, where such factors as the kinds of resources to be procured and the skills and resources required for success must be taken into account. Different group sizes are necessary for different productive activities.

Principles of kin affiliation were not the only kind of mediating mechanisms governing social relations between individuals. The nature of leadership and the role of the <u>umialik</u> in seasonal whaling activities suggest that principles of achieved status on the basis of skill and access to economic resources changed the "egalitarian" nature of Inupiat society. If the umialik were to own and maintain the <u>umiak</u> (skin boat), a necessity if he were to sustain his position of leadership in communal whale hunts, then he had to maintain a set of relationships with his whaling crew. Some of the crew would be kinsmen and others

would not be. One problem posed in Inupiat social organization is simply stated: how was leadership maintained by an umialik over both kin and non-kinsmen?

Of special interest in the analysis of Alaskan social organization is the explanation of the karigi. Not only is this a highly distinctive institution, but also through the specific social relations implied in membership, the possibility of incorporating non-kin in stable production units is critically facilitated (Riches 1981:79).

As in most egalitarian societies in which leadership is defined by ability, the <u>umialik</u> had to insure his continued prowess as a leader, as well as his ownership and continued up-keep of the equipment required. The <u>karigi</u> afforded him an area of influence and cemented his position of leader more fully. Whaling crew members were affiliated with the <u>karigi</u> of their <u>umialik</u>. In this sense, the <u>karigi</u> tended to represent a fairly stable production unit within Inupiat society.

Traditional social organization of the Inupiat was based upon often conflicting personal alliances to immediate family and kin, to the <u>karigi</u> and the whaling crew, and to the leadership of <u>umialik</u>:

This would place membership (in the hunting crew) on the level of the family tie but in view of the role played by the umialik and the fact that the crew together carried on ceremonial life as a unit, karigi ties seem to rest in the hunting group and to be worked out without regard to relationship (Spencer 1959:186).

The distribution of whale and other resources at the winter settlement was indicative of communal redistribution and reciprocity. However, labor and equipment demands were greater on the <u>umialik</u> than on other crew members. He had to maintain access to enough economic and social resources so that he could provide equipment for successful whale hunts and thus gain the reputation of successful hunts. This had to be combined with great personal skill and ability to lead the crew.

The overall focus of winter cohesion was that of the <u>karigi</u> or men's house. This may well have been a constant, year round, orientation (Burch 1980:271). The idiom of leadership and unequal access to leadership roles had a strictly "male" context. Additionally, both kin and non-kin relationships had to be emphasized in the traditional social system:

In summary, the individual belonged to a family unit which consisted of his nuclear family group and extended circle of kin. He had non-kin associations with trading partners, friends in his joking partners, relations to an umealig in his crew membership, and he was tied, by virtue of this last, to a karigi (Spencer 1959:192).

This pattern of social relations among male household heads in Inupiat societies is of particular interest for interpreting the principles of egalitarian hunting-gathering societies in a contemporary context.

Woodburn (1982) divides such societies into two types--those with "short-delay" production systems and those with "longdelay" production systems. "Short-delay" systems are more individualistic and less structured than "long-delay" systems. The traditional Inupiat winter settlement system was a characteristically "long-delay" type. Whaling constituted an activity that required leadership planning, organization, group decision-making, and team work. Leadership was achieved through individual qualifications as a hunter and was marked by boat ownership. The notion of property ownership by male household head defines this egalitarian model of society as composed of more "equal" status for the male household head than for other family members. In addition, leadership is

the result of the abilities of the most capable hunter who must then also maintain access to invaluable equipment such as skin boats, harpoons, and such.

Thus, the egalitarian principle is modified by unequal achievement and the exercise of personal leadership as well as the unequal ownership of important equipment. Competition among crews (and cooperation within each crew) enters into the valuation of each umialik's status. While consensus appears to be at the base of contemporary Inupiat political and economic spheres, the traditional pattern of umialik leadership indicates that group decision-making is, in certain circumstances, the result of leadership. The position of the leader is based upon competitiveness, economic advantage and access to resources, proven and recognized abilities, and the ability to attract followers. In fact, there are contemporary situational contexts where leadership positions are obtained through competitiveness and the transformation of access to cash resources into subsistence equipment, when combined with kinship ties and proven and recognized success as a leader. The relative importance of these factors is not always easy to determine in specific cases. We will make some attempt at this later in this section. In Nuigsut the position of mayor has always been occupied by an umialik (except for a brief transitional period about which we can obtain no public agreement).

Other leadership positions in the village apparently do not follow this recruitment pattern. At the same time, they seem to have the same requirements as traditional leadership in the sense that the leader is expected to command presence and maintain greater access to resources than do other community members. Leadership recruitment within the Village Corporation is not based so much upon solely traditional skills as it is on education and experience in both the

Inupiat and Anglo-American worlds. This flexibility is no more a recent development than is the umialik pattern:

The life of the traditional Point Hope people was focused to an extraordinary degree on the harvest of the bowhead whale. On the pursuit and capture of this single species was lavished a substantial quantity of their time and energy, as well as a major portion of what Wanniski (1979:55) has called their "intellectual capital". But the large human population which was made possible by the successful pursuit of this huge marine animal was unsustainable by the harvest of whales alone. The Point Hope people had to harvest other species in order to survive. If this study has any thesis at all, it is that the Point Hope economy, hence the Point Hopers' use of their land, was much more comprehensive and sophisticated than either Native Theory or the literature would suggest. Whales were merely the central focus of a relatively complex subsistence system which incorporated virtually every food resource that the region had to offer (Burch 1981:2).

We do not argue that all leadership roles require the characteristics of an <u>umialik</u>, or that the same resources are necessarily mobilized in attaining all leadership positions. Many positions are so filled, however, among them those that are most visible in the village. This is understandable in terms of the central metaphor of Inupiat life (the "intellectual capital" of whaling which dominates so much of Inupiat thought).

# FEMALE STATUS

A women's status in traditional Inupiat society was identified with that of the nuclear family or household group to which she (more or less literally) belonged. Spencer (1959) alludes to the fact that women prepared meals for the family, including their husbands and sons who stayed at the <u>karigi</u> in the winter settlement. The implications of this description are clear. The women maintained their own households separate from the <u>karigi</u> and yet still provided food for the communal consumption of their male household members who spent considerable time in the <u>karigi</u>. It would appear that there was little political or social equality between the sexes. In addition to the obvious division of labor between male activities of big game hunting (sea mammals, caribou, bear, etc.) and female activities of fishing and small game hunting, it has often been noted that women conducted the necessary household tasks such as child care, food preparation, skin sewing, preparing hides, and skinning and butchering animals.

The set of values in an egalitarian society distinguishes between men and women in such a manner as to establish the necessity for women as a fundamental but not necessarily equal element of each household. The division of property between women's equipment and men's equipment in the household also indicates a principle of mutuality and a recognition of the separate, complementary, and vital role of each of the sexes. Despite this notion of mutual dependence the problem remains that any principle sexual equality was overridden by male preeminence, most obviously during the winter when cohesion was promoted through male membership in a <u>karigi</u> and affiliation with a whaling crew and <u>umialik</u>. As in most "egalitarian" societies, only male-male relations usually fall under this ideology. Men have much greater independence than women, both ideologically and pragmatically.

If we examine the role of women in whaling ceremonies, it is apparent that the <u>umialik</u> must have benefited from his wife's organizational abilities to supervise the other crew members' wives in the preparation and sewing of the new skin covering the umiak frame (Spencer 1959:334). In the four

days of ritual before the onset of the spring whaling season, the umialik's wife had to perform rituals associated with the umiak that would carry the crew to its successful capture of a whale. In this sense, the umialik's wife's position was complementary to his leadership role. By virtue of her relationship to the umialik, she took social and ceremonial leadership among the women of the whaling crew's members. In a ritual context, she held a significant role in emphasizing her husband's claim to leadership through her productive and ritual position vis-a-vis the umiak, her husband's materially symbolic claim to leadership. Although women did not have equal status in the winter village, they contributed necessary productive labor in the preparation of food for the karigi, the sewing of the skin boat, and in the case of the umialik's wife the symbolic legitimation of her husband's leadership position.

In contemporary Inupiat whaling practices, the umialik's wife continues to play this role of provisioning the crew members and conducting rituals associated with the whale and the subsequent feasting events (personal communications). One Nuigsut informant mentioned that she had traveled in the umiak with the whaling crew during her husband's last whale hunt. In this sense, leadership has a duality of both male and female roles. Although the idiom of male leadership prevailed traditionally, the role of the umialik was supported by the complementary role of his wife. Their roles were separate, complementary, and unequal. This sexual inequality was culturally recognized. The fiction of egalitarianism among males and households was maintained by the distribution of whale among crew members, their kin, and the village community at large at the preparatory feasts before the onset of spring whaling and again at the whale feasts after a successful hunt.

Thus, <u>umialik</u> leadership had its ultimate social and ritual expression through the household and extended kinship units. The whaling crew is a male hunting group which does not override and is indeed dependent upon the social and productive organization of the basic household unit. The duality and complementarity of male and female roles may have served to maintain the flexibility and fluidity of Inupiat social organization. Cohesiveness in the winter settlement was promoted through the <u>karigi</u> while the independence of camp groups during the summer and fall was maintained through the kinship principles of immediate kin defining a household unit.

In contemporary Inupiat social organization, whaling crews bound to the leadership of whaling captains no longer engage in formal karigi activities. The continuities in social relations and values associated with subsistence whaling rest with the leadership position of the whaling captain and the alliances of individual whaling crew members to the captain. In contemporary Inupiat society, and in Nuigsut, information about whaling crew membership indicates recruitment and alliance based upon kinship. If Spencer (1959) is correct, whaling crew membership and karigi membership included both kin and non-kin relations. The influence of new patterns of social organization due to Western cultural and religious influences may have resulted in imposing a system of kin-based alliances on the whaling crew as a substitute for the extra-familial institution of the karigi. This point remains debatable. Burch's ethno-historical analysis of Inupiat societies indicates that an individual's affiliation to a whaling crew and other hunting groups was based upon kinship alliances (Burch 1975, 1980). Nonetheless, whether one accepts a model of kin based affiliation or extrafamilial affiliation to a umialik and thus to karigi, the issue for explanation of contemporary Inupiat social organization remains the same. The traditional principle of

egalitarianism is based upon equal but competitive status roles of male household members and the affiliation of male household members to a whaling crew. This must be juxtaposed against contemporary Western social organization that stresses inequality of status position, whether ascribed or achieved, and affiliation through Western economic and political system.

### EGALITARIAN LEADERSHIP

Despite the great contradictions between traditional Inupiat social organization and the influences of Western social organization, contemporary Inupiat behavior can be seen as integrative. Traditional practices of reciprocity and redistribution, along with the leveling mechanisms which controlled status, wealth, and power accumulations in the winter settlements, continue to shape and influence contemporary social organization and their attendant social and cultural values. The following arguments will review the current literature on egalitarian hunting-gathering societies and delineate the manner in which the principle of egalitarianism is maintained in contemporary Inupiat social organization. The contradictions and discontinuities which remain in contemporary Inupiat social organization arise out of the disparity of the traditional values associated with winter settlement social organization and those of the class and economic structures of contemporary American social organization.

In Woodburn's discussion (1982) of African egalitarian societies, he explores the issue of how hunting-gathering societies prevent the unequal accumulation of status, wealth, or access to resources among individual hunters.

The principal occasions in which individuals in these societies are brought into association with valued assets which could be accumulated or distributed to build status are when large game animals are killed. And it is then that the most elaborate formal rules disassociating the hunter from his kill and denying him the privileges of ownership are brought to bear. Leveling mechanisms come into operation precisely at the point where the potential for the development of inequalities of wealth, power, and privilege is greatest (Woodburn 1982:440).

This situation can be generalized and applied to traditional Inupiat society. Spencer outlined the division of the whale as follows: 1) the muktuk was divided amongst all present members of the community, 2) each individual was allowed as much meat as he could carry, 3) the flippers and the heart belonged to the boat owner, 4) the meat was divided by the crew responsible for taking the whale, and 5) the meat was divided by crews assisting the successful whale crew (Spencer 1959:345:346). In fact, it should be obvious from Spencer's account that a successful <u>umialik</u> could not amass wealth after fulfilling his social obligations through communal feasting unless he captured more than one whale.

The successful umealiq paid off his obligations when he had taken a whale. Indeed, having feasted the community and seen that his crew was properly provided by meat, there was little left for the umealiq himself. His wealth began to increase only when he took a second whale. He had obligations for those who had been of assistance in any aspect of the preparation for whaling. These included any anatqut who may have helped with magic and songs, the kaakliq, the artisans who may have made such items as the special mittens, the pot, or the like (Spencer 1959:347).

The mechanism of muktuk and meat distribution among community and whaling crew members, in addition to the payment of social debts to craftsmen, shamans, and kinsmen, greatly reduced the potential for wealth accumulation. There does seem to be a provision for the accumulation of wealth if a umialik could be successful in the procurement of more than one whale in a given season. Power and prestige accumulation could only occur with successive yields from whaling. In this manner, the advantage of occupying the position of umialik lay in the power and prestige afforded by successful whale hunts. Yet the accumulation of power and prestige in the egalitarian Inupiat society would probably engender no greater permanent position for the leader than for any other member of society. since it would then be his continued responsibility to maintain this position of umialik. Power and prestige may have afforded him some "edge" over competing umialik, but he still had to maintain his position and standing through generosity, distribution of his wealth, and maintenance of equipment.

Herein lies the distinction between what Woodburn (1982) labels as the effortless egalitarianism of a short-delay procurement systems and the competitive egalitarianism of a long-delay procurement system. The Inupiat, especially with respect to coastal whaling subsistence practices, invested great amounts of equipment, organization, and labor in the procurement of whales. As such, the cohesion of winter settlements represented a long-delay procurement system. Egalitarian status relationships could only be distributed among the male whaling crew members. Household members such as wives, children, and young sons were expected to support their household members who belonged to a whale crew and a karigi. If we subscribe to Woodburn's argument (1982:446) that "keeping up with the Joneses may be hard work, but keeping up with all other male adults of a community is incomparably harder", then traditional Inupiat society must be characterized as that of competitive equality in which competition for wealth, power, and prestige is expressed

through the position of the umialik.

The success of Inupiat social organization and culture was the result of the dynamics between processes of personal competition and those of personal cooperation. Competitiveness leads to increased subsistence harvests and to the emergence of recognized leaders to coordinate the whaling efforts (which itself required cooperation among the whaling crews). Certain social institutions and ritual practices, such as the <u>karigi</u>, division of whales, and whaling festivals served as processes for the redistribution of accumulated wealth resulting from the harvest and insured the availability of adequate resources for the entire population. Redistribution also served to maintain the competition and made it necessary to renew or reaffirm leadership through continued successful efforts, assuring that leadership would be maintained as an achieved status.

While the system may never have been truly static and there were always fluctuations in leadership patterns and competition, these oppositional processes resulted in a dynamic equilibrium and a stability of overall social organization. This reconciled what may have appeared to others to be irreconcilably opposite forces of competition and cooperation. The leveling mechanisms in Inupiat society such as social and economic obligations to crew members and kin and general responsibilities to the community apparently mitigate the effects of surplus production. Foodstuffs and other nondurable goods are rapidly redistributed. Capital goods and equipment pose more of a problem, as shared use of a privately owned and maintained durable good is an asymmetrical relationship between owner and fellow user with little chance of role reversal.

Today, egalitarian competitiveness remains an important feature of modern Inupiat community organization. Thus, it can be said the North Slope Inupiat have been successful in adapting to the competitive roles of leadership in a Western capitalist society. Modern Inupiat values of competition remain supported by traditional Inupiat social organization. The traditional system based upon the principle of equal status, wealth, power, and prestige among all male household members remains strong despite the presence of Western leadership roles.

For example, among contemporary Inupiat whaling captains, cash resources accumulated through wage labor and access to Western economic or political influences allows the modernday umialik to transfer or transform his cash accumulation into boat ownership and other whaling equipment. If this is the case, then we would expect that access to cash resources would allow any man to qualify for the status of umialik. However, not every man who can financially afford to do so can actually achieve a position as a whaling captain (although there is some evidence that more men than before can do so). Although the modern-day umialik can transform material cash resources derived from the Western society into the traditional symbol of boat ownership, he must also subscribe to traditional patterns of leadership. That is to say, he must participate in the leveling mechanisms which require that he display great generosity towards the village, the whaling crews, and his kin and satisfy all other social and economic obligations engendered by the whale hunt. His competitiveness must be tempered through a system of traditional principles with which he establishes his leadership role while maintaining egalitarian principles with respect to the accumulation of wealth, power, or privilege.

Great accumulations of wealth, power, or prestige among contemporary whaling captains in Barrow and Nuiqsut do happen. When a whaling captain's possessions, power, and position are not accompanied by traditional acts of generosity and social equality, conflicts and contradictions between the traditional and contemporary definitions of status occur. It is this contradiction between traditional Eskimo values and contemporary Western values that creates disintegrative aspects of contemporary Inupiat society. For example, if competitive equality represents the basis of traditional leadership roles, then an individual who successfully amasses status and position by virtue of his role as an umialik is expected in traditional terms to be a leader without great accumulation of wealth, power, or prestige.

### Present Leadership

People in Nuiqsut seem to regard the office of mayor as another sort of <u>umialik</u>-position, so it is natural for mayors to be <u>umialik</u>. Both are decision-makers for relatively permanent groups of people. The size of the village, a permanent settlement made possible by the introduction of nontraditional resources, seems to have fostered the development of a "super <u>umialik</u>" mayorship. The extension of this pattern would then seem very natural.

The present mayor of Nuiqsut is a leader who fulfills traditional criteria for leadership, while differing somewhat from the mayor he succeeded. The first mayor led the group from Barrow which refounded Nuiqsut in 1973. He has lived in the village ever since (when not in Anchorage on business). The present mayor has had a long political career in Barrow, twice serving as mayor, and "retired" to Nuiqsut in 1980, only two years before he was elected mayor. Both men are closely

related to many people in the village. However, the first mayor is registered under the Alaska Native Claims Settlement Act (ANCSA) as a resident of Nuiqsut. The present mayor is registered under the ANCSA as a resident of Barrow (his wife is registered in Nuiqsut). The present mayor may be more closely connected to the powers that be in the North Slope Borough than the first mayor is.

The two display quite different styles of leadership. The present mayor has a large household, is usually physically in residence in the village, and does not appear particularly wealthy. He emphasizes sharing and helping. One may even suggest that this individual would undermine his political position in traditional terms were he to begin to emphasize his unequal status with respect to wealth, power, and prestige. His experience in two of the most important political processes affecting the Inupiat, the passage and implementation of the Alaskan Native Claims Settlement Act and formation of the North Slope Borough, make him part of a powerful political network. Combined with his success as a <u>umialik</u>, he has a reputation for unselfish service to his people. He strives as mayor to maintain this.

On the other hand, the former mayor does not have nearly as much a reputation for service, even though he has been the only <u>umialik</u> to capture a whale with a crew from Nuiqsut (all other Nuiqsut <u>umialik</u> captured their whales before they moved to Nuiqsut). He is a successful businessman, at the time of our fieldwork heading a native-based (and native service oriented) corporation, and appears to be relatively wealthy. He is able to maintain a semblance of equal status with other community members through a set of modern leveling mechanisms: 1) his income has been at least partially spent and invested outside of the North Slope; 2) he emphasizes his long experience and continued success whaling; 3) he expresses

values of generosity through the distribution of subsistence food at community feasts; 4) his business role enables him to distribute wage labor positions (at Prudhoe Bay, etc.) among community members; and 5) while much of his time must be spent outside of Nuiqsut, his wife and children continue to live in the community as one household among equals.

In both instances, a parallel can be drawn such that both leaders have managed to subscribe to traditional Inupiat value systems that emphasize competitive equality. The former mayor can be seen as a success in terms of both Inupiat cultural values and of Anglo-American standards through his access to economic and political positions. He may, indeed, have been too successful in this regard. The former mayor is the topic of much more village gossip than almost any other person in the village. The truth or content of such loose talk is immaterial here and impossible for us to judge, but its existence results from the former mayor's ability to amass and use resources as well as his highly visible community roles. Gossip is one mechanism a community uses to promote egalitarian competiveness. People perceive his success, but may wish the benefits to be distributed differently.

In the community arena, the former mayor tries to emphasize his equal, rather than unequal status with other community members. He does this by sharing his success in last year's whaling and through his continued distribution of wage labor positions to other community members. He simply cannot please all of the people all of the time. In contrast, the current mayor is not expected to display economic wealth and thus maintains parity with other community members. Generosity is not the same as wealth. The present mayor shares what he has in what others perceive as an equitable way. From this perspective, we suggest that traditional

definitions of leadership continue to be exhibited in contemporary Inupiat social organization. Leadership roles in a traditional Inupiat idiom have survived the imposition of Western economic and political institutions, most clearly through the activities and organization of subsistence whaling (Burch 1980:267-268).

Organization of contemporary Inupiat men into whaling crews with each crew aligned to a whaling captain preserves the aboriginal pattern--competitive equality among male household heads and leadership based upon responsibility, proven ability, and generosity towards the community. Furthermore, capital accumulation of money can be transferred from Western economic sphere into the traditional Inupiat subsistence sphere. This buffers traditional activities from the potentially disruptive effects of wage labor and also serves as a leveling mechanism. A whaling captain's economic and social wealth is invested in whaling equipment and in provisioning crew members. This can easily total over \$10,000 (Worl 1980:313). Individual cash resources gained in the Western economic sphere seem to be seldom invested in the community itself, except in the context of subsistence whaling. The successful whale hunt thus allows contributions from the cash economy to be redistributed to the community in the form of subsistence food. The importance of subsistence whaling is considerable because both participants and community members are able to reinforce their own Inupiat cultural values through traditional ritual and subsistence activities, and by conducting their modern version of the leveling mechanism of egalitarian redistribution (Worl 1980).

The frequent conflict of cultural values between the Inupiat way of life and Western standards of living cannot be ignored. Koster talks about the "proletarianization" of original native

populations by administrative bureaucracies (Koster 1978: 179). However, this obvious set of conflicts is usefully examined within the ethno-historical context of traditional Eskimo social orginazation presented above. Today the complexity of community and social organization in Nuiqsut involves the rapid establishment of economic, political, and bureaucratic institutions of Western society. Obviously, the development of Western institutions since the founding of Nuiqsut in 1973 creates a mammoth set of conflicts for an Inupiat population many of which expressed a desire to form this community as a continuation of a traditional subsistence lifestyle. We will discuss this below by examining the sorts of leadership positions which exist in Nuiqsut and considering them in terms of the resources that are used to create (attain) and maintain leadership positions

One such resource not yet examined is followers, perhaps because followers are so much taken for granted. In order to understand Inupiat leadership, it is useful to discuss Inupiat "followership", the rules which logically constrain leadership. Such behavior is often easily observed and yet is often neglected by observers. In contemporary Nuigsut political and social settings, followership is demonstrated by deference, whether by people's attitudes towards speakers, the speaking order itself, or by simply not initiating actions or conversation. By this deference to those persons who are allowed to lead and speak for them, the leadership pattern is reinforced. As with the umialik, present political leaders and elected officials fill positions of leadership only as long as there are followers. Seldom will leadership change as a result of confrontation or a single event, and it is only with the establishment of systems of balloting and election that decision points are institutionalized and leadership transitions made abrupt.

A characteristic pattern demonstrating followership occurs at public meetings and hearings. Those present defer to those persons who regard themselves as leaders and who usually speak first, after whom come others who habitually support the initially presented position. The rise of a leader can be as rapid as the leader has opportunities to lead, as other will defer to the actions and directions as long as they are not directly harmful. However, the fall of a leader is usually the result of a gradual withdrawal of followership (with elected officials, this decline precedes the formal recognition of an election loss).

Deference also influences day-to-day decision making within councils and other groups and is carried over to elected officials whose leadership tasks one might expect to include decision making. Here the pattern is similar, where people are reluctant to take any action (positive or negative) and adopt a deferral pattern. However, should any participant in these events initiate a direction, in the absence of strong opposing feelings, others may simply defer (or acquiesce) and let that direction go. This is a central characteristic of village decision-making.

Some observers, noting the extreme amount of deference paid to leaders by the rank-and-file (followers) in the villages such as Nuiqsut are tempted to use the word "apathy". Such a view does not do justice either to the people involved or to the complexity of the situation. While it is true that shareholders of the Kuukpik Corporation have never asked to examine its financial records, and that public attendance at City Council meetings is generally very low, and that meaningful discussion (that is, about matters not already known) seems rare at public hearings, all these behavioral descriptions leave out the Inupiat context within which they occur. Such acts would imply a mistrust of the leader by

his public, and would be keenly felt. A silent presence, or a trusting absence, is taken as the basis for a leader's public support. These Inupiat values often conflict grossly with the formal mechanisms that have been introduced to the North Slope, and this conflict is the source of much crosscultural misunderstanding.

A conscious sense of accountability to the public, according to what informants have told us, is foreign to the Inupiat. Even to raise such a question is insulting, as to achieve a traditional leadership position a man had to be respected. A personal style of leadership within a small group society ensured that leaders were for the most part responsive to their followers, and that followers could rely on their leaders. As levels of government become less personal and the issues dealt with become larger, the developing style of Inupiat leadership and followership will be crucial. The balance between leaders and followers is seldom precise or static. How well traditional Inupiat values are melded with formal institutional structures will determine to a great extent how active the "average" Inupiat will be in making crucial future decisions.

This problem of scale is frequently encountered in situations of social and cultural change. Traditional Inupiat leadership was exercised among local kin groups (the "local families" of Burch 1980:263). The population dislocations which have resulted in the widening of such kin-related networks from relatively narrow geographical areas to the entire North Slope may well contribute to resolving the scale problem. Local, kin-based, patterns of leadership could then be applied borough-wide in larger contexts. Indeed, this seems to be what has happened.

### Political/Economic Relationships--Issues and Leadership

## INTRODUCTION

The administrative structures established by the Alaska Native Claims Settlement Act contain certain inherent conflicting interests and introduce basic problems in relations among governmental authorities. The division of surface and subsurface rights between the village and the regional corporation ensures that any mineral development project will have regional review. It also ensures a local voice in such projects developed on village corporation land. However, it also creates a dependence of the village corporation on the regional corporation which gives the latter considerable leverage, should it choose to exercise it. Both are for-profit organizations, so that the smaller often has less freedom of action than the larger. This has, so far, worked out. The Arctic Slope Regional Corporation appears to be relatively benign to Kuukpik Corporation, as both are interested in providing funds and jobs to local people. So far, Kuukpik has not been in a position to do so to any degree on its own. The North Slope Borough or ASRC have always been involved.

The corporation (ASRC and Kuukpik) and the governmental units (the NSB and the City of Nuiqsut) also have the conflict of profit interest versus resource protection and redistribution. Attempts to run the corporations within the framework of the common good are more successful in theory than in practice. The result is a village corporation such as Kuukpik, which was two million dollars in debt when its current president was elected to office. It has since partially recovered, thanks in no small part to ASRC, but as Kuukpik's accountant put it, the corporation tries to feed its people more than run itself as a business. Nonetheless, the corporation often

resists the service demands of the political bodies as uneconomical ventures.

The segregation of concerns, awareness, loyalties and values that Worl et al (1981:186) talk about thus has begun to appear. There is still a shortage of qualified individuals willing to fill leadership roles. However, the housing of the Nuiqsut City Office in the Kuukpik Corporation Building, which was an advantage when their administrations consisted of the same people, is no longer so clear. A private conversation, and even record security, in such a situation is impossible to maintain. The city clerk is very aware of this, both from her attempts to protect the confidentiality of city records and from the resentment sometimes expressed by Kuukpik Corporation officials at her proximity. Such a development clearly indicates the development of institutional interests which compound the political/kinship factionalism already present.

### ISSUES--LAND

While we were in Nuiqsut, perhaps the clearest issue bringing these conflicts to light was that of land conveyance, and of land value in general. The basic situation is simplicity itself. The North Slope Borough wished to begin construction on the newest phase of its housing Capital Improvement Project in Nuiqsut. To do so, it needed title to the lots upon which the houses would be built. The Kuukpik Corporation, present legal title holder to the land, was prepared to sell the land once an agreeable price was negotiated. However, members of the Nuiqsut City Council objected to this. Under Section 14(c) of ANCSA, each village corporation was to convey title of 1,280 acres of its land to its municipality. This has yet to be done in Nuiqsut. As the city has no

source of income except for grants generated by the city clerk, which are quite specific in terms of for what they can be spent, some people thought that the money from the sale of house lots should go to the village. They, therefore, pressed for a delay in construction until Kuukpik Corporation conveyed title of 1,280 acres to the village. There is some question in the village as to whether this 1,280 acres should include the land under present structures or whether it is meant only for "growth expansion". The city passed a resolution to hire a lawyer to contact Kuukpik Corporation requesting conveyance of the land. He was to sue for such conveyance if necessary. Kuukpik Corporation was evidently at the same time negotiating their gravel extraction coventure with ASRC, which ran into some problems from the NSB. The easiest way to follow this dispute would be to relate events as they unfolded at City Council meetings. We will then be able to talk about interests, leadership, factions to some degree, and the influence of non-Inupiat upon Inupiat decisions.

We did not arrive in the village until November 16, 1982. The first meeting which discussed the transfer of land was on November 1, 1982. The subject was brought up by the presence of a lawyer and a land consultant from Anchorage, evidently invited for this purpose, in the context of the necessity of the Kuukpik Corporation to transfer city lots to the NSB to allow construction to start. The construction materials had not yet been transported to Nuiqsut, due to various delays, and the NSB and Blackstock (the subcontactor) wanted to clarify the land ownership question as soon as possible. It is unclear whether Kuukpik Corporation representatives were present as well, or what was really said, as the minutes are rather terse. Five of the seven council members were present.

At the meeting of December 6, the issue was discussed again. Representatives from the NSB Planning Department (housing), Blackstock Construction Company, and the Kuukpik Corporation (the president, the chairman, the accountant, and one at large board member) were present, along with the city clerk. In addition, a researcher, one non-Inupiat villager, and three Inupiat villagers, attended. The meeting begain at 7:41 p.m. and ended at 9:50 p.m. with the land transfer issue taking about 45 minutes (8:15 - 9:00). Another meeting was scheduled for the next day. This business was brought up after the ASRC -- Kuukpik Corporation gravel deal was introduced by a letter and tabled. The housing situation was summarized to the council as a "three member party". Three corporate entities, each with its own interest, are involved. The North Slope Borough wants to build houses in Nuiqsut, for which it first needs to obtain lots. The Kuukpik Corporation wants to sell the lots but at a higher price than the NSB wants to pay. The Nuigsut City Council wants the houses and is seen as unofficial mediator, and may itself feel that the city is entitled to receive the proceeds from house lot sales.

The basic argument, at this meeting, was over the value of the land. The NSB assessed surface rights, which is all that the village or Kukkpik Corporation would legally have to sell anyway, at \$.25 per square foot, or \$4,800 for the standard 200' by 100' Nuiqsut house lot. The NSB wanted to purchase 22 lots for houses, two for the health clinic to be constructed, and the two on which the new firehall stands, for a total of 26 lots for \$124,800. The last house lots had been sold for \$3,000 each (\$.50 per square foot). Kuukpik Corporation, speaking through its accountant, assessed the land at \$3.25 per square foot, or \$65,000 per lot. This would be \$1,690,000 for 26 lots. The main sentiment expressed at the meeting by non-Kuukpik people (residents who may be Kuukpik Corporation shareholders, but who are not officers) was that since the

people who moved into these houses would have to buy them from the NSB, and since the land price was built into the purchase price, the lower the land price the better it would be. The Kuukpik Corporation accountant then suggested that, as at present the city had no assets except its (potential) 14(c) land, to set too low a value on this land would be very short sighted. What was needed was a united City Council--Kuukpik Corporation front to negotiate with the NSB. The mayor said that people were applying great pressure on him to get the housing construction started because they needed the employment. He thought that the NSB knew they needed the jobs badly and so were trying to obtain the land at a cut-rate price. Kuukpik's accountant again talked about Kuukpik's deal with ASRC which would potentially create jobs for Nuiqsut independent of the NSB. It was agreed that there would be a joint City Council/Kuukpik Corporation open meeting the next day, after more talk of the necessity for a united city-corporation front.

The meeting of December 7, 1982 began about 3:05 p.m. In attendance were six City Council members, five Kuukpik Corporation people (the president, the chairman, the treasurer, the accountant, and one of the at large board members), one researcher, one other non-Inupiat, and two Inupiat villagers. It discussed the Kuukpik-ASRC gravel agreement until 3:22 p.m. As laid out by Kuukpik Coporation's accountant, the coventure would relieve the corporation's debt, give it access to a money-making investment, and increase local employment. City approval was not needed as the land involved was Kuukpik land. This discussion was made pertinent when the mayor asked how Kuukpik could agree to transfer 1,500 acres of land to ASRC at essentially \$.02 per square foot and then ask \$3.00 per square foot for housing lots, especially when construction cannot start until the lots are transferred and people are desperate for work.

Kuukpik's accountant explained how the Kuukpik-ASRC gravel agreement was not a sale as such. The land is transferred to ASRC in exchange for a debt reduction and the right to share in subsurface mineral rights. Surface damage payments are also a possibility. This investment has enormous income potential, he said.

There was then a dispute over how much land the corporation had already transferred to the city. There was no clear resolution before the topic returned to land value. In Barrow, it is priced at \$3.00 to \$3.25 a square foot, and in other villages at \$.08 to \$1.00 per square foot. The Kuukpik accountant repeated the argument that the land and surface rights were the only permanent resources the people had, and that as oil development came physically closer to the village and subsistence harvests were reduced, the value of land must go higher to compensate. At this point, the city clerk spoke out (as she had at the previous meeting) to draw the distinction between the city's interest and Kuukpik's. The city only wants its land conveyance from Kuupik. After that, the value of Kuukpik's land is of value only to its stockholders, as Kuukpik only benefits the city by the employment it provides. A member of the council, at this point, asked what the point of the discussion was.

The Kuukpik accountant explained that sand and gravel--that is, the basis of the Kuukpik agreement with ASRC--was not the focus of the meeting. The support of the city was not necessary for that, although that deal would be easier with city support. Rather, Kuukpik Corporation wanted advice from City Council on the price to ask for their (Kuukpik Corporation's) land, which they wanted to sell to the NSB for house lots.

At this, the city clerk reminded the council that the lots were within the city confines, so that the payment should logically come back to the city. Kuukpik derives many benefits from the city, so if the city has any sort of representation on Kuukpik's board, they should insure that the city benefit somehow from the land sale. The Kuukpik accountant began a rebuttal, or an alternative way to look at the problem, starting with the corporation giving the city 1,280 acres free of charge. This sparked spirited exchange on native allotments which contributed little to the clarity of the discussion. The mayor brought this to a close by pointing out that it was not really pertinent to the central point of the meeting. The Kuukpik accountant then asked the mayor for his price suggestions.

The mayor then offered a compromise..."between the \$.02 [per square foot] you took and the \$3.00 you are offering and the \$.24 the NSB is offering". The Kuukpik Corporation treasurer started to "correct" this but was stopped by the accountant, who then explained again how seeing the Kuukpik-ASRC agreement in terms of \$.02 per square foot was inadequate. He then asked what price the board agreed upon, stating that the mayor was offering \$1.00 per square foot as a compromise. The mayor objected to this as potentially endangering the construction contracts, and asked what he tell the 60 applicants for housing who would be disappointed if the housing project were cancelled. The accountant agreed that this fear made sense. Housing and jobs are both needed. Still, what other income source do Kuukpik people have if they do not bargain over land value? At present, they do not get management contracts from the North Slope Borough so they make no money (other than as laborers) on local CIP projects. The mayor asked how a sharp increase in lot value in one year could be justified. The accountant replied that last year may have been a time when it was necessary to make an economic sacrifice. Now,

the NSB wants to use Kuukpik's hard times as a negotiating weapon. At this point, people began to speak in Inupiaq and one at large Kuukpik board member said that high land prices just hurt people and kept jobs away.

A City Council member brought up the high cost of living in Nuigsut. Jobs pay well but living costs are high. Better management around the village would help. Flying in diesel oil for heating makes little sense. The city clerk then compared the price the school pays for fuel with that which Kuukpik pays, to Kuukpik's disfavor. The Kuukpik accountant took this as both an attack and an opportunity. He began a speech on Kuukpik's current projects; a long-term, cheaper source of fuel oil; a better method of ordering motor gas to ensure a steady supply; a way to reduce their \$3 million dollar debt (including \$130,000 still due ASRC for first village houses and \$130,000 outstanding credit at the Kuukpik Store); and the benefit of City Council-Kuukpik Corporation cooperation to create permanent jobs. He closed with a striking offer. He said it was not a matter of \$3.00 per square foot. Whatever Kuukpik can get from the NSB, it will give to the city. Kuukpik has no money to pay its bills right now, but is only asking for village work to be done by village people. The mayor's office could be a strong source of support for the Kuukpik Corporation at NSB. After some more general discussion, he asked the mayor for a price to ask for. The mayor refused to name one, saying there are four rates and a compromise is needed. The accountant brought up the case of Kaktovik, which sold land in one month at \$.10 per square foot and at \$1.80 per square foot the next. He argued that high land appraisal leads to community health. To this, the mayor replied "The offer is \$.24, you ask \$3.00. Do we stand pat?" The accountant suggested a compromise of \$1.00 per square foot.

The mayor asked if that would be fair to the Kuukpik Corporation. The accountant said it would require some work. The mayor then asked if such a price would still enable people to buy the houses. The accountant thought so. It then became apparent that the NSB and the City of Nuigsut were having problems finding the funding for someone to hold the mortgages on the new houses when people bought them. The mayor said the NSB was currently trying to sell them to the Alaska State Housing Authority (ASHA) at \$78,000 each. ASHA would demand a five percent down payment (\$3,900) with the buyer being responsible for insurance and maintenance. Failure to make three payments would result in loss of the house. To this, the accountant replied that much better funding was available from a native bank if a Kuukpik Corporation note sponsored it. A general and muddled conversation ensued, with no one wanting to direct the meeting or make a decision.

This was halted by the city clerk who asked if it would be wise to negotiate with NSB, over house lot prices, since everyone wanted the houses here. To do so might take a great deal of time. The land could be sold now at \$4,800 per lot with alternatives being investigated for later sales. A council member seconded this, especially if monthly house payments could be lowered. The Kuukpik Chairman reminded people that such payments were based on need (income available). The clerk reminded the meeting that the problem was that the NSB had not been able to find funding that the people who wanted to buy houses in Nuiqsut could qualify for. The mayor expressed displeasure with the ASHA as a funding agency. The clerk asked for a counter proposal. The Kuukpik accountant suggested if the NSB did not want to compromise on the land price, that they sell the houses to Kuukpik rather than have Kuukpik sell land to the NSB. A council member asked what price Kuukpik wanted and the

accountant said at least \$1.00 per square foot (\$20,000 per lot).

There was a series of conciliatory remarks made after this point. The city clerk spoke to bargaining strategy. The mayor agreed that a \$1.00 figure was not ridiculous and that even \$3.00 would be equitable on paper. He did not see where the NSB would lose money. The clerk spoke again of the mutual benefits to the city and the corporation. An agreement was reached to send a joint Kuukpik-City group to meet with the NSB Mayor to ask for \$1.00 per square foot. The mayor reminded everyone that the City Council was merely a mediator in this process, however. The accountant repeated his promise to pass on any gain from land sales to the city. There were general grumblings about an outside firm (Blackstock) getting the housing contracts, and implications that kickbacks had been involved, which strengthened the resolve to be firm on asking for their price. If they could not get the management contract, at least they could get fair land price and some of the jobs. There was general discussion and an agreement to recess at 5:13 p.m. until 2:00 p.m. the next day. Representatives from Blackstock were to be invited to that meeting.

The meeting of December 8, 1982 was supposed to be short. It lasted from 2:10 p.m. until 3:00 p.m. There were five council members present, two Kuukpik Corporation people (the president and the accountant), a researcher, and several Inupiat villagers. The mayor began by restating his position. The 22 houses are still in limbo. No answer will come until people talk in Barrow. The village is only a mediator. He will listen to Kuukpik present their case to the NSB mayor. The question is whether the value of a lot has increased to \$20,000. The Kuukpik accountant then spoke about why land values should be high. He repeated his argument that it is

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the only resource the people have and, if valued at a low price, will soon be gone.

There was much dispute over this, with some villagers maintaining that it was strictly a Kuukpik affair since the city owned no land as yet and others saying that the value was too high. The accountant was essentially arguing long-term considerations for the case when oil development would increase local land values (and general costs) and provide more stable employment. The villagers, arguing more shortterm, said this was good for the corporation but not for them. Oil companies provided few jobs now, and they did not think that the future would be different. The accountant then told them to talk to the Kuukpik Board members, who make the decisions, and not to him. He finally also agreed that the city has no legal voice in the matter, as no land has been transferred to them.

The city clerk and the accountant at this part became embroiled in somewhat of a misunderstanding. Each wanted to represent the interests of her/his institution of employment. The clerk maintained that the Alaska Native Claims Settlement Act provision of 1,280 acres seemed like a large amount of land, but the city needed even more. The reply was that, at present, no city existed as the land was still untransferred. Only Kuukpik Corporation existed. The city can request land and can receive as much as Kuukpik wishes to transfer, but Kuukpik need not transfer more than 1,280 acres.

The mayor ended this by calling for order, and tried to summarize again. Every two days for the last month, he had called the NSB about the housing, with no results. Now, the NSB suddenly wants to push things through. He hates to see them (both the NSB but here perhaps especially Kuukpik) hold to their positions at the expense of citizens. A villager

adds the \$20,000 a lot is too high. The accountant again brings up the \$1.80 per square foot sale in Kaktovik. This again led into a wrangle over corporation profit at the expense of individual shareholders. Some of this was in Inupiat. One council member suggested that Kuukpik hold a shareholders' meeting before this decision was made. Essentially the same arguments were made by the same people as before. The Kuukpik accountant said the situation was very clear for Kuukpik: 1) to convey 1,280 acres to the city of Nuigsut and, 2) to bargain in Barrow for the benefit of the corporation's shareholders, and obtain the highest price possible. This sparked more discussion, with the same arguments, and ended with those objecting to high land values thanking the Kuukpik representatives for listening to them even if they still disagreed. Another project of interest to the village, the ice road to Deadhorse, was briefly discussed, but we will consider that issue later.

Later the mayor, representing the City Council, did go to Barrow with four or five Kuukpik Corporation people to see the NSB mayor. They reached a compromise price of \$.50 per square foot, paid to the corporation (\$10,000 per lot for a total of \$260,000). The City Council meeting of January 3, 1983 did not deal with this issue except that the city clerk reminded the board that Kuukpik had offered at least part of the lot payment to the city, and she had not received any of it yet. No one instructed her to go after it and the topic changed. The houses had been started in that holes were being drilled and pilings placed in them. This continued through the end of our research. The actual houses were still in crates being flown in. The main topic of this meeting was the ice road and how to obtain State and Federal money for use within the village. There were four council members present, the city clerk, a researcher, and the city clerk's husband. No Kuukpik Corporation people were present.

The February City Council meeting was cancelled since only the mayor and one other council member showed up. The meeting of March 7, 1983 was attended by five council members when the roll call was taken and by all seven by the time business was attended to. The city clerk, her husband, the public safety officer, and one Inupiat villager were also present. No one from Kuukpik Corporation was there. Dog control and sewage disposal were addressed before the land conveyance issue. This was being held up, the mayor said, pending the outcome of an embezzlement charge brought by the Kuukpik Corporation against their accountant. There had also been no determination of who would be allowed to buy housing and with what financing. The meeting then passed to other construction project matters, after the city clerk suggested the city do something to protect their claims to Kuukpik land (that is, a law suit). A cable television project was discussed and the teen center. The latter became the center of a hot dispute. First, the city clerk said the funds for construction were available but not any for operation and maintenance. In the absence of city revenues, she suggested caution in committing the city to it. The mayor, speaking for the council, said maintenace funds could be worried about later. He was currently working on getting the NSB to provide a gravel pad for it (instead of the city paying for more expensive piling). Second, the city clerk said money for construction was not available until the city actually had title to the lot(s) upon which it would sit. This depended upon the Kuukpik Corporation conveying lots to homeowners and 1,280 acres to the city. The mayor said there was nothing the city could do about this. Council members said they wanted a lawyer to speed the land transfer along. They were supported in this by the city clerk and the public safety officer. The mayor resisted this action by saying that information on who had applied to Kuukpik for a lot was necessary. Two of the younger council members were insistent

upon hiring a lawyer. They introduced a motion to the effect and it passed unanimously. The discussion returned to the teen center building then, and possible NSB help. The meeting wound down with some more routine items (annoucements, the fire station opening, and such) and ended at 9:37 p.m. On his way out, the mayor told the city clerk to type up his letter of resignation. To the best of our knowledge, he is still mayor.

### ISSUES--THE ICE ROAD AND OTHER

There is no land travel to Nuigsut in the summer. In the winter, when enough snow covers the tundra, water can be laid down to form ice thick enough to support trucks and protect the tundra. Nuigsut obtains most of its fuel over this sort of road, as the transportation fee is much less than air freight (\$.12 to \$.48 per gallon compared to \$2.00 per gallon). The past several years the state and the NSB have provided the money (\$400,000) for this road to Prudhoe. This year, with oil running low in the village and the new housing materials still not hauled into Nuigsut, neither the State nor the NSB was anxious to proceed with building the road. At the City Council meeting of December 8, 1982, the Kuukpik accountant announced that the corporation might have to do it on its own. At the meeting of January 3, 1983, with only council members in attendance, the need for an ice road was brought up again by the head of Public Works (a member of the council). The surface on the make-shift road was too rough. There was still no money available for work on the road, however. If there were, Nuigsut Public Works could open it in two or three days. People at the meeting thought that money for the ice road would be forthcoming.

Kuukpik Corporation clearly favored an ice road, and a much more expensive permanent road if it were fundable, to Prudhoe Bay. It would be to their benefit because of the gravel coventure they had entered with ASRC. However, the NSB was holding up the permit for the permanent road. The ice road may be held up for the same reasons, which the Kuukpik accountant stated as a desire on their part to have bargaining power with the oil companies when they came in around Nuiqsut to drill. If the "environmental" argument can be made, he said that it may be worth up to 100 million dollars to the oil companies for permission to cross the Colville to drill. Gravel extraction or a road would weaken the environmental case. As the road is a smaller matter compared to \$100,000,000 the NSB is not anxious to see the road happen.

An ice road was eventually opened, but not over the tundra due to expense and the lack of snow cover. It was built on the already frozen Colville River so only some smoothing and crack filling was needed. The road was not well marked, however, and people did sometimes get temporarily lost at night. The surface was not well maintained. Environmental pressure groups forced the closing of the road shortly after it was opened. The only exception was to allow the Kuukpik Corporation two weeks to truck oil in. Most of the oil ended up being flown in with assistance from the NSB when Kuukpik's trucking arrangements fell through and the village became very low on fuel oil. The housing construction materials were also flown in.

# ANALYSIS -- THE DIVERSITY OF INTERESTS

Our information may be interpreted in several ways. The data revealed from City Council meetings about land conveyance, the ASRC-Kuukpik gravel coventure, and road construction

clearly reveal different economic-political agendas. A short analysis should pull this into focus.

The city of Nuiqsut's interest seemed to be economic. Villagers were willing to trade some minor disruption of caribou for much lower fuel costs, the ability to truck in food and other durable goods from Prudhoe, and access to Prudhoe itself. The ice road also facilitated access to hunting by those who preferred truck travel to snow machines.

Kuukpik Corporation's interest was also economic. An ice road to Prudhoe would cut some of their costs. If this road were built so as to satisfy another of their needs, transporting the projected gravel extracted from the land now held in coventure with ASRC down the Colville to sea for oil rig drilling island construction, they would be happier. Whereas Nuiqsut wants a road to reduce costs, Kuukpik wants a road to create profit.

ASRC has the same profit motive as Kuukpik, but is perhaps more benevolent. They have substantial outstanding loans to Kuukpik, dating back to 1974 and the first houses constructed. It is in their interest to have an economically healthy Kuukpik Corporation pay them back rather than to have Kuukpik default and disappear. They thus wish to help Kuukpik get itself out of a hole while at the same time encouraging an industrial development project to benefit Inupiat.

The North Slope Borough evidently sees the road as a potential weakening of its bargaining position several years hence. They are willing to trade a delay in gravel extraction (gravel will always be there and will be worth more once oil companies are nearby anyway) and are willing to subsidize flying oil and other supplies into Nuiqsut, at least in the short term. They are using their land zoning-permit powers to

prevent the construction of a road to haul gravel, and thus prevent the extraction of the gravel itself. This was confirmed by the NSB assemblyman resident in the village who told us that he was opposed to the gravel deal because of the land use precedent it would set. He could stop it in the NSB Assembly if he wished to, but people in Nuiqsut did not oppose it so he had not made the effort. He had not pushed the issue either. The NSB was also said to be tired of paying for Nuiqsut's ice road every year, when CIP projects were supposed to be confined to long-term investments.

# ISSUES--PUBLIC MEETINGS

It has been said that Inupiat treat all public hearings as if they were the same, as if information and issues discussed at one should be common to all. "Oil development" is used to label all agencies, whether private, state, or federal, trying to collect or disseminate information about proposed actions. Inupiat, at these meetings, also tend to behave as if they were talking to people with the power to make decisions, which of course is usually not the case. Five meetings of this sort were observed. We begin by noting several aspects of each.

The meeting of January 10, 1983, concerned State Lease Sale 39 (Beaufort Sea). The date and time had been set by agreement between the state agency responsible and the mayor's office. Two City Council members, two Kuukpik Corporation officers, about 18 other Inupiat, and five non-Inupiat attended. Comments were made by Inupiat villagers on what they perceived as the vast amount of information collected already (for at least three years), how the State selling this land while the people who use it are still alive deeply hurts them, about grave sites destroyed by the installation of a DEW-line

station, harm to subsistence resources, and the high cost of fuel. The Kuukpik accountant spoke several times, at length, about the need for a road between Nuiqsut and Prudhoe Bay. Another non-Inupiat said that big money was available if the village, Kuukpik, and the NSB work together. Comments were also made that decision makers never came to Nuiqsut and that the NSB just pushed paper and ASRC was perhaps too friendly with the oil companies. The meeting started late and lasted three hours.

The meeting of January 27, 1983 was held by the Army Corps of Engineers on the Endicott-Sagg River Delta project. No council member or Kuukpik representative was present. 0ne NSB assemblyman was present and served as translator. He did so as a public service, as the Corps had not arranged for a translator. The mayor had told them that a translator was not necessary. However, the bilingual villager the mayor had expected to attend the meeting did not. Twenty-two Inupiat and four non-Inupiat were there. People wanted to reschedule the meeting so that elected officials could be present. They decided to reschedule a meeting but to proceed with this one as well. Most comments concerned potential effects on subsistence resources. The cost of fuel and the potential of a gas line from Prudhoe to Nuigsut was raised. The DEW-line grave site desecration story was recounted. All in all, people seemed impressed that Colonel Neil Saling, the person with the final decision, was actually there. The meeting started very late and lasted only 90 minutes or so.

The meeting of January 31, 1983 was conducted by Minerals Management Service, again at a time arranged with the mayor's office. One member of the City Council was present. No Kuukpik Corporation or NSB personnel were present. About 17 Inupiat and 4 non-Inupiat were present. Concern was expressed at the absence of the mayor and council. MMS said that the

comments of "plain folks" were just as important. Concern was expressed about making draft EIS available in Inupiat. People again expressed concern over a public meeting held without the mayor. There was some confusion of this lease sale with the Corps project meeting of January 27, 1983. Environmental issues predominated, based on potential oil contamination and offshore gravel dredging operations. Much concern was expressed over the potential reduction of subsistence resource harvests. A discussion of the purpose of fish tagging resulted when the observation was made that no Nuiqsut person sent these tags in as their purpose had never been explained. This led to extended talk about fish resources. The need for subsistence activity access and the recruitment of Inupiat for other than "stickpicker" work in oil lease areas was stressed. The feasibility of a gas pipeline was broached again, as was the question of a road to Prudhoe. The meeting started late and lasted for about four hours.

The meeting of February 23, 1983 was held by the Fish and Game Advisory Committee and "officiated" by a staff member of the Alaska State Department of Fish and Game, Subsistence Division. Two council members were present, as was one of Kuukpik Corporation's officers. Eight other Inupiat (some from out of town) and one other non-Inupiat attended. All business items considered were proposed regulations governing fish and game. Attendees tended to be older than for the three meetings above. The meeting started late and lasted a little under three hours.

The meeting of February 24, 1983 was conducted by ARCO. The Atlantic-Richfield Company is one of the main partners at the Prudhoe Bay field, and wished to discuss several things with the people of Nuiqsut as part of their public relations and information dissemination programs. The main agenda item had

been advertised as a briefing on the Oliktook Point oil facilities project, but a great deal of time was spent discussing Inupiat access to harvestable resources in the Kuparuk and Prudhoe oil fields.

Three City Council members, one Kuukpik Corporation official, the NSB Mayor, and a NSB Assemblyman attended. The Nuiqsut Mayor "chaired" the meeting. Twenty-six other Inupiat and four non-Inupiat were present. The invocation was given by the NSB Assemblyman (a lay minister) after which the Nuiqsut Mayor introduced the NSB Mayor. The Kuukpk officer then introduced the three non-Inupiat present who were not residents of the village (apparently for the benefit of the NSB Mayor). He knew only one of them by full name, and she had been the one dealing with the village longest. He knew our researcher's first name, and forgot the NSB mechanic's name.

The ARCO people were late, so other issues were discussed while waiting for them. The ice road was brought up and the NSB Mayor said it was costly and Kuukpik would have to pay for part of it. The Kuukpik officer and the NSB Mayor discussed NSB-Kuukpik concerns. The NSB Assemblyman took no part but was and is a member of the board of a corporation formed by Kuukpik. Nuiqsut people used the chance to ask the NSB Mayor about their land conveyance problem and the lot evaluation question. When the ARCO people came in, the NSB Mayor said they had saved his hide and then asked if they were "running on Eskimo time?" The main topic first discussed was that of hunting restrictions in the Kuparuk oil field.

Essentially, there are no hunting restrictions except those self-imposed by the hunters themselves. Non-Inupiat oil field workers are the only people not allowed to hunt. Some testy questions were asked, and information sharing arrangements

were agreed to. Comments were made to ensure prior village notification of any new proposed regulation. A non-Inupiat offered his advice on how to ensure village/oil company communication. The discussion became heated again until an Inupiat said that "ARCO did not come here to argue. You came here to listen to the residents of Nuigsut". A recess was called, after which the ARCO representative made a summary, conciliatory in tone. He then went on to discuss the Oliktok Point project. The issues of expensive heating oil and the possibility of a gas pipeline to Nuigsut from Prudhoe Bay were brought up again by several villagers. Grave sites at Oliktok were mentioned. The meeting had to be called to order by the Nuigsut Mayor (the NSB Mayor had left earlier for fear of losing his temper at a very vocal Nuigsut resident, we were told) and the actual nature of the waterintake project was then discussed. The discussion was rather tame, although gravesites were brought up again at the end of the meeting. The ARCO people were there two and one half hours. The assembled were there for somewhat over three.

# Analysis--The Politics of Public Meetings

These meetings seem to be used by one or both (or however many there may be) parties more for ideological/political purposes than for the open exchange of information and an explanation of the issues. At four of these five meetings, the idea of the feasibility of a natural gas pipeline from Kuparuk Field to Nuiqsut was asked about. An answer was never given. However, Wickersham and Flavin (1982:382) directly addresses this issue and finds that such a pipeline makes no economic sense at this time or in the foreseeable future. Gravesites destroyed at a DEW-line not connected with these projects were brought up at three of the meetings. Concern over the absence of City Council members was expressed

at three of the meetings. The content of most hearings was quite predictable and follows closely the summary of Inupiat concerns listed as examples in the Wickersham and Flavin (1982:194-195).

Attendance at such meetings is quite high in light of the few rewards received. A fairly constant "core" of villagers attend most of the public hearings held in Nuigsut. The comments they make tend to be the same, and on the same topics, regardless of the specific focus of the hearing. When the mayor is present, he is expected to moderate the meeting. This often takes the form of his ensuring that everyone who wishes to speak has the chance to do so while at the same time guarding against anyone sidetracking the hearing too far off the topic. The mayor also steps in when passions become aroused and exchanges threaten to become heated. In the mayor's absence, other people (often surprising to the researcher) emerged to perform this role. This was not done easily, however, and partially explains why villagers prefer that the mayor and/or other elected officials be present.

The only blatently self-serving comments are made by non-Inupiat. The Inupiat maintain a fairly united front stressing the importance of subsistence resources and the need for cheaper oil and food. Even the strongly pro-development Kuukpik Corporation accountant often spoke in terms of the subsistence rhetoric. Thus, it appears that in public meetings with outside groups, villagers present a united front of an ideological nature. Internal village meetings (City Council, etc.) deal with problems where such a front would be counterproductive, as interests do differ fundamentally on occasion. One seldom hears about subsistence at a City Council meeting, however. Land value, the need for a road, and dog control are all more commonly discussed problems.

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In one sphere, the local, leaders are competitive. In the other sphere, the outside world, leaders are cooperative. This is of course a very common sort of pattern found in anthropological studies of kinship based societies.

## Groups and Political Influence

Kinship is the idiom of authority of Nuiqsut, but authority in Nuiqsut is not as absolute as non-Inupiat Americans may be used to. Kinship is the conveyor of rights and obligations The "Social History" subsection on "Kinship and the Community" makes this point clear. Nearly every household in Nuiqsut can trace direct kin ties to someone known to have used the Colville River area as a subsistence area at some time in the past. As might be expected from a situation where enrollment as a member of a particular native village, and hence of a particular village corporation, took place at one point time and was not changeable thereafter, newer resident households are related to historical land use in the Nuiqsut area more through spouse (female) kinship ties than through those of the male head of household. Males so related came back to Nuiqsut in 1973 or soon thereafter.

The Kuukpik Corporation, because shareholder membership is based on enrollment, is expected to have a much closer pattern of kin relations than the City Council, and this is the case. Three council members are enrolled in the village corporation of Barrow, whereas all seven Kuukpik board members are from Nuiqsut, as they are required to be shareholders. Spouse connections, however, link at least two Kuukpik board members with Barrow families. Spouse connections on the council are all solidly Nuiqsut related. The mayor and the newest councilman are affinally related to the president and chairman of Kuukpik Corporation. The Kuukpik officers

are a generation younger. Ages of the other council members muddies the issue somewhat, but the council appears to be dependent more on seniority and Kuukpik on education as a recruitment criterion.

Kinship ties through spouses also explains the presence of so many Inupiat "outsiders" in positions of prominence. The kinship link, once made, is what matters. Thus the mayor, the Head of Utilities, and the Head of Public Works all acknowledge that they are not "of" Nuiqsut in the same sense as the officers of Kuukpik Corporation are, but they are nonetheless part of the same system. It is interesting that ANCSA, through the forced choice of single enrollment, has limited the traditional flexibility in Inupiat use of kinship ties. The Kuukpik Corporation's 1983 annual meeting (January 14, 1983) began as an open meeting out of courtesy to guests. However, a motion was made and passed (after much discussion) to close the meeting to non-shareholders. This excluded not only the researchers, but also the mayor of Nuigsut and people representing the NSB who otherwise, through various kin ties, would have been expected to be included.

The NSB Assemblyman resident in the village has few direct kin ties in Nuiqsut, but he has an extensive kinship network throughout the North Slope. He is also a lay minister and is very personable besides. Since assemblymen are elected at large, too close an association with any community other than Barrow would probably be disadvantageous. The power of this man's position and the sincerity and force of his personality also increase his influence. He has had long-term relationships with most NSB political figures, including the Nuiqsut and NSB Mayors.

### Village Decision Making

Observations at every sort of meeting (Public Hearing, City Council, Kuukpik Corporation) and informal questions to "people in charge" revealed a common sort of decision making dynamics. Issues are discussed at length, but facts and implications are not always fully laid out. The object is to achieve the lack of objection. A sense of agreement, of acquiescence, is striven for. At times, facts and events may, to less political eyes, be misrepresented in the hot pursuit of this goal. People do not like to make decisions. Given a representative form of city government, they expect their elected officials to make the decisions, or rather, to serve as the spokesman for the position of "unanimity" that is arrived at. This seems to be the reason villagers object to public hearings without the mayor. As their official spokesman he establishes and legitimizes the lack of dissension which is taken as the basis of consensus. Public hearings to collect a diversity of opinions or to disperse information are foreign concepts to Inupiat. A strong mayor can shape or even lead the consensus of a meeting. This is a common small group phenomenon very characteristic of the North Slope. Eben Hopson, the first NSB Mayor, was a prime example. The present mayor of Nuigsut may not have been so diplomatic, and indeed may have lost the last election because of a perception of him as too directive. That his actions may have benefited the people did not matter in this context.

Thus, all decisions made at the City Council were without dissension. At the Presbyterian Church annual congregational meeting, the elders election was actually competitive in that a choice did have to be publically made among a number of people (the result of a secret ballot). Three candidates for the three available positions were nominated. There was a lull, and then one of the candidates nominated a fourth person.

This seemed unexpected and a secret ballot was taken. After these results were in, deacons were then elected. They were selected unanimously by nominating only as many candidates as there were positions open. This pattern was also observed at civic group meetings. At the Kuukpik Corporation, officers answering the phone would rarely commit themselves to an answer on behalf of the corporation unless two or three other Kuukpik people were available for consultation. When they went to Anchorage on business, it was always as a group of two or more. Making decisions affecting other people does not come easily to Inupiat individuals.

This desire for the appearance of unanimity and the lengthy public meetings that result from it are characteristic of small local governments, and small groups in general. What distinguishes Nuiqsut, and probably most Inupiat, is that even when such decisions are made they are often not carried out. In other parts of the United States, even if most people are only lukewarm (at best) to the course of action decided upon, it would most likely be initiated by its few strong proponents. In Nuiqsut such dynamic advocacy is considered improper and a unanimous decision about which some people have reservations will probably not be carried out. Thus, land conveyance continues to be an issue even though the law is clear on what should (and indeed must) be done. Bootlegging and selling of alcohol is universally decried, but no concerted local effort has been made to reduce this activity. Dog control is a recurrent problem, but the solution of requiring people to restrain their dogs is resisted. Being a formal leader in such circumstances can be very frustrating, although leaders in Nuigsut have managed to use these characteristics of the system to their advantage as well.

### NON-INUPIAT INFLUENCE

These dynamics may explain why non-Inupiat can appear to influence Inupiat decisions so much at times and yet affect behavior so little. A discussion of the school system in this regard would be relevant, but would also require extensive research and the school system's close cooperation as the topic is no doubt very sensitive. Our information is of a more public nature.

We did observe several non-Inupiat residents of the village speak out at public meetings. Three individuals stand out-the city clerk, the Kuukpik Corporation accountant, and a NSB mechanic. The last seemed to be simply trying to establish a reasonable comfortable social niche for himself while working in Nuigsut. The Kuukpik accountant consistently stressed the need to run the Kuukpik Corporation as a business, while he perceived it being operated more as a service organization. Information here is very tentative, however, as the corporation has filed suit against the accountant for embezzlement. The differences in perception between the Iranian accountant and the Inupiat Kuukpik officers may be enough to explain the dispute. The accountant has fled and newspaper accounts say that \$300,000 to \$800,000 is unaccounted for in the Kuukpik Corporation's ledgers. The corporation (and the city as well) does have a reputation for keeping rather shoddy books and records, and the corporation is known to be heavily in debt.

The fact remains that the accountant possessed an expertise and was willing to express a forceful opinion. He often carried the day, temporarily, while he was present, by his air of assurance. Such imposed courses of action, if not supported by an understanding of why and how by the Inupiat involved, usually scon fell by the wayside. The accountant recognized this fact in several conversations with the

researchers and in fact mentioned that at times he refused to accompany Kuukpik Corporation officers to Anchorage in the hopes that they would learn to make independent decisions.

The land conveyance issue, involving the City Council, the Kuukpik Corporation, the city clerk, and the accountant, illustrates this. Over ten years since ANCSA, the Kuukpik Corporation has yet to convey land to Nuigsut. The accountant, who was only in Nuiqsut a year or so, was always more interested in establishing a value for the land than in conveying it. The city clerk would like to see some real city revenue and so wants an actual land base for the city. If Nuigsut had land, it could potentially sell or tax it and thus have an independent, stable, and regular source of income. Inupiat residents of the village seem to care little. Few realize that they do not own the land on which their houses sit (and fewer own the houses that they live in than think they do as well). Most see no difference between city ownership of the land and native corporation ownership. Thus, the issue has never been pressed.

Given the poor financial situation of the corporation, the city clerk has recently begun to push for the conveyance, just in case the corporation should go under. She does not want to administer a landless city. The mayor sees this as no problem. The corporation, in his view, will not be allowed to fail. If it were to do so, village claims would be protected. Most of the City Council seems to take this position but at last meeting we attended, the two youngest members both pushed this issue. They suggested that the city hire a lawyer to speed the process up. The mayor was hesitant to do so, as it would cost money and could create friction between the City Council and the Kuukpik Corporation. His son-in-law is the corporation's president, but the mayor was probably thinking more in terms of most people in the village

as both city residents (represented by the council) and corporation shareholders (represented by Kuukpik). Both council members wanting the lawyer were shareholders, however, while the mayor is not. There is money available to the city for hiring the lawyer.

The mayor was doing well at stonewalling the request, claiming it was all up to Kuukpik and that there was no money for a lawyer and so on, when the city clerk make it clear that these things were not exactly so. She essentially refused to accept the mayor's attempt to defuse the situation by his acceptance of the conveyance in principle while not taking any real action. With her vocal and moral support, the two younger council members introduced a motion to hire a lawyer. There were no dissentions to the motion. The mayor remarked, "So we'll go to court". Others did not think it would come to that. Afterwards, people told me that the resolution would not have been made and the vote taken if the city clerk had not been so forceful. The mayor would have created a consensus for another informal appeal to Kuukpik. It is to be noted that nothing further was done on the conveyance issue for nearly a year. The mayor informs us that the land has now been conveyed.

### Summary

The definition, discussion, and resolution of public (political) issues in Nuiqsut is still largely informal, even when carried out within "formal" institutional structures. The institutional structures that have been imposed on more traditional decision-making processes seem to be mainly matters of form. The idiom of kinship remains essential for understanding the dynamics of the overlapping memberships of the "separate" political and economic entities. "Conflict of

interest" never comes up as an issue important to Inupiat about other Inupiat. Inupiat culture is based upon small groups, and Nuiqsut remains a polity operating upon small group dynamic principles. Perhaps that tentative idea could be extended to the North Slope Borough as well. Social differentiation is at an as yet low level throughout the North Slope in general, and particularly in the villages outside of Barrow and Deadhorse. This makes socio-political and economic processes less visible and harder to understand for outsiders, especially when a very visible "rationalized" set of formal structures has been superimposed onto them. Observers note the frequent ineffectiveness of the sociopolitical structures and make the mistake of assuming that they are observing socio-political process as well.

# Introduction

Quick judgments about any community are difficult to make. Informed opinions must be based upon a great deal of information gathered in a systematic way. Our time in Nuiqust was limited and documentary and historical records about Nuiqsut are for the most part lacking. Thus, Nuiqsut is, at best, as difficult a community as any to evaluate and understand in a dynamic sense. Nonetheless, there are certain general aspects of Nuiqsut's appearance which give some indication of its overall state of social health.

Nuiqsut is a very regular town in terms of its physical layout. The maps of the village demonstrate a rectangular grid arrangement. This is not typical of North Slope and sets houses much farther apart than in most other Inupiat villages. Residents remark on this now and again. Nuigsut also appears to be, as it is, a new village. Most houses look in good repair, although it is easy to tell the older originally one-room homes from those built since. Each subsequent building phase is stylistically distinguishable (see Figure 12). All houses except for one were built under the sponsorship of the ASRC or the NSB. There are also five (four when we arrived in November) non-standard residential buildings, much smaller than the houses in size, which also serve as homes. These were built by individuals at various times and display no particular style except for frugality. The new school, new public safety building, new utilities complex, new fire station, and new satellite dish all create a favorable and modern impression.

There are some discordant characteristics as well. One is the existence of non-standard residential units when some regular

residential units were obviously vacant (Tables 35, 36). When we arrived on November 16, 1982, those structures vacant were mostly older units but also included newer houses and one non-standard unit. Three of the newer vacant houses were not inhabitable at this time. In all, including the apartments in the four-plex and the nonstandard units 10 of 63 (16%) of residential units were vacant when we arrived. When we left on March 9, 1983, there had been some shifting, as a new non-standard structure had been built and two of the three uninhabitable newer houses had been repaired and reoccupied. Vacant structures were still mostly older but also included two newer structures and two non-standard structures for a total of 10 of 64 (16%). If one subtracts non-Inupiat housing (units set aside for the NSB School District, the PSO, and the Kuukpik Corporation accountant) from these figures, vacancy rates are 10 of 54 (19%) for November and 10 of 55 (18%) for March.

#### Table 35: VACANT RESIDENCES IN NUIQSUT, ALASKA

Plot Location*	11/16/82	03/09/83
B1 L08 <sup>a</sup> L09 <sup>a</sup> L18 <sup>c</sup> L20 <sup>a</sup>	Vacant Vacant	Vacant Vacant Vacant
L20 <sup>a</sup>	Vacant	Vacant
B2 L04 <sup>b</sup> L16 <sup>a</sup>	Vacant	Vacant Vacant
L18 <sup>a</sup> L19 <sup>a</sup>	Vacant Vacant	Vacant Vacant
B3 L01 <sup>C</sup> L19 <sup>b</sup>	Vacant	Vacant
B6 L01 <sup>b</sup> L10 <sup>c</sup> L15 <sup>b</sup>	Vacant Vacant Vacant	Vacant

\* B = Block, L = Lot.

<sup>a</sup> Original housing.

<sup>D</sup> Newer housing.

Non-standard housing.

#### Table 36: NUMBER OF VACANT RESIDENCES BY HOUSING TYPE

	Number of Va	<u>icant Units</u>
Housing Type	11/16/82	03/09/83
Original Newer Non-standard	5 4 1	6 2 2

Interpretations of various sorts are possible. Occupancy rate is a measure of housing demand, ability to pay for housing, or both together. A high vacancy rate can indicate a low rate of growth (not neccessarily bad in this case) or a deterioration of the quality of the housing stock (or a rise in general expectations or standards by which housing is judged, which usually is to the disadvantage of older housing). A high vacancy rate may indicate that non-residents own homes and do not wish to rent or sell them, resulting in less efficient use of resources, especially when people claim that others do wish to move to Nuigsut. Rents or prices asked may be too high, or people's resources too low, for the lease or sale of these structures. Uninhabitable housing indicates lack of maintenance or actual abuse or natural calamity. Occupied non-standard housing implies one or all of these interpretations. The explanation that people would rather live near kin in non-standard housing than farther away in a "better" house accounts for only one of the five non-standard housing cases. Expense does seem to be the key. A high vacancy rate is usually taken to be the sign of a troubled economy, which would be consistent with this.

A survey of material items outside residential structures is also indicative of a community's general economic and social health. In Nuiqsut, such a survey resulted in a count of 79 snow machines, 35 (44%) of which were judged to run. One cannot tell Inupiat from Non-Inupiat owned snow machines, but

excluding public safety snow machines gives 33 operational snow machines out of 77 (43%) as of February 1983. As there are 54 permanent resident households, this is less than one operational snow machine per household. Informants said places such as Anuktuvuk Pass had many more snow machines than this, and were somewhat surprised at the low number. Maintenance is difficult, and parts not always easy to get. There is no snow machine outlet in Nuiqsut, unlike some other NSB villages.

There were 23 trucks and cars in Nuiqsut, most of them parked by Inupiat households. Of these, 15 (65%) appeared operational during the winter period of observation. Most were vehicles owned by the NSB, Kuukpik Corporation, or construction companies. There were approximately 26 boats in and around the village. There were 47 sleds for hauling things by snowmobile. Ten ice cellars were counted, mostly near the older residential structures. One main store was evident. The general impression was one of a young community investing heavily in infrastructure but lacking a strong local economic base, as shown by vacant housing and a relative lack of durable subsistence-related consumer goods. This is consistent with our knowledge of the North Slope Borough's monetary economy, which is based primarily on the extraction of non-renewable natural resources and not upon sustainable economic production.

#### Public Health

#### INTRODUCTION

The physical and mental health of a community can be measured by the incidence and seriousness of illness, and the attention paid to them. Nuiqsut has a clinic staffed by two health aides in phone contact with doctors in Barrow. Procedures exist for air evacuation of patients to Barrow, and funds to help pay for such transport are also available. Generally, we were told people get ill mostly in the spring and fall when the weather changes (flu) and in the winter with ear infections and other problems. The clinic records provide further information of this sort.

#### CLINIC RECORDS

Clinic records from Nuiqsut for the past year were available for use in the analysis of illness and health care in the community. The records list day and time of visit, the patient's age and sex, the patient's complaint, and the treatment.

Table 37 lists the total medical complaints for 1982 by category of complaint. Respiratory complaints comprise almost one-fifth of the total. Infectious diseases (mainly strep throat), ear problems, and accidents/injuries each contribute about 13% to the total number of complaints. Another 12% of the complaints are related to health maintenance, which includes such things as blood pressure checks, medication refills, and well-baby clinics. All other categories of complaint contributed less than 5% to the total number of complaints. Approximately 15% of the visits to the clinic were for multiple complaints (1,424 complaints in 1,214 visits).

In the major categories of medical complaints, males outweighed females for accidents and injuries (62.7%), and slightly outweighed females for health maintenance vists (51.2%).

Nearly half of all male visits to the clinic for health maintenance reasons were by individuals aged 45 and over,

# Table 37: TOTAL MEDICAL COMPLAINTS, NUIQSUT CLINIC 1982 BY CATEGORY

Category	% of Total	% of Category Male	% of Category Female	# of Complaints
			<u></u>	
Respiratory	19.3	46.9	53.1	275
Infectious Diseases	13.4	40.3	59.7	191
Ear	13.0	44.3	55.7	183
Accidents/Injuries	13.0	62.7	37.3	185
Health Maintenance	11.7	51.2	48.8	166
Undiagnosed	4.8	42.0	58.0	69
Oral/Dental	3.0	55.0	45.0	42
Skin	2.8	55.0	45.0	40
Pregnancy Related	2.7		100.0	39
Digestive System	2.6	21.6	78.4	37
Alcohol/Drug Related	2.2	80.6	6.0	31
Еуе	2.0	50.0	50.0	28
Female Genitalia and/or Breast	1.7		100.0	24
Family Planning	1.3		100.0	19
Poisoning/allergic	1.3	31.6	68.4	19
Cardiovascular	1.1	50.0	50.0	16
Urinary Tract	1.1	13.3	86.7	15
Other <sup>a</sup>	3.0			45

Total

1,424<sup>b</sup>

<sup>a</sup> 13 categories, none over .7%.

<sup>b</sup> Higher than total yearly visits (Tables 38, 40) because of multiple complaints on some visits.

and were primarily for the purpose of monitoring cardiovascular problems. Male activities (hunting and constructiontype labor) characteristically present more opportunities for accidents and injuries than do female activities.

Males were the only complainants to visit Nuiqsut clinic with alcohol related problems, while two-thirds of all drug related visits were by females. However, caution is advised in drawing any conclusions from this, since the actual number of visits in both categories is quite small. In particular, the alcohol related visits were dominated by abuse therapy administered to a single patient. Alcohol and intoxication is evidently not perceived as a medical problem requiring a clinic visit in Nuiqsut.

Mental illness related visits to the clinic were made primarily by females (80%) with complaints of depression, stress, and schizophrenia. However, we again have a situation involving a small number of total visits which, as with alcohol and drug related problems, represents a very few individuals. It is possible, however, that females with mental or emotional problems are more likely to seek professional help than are males with similar complaints. Perhaps males, rather than perceiving this as a condition deserving medical treatment, seek other outlets for their problems. Our information in this area is very limited.

Visits to the clinic related to venereal disease were made predominantly by males (89%). Perhaps the small proportion of females in this category is due to differential diagnosis of males and females. It could reflect differences in sexual activity or of contact with non-Nuiqsut individuals (more likely for males than females). However, numbers are again small and will not support much interpretation.

Complaints involving the digestive system were made primarily by females (78.4%), with gastroenteritis as the most common complaint/diagnosis. Differences between the sexes in this category of illness are especially marked in the 5-14 year old and 15-44 year old age groups. The most likely explanation for this discrepancy between the sexes is dietary differences. However, the initial data gathered from Nuiqsut did not include sufficient information to resolve this unexpected situation. The preponderance of female complaints in the other categories is even more significant than the figures here indicate when one takes into account the fact that the sex ratio is generally skewed in favor of males (approximately 120 males to 100 females).

Females may be more likely to seek medical help for general symptoms of distress than are males. Further research would be necessary to determine if a sex difference exists in perception of illness and the desirability or appropriateness of seeking medical attention. Another likely explanation for higher female participation in the health care process is the possible role visits to the clinic play in socializing. A visit to the clinic is an ideal opportunity to see and speak with other members of the community. The fact that health aides have always been female may also be a factor promoting more visits from females than males. Another reasonable explanation is that women usually are responsible for childcare and 30.6% of all clinic visits involved children 14 or younger (Table 38). More than likely an adult accompanied the child, and most probably a female adult. They then may feel inclined to ask about their own health as well, or may simply feel more at ease going to the clinic, as they do so more often than males. Since more men than women work the hours that the clinic is open, 10:00 a.m. to 4:00 p.m. with a likely closing for lunch, this strongly favors visits by women.

Table 38: YEARLY VISITS, NUIQSUT CLINIC 1982

		Unknown	<u>0</u>	<u>1-4</u>	<u>5-14</u>	15-44	<u>45+</u>	Total
Male	#	11	34	116	72	218	102	553
	%	0.9%	2.8%	9.6%	5.9%	18.0%	8.4%	45.6%
Female	#	18	19	95	88	346	95	661
	%	1.5%	1.6%	7.8%	7.2%	28.5%	7.8%	54.4%
Total	# %	29 2.4%	53 4.4%	211 17.4%	160 14.1%	564 46.5%	197 16.2%	1,214 <sup>a</sup>

<sup>a</sup> Less than total medical complaints (Table 37) because of multiple complaints on same visits.

Selected medical complaints are broken down by age and sex in Table 39. For individuals under one year of age, ear problems are the major reason for clinic visits, although a significant number of females also come in with respiratory complaints. In the 1-4 age category, females again show symptoms of respiratory and ear problems. Infectious diseases are also prevalent for males aged 1-4, but respiratory complaints and ear complaints are again the most prevalent. Both males and females aged 5-14 most commonly have infectious diseases. Accidents and injuries comprise 43% of the complaints for males aged 15-44 years. Approximately one-fourth of the visits by both males and females in this age category are for respiratory complaints. For individuals age 45 and over, health maintenance visits are prevalent, especially for males. Respiratory complaints are also frequent for females in this age category.

Clinic visits peak in February, March and April and again in July, August, and September (Table 40). Female vists outnumber male visits for every month except March, July, November and December. No obvious explanation suggests itself to us.

# Table 39: SELECTED MEDICAL COMPLAINTS NUIQSUT CLINIC 1982 BY AGE AND SEX

	MALE												
	<u>Unk</u>	<u>0</u>	<u>1-4</u>	<u>5-14</u>	<u>15-44</u>	<u>45+</u>	<u>Total</u>						
Respiratory Complaints % of Age Total	4 28.6	10 28.6	37 32.5	21 29.2	41 25.0	16 18.0	129.0 26.4						
Infectious Diseases % of Age Total	1 7.1	0 0	15 13.2	24 33.3	32 19.5	5 5.6	77.0 15.8						
Ear Complaints % of Age Total	1 7.1	16 45.7	32 0.9	10 13.9	13 7.9	9 10.1	81 16.6						
Accidents Injuries % of Age Total	3 21.4	1 2.9	11 9.6	14 19.4	71 43.3	16 18.0	116 23.8						
Health Maintenance % of Age Total	5 35.7	8 22.9	19 16.7	3 4.2	7 4.3	43 48.3	85 17.4						
Total	14	35	114	72	164	89	488						

# FEMALE

	<u>Unk</u>	<u>0</u>	<u>1-4</u>	<u>5-14</u>	<u>15-44</u>	<u>45+</u>	<u>Total</u>
Respiratory Compaints % of Age Total	3 25.0	5 35.7	31 30.7	18 21.7	62 26.8	27 38.0	146.0 28.5
Infectious Disease % of Age Total	0 0	0 0	23 22.8	37 44.6	<b>47</b> 20.3	7 9.9	114 22.3
Ear Complaints % of Age Total	2 16.7	5 35.7	32 31.7	16 19.3	44 19.0	3 4.2	102 19.9
Accidents Injuries % of Age Total	3 25.0	0 0	3 3.0	10 12.0	<b>42</b> 18.2	11 15.5	69 13.5
Health Maintenance % of Age Total	4 33.3	4 28.6	12 11.9	2 2.4	36 15.6	23 32.4	81 15.8
Total	12	14	101	83	231	71	512

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# MALE

# Table 40: MONTHLY VISITS NUIQSUT CLINIC 1982

BY SEX

<u>Month</u>	Ma	<u>le</u>	Fem	ale	<u>Total</u>	% of Total <u>Visits</u>
Jan	22	34.4%	42	65.6%	64	5.3%
Feb	45	40.2	57	50.9	102	9.2
Mar	92	52.6	83	47.4	175	14.4
Apr	64	39.0	100	61.0	164	13.5
May	39	41.1	56	58.9	95	7.8
Jun	25	39.1	39	60.9	64	5.3
Jul	73	55.7	58	44.3	131	10.8
Aug	53	39.8	80	60.2	133	11.0
Sep	52	44.4	65	55.6	117	9.6
Oct	22	46.8	25	53.2	47	3.9
Nov	32	59.3	22	40.7	54	4.4
Dec	34	50.0	34	50.0	68	5.6
Total	553	45.6	661	54.4	1,214	

<sup>a</sup> Less than total medical complaints (Table 37) because of multiple complaints on some visits.

Analysis of the clinic data for November 1982 in terms of the population structure is made possible by use of the November 18, 1982 household census. In this month, there were 54 clinic visits out of a population of 271 individuals, resulting in a 20% visitation rate for Nuiqsut. However, this rate is somewhat too high, as it assumes there were no repeat visits by individuals. Male visits outnumber female visits in terms of both real number (32 males vs. 22 females) and percentages of the male and female populations (21.8% of the total male population vs. 17.7% of the total female population).

Table 41 breaks down the November clinic data in terms of age and sex. One of the most striking contrasts is the very high visitation rate for males under five years of age and over 45, and the very low visitation rates for females in the same

### Table 41: DEMOGRAPHIC ANALYSIS OF NOVEMBER 1982 VISITS TO NUIQSUT CLINIC BY AGE AND SEX

	Males	a		Females		
Age	Total Population	<pre># of Visits</pre>	% of Pop.c	Total Population	# of <u>Visits</u>	% of Pop.c
0-4	20	8	40.0	21	1	4.8
5-14	23	5	21.7	19	4	21.0
15-44	80	10	12.5	65	16	24.6
45+	19	8	42.1	17	1	5.9
?	-	1	-	-	0	-

<sup>a</sup> Population figures do not include 5 males of unknown age. <sup>b</sup> Population figures do not include 1 female of unknown age. <sup>c</sup> % of Population of age group represented by clinic visits.

age categories. In the 15-44 age category, males fare somewhat better, with a 12.5% visitation rate, than females with a 24.6% rate. The proportion of visits for 5-14 year olds is comparable for males and females (21.7% and 21.0%, respectively).

An attempt was made to determine what factors are associated with and have an effect on the degree of illness that occurs within individual households. A measure of household incidence of illness was created. This consisted of the total number of non-health maintenance visits made by the members of each household, divided by total household membership. This yielded the average per capita visits to the clinic for each household (AVPC). Several other measures were created on a household basis for factors believed to have an effect on the incidence of disease and injury. These were size of household (SIZE), average per capita alcohol consumption among the adults of the household (PCAC), the age structure of the household (RNAA-the ratio of nonadults to adults), and the average per-capita adult employment

in the household (MONEY). These measures allowed the testing of several hypotheses in the relation of socio-economic factors and illness:

- Larger households would suffer from increased incidence of illness. Large numbers of individuals living in close contact would permit rapid transmission of infectious disease. Secondarily, large numbers of individuals within a single household might lead to crowded conditions, and a consequent rise in health problems. Furthermore, the more individuals in a household, the farther the household income has to go, and health is likely to suffer as the standard of living declines.
- High alcohol consumption has been shown in numerous studies to be associated with a high degree of illness, for a number of reasons, (social, biological, economic, nutritional, etc.). In addition, high alcohol consumption is likely to increase the number of accidents and injuries.
- Children are a highly susceptible sub-population, both for infectious disease and for accidents and injuries. Therefore, it is likely that the more children in a household the higher is the incidence of ill-health.
- The higher the degree of adult employment within a household, the higher is the standard of living likely to be, due to better food, clothing, housing, heat, etc. This contributes to improved health.

Correlations of each of the above measures were computed against the average per capita visits to the clinic (AVPC) for 55 Nuiqsut households. Of the four variables tested, only two, SIZE and MONEY, were found to have a statistically significant relationship with AVPC. Size of household was found to be positively correlated with average clinic visits (significant at the .05 level), demonstrating a direct relationship between size of household and household incidence of illness. As the size of a household rises, so does illness within the household. MONEY was found to be negatively correlated with AVPC (significant at the .005 level), demonstrating a clear cut inverse relationship between the average adult employment in a household and household incidence of illness. As the amount of adult employment in a household rises, incidence of illness falls.

The correlation of PCAC with AVPC failed to prove significant. This could be due to the almost ubiquitous consumption of alcohol in the community. The correlation of RNAA with AVPC also failed to prove significant, demonstrating that the age structure of the household has no clearly defined relationship to the incidence of illness in the household.

One may conclude that any socio-economic changes in the community which have the effect of lowering the size of households or of raising household employment will likely have the additional effect of lowering household incidence of illness, all other things being equal.

A further test was done to determine if household ethnicity had any clear relationship to illness. The nature of the data precluded conducting correlation tests, so household average visits to the clinic (AVPC) were converted into ranked categories of "Low", "Medium", and "High", and a Chi Square test of homogeneity was carried out to test if Inupiat households had a significantly different incidence of illness than did non-Inupiat and mixed-ethnic households. Seventy-five Nuiqsut households were used in the test (18 non-Inupiat). A significant difference was found (at the .025 level) between the two populations. Unfortunately, the Chi Square test is not powerful enough to determine the direction of the ethnic difference.

Further examination of the data did provide clarificaton of this situation, however. Of the 18 non-Inupiat households,

only 7 (belonging to the teachers, the public safety officer, and the school maintenance head, with their spouses) were of a permanent or semi-permanent nature, existing as a household in Nuiqsut for a period of a year or more. Of the remaining 11 households, 6 consisted of temporary households of construction workers who generally stayed in Nuiqsut for a period of 3 to 6 months. The 5 remaining households were of a mixed-ethnic nature. Of these 18 households, 12 averaged less than one visit per person to the Nuiqsut clinic in 1982.

One must be cautioned not to interpret the results of this test as indicative of any differential susceptibility to illness by Inupiat members of the community. A more likely explanation is simply that non-Inupiat do not visit the clinic as often as do Inupiat because non-Inupiat do not see it as serving their needs. Non-Inupiat, in Nuiqsut at least, tend to treat themselves or to go out for treatment when a serious problem arises. The clinic's financial operation may also affect this, as Inupiat are treated without charge while non-Inupiat are supposed to pay for treatment.

In conclusion, the limitations of health care in Nuiqsut must be discussed. Clinic records provide information on the treatment administered or prescribed for each clinic visit. When no doctor was present at the clinic certain complaints were sent to Barrow without preliminary treatment locally. These generally consisted of serious injuries such as fractures or burns, pneumonia in elderly patients, or unusual conditions such as appendicitis, breast abcess, hernia, loss of vision, or severe allergic reactions. These conditions were beyond the ability of the trained health aides to treat locally. When a doctor was present in Nuiqsut, some conditions could still be effectively treated only in Barrow. These include, for example serious injuries (such as hypothermia) and conditions such as facial paralysis,

as well as symptoms of a condition requiring further diagnostic tests and/or treatment (such as blood in the stool).

In certain cases, preliminary treatment was administered in Nuiqsut before sending the patient on to Barrow. In some cases these involved emergency situations, such as heart failure or stroke, but most involved cases where more comprehensive health care was necessary, such as abcessed gums, mental illness, and venereal disease.

In certain other cases, the patient was recommended to visit Barrow for further care. Usually there existed persistent but non-urgent symptoms of a condition beyond the diagnostic capabilities of the clinic. Sometimes a condition was not responding to treatment. These generally involved, for example, vaginitis, enlarged uterus, masses or lumps, swelling, etc.

The handwritten records were often difficult to read accurately, but a preliminary assessment of the treatment administered indicates that when no doctor was present, the health aides prescribed a fairly narrow range of drugs and treatment for certain conditions. When a doctor was available a wider range of drugs was prescribed. However, there appears to be no significant difference between the health aides and the doctor in the amount of drugs prescribed.

As a last note, it must be remarked that nearly all adult Inupiat smoke cigarettes. Some smoke quite heavily. This no doubt aggrevates respiratory ills, the most common medical complaint. There are also indications that the incidence of lung cancer (and other cancers) is increasing.

#### Social Health

#### INTRODUCTION

This section will have two major parts. The first will deal with disruptive behavior in terms of public safety records, informants' information, and observation. The second will consider alcohol and drug use in the village and the implications of the patterns which emerge.

#### DISRUPTIVE BEHAVIOR

Disruptive behavior occurs in all communities and is basically any behavior against which sanctions are made. Sanctions can be very mild (being ignored or lightly corrected) to very harsh (physical pain, imprisonment, or even death). In Nuiqsut, gossip was probably the most common social sanction and mechanism for social control. Inupiat attempt to deal with all within this social pressure sort of mechanism. Only in the case of very serious disruptive behavior is public safety called in. The argument could be made that too much disruptive behavior is dealt with informally, and public safety involved too seldom. However, the success of village residents in solving problems without resort to the public safety department can also be seen as a resiliency or strength of the community. Which interpretation one chooses depends upon one's assessment of the results.

Unfortunately, an assessment of these results is not easy, due to a lack of information. Records only exist in those cases where public safety has been called in and is involved and a service call is recorded in the monthly report to Barrow. We did not have access to local Public Safety

records, and so we had to rely on the summary statistics available in Barrow. These records are not totally accurate. Some monthly records are missing, or possibly combined with the month following. It is not clear whether public safety officers are totally consistent in what they decide to report from month to month. Also, for that behavior subjected only to informal social sanctions, no records exist as such. Collection of informal information is easy, but validating it, or deciding what is reliable and to what degree, is almost impossible. This provides good information on values and on community approved behavior. Thus, what we must do is present and review the Public Safety statistics available, and then discuss them in terms of village dynamics.

#### Public Safety and Court Records

We obtained the monthly frequency counts of service calls from Public Safety in Barrow. We also searched the court records in Barrow and pulled and tabulated all those with defendants whose address was Nuigsut (Tables 42, 43, 44). Problems with these data are obvious, but they are nonetheless suggestive. Figures for service calls in the city of Barrow were included for comparison purposes. We will only deal with identified calls, excluding the categories of "other" and "optional", as Public Safety in Barrow could attach no consistent meaning to them. Unfortunately, this excludes 33% to 63% of the yearly total calls (See Table 45) but this is unavoidable given the weakness of the records. As of March 11, 1983, the latest statistical summaries available were from September 1982. One hopeful sign is that the percentage of identified service calls is much higher for 1982 than for 1981. The records themselves may or may not

be more reliable. Two months of 1982 are either missing for Nuiqsut or combined with the following month, and April and May are exactly the same. Be that as it may, these are the figures available to us.

The information for Nuigsut, sparse as it is, supports the Public Safety Officer's (PSO) contention that troublesome behavior is more frequent in the winter (cold and dark) than in the summer (warmer and light). Barrow does not show this same pattern nearly as well. This could be expected in a larger city with a less homogeneous population and less susceptibility to such seasonal influences. If Nuigsut continues to grow and develops a stable core of permanently employed residents and a more diversified population, such seasonal variation can be expected to decrease. The present PSO explains the present pattern as due to people either working in the summer or being at fish camp. In either case, they are out of the village and not likely to make trouble. If Nuigsut becomes more like Barrow and 40 hour a week permanent jobs become more common, this may change. A significant increase in rotational oil field employment could have the same effect.

One must be creative when dealing with such data. Comparing the categories in Nuiqsut and Barrow which include 10% of the known reported service calls is one basic approach. These figures are displayed in Table 45, along with values for the same category which come close to 10% or show that one year may have been uncharacteristic. For both years, three categories of problems are significant in both cities. Assault, liquor offenses (mostly drinking underage), and domestic problems and disturbing the peace are each above 10% of identified calls. Together they account for 54% of identified calls in 1981 in both cities, and 69% in 1982. Burglary is fairly significant in Nuiqsut, but less so in

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#### Table 42: NORTH SLOPE BOROUGH PUBLIC SAFETY RECORDS

#### Nuiqsut 1981

	<u>Jan</u>	Feb	Mar	<u>Apr</u>	May	<u>Jun</u>	<u>Jul</u>	Aug	Sep	<u>0ct</u>	Nov	Dec	<u>Total</u>
Homicide	-	-	-	-	-	-	-	-	-	-	-	-	0
Rape & Sex Off.	-	-	-	-	-	-	-	-	-	-	-	-	0
Robbery	-	-	-	-	-	-	-	-	-	-	-	-	0
Assault	2	1	-	-	-	-	-	1	-	-	2	3	9*
Burglary	3	1		-	-	-	-	-	-	1	1	1	7*
Larceny	1	1	-	-	-	-	1	1	1	-	-	-	5
Motor Veh. Theft	-	-	-	-	-	-	1	-	-	-	-	1	2
Vandalism	1	1	-	-	-	1	-	-	-	-	2	1	6
Narcotics	-	-	-	-	-	-	-	1	-	-	-	-	1
DUIIa	-	-	-	-	-	-	-	1	-	1	-	-	2
Liquor/Doc <sup>b</sup>	-	-	+	1	-	1	1	1	1	1	2	-	8*
Traffic Off.	1	-	1	-	1	-	-	-	-	-	-	-	3
Animal Prob.	1	1	-	-	-	-	1	-	-	2	3	1	9*
Domestic Prob.	1	-	-	1	-	-	1	-	1	1	3	3	11*
Prem. Sec.	-	-	-	-	-	-	-	-	-	-	-	-	0
Disturbing Peace	-	-	-	-	-	-	-	1	2	2	4	3	12*
Optional	2	-	2	1	1	-	2	1	2	-	4	8	23
Other	18	14		3	3	3	8	5	8	18	_13		101
Total	30	19	4	6	5	5	15	12	15	26	34	28	199

<sup>a</sup> Driving under the influence. <sup>b</sup> Mostly underage drinking. \* 10% or more of "known service calls."

#### Table 43: NORTH SLOPE BOROUGH PUBLIC SAFETY RECORDS

#### Nuiqsut 1982<sup>C</sup>

	<u>Jan</u>	Feb	Mar	<u>Apr</u>	<u>May</u>	Jun	<u>Ju1</u>	Aug	<u>Sep</u>	<u>0ct</u>	Nov	Dec	<u>Total</u>
Homicide	-	-	-	-	-	-	-	-	-	-	-	-	0
Rape & Sex Off.	-	-	2	-	-	1	-	-	-	-	-	-	3
Robbery	-	-	-	-	-	-	-	-	-	-	-	-	0
Assault	-	-	1	2	2	1	4		1	-	-	-	11*
Burglary	-	-	1	-	-	-	2	-	3	-	-	-	6
Larceny	-	-	1	-	-	1	1	-	3	-	-	-	6
Motor Veh. Theft	-	-	2	-	-	-	2	-	1	-	-	-	5
Vandalism	2	-	1	-	-	1	2	-	1	-	-	-	7
Narcotics	-	-	1	-	-	-	-	-	1	-	-	-	2
DUIIa	-	-	-	1	1	-	-	-	-	-	-	-	2
Liquor/Doc <sup>b</sup>	4	-	5	2	2	1	5	-	4	-	-	-	23*
Traffic Off.	-	-	-	-	-	-	-	-	-	-	-	-	0
Animal Prob.	-	-	3	-	-	-	-	-	2	-	-	-	5
Domestic Prob.	3	-	2	2	2	1	5	-	7	-	-	-	22*
Prem. Sec.	-	-	-	-	-	-	-	-	-	-	-	-	0
Disturbing Peace	3	-	2	2	2	4	2	-	5	-	-	-	20*
Optional	1	-	-	-	-	1	-	-	-	-	-	-	2
Other	_9	-	9	5	5	7	5	-	14	-			54
Total	22	-	30	14	14	18	28	-	42	-	-	-	158

<sup>a</sup> Driving under the influence. <sup>b</sup> Mostly underage drinking. <sup>c</sup> Blank months not reported. May be included in following month. \* 10% or more of "known service calls."

Table 44: NSB PUBLIC SAFETY SERVICE CALLS AND COURT CASES FILED

1981

	<u>Jan</u>	Feb	Mar	<u>Apr</u>	May	<u>Jun</u>	<u>Ju1</u>	Aug	<u>Sep</u>	<u>0ct</u>	Nov	Dec	<u>Total</u>
Service Calls, Barrow	287	263	287	243	286	383	337	379	339	353	321	37 <del>9</del>	3,857
Service Calls, Nuiqsut	30	19	4	6	5	5	15	12	15	26	34	28	199
Court Cases Filed, Nuiqsut Misdemeanors	1	2	-	-	-	-	-	-	-	-	-	1	4

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	Jan	Feb	Mar	<u>Apr</u>	May	<u>Jun</u>	<u>Jul</u>	Aug	<u>Sep</u>	<u>0ct</u>	Nov	Dec	Total	
Service Calls, Barrow	327	113	331	265	239	209	268	175	269	-	-	-	2,196	
Service Calls, Nuiqsut	22	NR <sup>a</sup>	30	14	14	18	28	NR <sup>a</sup>	42	(44)	b_	-	168	
Court Cases Filed, Nuiqsut Misdemeanors	2	1	2	1	1	1	1	1	1	2	1	2	16	
Court Cases Filed, Nuigsut Felonies	-	-	1	-	-	-	-	-	-	-	1	-	2	

<sup>a</sup> Not reported. May be included in following month.
 <sup>b</sup> Personal communication.

Barrow. In both cities, animal problems were a high percentage of calls in 1981, but not in 1982.

Computing service calls per capita in both communities for both years, using the 1980 census population (2,207 for Barrow, 208 for Nuiqsut) yields the same basic ratios whether one uses total service calls, known calls only, or most common call categories. Barrow's rate is twice Nuiqsut's in 1981, but in 1982, they are equal (Barrow's rate is stable from 1981 to 1982, Nuiqsut's essentially doubles). The profiles of offenses are very similar. This is somewhat surprising in that one reason informants gave for preferring life in Nuiqsut to life in Barrow was th lower "crime rate" and lower incidence of trouble. This suggests again that official NSB Public Safety records do not reflect all that occurs in a community. People who choose to live in Nuiqsut find it, for some reason, a less pressured place.

# Table 45: NSB PUBLIC SAFETY SERVICE CALLS SELECTED CATEGORIES

		Nuiqsut				Barrow		
		1981		1982 <sup>a</sup>		1981		32 <sup>a</sup>
	#	%	#	%	<u>#</u>	%	#	%
Total Service Calls	199	100	168	100	3857	100	2196	100
"Other" "Optional"	101 23	51 12	54 2	32 1	1564 781	41 20	792 242	36 11
Identified Calls	75	37	112	67	1512	39	1162	53
Burglary Liquor/Doc Animal Prob. Domestic Prob. Disturbing Peace Assault	7 8 9 11 12 9	9 11 12 15 16 12	6 23 5 22 20 11	5 21 4 20 18 10	271 134 203 239 110	18 9 13 16 7	201 18 250 267 87	17 2 22 23 7

<sup>a</sup> Nine months information only. October - December data unavailable.

Public Safety does maintain a much lower profile in Nuigsut than in Barrow, probably because there is less need for the mere presence of authority to deter public disruptive behavior. Nuiqsut is a much tighter knit community than Barrow in terms of kinship relations, as would be expected of a smaller community of self-selected people. The informal mechanisms of social control work much more effectively in Nuiqsut than in Barrow. Resort to the courts, located in Barrow, has been infrequent in relative terms. Our search of the court records revealed four court cases (all misdemeanors) in 1981 and 18 court cases (16 misdemeanors and 2 felonies) in 1982 (Table 43). One in 1981 and two in 1982 seem to involve non-Inupiat as defendants. The pattern of timing of events leading to court cases is rather even, but looks to support the same sort of seasonal pattern for Nuigsut as the service call information. It is, of course, not statistically significant.

Only two felony cases were filed in 1982, both for rape. This points out an important source of difficulty between Inupiat and non-Inupiat people. Situations that Inupiat have before treated within the kinship-community sphere are seen by Public Safety as matters of general public concern. This is by no means a problem restricted to the North Slope. Relations between the sexes, both within marriage and outside of it, and relations between parents and children are especially sensitive. In Nuigsut, women are apparently changing their self-image or the idea of proper male behavior towards them. For whatever reason, women are becoming more willing to redress wrongs by using the court system rather than the more traditional informal community sanctions. This change is much more evident in Barrow and could be expected to increase now that a judge is stationed permanently in Barrow. Nuigsut could well exhibit the same pattern. Similarly, a common observation of visitors to North Slope villages is that children seem to be loved and coddled and yet at times also ignored or even mistreated. We could not collect any reliable information on such a sensitive issue, which even public agencies with that as their charge find difficult, but were able to observe instances where neglect or abuse was evident. The incidence or frequency of this is a question we cannot address. The most common observation is that many children come to school hungry, without breakfast. This is, unfortunately, not uncommon everywhere, especially as many adult Americans no longer eat breakfast. Students sleeping in school because they could not at home, and exhibiting bruises and cuts, are a different matter, however. They do seem to indicate a social health problem, but one of unknown magnitude.

Such cases are usually linked by non-Inupiat to the Inupiat use (and abuse) of alcohol. The Public Safety Officer states that 80% to 90% of service calls are for alcohol related

situations, and that all serious offenses are alcohol related. The court records bear this out in substance if not in literal truth. Of the twenty two court cases which comprise part of Table 44, 18 (82%) involved the use of alcohol. Those that did not involve alcohol were three theft cases and one reckless endangerment during a dispute. Most of the alcohol related cases involved the most common sorts of identified service calls abstracted from NSB Public Saftey records (Table 45) -- assault (6), underage drinking (4), and domestic problems and disturbing the peace (4). The remaining four cases involved criminal mischief (2), reckless driving (1), and misconduct with a weapon (1). Since this seems to implicate alcohol as something underlying behavior disapproved of enough to necessitate calling Public Safety and then taking action through the courts, a discussion of alcohol consumption and its effects on behavior, and on the community in general, is essential.

#### ALCOHOL CONSUMPTION IN NUIQSUT

#### Introduction

Studies of alcohol use and abuse are common in nearly every social setting because the issue is such a common one. The subject is an especially sensitive one in the North, however, because of the sometimes callous manner in which such studies have been carried out and the conviction with which interpretations were made (Hild 1981, Segal nd). What we attempted to do was to document alcohol consumption in Nuiqsut, observe the contexts in which it was used, and form some sort of understanding of why the pattern of use which exists persists. That Inupiat and non-Inupiat (both residents and non-residents) have different perceptions of alcohol use in Nuiqsut must be admitted. We will attempt to find some

common ground by focusing on observable behavior and situational contexts.

Nuigsut, like Barrow and several other North Slope villages, is a dry community. Potable alcohol cannot be sold or imported for sale. However, personal possession, drinking, or being intoxicated are not legal offenses and hence are not prohibited. People who are intoxicated and unable to care for themselves can be placed in protective detention without being charged. Alcohol is rather freely available in Nuigsut, notwithstanding the official policy of the air carrier serving Nuigsut not to transport alcohol. The major airlines can legally ship alcohol to Barrow, where it is often repackaged and sent to Nuiqsut. Alternatively, alcohol is sent to Prudhoe Bay, which is not a dry community, and repackaged for shipment to Barrow. People sometimes charter a plane to fly in alcohol, we were told, but can only judge the reliability of this information by who told us this and how many times (many different people, many times).

There are several different ways to obtain alcohol in Nuiqsut. We shall see some of these in action in later sections, but will sketch them here. The most direct way to buy it is to contact a liquor store in Fairbanks (usually, but it could be Anchorage as well) and have them send a package to Nuiqsut via Prudhoe Bay. If it is in a non-liquor box, there is no need to repack it. If it needs to be repacked, there is usually someone in Prudhoe Bay willing to do so. The second way to buy alcohol, more expensive than the first, is to contact a friend in Barrow, where access is easier than in Nuiqsut. Usually a bottle can be located quickly and put on the next plane to Nuiqsut. Such "packages" are eagerly awaited and most planes are greeted by small crowds in the hopes that such a package will arrive. The third way to buy a bottle is to approach a bootlegger in Nuiqsut. This is the

most expensive and quickest way, of course. None of our information in this regard is tested, as we never observed the selling of illicit substances as such. However, we observed bottles of Calvert Whiskey, the most common drink in Nuiqsut, selling in Fairbanks for \$8 - \$10. In Barrow, they were said to sell for \$40, and in Nuiqsut for \$100.

Social drinking, not involving the use of money, is also a common way to obtain alcohol. It does imply a tie of later reciprocity, and is somewhat risky in that only close friends and relatives can rely on someone else's bottle being shared with them. In most cases, a person is not refused a drink. He is simply not offered one or not shown the bottle. We did observe quite a bit of social drinking, as well as the "cruising" behavior which sometimes precedes it. Individuals, typically young men in groups of two to six, will drop in to visit houses where they have obtained and shared alcohol before (not all individual members of the group need to have done so, but at least a majority always had). If no offer of alcohol or other intoxicating hospitality seemed to be forthcoming, the group quickly left. Five minutes, an abnormally short visit by normal Inupiat standards, was about the longest an unsuccessful (or unlucky) "cruising" group was observed to stay before exiting to try another house. These groups had no stable membership, other than that friends tended to cruise together more often than with others. These groups sometimes carried one or two bottles of alcohol of their own, which were brought out if the "host" had opened his own supply. Female and mixed-sex "cruising" groups were observed, as well as an occasional solitary. Only a very few "cruisers" over the age of 30 were observed.

#### Data Collection

Several sorts of information were obtained. Observations were made of peoples' drinking behavior, its frequency, who else was there, and so on. Personal observations were made and later recorded in coded form on 80 to 100 adults. Anyone over the age of 15 was considered an adult. Information on the drinking behavior of individuals 15 and under was too unreliable as to be able to make any general statements about that part of the population. Several reasons contribute to this. Drinking is less frequent for non-adults, so that informants are less sure of who drinks and how much. Non-adults especially avoided talking about drinking with the researchers, and other informants simply did not socialize in this way with this age group and so had no data base to share. Adult drinking is thus more visible in Nuigsut, and more is known about it by the average community member than is known about non-adult drinking. Non-adult drinking no doubt exists, but our information is too poor to treat it in any systematic way.

Thus, our drinking observations cover approximately 1/2 to 5/8 of the potential adult drinking population in Nuiqsut. In addition, observational impressions were collected and coded for later use. Both of these were simply aspects of our more general daily note write-up. Once research was well underway and rapport had been established with various informants, a more concerted effort was made to obtain information on alcohol consumption. General questions about alcohol and its use were usually ignored, so we quickly learned not to ask such questions. An informant did agree to classify everyone on our census as to the frequency with which he or she drank alcohol. As one choice was "insufficient information", we are reasonably sure that these judgments were all made in good faith and with some

consistency. Our informant knows the community very well, and could classify someone as "unknown", "does not drink", "drinks occasionally", "drinks regularly", or "always drinking". Our informant made no use of the last category, which displayed, to us, evidence of his objectivity, Our informant's general views on alcohol consumption were that nearly everyone drank and that those who drank also had drinking related problems. This is not inconsistent with his pattern of judgments, especially given the uneven supply of alcohol to Nuiqsut, but demonstrates an ability to look at things in detail rather than in terms of broad generalizations.

Another source of confidence in these alcohol ratings is that one of our field researchers independently classified the same people and reached just about the same results, both in terms of aggregated percentages and individual categorizations. Table 46 indicates that for Inupiat, the informant was more familiar with regular drinkers than the researcher but that the difference in overall ability to assess drinking was not great. Only 16 cases were unknown to both and so could not be assigned to a class. The informant was much less familiar with non-Inupiat drinking (Table 47). Thus, the non-Inupiat data set reflects the researcher much more than the Inupiat composite data set does. There are no actual disagreements of assessments for individual non-Inupiats, however, and only two from among the Inupiat population.

This overall agreement justified the formation of a composite data set from the two independent sets of values. An individual coded as "unknown" in one set but assigned a consumption code in the other was coded by that consumption code in the composite set. This reduced entirely "unknown" cases to 16, resulting in a more complete data set, without significantly changing its distributional composition.

# Table 46: NUIQSUT ALCOHOL CONSUMPTION INUPIAT ADULT JUDGMENT COMPARISONS

	Drinking Frequency						
	<u>Unknown</u>	Never	<u>Occasional</u>	Regular	<u>Total</u>		
Informant	39	19	32	72	162		
Researcher	49	18	32	63	162		
Composite*	16	26	44	76	162		

\* A combination of informant and researcher judgments. See text for explanation of method.

# Table 47: NUIQSUT ALCOHOL CONSUMPTION NON-INUPIAT ADULT JUDGMENT COMPARISONS

	Drinking Frequency						
	Unknown	Never	<u>Occasional</u>	Regular	<u>Total</u>		
Informant	14	0	7	3	24		
Researcher	3	4	14	3	24		
Composite*	2	5	14	3	24		

\* A combination of informant and researcher judgments. See text for explanation of method.

#### Data.

Definitions could pose a problem, but here the categories have the following meanings. "Unknown" means there is insufficient information of a reliable enough nature to make an assessment. "Never drinks" means that the individual has never been seen drunk or drinking and claims, or is reputed to claim, not to drink. "Drinks occasionally" means that the individual has no set pattern of drinking. If he is observed in an intoxicated state, it is an unusual but not startling event. No non-Inupiat in this category were ever observed in an intoxicated state. "Drinks regularly" means that the individual drinks consistently

within certain contexts when liquor is available, but not that the individual drinks consistently in a temporal pattern (daily, weekly, etc.) due to the often sporadic supply of liquor, It is not uncommon to observe these individuals when they are drunk. Everyone in category three has been observed to be in such a state. No individual in Nuiqsut was observed or known to be in a constant or semi-constant drunk state. That sort of steady drinking over a long period of time appears to be absent.

Information for individuals below the age of 16 does not seem very reliable. The characteristics of both adult populations are fairly clear. Most Inupiat drink (Table 48). Below the age of 20, occasional drinkers outnumber regular drinkers and there is a significant number of non-drinkers. For the 21-30 age group, the numbers are reversed and drinkers far outnumber non-drinkers. Regular drinkers outnumber occasional drinkers. For the 31-40 and 41-50 age groups this pattern intensifies. Regular drinkers far outnumber occasional drinkers. There are few non-drinkers. Above the age of 50 there is an abrupt change, as non-drinkers far outnumber regular drinkers and there are no occasional drinkers at all. The differences are statistically significant.

The simplest explanation is that increased drinking is directly related to ease of access to alcohol. The older one is, the more likely one is to obtain alcohol. This is no doubt partly a matter of resources (adults tend to earn more than adolescents) and partly a matter of social setting (the older one is, the wider one's social network is, in terms of number of people as well as different geographical locations). The disjunction at age 50 may be evidence for a change in socialization practices, differences in life experiences, and/or differences in values between Inupiat over 50 and those younger. In Nuiqsut there are 20 people

# Table 48: NUIQSUT ALCOHOL CONSUMPTION INUPIAT ADULT, AGE BY FREQUENCY

	<u></u>	Drinking	g Frequency		
Age	Unknown	Never	<u>Occasional</u>	Regular	<u>Total</u>
16-20	8	6	21	11	46
21-30	7	1	15	22	45
31-40	1	2	3	17	23
41-50	0	- 1	5	22	28
51-60	0	6	0	3	9
61+	0	10	0	1	11
Total	16	26	44	76	162

Drinking Frequ	ency, Inu	upiat /	Adult

<u>Age</u>	Never	<u>Occasional</u>	Regular	<u>Total</u>
16-20	6	21	11	38
21-30	1	15	22	38
31-50	3	8	39	50
51+	16	0	4	20
Total	26	44	76	146

 $x^2 = 84.9, df = 6$ 

hypothesis of no significant difference must be rejected.

	Drinking	Frequency, Inupia	t Adult≤50	
Age	Never	<u>Occasional</u>	Regular	<u>Total</u>
16-20	6	21	11	38
21-30	1	15	22	38
31-50	3	8	39	50
Total	10	44	72	126

 $x^2 = 17.9, df = 4$ 

hypothesis of no significant difference must be rejected at the 0.005 level.

over 50. By chance, 13 (65%) are women. None drink (Table 49). Many are active in church. All speak Inupiat most of the time. Only a few can readily understand English. Of the 7 men over 50, 4 drink regularly and 3 do not drink at all (Table 50). Those who do not drink have had little direct

# Table 49: NUIQSUT ALCOHOL CONSUMPTION INUPIAT ADULT FEMALE, AGE BY FREQUENCY

		Drinkin	g Frequency		
Age	Unknown	Never	<u>Occasional</u>	Regular	<u>Total</u>
16-20	7	3	10	3	23
21-30	5	1	7	9	22
31-40	1	2	1	9	13
41-50	0	0	3	6	9
51-60	0	4	0	0	4
61+	0	9	0	0	9
Total	13	19	21	27	80

		Drinking Frequency					
Age	Never	<u>Occasional</u>	Regular	<u>Total</u>			
16-20 21-30 31-50 51+	3 1 2	10 7 4	3 9 15	16 17 21			
51+ Total	13 19	21	27	13 67			

 $x^2$  = 52.9, df = 6 hypothesis of no significant difference must be rejected.

	Drinking Frequency, Inup	iat Women <u>≤50</u>	
Age	<u>Never or Occasional<sup>a</sup></u>	Regular	<u>Total</u>
16-20	13	3	16
21-30	8	9	17
31-50	6	15	21
Total	27	27	54

 $x^2$  = 10, df = 2 hypothesis of no significance must be rejected at the 0.010 level.

 $^{\rm a}$  There are too few women  $\leq 50$  in the "never" category for the computation of a valid chi-square test.

# Table 50: NUIQSUT ALCOHOL CONSUMPTION INUPIAT ADULT MALE, AGE BY FREQUENCY

		Drinking	g Frequency		
Age	Unknown	Never	<u>Occasional</u>	Regular	Total
16-20	1	3	11	8	23
21-30	2	0	8	13	23
31-40	0	0	2	8	10
41-50	0	1	2	16	19
51-60	0	2	0	3	5
61+	0	1	0	1	2
Total	3	7	23	49	82

	Drinking Frequen	су	<u>Total</u>	
Age	Never or Occasional <sup>a</sup>	Regular		
16-20	14	8	22	
21-30	8	13	21	
31-50	5	24	29	
51+	3	4	7	
Total	. 30	49	79	

 $x^2$  = 11.4, df = 3 hypothesis of no significant difference must be rejected at the 0.010 level.

	Drinking Frequency, Inupiat Men ≤50					
Age	<u>Never or Occasional<sup>a</sup></u>	<u>Regular</u>	<u>Total</u>			
16-20	14	8	22			
21-30	8	13	21			
31-50	5	24	29			
Total	27	45	72			

 $x^2$  = 11.5, df = 2 hypothesis of no significance must be rejected at 0.005 level.

<sup>a</sup> There are too few males in the "never" category for the computation of a valid chi-square test.

contact with non-Inupiat, whereas those who do drink have histories of wage labor. Drinkers' knowledge and use of English is greater. Non-drinkers rely to a much greater extent on subsistence resources. The characteristics of non-drinkers over the age of 50 thus suggest that contact with non-Inupiat (and alcohol) facilitates the acquisition of alcohol and, indeed, that such contact has resulted in the Inupiat acceptance of the use of alcohol.

There is a statistically significant difference in drinking frequency between Inupiat males and Inupiat females (Table 51). Since Inupiat males in Nuigsut have more contact with non-Inupiats than their female counterparts do, this reinforces the above discussion. Examination of Tables 49 and 50 reveals that the sexes do exhibit a similar pattern. Drinking intensifies with age, reaches a peak, and then declines. However, female Inupiat drinking intensity seems to peak at ages 31-40, whereas for men it peaks at 41-50. Older women do not drink at all, whereas some older men do. Firm conclusions cannot be made, since the population is small for statistical treatment. Random factors such as the relative surplus of women over age 60 may account for some of the variance. Age as a factor does seem more important than sex, overall.

The non-Inupiat population is smaller and subject to more chance fluctuations than is the Inupiat population. Occasional drinkers predominate. Age does not seem significant (Table 52). There are no female regular drinkers (Table 53). Only males over 30 drink regularly (Table 54). These three males were the only non-Inupiat who were seen when drunk. Thus, the drinking behavior of "occasional" drinkers does differ in the two populations. Non-Inupiat occasional drinkers drink more consistently over time but in small amounts at any one time. Inupiat occasional drinkers tend

# Table 51: NUIQSUT ALCOHOL CONSUMPTION INUPIAT ADULT, SEX BY FREQUENCY

	D	rinking Frequenc	У	
Sex	Never	<u>Occasional</u>	Regular	<u>Total</u>
Male	7	23	49	79
Female	19	21	27	67
Total	26	44	76	146

 $x^2 = 1$ , df = 2

hypothesis of no significant difference must be rejected at the 0.005 level.

# Table 52: NUIQSUT ALCOHOL CONSUMPTION NON-INUPIAT ADULT\*, AGE BY FREQUENCY

	Drinking Frequency				
Age	Unknown	Never	<u>Occasional</u>	Regular	<u>Total</u>
16-20	0	1	0	0	1
21-30	0	0	6	0	6
31-40	2	1	1	1	5
41-50	0	2	5	2	9
51+	0	1	2	0	3
Total	2	5	14	3	24

to drink less consistently over time but in large amounts when they do drink. Regular drinkers in both groups tend to follow the same drinking pattern, but non-Inupiats have better or more regular access to alcohol, it seems.

To state that Nuiqsut has a problem with alcohol (and other drugs) would not be to say anything that people there do not already know. Undoubtedly, the extent of the problem is

# Table 53: NUIQSUT ALCOHOL CONSUMPTION NON-INUPIAT ADULT FEMALE, AGE BY FREQUENCY

	Drinking Frequency				
Age	Unknown	Never	<u>Occasional</u>	Regular	<u>Total</u>
16-20	0	0	0	Q	0
21-30	0	0	3	Ó	3
31-40	1	0	0	0	1
41-50	0	1	2	0	3
51+	0	0	1	0	1
Total	1	1	6	0	8

# Table 54: NUIQSUT ALCOHOL CONSUMPTION NON-INUPIAT ADULT MALE\*, AGE BY FREQUENCY

	Drinking Frequency				
Age	Unknown	Never	Occasional	Regular	<u>Total</u>
16-20	0	1	0	0	1
21-30	0	0	3	0	3
31-40	1	1	1	1	4
41-50	0	1	3	2	6
51+	0	1	1	0	2
Total	1	4	8	3	16

\* Excludes all camp residents except 1 resident camp cook.

much better known to them than to the researchers. Resolution E-02-83 at the Inuit Circumpolar Elders Conference states "... that we as concerned Elders strongly recommend that Inuit communities consider banning alcohol and drug introduction and consumption;..." (Arctic Policy Review, October-November 1983:28). The nature of the subject precluded our formally investigating it, especially as recent research on the North Slope has sensitized people to this topic. We had no wish to jeopardize our other, more primary, research interests for this one specific type of information.

Also, it rapidly became clear that Nuiqsut is such a small community that ethical considerations would prevent us from disclosing any information by which specific individuals and their activities in this sphere could be identified. People are sensitive enough when their open and public activities are discussed. Thus, the decision was made early to keep our discussion on a general plane.

At the same time, a rather broad view of alcohol use cannot help but be obtained by anyone who lives there for several months who observes carefully and is not biased by the reports or expectations of others. Who drinks how often and when is not necessarily a question one should ask, but is certainly a question one can investigate. Unexplained work absences, a package followed by a party or lots of guests, a change in physical appearance or behavior, all are indirect measures (or rather, potential measures) of alcohol consumption. These, combined with public opinion, can become the basis of solid data when they are bolstered by some independent and reasonably reliable confirmatory information. Our information is mostly of this soft variety, but we have confidence in its validity for all that, mainly because it correlates well with Tables 47 - 53.

#### Alcohol Acquisition and Distribution in Nuigsut.

Alcohol is flown into Nuiqsut, as was briefly sketched above. There are reputed to be three bootleggers in Nuiqsut. This seems reasonable to us, given our other information on income and expenditures, and the potential market for liquor. In addition, people returning from Barrow, Anchorage, Fairbanks, or Prudhoe often bring back other drugs, mainly marijuana. These are sometimes sold, but more often are given away or used with a group of kin and friends in a social context. "Packages", an euphemism for goods that Cape Smythe Airlines would normally not carry repackaged in a way so that they will, are also treated in this way. On days when such packages arrive, kin and friends (at least those who drink) come visiting. The phone rings constantly if one has a name for receiving liquor and people notice that a package has arrived for you. Since a crowd greets every plane, someone always notices such packages.

For the reasons stated above, we wish to get no more specific on this topic. Also, no matter what one thinks of the alcohol survey part of their work, Klausner and Foulks have done a good job of describing the context and mechanisms of alcohol consumption on the North Slope. Their section on bootlegging and distribution (1982:137-142) applies to Nuiqsut as well as it does to Barrow. A great deal of bootlegged liquor goes to young people. Older people tend to acquire liquor in a more social context, in many cases the one they consume it in. The label "bootleg" often appears inappropriate for this latter context, where economic motivations are plainly secondary. That is not to say that liquor is always willingly shared, but merely that social considerations often outweigh economic ones.

We observed several parties or social gatherings where drinking was going on. We also observed several smaller, more informal drinking groups. The more people there were, the noisier and more active the people were, the same as anywhere else. In all cases, only certain people were welcome to come in and drink, the Inupiat value of hospitality notwithstanding. We were told that when Inupiat drink they keep the bottle on the table for all to see, so that anyone

can have some if he wants. It was far more common for us to see bottles protected by a person's feet, in a purse, under a table, or in a similar area of control. A decision to "brush off" a new arrival was not uncommon in informal drinking groups, especially when the liquor supply was limited. Larger social gatherings tended to select people at the door. No one came in unless they were to be part of the party.

In all cases of observed liquor consumption, the drinking went on until the liquor was gone. In most cases, this meant that nearly everyone was drunk or noticeably under the influence (as judged by a non-drinking observer). The amount consumed per person varied from three-fourths of a bottle in about two hours (three bottles for four people) to three or four glasses of strong punch plus some beers. Several drinking sessions were marked by verbal and/or physical aggresiveness on the part of drinkers. This was usually displayed towards other drinkers, but once occasioned the departure of the researcher. Only two physical encounters were actually seen, although accounts of others were reliably verified. Chapter 11 of Klausner and Foulks (1982:202-224) fits the Nuigsut empirical pattern of drinking and behavior, although their psychosocial explanations and use of the MAST test cannot be generalized to the Nuigsut population. Drinking does seem to trigger guilt feelings rather than social shame. "Guilt is what one suffers when one judges oneself as having failed, a matter of conscience, not of social appearance" (Klausner and Foulks 1982:210). Fighting and family strife are also common problems associated with drinking. Job absence and poor performance due to drinking are also apparently becoming more common. If more jobs in the village become permanent year round, the problem can be expected to grow. Certain NSB departments during our research period were seriously undermanned for short periods of time due to the incapacitating after effects of extensive socializing.

# Alcohol Consumption Outside of Nuigsut.

Extreme intoxication is sanctioned within the village, although sometimes only by silent disapproval and social distancing. This is enough to cause some people to do most of their drinking outside of Nuiqsut, however. This type of drinker is thus even more of a "binge" drinker than is the typical Nuiqsut Inupiat drinker. Travel is used as an excuse to drink. Alcohol also tends to be cheaper in such places. It is not uncommon for official business to take two or many times as long as would be possible due to social activities, including drinking, which go on around them. Villagers are aware that part of their City-Corporation money may be used in this way. On one level it upsets them while on another they see it as a prerogative of leadership.

Private individuals are sometimes also "stuck" away from Nuiqsut when on a drinking binge. They run out of money to fly back. There are special programs designed to aid such people in Fairbanks and Anchorage. Shopping trips and medical visits also tend to be conjoined with drinking bouts. Visiting also can encourage drinking when away from Nuiqsut. In the larger communities of central and southern Alaska, the pressures of the smaller northern communities are evidently relaxed and Inupiat feel that their behavior is less scrutinized by those who count, their fellow villagers.

## The Use of Alcohol.

Interpretations of why people drink are fraught with peril. That people do drink a great deal in Nuiqsut is beyond doubt. That when they drink they exhibit more aggression than when sober is also without doubt (not all villagers, but a significant number). Some become physically aggressive, while others are more vocal. Negative feelings are easier to express when one is drunk. One Inupiat told a researcher that it was inappropriate for the researcher as well as himself to be in church, because that was God's place and private and above man's secular pursuits such as science or drinking. He overlooked the researcher's possible need for church attendance and the community members' observations of each other, perhaps because he was inebriated (one of the few intoxicated people ever seen in church). Another Inupiat says he is only strong enough to say what he feels when he is drunk. What he mostly says then is that all non-Inupiat should leave the village, and the North Slope too. Fights between Inupiat occur mostly when both are drinking.

Alcohol is used in contexts of sociability but easily turns such a situation into a series of confrontations. These either end in at least one party leaving or the complete termination of the drinking context. Such confrontations are easily patched up later when the effects of the alcohol have worn off, but tend to be repeated once drinking begins again. We are not qualified to say what underlies the use of alcohol in Nuiqsut, but clearly it is being abused. This abuse is just as clearly an indicator of social disarray or of an ill-fit between the demands of social situations and the capabilities of individuals to cope with them.

#### Social Effects.

In spite of this information, we have little to offer in the way of measuring the impact of alcohol on the community. At best, we can offer attempts to estimate it. This is one area where community support of research effort is necessary, not only during the research, but in the design phase as well.

One's information is only good as what people choose not to conceal.

There are, nonetheless, some good indicators of the social effects of alcohol. Those dealing with social health and disruptive behavior have been discussed above in terms of Public Safety records. Public Safety cases are almost always alcohol related. The clinic records may indicate the level of physical injury potentially related to alcohol consumption. The existence of bootleggers speaks to the amount of cash flowing into the purchase of alcohol. Conservative village estimates by those in the village who know payroll incomes and consumer patterns conservatively estimate that \$45,000 is spent each month in the village on alcohol. They estimate that as much as 80% of some people's income is spent on liquor, other drugs, and gambling. We had no way to verify such figures, but found the statement interesting even if somewhat implausible.

Alcohol also occupies a prominent position in Christian Inupiat testimonials. Many of these public confessions of faith spoke about past personal problems with alcohol and how the church and faith in God gave one the strength to overcome them and resist the temptation to drink. This indicates that alcohol is a major concern and a fundamental reason for church membership for a significant number of Inupiat. Social effects of alcohol in Nuigsut can also be gauged by their effects in Barrow. Barrow has begun an extensive publicity campaign to combat alcohol abuse. The case has been made that Nuigsut is becoming more like Barrow, and this appears to be one area where this is true. Since better documentation of spouse abuse, child abuse, police (Public Safety) calls and such exist in Barrow, that is the logical place to begin a search for tends in Nuiqsut changes.

#### Leisure Activities

# RESIDENCE (VISITING)

One of the strengths of a small community anywhere is the sense of cohesion generated by social bonds between households. In Nuiqsut, these are doubly important. The ties of kinship which web the village are reinforced and sometimes supplemented by visiting and friendship ties. There are a number of "typical" social activities which can go on during such a visit. We will discuss each in turn briefly after we look at a typical residence.

One may enter a kinsman's house without knocking (other things being equal) but should knock on the inner door of other people's houses. Upon entry, one notices that the television is almost always on. As there are only two channels in Nuigsut to choose from at present, no particular attention is paid to the particular content of the program except in prime time or sports viewing times. The television is usually not a focus of attention but rather something to orient to avoid looking directly at the person to whom one is speaking. Often, the sound of the television is turned off or is very low. A tape player may be accompanying the television picture with music, readings of the Bible, or recorded church services. The television is on a great deal in all households, but how much is watched is unclear. People seldom talk about television in terms of program content, and are seen to actually watch it intently in the evening or when sports or Inupiat culture programs are on. Radios are not played much as reception of KBRW (Barrow) is very poor.

After an initial welcome, and a short chat or perhaps mutual silence in the presence of others (the comfort of company),

one is usually offered tea and something to eat. This is not inevitable, but is usual and allows one to stay for a fairly indefinite period of time. Conversation will flow as the spirit moves people. If there is no common spoken language, gestures and pictures often will serve as means of communication. Small gifts and favors are much appreciated, and are certainly an important part of the social exchange system. The visit itself, the personal attention of the visitor in selecting that household to visit, often seems to be the thing exchanged in return for hospitality. This is especially evident when visiting older Inupiat, who are so gracious as to make one feel as if the visitor is the one providing the more valued behavior. Younger peoples' visits will be dealt with below.

One may also visit someone to offer assistance of some sort. This could range from changing a light bulb or pumping heating oil to fixing a snow machine. It was especially true that adolescents and young adults generally had social obligations to fulfill when they visited. These could be domestic tasks (dishes, washing the floor, cooking) or the caretaking of children or simply keeping someone company. Elderly people often looked after young children for working mothers as well. Such visits tend to follow kinship lines. The distribution of fish and game tends to follow the same pattern. Indeed, the researchers found certain houses easier to visit because of the household in which one of them resided. He had become part of the household and had at least temporary access to a kin network. In fact, certain social visits came to be expected of this researcher.

Invitations to eat are also a major type of visiting. These meals tend to be more elaborate than meals to which one is spontaneously invited. They also tend to include more native food elements, and to be part of an evening's program

of socializing. The gathering may be only two or three couples or as many as 20 people. Drinking seldom follows such a dinner, but cards or some other entertainment very well might. Occasions for such gatherings are birthdays, special accomplishments, someone's return to the village, or the recent gift of a special sort of native food not usually available in Nuiqsut. Such gatherings almost always are of married adults, and the meal/snacks almost always are predominantly harvested native foods. Bread, crackers, fruit and candy are used to supplement and fill out the featured offering.

Card playing gatherings can either follow such a meal or happen on their own. Poker games run, but we never observed one except among relatively young and inexperienced players who played their own rather simplified version. Rummy and "snerts" were the two games of choice, with Pinochle also being popular. Some games are continued from week to week for as long as a year. They seem to be competitive, yet not too pressure laden. They are the occasion for much light banter.

The visits of adolescents and young adults differ greatly from that of adults, described above. Young people talk less and orient to the television set more. When they are in an all young group, casual consumption of alcohol and/or drugs is common. Adults rarely do this during such chance visits. Young people often "cruise" several houses together before deciding where to stay awhile. These differences seem typical of young-old distinctions discoverable in other parts of the country. Youth in Nuiqsut are at a disadvantage in that they have few, if any, places to be together free of adult supervision. This is what made the arcade and pool hall so special, it seemed. Houses could not be used for young people's parties unless the household adults were

away. This partially explains the "cruising" behavior of this age group. They could simply look for where their age group action is, and possibly where the adults are not.

Drinking behavior has been referred to above. Other social behavior, gatherings without drinking, occur much more often than gatherings with drinking. The young people smoke marijuana more often than they drink, but they indulge more heavily in alcohol once they start drinking. Marijuana is used in more moderation, but in greater frequency, than alcohol by the young. People over the age of 35 seem not to use marijuana that much, but our information is not very complete. The frequency of adult drinking parties is unknown, other than that at least three nights a month show signs that extensive drinking is taking place. The times of the month are not consistent but weekends are more likely to be drinking nights than weekdays. Young adults seem to follow the same pattern in their drinking, probably acquiring much of their alcohol from their parents.

#### GATHERINGS

#### Church.

Among other things, church is a social event. Church attendees are fairly regular. Those who come, come fairly often. Greetings are exchanged before and after the service. On Sundays, there is a coffee session after the morning service. People use this opportunity to talk as well. Announcements are made in church. In the absence of a newspaper and an effective radio station, this is the only central source of information. The church is also the base for the Jubilee Singers and the informal Singspirations which are held at intervals in various homes throughout the village.

Church attendance, the congregation size, and such is dealt with elsewhere. As a formal voluntary association with an ideology of fellowship, it is the model of community social relations. The formal structure of lay minister, elders, deacons and congregation, forms a constructed extended family composed of biological family households. In this sense, the church is one of the most significant social activities in the community. Unfortunately, average attendance is fairly low.

## Singspirations.

These events are essentially hymn sings held in individuals' households, either on special occasions of joy or grief or when a person wants to have an enjoyable social evening of singing. Generally, at least 20 people will come and the home becomes crowded. The singing can last from 7:30 p.m. until 2:00 or 3:00 a.m., but usually ends earlier. The people who come are mostly the same people who attend church. Some irregular church attendees attend singspirations fairly regularly, however. Refreshments are usually served during the singing. Anyone may request that a particular hymn be sung. One function of singspirations is to enable people to practice singing new hymns.

### Feasts.

The Thanksgiving and Christmas feasts occurred during our research period. A researcher attended both. Perhaps 200-250 people attended each of the feasts. They were pretty much alike, except for a shortage of frozen fish at the Christmas Feast. People sit in the school gym and are served different kinds of food sequentially. Extra muktuk

and frozen fish are provided for later consumption.

The feasts are important for several reasons. They demonstrate a community solidarity. They allow the community to offer hospitality to whoever is visiting the village. They also allow the redistribution of harvested fish and game. All of these reaffirm cultural values and remind villagers of ideal modes of behavior. The feasts also serve to draw back into the village those residents who work in other places, again reaffirming the community identity.

The feasts are also events at which prestige and honor are awarded those who provide the food to be redistributed, especially the whale. They have thus become political in a personal sense as well as remaining an expression of community identity. There need be no conflict between these two, so long as the sense of community identity does not become entangled with an identification with any one particular individual. If that were to happen, the nature of the event, and probably of the community, would have changed unalterably. A community of equals honoring its successful hunters would have been co-opted by an individual or an elite group and transformed into a stratified community. Because of the nature of events and resources, this may have already occurred in Barrow and for the North Slope Borough. If that is the case, Nuigsut will not be far behind and the feasts should be a sensitive indicator of that. People's attitudes and contributions towards the feast will tell.

#### Eskimo Dances.

For a long time, perhaps as long as two years before our research, there had been no Eskimo dances. From November 16, 1982 to March 9, 1983 there were two or three of them.

They again reaffirm community ties and cultural continuity. By how well people know the dances one may judge the transmission of traditional culture. Eskimo dances could also be a way to co-opt the form of traditional Inupiat culture for political and ideological purposes, of course. A living culture cannot avoid this sort of adaptation, in fact, but must beware of maintaining an empty form simply in the name of tradition. Eskimo games and dances will be good indicators in that sense. The number of participants and how skillful they are will indicate resources allocated to these events. Frequency is a gross indicator of interest.

The form of an Eskimo dance can be described in terms of the roles which comprise the event. Drummers, singers, and dancers perform together for an audience. Individuals can pass from one role to another, so that the composition of these role groups is constantly in flux (some more than others). Indeed, at times it seemed that these transitions, the sharing of role responsibilities and a community identity, were what the event is about.

The dance itself is a short sequence of hand, foot, and body movements. These movements may be a standard, learned, dance or one that is improvised. The dance is accompanied by the rhythmic beats of the drum and sometimes by a chant-like song as well. The dance is usually repeated, but rarely lasts longer than two minutes. There are pauses of perhaps 15 seconds between dances.

The drum is a light wooden hoop about eighteen inches in diameter which is covered with an animal membrane. It is sounded by striking its rim from underneath with a wooden stick. All drummers play in unison, but they have a leader who starts each dance song. Drummers sit in a line, holding their drums, and are usually face to face with the dancers.

Drummers sometimes sing while playing, but not always.

A line of singers stands behind the drummers. They accompany the drumming with chant-like songs. Some songs are meaningful, while others are merely vocalizations, we were told. Not all dances were accompanied by songs.

Drummers seem to always be men, and standing non-drummer singers are apparently always women. Dancers can be of either sex and sometimes drummers and singers will temporarily give up their roles to dance. In fact, the female singers at times initiate certain dances. The watching audience provides most of the dancers. however. Occasionally, a member of the audience will drum for a short period while a drummer dances. The main role switches are from audience to dancer and from singer to dancer, however.

Dances may be done by a single individual or a group of any size. Groups may be of a single sex or mixed. There seemed to be certain types of dances for each such combination of number and sexual composition, but we were not knowledgeable enough to make detailed and specific observations in this regard. Age did not seem to be an important factor except that most solo dances were by older men. Older dancers seemed more skilled than younger dancers. Women danced only in company.

Dance movements are usually meant to be meaningful. Some are traditional, such as hunting movement dances. Others include such modern actions as tipping up a bottle. Group dances tend either to have a formal structure, synchronized movements and a limited number of dancers, or to be more freeform mass dances of social solidarity. The former often involve same-sex groups or mixed groups formed by the dance initiators inviting specific others to join them. The latter

are always sexually mixed and include whoever wishes to join in.

A description of the Eskimo dance held in Nuiqsut on Christmas Day will flesh out this general form. There were four male drummers and three female singers. A fifth drum was shared by three other men. There were two periods of dancing separated by a 15 minute rest period. Approximately 150 people attended. Younger age groups tended to sit together--tots of 3 to 7 years, high schoolers, and people 18 to 25, Older people sat near friends and relatives.

The first period of dancing consisted mostly of spontaneous couples and group dancing. A few individuals did try to initiate dances by inviting others to join them, but nearly all dances started as group dances. The second period of dancing started with one of the three singers initiating the dance. The three singers continued to do so, sometimes inviting specific people to join them, for about 30 minutes. Most were very controlled dances. The pattern then changed to more audience initiated activity.

During both periods, dances varied from solo dances to mass group dances. The former mayor of Nuiqsut, at the time of our research living mostly in Anchorage to attend to the business of Pingo Corporation, started several dances as the captain of the whaling crew that brought in last year's whale. These dances ended as mass "stomps" which could rightly be said to be the highlights of the evening. Nearly everyone took part in them.

Few elderly men danced. Many more elderly women danced. The young were not well represented. The important thing seemed to be for people to dance at least once. The present mayor danced twice, but never went out to dance when the man

who had been the first mayor was out on the dance floor. Dances varied from solo patterned dances to more free-form group "stomps". In between were multiperson patterned dances. Some dances were unisex while others were mixed. Group "stomps" always became mixed although they usually began as predominantly male. The sequence of dances had some structure, but did not follow any sort of script. Age groups tended to dance together even if they did not sit together. Seating, except for adolescent and young adults, seemed to be mostly along kinship lines.

#### Eskimo Games.

Our notes of the week-long Eskimo games after Christmas are extensive, but excessive detail is not necessary. The games run 24-hours a day and are essentially contests (mainly but not exclusively tests of physical endurance) between the individuals comprising two opposing teams. This year, in Nuiqsut, the teams were made up of married individuals versus single individuals. Last year the teams had been chosen by their captains. As last year's competition was much closer than this year's, people say that they will probably return to that system.

The games were organized and run by a volunteer committee headed by an active middle-aged couple. The bulk of the committee members were unmarried males between 20 and 30 years old. By the end of the week, the functioning committee was much smaller than at the beginning. There was always adequate manpower to do what needed to be done, however. In addition to organizing the events themselves, the committee was responsible for the refreshment stand.

The mechanics of the games are fairly simple. A coin was tossed to determine which team could choose the first event. Most games are competitions between individuals. An individual from the choosing team goes to the middle of the floor between the two teams. An individual from the other team then accepts the challenge. Once an individual loses, he can no longer compete in that game. An individual plays until he loses or until the other team no longer fields a player, either because everyone has been beaten or those remaining choose not to play. The team of the winning individual then wins the event. The losing team then chooses the next event and the process goes on. The event chosen must be "familiar". That is, it must have a recognized name and rules. It need not be something that everyone, or even most people, have done recently or ever at all. With the consent of the other team, events can be made up on the spot. There are sometimes wrangles before events as to the proper way to play. Most people do not practice these events apart from the actual games.

Events could only be played once, but variations on the same theme were allowed (different finger pulls, toggle pulls, high kicks, etc.). For individual events which did not pit one person against another, team members were not barred from future competition in that event as long as one member of that team succeeded. In the one-foot high kick, for instance, each team had to have one of its members leap up in the prescribed way and strike the object target at a higher height than an individual on the other team had just done. All team members can try, but each has only a certain number of attempts per height. Once one person succeeds, however, the other team must better it. The teams alternate until one team fails to better the others' height, and so loses. All team members can try at all heights, and not all of one individual's attempts need to be in succession. Thus

some people who have little chance of succeeding may compete in order to give a team member time to rest. Two person and relay events were done in the same fashion.

As could be expected from these mechanics, only rarely does an individual who starts an event also win it. Even if one is undeniably the best, a series of opponents can wear one out. Thus the team with more individuals, in this case the singles, has a large advantage. Married men tended to be bigger and stronger, but there were many fewer of them. Thus, the physical advantage which married men had in the strength events was partially negated. In addition, unmarrieds tended to be better at the jumping and dexterity events. The strategy of choosing events was thus part of the competition.

Attendance varied from a high of 160 people to a low of 20. Much partying and social activity was going on in Nuiqsut at the same time. The married teams especially had problems ensuring that enough team members were always present. Basically anyone in attendance was part of one of the teams. Only individuals below the age of 16 were excluded.

Men's events did differ from women's to some extent. Men concentrated more on physical contests, while women supplemented these with more "party-game" type events (blind folded find-your-shoe relays, balancing relay races, etc.). Also, men seemed to feel the need to compete in nearly all events, regardless of whether they felt they could succeed or not. This pattern did not seem to exist among the women, who sometimes had a sizable portion of team members decide not to try an event. Near the end of the games, when it was clear that the unmarrieds would win handily, men's events came to more closely resemble women's. Idiosyncratic events predominated over physical contests.

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The tone of men's and women's games differed as well. The men's games were more competitive, but did not seem as confrontational as the women's. Women did tend to play more games which involved judgment calls. One especially, which required that one keep a straight face while one's opponent made faces and tried to make one smile, caused disputes about who smiled and who did not. Married women were generally at a disadvantage when competing with the unmarried women, so that the unevenness of the competition may have caused some of this tension. The two men's teams were more evenly matched as far as individual abilities went and seemed to lack this element of generational tension.

There are several possible explanations. Men interact in intergenerational work and hunting situations where they are part of a team. The whaling crew metaphor is central in their minds. Older men teach younger men where and how to hunt. Construction work is organized in teams, with older more experienced men usually supervising or teaching the younger. Women do not have this sort of experience as much. Many of the domestic skills of traditional Inupiat women are no longer taught. Hide preparation and skin sewing is for the most part no longer part of everyday life. Cloth, down, calf- and sheepskin, and Sorel boots have replaced much of traditional dress. Young women now spend their days at the school and not in the household. Intergenerational continuity seems to be much less explicit for Inupiat women than for Inupiat men. Social stresses result, and the problems of women's status and male-female relationships dealt with in "Cash Economy" and elsewhere seem to bear this out. The present day support systems of Inupiat culture are maleoriented, as has perhaps always been the case. However, adolescent females no longer have a clear behavioral role model within their households to follow. Women's roles and statuses are changing much more rapidly than are men's.

### The School.

The school provides recreation mainly for the young, those up to age 30. Most users are 25 or less. Adults use the school as a place to hold meetings, but not to socialize. The young people use the school for occasional movies and dances, but mostly for physical activities like swimming and basketball. The latter is by far the most popular sport in Nuiqsut. The gym is the focus of the school.

Several age groups use the gym. It opens at 7:30 p.m. every night except Wednesday and Sunday, and has different hours on Saturday. A non-Inupiat schoolteacher has supervisory responsibility. Early in the evening, a mixed group of young children three to eight years old is in evidence. They average about eight in number. Men in their 20's dominate, however. When they want to play, they do. Men usually outnumber women two or three to one. Many times games are played full-court so that more people watch than play. An average night would have about 30 people in this age group (16-30+). Those people aged 8-15 are more sporadic in attendance, but average perhaps four to six per night. The people who come tend to do so very regularly.

There are few alternative activities in the village. Movies are shown relatively rarely and attendance is sporadic sometimes high, sometimes low. School dances were unobserved.

## The NSB Dredge Camp.

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The construction camp is an unofficial visiting spot for many people. The cook has worked in Nuiqsut long enough to know people and is friendly enough to like to do people favors. It is a good place to drop in, visit, and have a cup of coffee.

It is also a good place to learn what is going on, since most of the transients in town stay there. It is also possible to occasionally get something to eat there. Most villagers who stop in tend to see it as a place to socialize and drink coffee, however. Mostly, NSB employees and men in their 20's and 30's stop in. The Mayor and the Presbyterian minister are also regular visitors.

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## The Kuukpik Corporation.

The other place in the village with free coffee is the Kuukpik Corporation. This is much more of a social center. It is near the airport so that people can see arrivals and departures. It is the center of Inupiat power and activity in the village since the city office is in the same building. The clinic, in the other half of the building, brings in still more people for casual conversation. The Kuukpik Store is just next door. If Nuiqsut has a "downtown", this is it.

There always are at least two Kuukpik employees around, except during lunch (when no one is there) and on rare occasions when nearly everyone is out of town or under the weather. There are usually two or three Inupiat villagers sitting around talking. Non-Inupiat also commonly sit and chat here. At times, as many as 15-20 people may be in this building, but the peak is usually 10 or so.

#### SPENDING MONEY ACTIVITIES

#### Bingo.

Bingo in Nuiqsut began in about 1980, sponsored by the Health Board. They have run Bingo for about three years. The

Mother's Club has been operating Bingo for about one year and now alternates nights with the Health Board. Bingo is usually held every night except Wednesday and Sunday (church nights). Both use the multipurpose building and start at 7:30 p.m. The session can last past midnight, but usually does not. To play three cards costs fifty cents. People can play as many cards as they wish. Every night a "blackout" jackpot game is played, with a limit on the number of numbers to be called (a minimum of 50, a maximum of 75). There are 24 numbers on a card and 75 possible numbers in all. To win at blackout, all 24 numbers on a card must be covered. If no one wins one night, the pot keeps growing and the number of numbers called is increased. When more than one person has bingo, the pot is shared.

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Before the jackpot game, any number of different games can be played. Basically, a "bingo" is any agreed upon arrangement or design of covered numbers. A number can be covered only after it is "called" by the person in charge, of course. Each game is known by the name of the arrangement or arrangements of numbers which constitutes a winning design for that game. A free game or two is included during the session before the jackpot game. Each evening's sequence of games is written out before hand. Special bets are possible on select games for intermediate bingos, on the way to the final bingo. All in all, the system is pretty complicated for such a conceptually simple game.

To learn the games, one sits down by a person one thinks is experienced and simply asks what each game called looks like. There is no central catalog of what various bingos look like, and no one seems inclined to compose one. In fact, no one seems to even conceive of the existence of such a thing. As an Inupiat learning experience, Bingo seems rather typical.

A typical Bingo night will have 17 women players and 8 men players. The two to one ratio is maintained even on light or heavy attendance nights. Nearly everyone smokes and most will drink at least one soda during the night. Few people content themselves with playing only three cards. In fact, for jackpot games, people play up to 42 cards. Some nights all available cards are in play. Other nights, perhaps only one third of them will be. Men tend to sit with men and women with women, although there is some mixing. Married couples tend to break up when they enter the building and sit with same-sex friends or kin.

Besides the Bingo game itself, game of chance cards similar to instant lottery tickets are sold for \$1.00 and \$2.00. The actual form of these tickets varies from night to night, but can take the idiom of a slot machine, poker hands, or similar games of chance. It is clear from the volume of these sold that the organizations make money on them and not on the Bingo itself. Not everyone who plays Bingo also plays the "instant winners", but at least two thirds of the players seem to. A common pattern is for a person to buy \$20 worth of these tickets at one time. There is usually some ritualized way of opening them and a proper way to display winning and losing.

Bingo is clearly seen as a social event even though the games move too fast for people to socialize during them. Such games as "straight bingo, love thy neighbor" foster a feeling of sociability, as the winner must choose someone with whom to share his pot. The few false bingos which occur are not treated with any overt displeasure even when they require that all drawn numbers be recalled. There is usually some form of good natured "ribbing" of the caller and the people playing, as the evening goes on.

The money which the Mother's Club and the Health Board realize from Bingo is used to help people pay their medical transportation from Nuiqsut to Barrow, Fairbanks, or Anchorage, or to otherwise help those Nuiqsut families who are in need. People in general have little idea how much money Bingo takes in, but gossip about who takes how much out of the till is constantly making the rounds. As with most gossip, this may have a little element of truth in it and a larger element of fabrication. The fact that such things happened at least once in the past makes it very difficult to maintain a completely clean image now. When Bingo was not held until March of 1983 due to a delay in obtaining the necessary state license, people suggested poor financial records as one reason.

### Pool Hall.

The Pool Hall is owned and operated by a long-term resident of Nuiqsut (he maintained a fishing camp in the area in the period before the 1973 refounding of the village). He and his family live in one of the original houses built in Nuiqsut. They constructed the Pool Hall themselves, it appears, in the summer of 1982. Since the family has many male members and the machine owned by the Kuukpik Corporation for drilling holes in which to set structural piles is expensive to rent, they dug the holes by hand. The Pool Hall has three tables and is heated by a diesel oil heater.

During most of our research, the Pool Hall was this family's sole source of cash income (the male head of the household went to work in Barrow near the end of our fieldwork). It cost \$1.00 per person per game for "slow" games such as cribbage or rotation, and \$.50 per person per game for "fast" games such as eight-ball. Money was collected at a table

near the entrance, where one of the male family members sat. We never heard any complaints about the amount charged to play. The Pool Hall was formally open non-church nights from about 7:00 p.m. or 8:00 p.m. to 1:00 a.m. or 2:00 a.m. However, we noted that during our stay, these hours gradually lengthened. First, the Pool Hall stayed open on Wednesdays, the secondary church night in Nuigsut. Then, the hours were lengthened so that at least the regular patrons could play pool pretty much as long as they wanted (5:00 a.m. on occasion). Finally, the Pool Hall was kept open on Sundays, or at least some Sundays. We did hear complaints about the Pool Hall being open on church days, thus tempting people from God. Complaints were also heard about the hours, since they allowed young people to stay out late. Many adults also thought that alcohol and drugs were readily available from the people who played pool at the Pool Hall. The Pool Hall officially prohibited alcohol and drug use in the Pool Hall.

For the most part, patrons at the Pool Hall were fairly young, ranging from high school age to 25. A few older men would also play sometimes. Most players were single, but both males and females were usually present. A usual group to find in the Pool Hall would be 8 to 15 individuals. On occasion, there would be more, but this caused crowding. People did like to watch and talk as well as play pool, and it was used as a place to go to meet others and to see who was there.

Because the Pool Hall was relatively drafty, it was difficult to heat when the weather was cold. Since there was one 7-10 day period when temperatures were -60°F or so, and other times when the Pool Hall ran out of fuel oil, the Pool Hall was not always open. Patrons could never be sure which days these would be, however, so one social question was "Is the Pool Hall open?" It seemed to be used as a place to

go to be with one's friends away from the supervision and authority of other family members. On those nights when the Pool Hall was closed and the gym was not open for recreation, Pool Hall patrons tended to gather and watch television or play cards.

### Arcade.

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For at least a short time, probably the summer of 1982, there was a video arcade in Nuiqsut. This was comprised of about six video games in one of the original one-room residential structures. The owner of the house and Arcade was in Barrow, so the house was not being lived in at the time. A Nuiqsut Inupiat was managing the Arcade in November when our research began. It had just closed, however, and was never open while we were there. The video machines were eventually packed up and sent to Barrow.

The patrons of the Arcade were evidently junior high and high school students with a smattering of people in their twenties. Besides the games, the Arcade sold snacks, pop, and had a jukebox. The latter was a real attraction as record collections are relatively rare in Nuiqsut and even after the Arcade closed, people borrowed these well-worn records to record them onto cassette tapes.

The Arcade evidently closed for two reasons. First, it was not making money because it cost too much to heat and \$.50 per play mounted up only so fast. Second, adults complained about their children spending too much time there and the apparent availability of alcohol (and perhaps other drugs) there. There were times when the Public Safety Officer was needed at the Arcade, people told us. The minutes of the Nuiqsut Village Council meeting for September 7, 1982

indicate that several community members were concerned about the behavior of youths at the Arcade, and their influence on each other. However, villagers told us that community pressure was not enough to close the Arcade. It took economic reasons to do that. Even though this reduced the number of recreational opportunities or choices open to people, (especially young people), we heard no complaints about the closing of the Arcade.

## <u>Colville Cafe</u>.

Our information on the only restaurant in Nuiqsut is not very extensive. It seems to have been open less than a year. The proprietors were among the original resettlers of Nuiqsut and have extensive kinship relations throughout the village. He serves as manager, waiter, and cashier while she cooks. The food is exclusively mainstream American -- hamburgers, french fries, beef steak, chicken, pie, etc. They say that business depends on economic activity in the village. When construction projects are running, people have the money to come in and eat. Most non-Inupiat construction workers and other specialists stay at a dormitory-type camp where food is provided, so they do not need to eat at the restaurant. Inupiat workers will sometimes eat there, however, and non-Inupiat workers who do not live at the camps find it very convenient.

People who eat at the restaurant, at least those who go there for lunch and dinner, tend to be young. At least some high school age people eat there by choice, if they have the money. Prices are considered somewhat high and quality not all it could be, but overall people are satisfied enough to keep going back. Young single and married adults frequent the cafe as well. Older people eat there less often than younger

people (based on informal conversations, off-hand remarks, etc.). Breakfast is eaten at the restaurant mainly by middle-aged and older Inupiat, however. This is a meal that even at home consists of eggs, cereal, bread, and such for most Inupiat. Young people tend not to get up early enough to eat breakfast at the restaurant, or must go to school instead. Village visitors also tend to eat at the restaurant.

Typically, only one or two of the six or so tables in the cafe are in use. Our observations were made during the least busy part of the year, however. Business in the summer can be expected to increase substantially. The cafe does not seem to be used as a social gathering spot, but our observations were limited and our entry always caused a change in the situation anyway. People eating in the restaurant were always willing to talk with us, however. There just was not always someone to talk with.

### Outside Recreation.

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This topic is not clearly defined for the Inupiat, or at least it was not evident to us. Inupiat ride snow machines, motorcycles, three wheelers, hunt, fish, etc. but do not seem to distinguish between doing so to acquire subsistence resources and doing so for recreation. This is consistent with earlier reports (Hoffman et al. 1978:46).

### Summary.

There are quite a few behavioral settings for leisure activity in Nuiqsut. Each is characterized by a user population. The number of such settings and the characteristics of such settings are measures of social development and

change. Multi-function settings, such as the Kuukpik Corporation, are especially significant because of the meeting of several different user groups, each with its own characteristics. An inventory of such single and multifunction settings is a valuable tool in assessing social change or stability.

# Summary

An inventory of the behavioral settings that exist in a community provide a measure of its degree of differentiation. Combined with the knowledge of how people interact in those settings, a measure of community activity is obtained. These can be tracked over time to study change. The monitoring chapter discusses this further.

Observations of material goods can give an accurate indication of a community's overall economic state. The condition of housing, consumer goods present, and the presence or absence of litter of various sorts are all easily observable. Clinic records reflect the population's physical health. Public service records record the level of the most severe disruptive behavior. Both sorts of records have limitations.

The most severe health problem is no doubt the abuse of alcohol. The effects of alcohol are recognized by everyone in the North to be devastating. Ways to deal with the problem are difficult to find. A community problem with alcohol does exist in Nuiqsut. We have attempted to measure the degree of that problem by looking at the extent of alcohol use. Given the patterns of alcohol use on the North Slope, no short-term mitigating actions are obvious.

### VIII. VALUES

### Traditional Inupiat Values

#### INTRODUCTION

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Values are abstract generalizations seen as principles which underlie and account for patterns of consistent behavior. Hence, if a person is perceived by others as consistently not misrepresenting himself in discourse and behavior, he is said to demonstrate the value "honesty". The statement of a value is often difficult to interpret, however, as discussions of values tend too easily to lose contact with actual behavior and empirical reality. We hope to avoid this pitfall by relating value ideas to observed behavior. This behavioral approach will differ somewhat from that of others which rely more heavily on the statements of informants. For those aspects of culture which reflect the statements of people about preferred behavior, we use the term "norms". Within Nuigsut, we wish to concentrate on five aspects or domains of value inquiry--Kinship, Egalitarianism, Seniority and Respect Inupiat Identity, and Subsistence.

Values are often perceived to be threatened by contact with people who are different. Concern for the maintenance of traditional Inupiat values has been consistently expressed in a range of media, newsletter publications, public testimonies in hearings and at church, and posters in schools, churches, and public buildings speak to this concern. We observed two examples available to people in Nuiqsut, and believe them to be typical expressions from this genre (Table 55). We will use their content as demonstration of the composition of contemporary values concerns and as an organization for discussion.

# Table 55: INUPIAQ VALUES

WHAT CAN YOU DO TO HELP PRESERVE THESE IMPORTANT INUPIAQ VALUES? Know the Inupiag Language. Share with others and try to be helpful to people in your village. Treat all people with respect. Cooperate with others. Respect the elders. Treat children with love. Work hard and avoid laziness. Know your family tree. Avoid unnecessary conflict. Respect all animals and be grateful to them. Don't lose your sense of humor. Meet your obligations and responsibilities to your family. Respect successful hunters. Learn Inupiaq domestic skills. Trust in a spiritual power greater than yourself. PUT THESE VALUES INTO PRACTICE EACH AND EVERY DAY. LEARN AND TEACH THE INUPIAQ WAY. Source: Posted on wall of Kuukpik Presbyterian Church, Nuigsut, Alaska HUMAN VALUES INUPIAQ VALUES Knowledge of Language Sharing Respect for Elders Love for Children Hard Work Knowledge of Family Tree Avoid Conflict **Respect** for Nature Spirituality Humor Family Roles Hunter Success Domestic Skills Humility Responsibility to Tribe Source: Christensen nd:9

#### KINSHIP

Kinship is the central organizing principle of Inupiat social organization. The operational mode has of course undergone some changes in the adaptation from a nomadic or semi-nomadic society of small social groups to one of larger, permanently settled, communities. Much traveling still occurs, as we have seen, but the scale and rhythms have changed. The importance and flexibility of kin ties remains, and pervades all else.

Four or five of the values listed in Table 55 related to kinship (elders, children, family tree, family roles, tribe). Earlier chapters have shown some of the ways in which kin ties function in economics and politics, and how important they were in defining the group of people who resettled Nuiqsut in 1973. In fact, all activities tend to be expressed in a kinship idiom.

#### EGALITARIANISM

Five of the values listed relate directly to egalitarianism (sharing, avoid conflict, humor, humility, tribe). Our section on leadership developed the theme of competition in an egalitarian society. Redistribution, especially to those in need, through kin ties is a strong integrative mechanism for the community. Sharing is a stressed societal norm. We observed contexts where this norm was often ignored (drinking, for example) but overall the orientation is maintained. The reluctance to make a decision for someone else, to tell others what to do, was also discussed. To set oneself apart from one's fellows is inappropriate. Behavior at public meetings shows this. Lack of overt conflict is the ultimate goal--not necessarily a timely or definite decision. The

confrontational and adversarial nature of introduced non-Inupiat government and economic structures often seems inappropriate and stress provoking. The development of Inupiat leadership to deal with this disjuncture and stress must be further explored.

# SENIORITY AND RESPECT

Age and experience are much respected and give extra weight to a person's words or actions, as is shown by five values (elders, work, family tree, hunters, tribe). However, new institutions and situations have reduced the active role of the elders somewhat. Skills not developed by the older generation are needed at times. In Nuiqsut, the question is made more difficult to address, both for the villagers and the researchers, by the lack of elder men. The effect of this relative lack should be explored.

# INUPIAT IDENTITY

Perhaps four of the values speak to this relatively new concern (language, family tree, domestic skills, tribe). Before the onslaught of the seekers of oil, the Inupiat had no cultural-identity crisis as such. Serious problems <u>did</u> exist, but Inupiat did not have to think about learning Inupiaq, or their kin relatives, or domestic skills, or social responsibilities to other Inupiat, because they did not have a choice. However, this is no longer the case. Where before an Inupiat individual had to exert himself <u>not</u> to do these things, today an Inupiat individual must exert himself at least as much to accomplish them. This is due to increased contacts with other cultures, of course, and the resulting contexts for which traditional Inupiaq culture has

no rules. Tension, stress, and change are then inevitable.

#### SUBSISTENCE

There is a continuous debate in anthropology over the definitions of "culture", "society", "values", and other such terms and whether it is possible to study any one apart from the others. Values are ideas about what sort of behavior is proper. They cannot be studied apart from behavior, however, even if the behavior is purely verbal reportage. Whether cultural values are expressed through specific and unalterable behavioral imperatives is a question most often avoided. It is the central issue when discussing harvest resources and the Inupiat, however. Is a culture defined by a set of behaviors, a set of ideas, or the two working in conjunction? The last seems the only sound premise to us, as it most easily accomodates cases of cultural change. Both values and behavior do change over time while cultural identity may remain the same. Values tend to change more slowly than do concrete behaviors.

The literature on harvest resources and the subsistence issue, on the North Slope specifically and Alaska in general, is extensive. The question is seldom examined from a value perspective however (Kruse 1982:45). Yet, clearly the Inupiat are involved in a continuing process of social evolution. Their economic production strategies have shifted, at least for a time, to a mixed wage income/game resource harvest economy. The values underlying the behavior remain the same as when local subsistence resources were depended on nearly totally. After all, many of the people have lived both ways. The real question is the continued transmission and relevance of traditional Inupiat values to younger Inupiat brought up in a "modernizing" North Slope Borough. The political question

of Inupiat identity, combined with that of the economic question of who benefits from change, appears to be more responsible for the considerable concern expressed for subsistence values.

Much of what Fienup-Riordan calls the ideology of subsistence on Nelson Island (Fienup-Riordan 1983) applies equally as well to Nuiqsut. This economy, as all economies are, is more than a set of behaviors merely for the acquisition of enough to live. No people easily change their way of life in terms of behavior. Most often this resistance is phrased in terms of values. When the behavior seen to be subject to change or threat of change is that behavior perceived as most vital to and supportive of the fundamental values of their culture and society, it becomes the center for debate.

Our information from Nuigsut contains little of the detailed exchange data upon which Fienup-Riordan bases much of her ethography of the Nelson Island Eskimo. Purposes of the research were very different. However, one way of measuring much the same thing is the content analysis of public testimonies during public hearings. This is one important aspect of a study recently conducted for the Minerals Management Service (Kruse et al. 1983). One of the three villages from which much of their material comes is Nuigsut. Their study provides much better information on current North Slope value perceptions than is available elsewhere and allows better interpretations of contemporary behavior. Our treatment of public hearings mirrors their fuller treatment. Kruse et al's study does not have the fine behavioral components that Fienup-Riordan's does, but such data require intensive effort over a long period of time within a cooperative (and relatively small) community. Resource harvest information and such social-exchange data are both very difficult to collect. Short-term or sporadic research

cannot hope to do so. Our focus on observable behavior and measures is not meant to give short shrift to values. Rather, we see behavior as an expression of values. Values provide an abstract context within which to interpret behavior and behavioral change.

# Traditional Versus New Values

The comparison of the "traditional" to the "modern" is one which is commonly made but which appears to obscure more than it elucidates. What have changed for the Inupiat, so far, are the contexts of social behavior and organizational forms. The principles of social organization which are applied seem remarkably stable. The effectiveness of such applications in the most recent, rapidly shifting, socio-ecopolitical contexts is what must be evaluated. This is a question of adaptation and continuity, of how the old is transformed into the new or rather, of how the present is renewed to become the future. The words of John Schaeffer. speak the most powerfully to the researchers, as conveyed in Inupiat Ilitgusiat: Yesterday, Today and Tomorrow (Christensen nd). This is the source of Table 52. We have shown the continuity in patterns of leadership, and will discuss others below. Continuing Inupiat concern for traditional values is the time and effort devoted to Elders' Conferences (Smith 1980, Okakok 1981) and the central place such values hold when speaking at public hearings (Kruse et al. 1983).

#### Expressed Versus Observed Values

Values are not always expressed verbally and are seldom written down. Often, observed behavior contradicts

expressed values and norms. Values are inherently more conservative than behavior--the rules for behavior change more slowly than the behavior itself. This does not mean that values do not influence behavior. They serve as general guidelines. Normative rules do not determine behavior, however. This flexibility between normative rule (value or norm) and actual behavior can itself be taken as another Inupiat value. We have seen how this is expressed in the paragraphs above.

## New Social/Economic Situations and Organizations

There are many topics which could be profitably discussed here. The church as an historical agent of change is one. The school system as the primary meeting ground of the two cultures is another. New economic opportunities as they affect the family and male-female relationship are vitally important. The political actions required of the City Council, Village Corporation, and regional organizations in relation to more external economic and political entities require new sorts of political and social leadership, or at least reapplications and modifications of old ones. The effects of resident non-Inupiat upon things Inupiat (leadership family, subsistence, etc.) must be addressed. Individual, unplanned, and unregulated events are likely to have significant effects, especially as they are often not anticipated (interethnic marriage, income competition, etc.).

#### THE CHURCH

It is beyond the scope of our report to trace the role of the church on the North Slope (see Klausner and Foulks 1982:36-43). While the church is a key institution in that nearly every household in Nuiqsut is nominally Presbyterian, it seems to occupy a central position more because of its social aspects than because of its Christian doctrine. The Presbyterian Church provides a shared identity for people in Nuiqsut, but not one that people really think about. As in most American communities, attendance is low except for special holidays like Thanksgiving, Christmas, Easter, and such. Women normally outnumber men two or three to one. In Nuiqsut, normal attendance at the Presbyterian Church is approximately 25 people. Low attendance is 15-20, while 40-50 is high. Low attendance is more common than high. A higher attendance on ritual occasions supports the idea of a social rather than a uniquely religious identity.

The lack of an active Assembly of God core congregation in Nuiqsut is also indicative of this. The single most common difference between the two religions pointed out to the researchers by residents of Nuiqsut was the assertiveness and almost aggressiveness of Assembly of God services which feature testimonies by members of the congregation. These generally concern conversion experiences, troubles relieved through prayer, or the evils of smoking, drugs, and/or alcohol. Such testimonies were not common in the Presbyterian Church. Except for the Christmas holiday service, all testimonies in the Presbyterian Church were by elderly women who spoke in Inupiaq.

For this Christmas holiday service, more people than normal were at the Presbyterian Church, including some normally identified as members of the Assembly of God. The testimonies that night were quite involved, some including songs that had obviously been rehearsed. That in itself is not unusual as hymn requests, especially after a short dedication or explanation, are fairly common in the Presbyterian Church. This one night was different in that people accompanied themselves

with instruments and moved to the front of the congregation, almost as if performing for them. Several Inupiat informants commented on this afterwards.

No spontaneous testimonies by Nuiqsut people were observed other than these expressions of thanksgiving for the past year's blessings or much shorter requests for a prayer or hymn to help someone through a troubling time. When a delegation from the Barrow Assembly of God Church visited Nuigsut in the middle of January for about five days, this behavioral difference became obvious. As an experiment, and to see if the Nuigsut Presbyterian and Nuigsut Assembly of God Churches could be merged, services were held jointly while the visitors from Barrow were in Nuigsut. At the service held in the Nuigsut Assembly of God Church, every Barrow visitor testified individually, most in Inupiaq. Only then did a few Nuiqsut people speak, and their testimonies were much briefer, less intense, and less personal than those of the Barrow people. The next night, in the Nuigsut Presbyterian Church, the service began by having Nuigsut people perform hymns. People also requested hymns that the congregation would then sing. Every Barrow person did eventually testify, however, when "people got tired of singing". A few Nuigsut people testified, but again not many.

The lack of spontaneous Nuiqsut Assembly of God testimonies can be attributed to the small active congregation size. The fact that the Nuiqsut Assembly of God minister is non-Inupiat and does not speak or understand Inupiaq is no doubt also germane. He is also out of town fairly often and is relatively uncharismatic. His style simply does not seem conducive to success in Nuiqsut.

The style of the Nuiqsut Presbyterian minister is also quite important. He does possess charisma, and has a great deal of

influence even outside of his ministry. His religion is not of the ecstatic variety, however. He enjoys singing, and is obviously proud of his voice. He speaks quite capably in English, and is absolutely musical in Inupiaq. Yet, he feels uncomfortable about public testimonies. His religion is a deeply personal one, in terms of experience and words, and is oriented more towards helping to deal with humam problems rather than trying to uphold or convince others to uphold specific behavior norms. Perhaps one can say his church is more for humans than for God, more forgiving than absolute (this is our observation, however, not a view reported to us). Services at his church rarely include many testimonies and seldom last over an hour. Testimony services that we observed last much longer.

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Public testimonies run counter to traditional Inupiat sensibilities, as listed in Table 55, and this no doubt also is significant in explaining the absence of testimony in Nuigsut. The values of respect for others, avoidance of conflict, humility, and not putting oneself forward all serve to discourage acts such as public testimony. The Inupiat Presbyterian minister in Nuigsut recognizes his leadership role, but perceives it (as do others) as a service others allow him to perform in order to use his talents. He works to express the common will, which is attained only through a slow and involved, even if sometimes guided, process. Testimony often serves to short circuit the consensus process by defining issues too clearly too soon. The non-Inupiat Assembly of God minister in Nuiqsut may not be as sensitive to the social problems public testimony introduces, or perhaps he does wish to directly challenge public behavior in Nuigsut. Barrow, with its larger non-Inupiat population and larger size in general, can handle confrontational, less personal, debate and decision mechanisms better than Nuigsut can. Many people in Nuigsut moved from Barrow precisely to get away from these sorts of problems.

We cannot adequately discuss the role of the church in Barrow, but a comparison between Barrow and Nuiqsut would be very interesting. The Presbyterian minister in Barrow is non-Inupiat but has much experience on the North Slope. His congregation is large. The few services we were able to attend in Barrow seemed more impersonal than those in Nuiqsut, perhaps because of the use of a translator (actually, Inupiat co-minister would be a more adequate title as the sermon in Inupiaq sounded more moving, was more animated, and took longer, than the English sermon). The church and pastoral style in Nuiqsut can be directly compared.

The Assembly of God congregation in Barrow is smaller than the Presbyterian congregation, but is very active and should be studied in relation to North Slope Borough and Barrow leadership positions. It could well be that such a religion, encompassing public testimony and thus potentially weakening traditional Inupiat values about self-effacement, conflict avoidance, egalitarianism, and public judgments, appeals to medium and higher level executives and younger Inupiat precisely because of this conflict. New institutional forms, such as corporations, have brought new forms of leadership to the North Slope. It would be interesting to see if this corresponds to the appeal of a different sort of religion. There is also some indication that in Barrow religious affiliation may influence political linkages (again, perhaps through leadership style). This potential development in Nuigsut could be monitored, and would be expected to appear once a certain population size was reached (probably as low as 500 persons).

THE SCHOOL

The school has already been described in terms of physical plant, faculty, turnover, and community use. The actual functioning of the school will be discussed here because of its central importance to Nuiqsut and Inupiaq identity. The school teaches a set of values as well as a set of techniques and a body of knowledge. Too many schools do too good of a job teaching an unintended or even unconscious set of the first and fail to teach either of the last two. Which is the more serious failing is unclear, and to what degree the school in Nuiqsut has achieved its goals is not for us to judge. We raise questions and explicate context, and suggest things to look at.

The program for the Nuigsut school, as for all North Borough Schools, is set by the school board in Barrow. This is an Inupiat Board, but is advised by non-Inupiat staff and must no doubt act in accordance with state regulations. It is predominately what would be expected in a high school anywhere. Courses or sequences of courses relating specifically to the North Slope of Alaska are not as prominent as the NSB's commitment to them might have led one to believe. Inupiag is taught from the early grades, but few students graduate who speak Inupiaq fluently unless they have learned it at home. The Alaska Native Claims Act class is taught from a series of simplified pamphlets by a non-Inupiat teacher and little connection between it and what is now occurring in Nuiqsut is made by the students. The other Inupiat culture courses are relatively popular but do not really serve to transfer the living essence of the skills involved. Little skin sewing or other craft activity takes place outside of these classes. Thus, the school in Nuiqsut is little different from what was found in Kwethluk, Tuluksak, and Bethel by John Collier Jr. in 1973 (Collier 1973).

Mainstream classes and values were being taught in a way which prevented the traditional learning of "subsistence skills" (hunting, trapping, survival skills, processing of harvest products) through experience.

A very suggestive observation, made earlier, is that the satisfaction of Nuigsut people with their school seems to be inversely proportional to the size of the investment in its physical plant. Of course, along with this investment came a largely non-Inupiat faculty (with less and less use of Inupiat teacher aides) and a closer supervision of what was being taught from Barrow. The nostalgia of the first year in Nuiqsut also works in favor of the tent school. Nonetheless, it appears clear that Nuigsut villagers remember the early school as better suiting their needs, and responding to their desires, than the present system does (note that we say nothing about the quality of the education provided, as measured on some "absolute" scale). Some teachers feel that present students see the school as a resource-rich intrusion to be plundered whenever and however possible, either because it belongs to outsiders or to no one in particular. Students do not see it as "their" or Nuiqsut's school.

The first school operated with one non-Inupiat supervisor and five or six Inupiat teacher aides, and two Inupiat maintenance men. The present school employs twelve teachersadministrators, two Inupiat and ten non-Inupiat, and five Inupiat maintenance people with a non-Inupiat supervisor. An Inupiat secretary and a non-Inupiat study hall supervisor are also on the staff. Up to five Inupiat teacher aides are provided for in Nuiqsut's school budget, but only two of these positions were filled when we left the field. Qualified villagers, for whatever reason, have not wanted to serve as teacher aides. There are thus three or four

significant issues here: 1) a lack of Inupiat teachers, 2) rapid turnover of non-Inupiat teachers, and 3) little success in the recruitment of Inupiat teacher-aides, and 4) rapid turnover of teacher-aides. All reinforce the perceived separation of the school and the village. Another issue may be the rigid time constraints imposed by the school in comparison to the greater flexibility of the original tent school.

Teachers interact very sparingly with Inupiat residents. This is at least partly due to the great demands placed upon their time. The size of the faculty allows for little or no duplication of skills--each teacher has a full day's responsibility every day (although there is enough slack to cover teacher illnesses). Further, as the school is the center for village recreation, the teachers spend many evenings supervising gym, swimming pool, and sports teams' trips to other villages. This gives them the opportunity to earn additional income, but also increases their desire for privacy outside of the work situation. It also supports the pattern of non-Inupiat teachers working on the North Slope only long enough to save a nest egg, and then leaving for a location more to their liking. Some teachers in Nuiqsut express this as their goal, while others do not. None seriously plan on living permanently in Nuiqsut, nor has any Inupiat resident ever mentioned that possibility. The lack of school-village interaction is then seen as inherent in the structure of the system. Short-term teachers with severe time constraints and no Inupiag language skills simply cannot "know" the village outside of the school. The fact that most teachers spend their vacations and breaks outside of the village also limits their interaction with Inupiat residents.

Teachers in Nuiqsut thus "enclave" themselves. Their interaction with, and influence on, the community as such is

minimal. This may seem paradoxical, since education is considered one of the vital community responsibilities in American culture at large. Apparently, the school in Nuiqsut does not hold such a position in the minds of the people of Nuigsut, at least not yet. This may change as more students graduate. They will either stay in Nuigsut, go elswhere looking for work, or go to college. The first and the last would likely result in a closer relationship between the village and the school, especially if Inupiat teachers were eventually hired. The second would probably produce no change in the situation as it now is. The program of study actually presents few choices that are any different from those available in any other high school program (see Collier 1973:112-127, especially 117). Teachers in Nuiqsut do not voice public opinions on this precisely because of the sensitive topic of Inupiat identity and cultural transmission. They feel that their job tenure is tenuous enough as it is and that there is no consensus as yet among the Inupiat as to the proper form for a formal Inupiat education. In this they seem to be correct--there is as yet no operational Inupiat consensus. This only serves to further isolate the teachers from the village.

On the other hand, non-student villagers avoid the school for the most part. Employees, the Presbyterian minister, the mayor, and occasional elders are the only Inupiat adults in the school during school hours. The school is used for public meetings, clubs, and community feasts and celebrations, but then non-Inupiat tend to be absent. Parents of students have suprisingly little contact with the school. This is one cause for teacher disquiet. They feel much of the support they need from the families of their students is not there. How to generate such support from families who are often unaware of what the school is about, it being totally alien to their experience, is a difficult question. The

school advisory board, made up of Inupiat village residents, holds monthly public meetings. Few people come, however, except when a door prize of 55 gallons of oil is given away. Even then, most people merely listen.

The students' attitudes towards the school seem to range from neutral to hostile. Most in the higher grades seem bored or apathetic. Elementary classes seem more energetic. Universally, gym is the most popular class. Attendance before lunch is usually low (informant information confirmed by observation), so teachers never plan anything vital for the morning. Experiments of allowing recreation before school or starting a breakfast program in order to increase morning attendance have been discussed. Records on tardiness were not available to us. Daily attendance records, in aggregate form, were on file in Barrow and show relatively good attendance (Table 56). Monthly attendance figures showed little patterning. Many students see the school primarily as a place to eat a free hot lunch, to play basketball, and as a place to be free of home influences. One of the most effective sanctions teachers have is that of denying students access to free recreational periods.

The close identification of the school with community recreation is not an inevitable one. The recreation facilities are at the school, it is true, but if and when the community center is built, this would not have to be true. However, as the mayor has stated that he thinks recreation in general, and basketball courts in particular, are the school's responsibility, such a change in perception appears unlikely. Teacher supervision of recreation could be easily changed, however. While this may seem an ideal way for teachers and community to interact, it does not work out that way. Rarely do people over the age of 25 go to recreation, and this occupies a fair amount of teachers' time.

Table 56: NUIQSUT SCHOOL ATTENDANCE

	08/20/80- 05/19/81	08/18/81- 05/26/82	08/23/82- 10/27/82	<u>Total</u>
Kindergarten ADAb (% of ADM)	158 (16%)	117 (26%)	77 (19%)	352 (19%)
ADAt <sup>b</sup> (% of ADM)	831 (84%)	332 (74%)	334 (81%)	1,497 (81%)
ADM <sup>C</sup>	989	449	411	1,849
Elementary ADAb <sup>a</sup> (% of ADM)	363 (9%)	451 (8%)	94 (9%)	908 (9%)
ADAt <sup>b</sup> (% of ADM)	3,610 (91%)	5,050 (92%)	952 (91%)	9,612 (91%)
ADMC	3,973	5,501	1,046	10,520
High School ADAb (% of ADM)	1,441 (16%)	1,456 (16%)	177 (9%)	3,074 (15%)
ADAt <sup>b</sup> (% of ADM)	7,538 (84%)	7,602 (84%)	1,729 (91%)	16,869 (85%)
ADM <sup>C</sup>	8,979	9,058	1,906	19,943
TOTAL ADAb <sup>a</sup> (% of ADM)	1,962 (14%)	2,024 (13%)	348 (10%)	4,334 (13%)
ADAt <sup>b</sup> (% of ADM)	11,979 (86%)	12,984 (87%)	3,015 (90%)	27,978 (87%)
ADM <sup>C</sup>	13,941	15,008	3,363	32,312

a Aggregate Days Absent b Aggregate Days Attendance c ADM = ADAb + ADAt

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Freeing them of this responsibility would give teachers time to interact with villagers in unstructured ways and also enable (force) villagers to take at least partial responsibility for their school. There seems to be little support for this change, though.

The gulf between the village and the school in Nuiqsut appears to be very real. Note that this is not related to either teacher quality or educational quality, neither of which we are qualified to evaluate and neither of which was considered above. Everyone is acting with the best of intentions. There may be additional factors, but we cannot say. What does appear as the vital issue to us is the lack of Inupiat involvement with the school and the resultant lack of relevant Inupiaq content in the program of study. The schools would seem to need to more clearly relate traditional Inupiat values to present day Inupiat life opportunities. This is, unfortunately, far from a simple matter.

#### MALE AND FEMALE ROLES

Reviewing the ethnographic description of Eskimo men's and women's roles is important when we investigate the foundations for contemporary Inupiat gender roles. Referring back to our discussion of the family and individual status, the traditional value system would seem to indicate that Inupiat men and women had necessary but separate complementary positions in an essentially household oriented economy. Even in the winter villages, when men participated in the karigi (or "men's" house), women still were expected to continue to cook or prepare food for their male family members. The ethnography of this region indicates that women's roles were subservient to men's social power and prestige positions. The social standing of an umialik or a hunter held in high

esteem would be transferred to the community valuation of his wife's position but not necessarily vice versa. Undoubtedly any egalitarian society that embraces the symbolic and cultural idiom of hunting, especially as a male occupation, would have an overriding male idiom dominating social ideology. We believe that this is expressed in both traditional and contemporary Inupiat society. However, we qualify the extreme significance of the male idiom dominating social values in such a society by emphasizing the vital necessity of women's productive and reproductive labors. We should note that most ethnographic investigation was conducted by male ethnographers who may have failed to understand the underlying significance of the complementarity of sexes in productive labor and the economic necessity for the interdependence of gender roles in Eskimo society.

The continuity of traditional Eskimo values related to gender roles may be expressed in the contemporary economic and social positions of Inupiat men and woman. Researchers (Klausner and Foulks 1982, Kleinfeld et al. 1981) of contemporary North Slope communities have outlined two agents of change affecting gender roles--the influence of western religion (and Judeo-Christian values) and the influence of the western economy. Western religion, established in the early part of the twentieth century, gave women status and position in the Church and the community, more so than was obtainable in traditional society. Furthermore, the Church introduced the western institution of marriage which differed considerably from the less formal institution of traditional marriage. Because women were seen as relative "equals" in the eyes of the Christian clergy, a woman could hold social position by virtue of her membership in Church and her participation as a Church deacon or elder. This position is clearly used in this way by Nuigsut women who hold positions in the bureaucratic structure of the Presbyterian Church as deacons and elders.

Whereas Eskimo women in traditional society had little or no access to leadership positions except as the wives of umialit or successful hunters, the presence and influence of the Christian Church has allowed Inupiat women of the last 50 years to hold social and community positions within the context of Church organization. Here women could carry out roles of ritual and ideological importance as well as participate in the maintenance of the Church organization. At the same time, a traditional society based primarily upon the male leadership role of umialit, hunters, and shamans was supplanted in the early twentieth century by western religious and moral values that did not encourage the full status equality of the sexes, but did permit participation by both sexes. Also, these religious institutions gave both men and women access to community and "spiritual" areas transcending the basic kin affiliations of traditional society. The formalization of marriage practices through the Church gave a more rigid bilateral definition to the marriage tie. The marriage tie now included concepts of religious and moral sanctity as well as necessary social and economic reciprocal obligations between both partners.

The changing value orientation of sex roles has been apparent in the present day wage labor situation of Inupiat men and women. We discussed the impact of cash economy and the definition of male and female occupational roles in earlier chapters. This valuation of productive labor through the cash economy is one driving force in changes in the roles and values of contemporary Inupiat.

In the past, the different roles of men and women have been complementary and independent, with each necessary to form the stable and most elementary social unit. However, this was traditionally expressed in behaviors that demonstrated that while the roles of men and women were both equally

necessary to the institution of family, their status was not equal. This distinction is important to an understanding of both traditional and contemporary male-female relations because as far as most Inupiat men are concerned, women are necessary but not equal. The social contracts of marriage, either formal or informal, are not necessarily between equal partners, when measured by political, social or economic power. Men have greater power and freedom of action. Hence, while the roles may be equally necessary to the proper establishment of families and other social and kinship units, relations within these units demonstrate the continued status dominance by males.

As the productive work of women comes to more closely resemble that of men, with both working for a cash income rather than obtaining/processing harvested resources in different ways, we would expect that the strain between male status dominance and male-female economic independence to increase. This is true for American society in general and in Nuigsut and the North Slope may be exacerbated by women obtaining higher paying and/or more permanent cash income jobs then men. The male-oriented complex of subsistence activities remains much more intact than the female-oriented activity complex. Males thus have more options and are psychologically less displaced by the market economy. On the other hand, females, with fewer options, have an incentive to succeed at what is open to them and to evaluate their worth in terms of their new economic activities. This could lead to pressures for formal acceptance of sexual equality, more reflective of Anglo-American social ideology than of Inupiat values. Resolution 83-02 of the 1983 Inuit Circumpolar Conference is evidence for this development (Arctic Policy Review 1983:12). The felt need for such a resolution (for equal sexual representation within the ICC) reflects traditional Inupiat male dominance.

THE FAMILY

The family is a key institution in Nuiqsut, as would be expected in an informal, kin-based, community. The proliferation of new housing has encouraged the division of traditionally large multi-generational households into smaller, less extended independent households. This in turn has reduced (or at least is perceived to have reduced) intergenerational contact. Elders cannot always get out as much as they like, and visiting never allows as much contact or the same sort of interaction as living with someone. Grandparents especially were noted to remark on how they missed being with their grandchildren.

Most couples want their own home when they marry. They prefer to buy one, but often rent as a more feasible course of action. The decline in the average household size thus reflects more the desires of the younger generation than of the old. Ties of affection and sharing remain strong. Grandchildren often spend much time, or may even live with, their grandparent(s) outside of their parental household.

Age at marriage may be declining, but this is hard to say. The availability of housing certainly helped certain residents make up their minds to marry early. However, there are also people well in their 30's who remain unmarried. Teenage pregnancy is not unusual in Nuiqsut. Half of the pregnancies during the last year were among this age group, a pattern typical of North Slope villages outside of Barrow. Most are unmarried but the institution of marriage does not seem to be at all essential for community acceptance of a stable union. Pregnancies do result from more casual affairs as well, however. Whether this is a continuation of the positive value placed on bearing children or a lack of "family planning" is not known. The sex education unit, prepared in Barrow, is

not used in the Nuiqsut school. Evidently no formal sex education occurs in the school. Home sex education was not a subject of our research.

Grandmothers, mothers, or older siblings sometimes raise the infants of young girls. In fact, sometimes the firstborn (or later) child of a couple will be "given" to one of the couples' parents. Adoptions of various sorts are common and very flexible. The biological parents are nearly always known and a child of age has the right to choose his own residence. This was pointed out by an informant, himself both a biological and adoptive father, as superior to the white system where an adopted child does not know his biological parents. An Inupiat adopted child has many more relatives, and more social options and support. Thus, this adoptive flexibility is one factor countering the possible social constriction of small household size.

# LEADERSHIP ROLES

Previous sections have shown the various new social settings within which Inupiat must function. Traditional men of influence must learn to serve as brokers or mediators (Harrison 1972). Chairing a meeting, or speaking out at a public forum, becomes a form of personal projection, separating a person from the group. The integration of such novel patterns of expression within an Inupiat identity becomes vital if cultural transmission, education, and effective representation are to succeed.

As a phenomenon, followship (or acquiescence to "leadership") is more traditionally supported than the new patterns of leadership, hence the greatest stress results from the demands of leadership in new organizational settings (public

hearings, for example) where the leveling effect of traditional and recognized leaders who are expected to represent community concensus is commonplace, even if disagreement exists with regard to the particular issues being addressed. Seldom will open contradiction of speakers occur and spoken deviation from any consensus will be tolerated to the extent that it will not be challenged openly. Consistent with these values is the practice of arranging the speaking schedule so that recognized leaders speak first, allowing others to speak later with comments which do not conflict with the points previously made. Seldom will public participation result in contradictory testimony under such a traditional pattern, although some deviation on the part of leaders or individuals will be tolerated which may not convey an accurate picture of an assumed underlying consensus.

Leaders and followers must also begin to think about issues in terms of new concepts, at least to the degree necessary to protect their own individual interests (Jones 1977). Land ownership is seen as unproblematic by most Inupiat in Nuiqsut. However, few Inupiat have considered the implications of private ownership. The traditional community of lands used for resource harvest makes such a concept difficult. Even oil field restrictions, such as that on high-powered rifles in the Prudhoe Bay field, have not raised the general consciousness of the implications of who owns, and can thus sell or control access to land. Oil companies at present only lease land. Some Inupiat, and some native corporations, are more pro-development (and hence more pro-land control) than others. Who has the rights to decide upon land use and the disposal of such rights will become increasingly important. Ways to influence land use upon Federal and State land have been, and will continue to be, of key importance.

An egalitarian society resists leaders. Yet, there are situations where a formal leader is necessary for action. The resulting checks and balances result in what we have been calling egalitarian competitiveness. The continuation of such a pattern seems essential. This requires the interpretation of new social contexts in terms of Inupiat interest and traditional values. For us to attempt a further discourse on this would be presumptuous.

# "SMALL" THINGS

Large effects can result from the amplification or aggregation of small individual acts of behavior, done with little or no thought as to their long-term consequences at all. We cannot hope to deal with all or even many of these. A few will be discussed here in terms of their potential effects on traditional Inupiat values and thus cultural transmission.

The sudden infusion of money into the North Slope has meant employment. This is employment not only for Inupiat, but also for non-Inupiat. This in turn means increased crosscultural contact. In Nuigsut, all non-Inupiat were at first school teachers. With CIP funding, however, temporary workers, and permanent employees to take care of finished facilities, increased the intensity of such contact. Jobs were created for which, although there is an Inupiat preference policy, no Inupiat was qualified (Public Safety Officers are an exception, there being a policy to hire non-Inupiat to prevent complicated family troubles). The presence of such jobs also allows individual non-Inupiat to establish themselves in Nuigsut (or some other North Slope Community) on a permanent basis. The community in essence loses its ability to protect itself from this individual as a contributor of change or difference, a protection which the seasonal nature

of construction or oil jobs had before provided. The person changes from being one of many temporary "camp" residents into a permanent, individual, village resident.

Increased cross-cultural contacts almost naturally increase the rate of cross-cultural marriage. The choice of one's marriage partner is of important cultural significance. The family unit provides most peoples' cultural identity. While interethnic relations and marriages on the North Slope date back to first contact with Europeans, there are recent changes that appear to be important in Nuigsut. Nearly all such unions are between Inupiat women and non-Inupiat men, as has always been true. However, those couples with children tend to acculturate them more as "white" than as Inupiat (Black-Inupiat children may be an exception). Several factors may account for this. Female Inupiat traditional subsistence skills are in general decline, and non-Inupiat males lack subsistence hunting skills, for the most part. Few non-Inupiat can speak Inupiaq, so that the household language is usually English. These couples tend to live in their own household so that children's day-to-day contact with older Inupiat is minimized. These children often physically look more "white" than Inupiat and, for better or worse, Inupiat people in general treat others by how they look, the same as other groups of people do. These couples also often have plans to leave Nuigsut, if not the North Slope, eventually and so convey a sense of transition to their children.

Interethnic marriages also prevent some Inupiat males from marriage, given roughly equal sex ratios and the lack of male Inupiat/female non-Inupiat unions. Men tend to live in their wife's village, when a choice has to be made, so few Inupiat women seem to have been "imported" to Nuiqsut. The result is either young men leaving the village, a net loss, or men remaining as bachelors. A sense of social frustration

may result, combining a feeling of inability to compete for women and perhaps for employment as well.

The effects on male-female relationships of changes in income availability, earlier discussed, can be expected to aggrevate these effects. Effects on leadership may also be expected, but our information on female leadership in Nuigsut is not great. Increased non-Inupiat presence in Nuigsut will have definite implications for leadership style, however. The Public Safety Officer, now in Nuigsut for about two years, has acquired a reputation for giving good advice. The non-Inupiat City Clerk is depended upon very heavily, both in financial matters (as grants are the City's only source of revenue at present) and in procedural matters. Her (often strongly worded and forcefully delivered) opinions are also often sought. The teachers as a group still tend to exert little influence outside of the school, apparently by their choice and with community assent. Other non-Inupiat residents have no official village role, but as permanent neighbors interact with the villagers a good deal. Casual conversations and remarks at public meetings seem to indicate that non-Inupiat residents are becoming increasingly visible in Nuigsut.

#### Summary

The best suggestion we can make is for the interested observer to read <u>Inupiat Ilitqusiat: Yesterday, Today &</u> <u>Tomorrow</u> (Christensen nd), which reports on the message of John Schaeffer and the <u>Inupiaq Spirit</u> movement. Behaviors may, and indeed must, change, but the central values of a culture can remain the same. A culture adapts or eventually it dies or is engulfed. Cultural isolates can no longer exist apart. Values can be maintained even while behavioral

patterns are changing. Such continuities have been demonstrated but this does not mean that they are inevitable. Such continuities are not necessarily signs of successful adaptation, either, as one can argue that alcohol consumption patterns observed are simply a function of norms of sharing, sociability, and the lack of rigid time scheduling. The grim human consequences of this consumption pattern makes such an argument beside the point. The behavior can reflect traditional values and still be harmful. Thus, maladaptive continuities are as possible as adaptive ones. The challenge is to encourage the latter. All too often observers perceive only the former without even raising the possibility of the other.

People in Nuiqsut do not talk spontaneously about values. They will, when asked, but confine themselves to the generalities with which this chapter began. They will sometimes compare their ways with those of the white man, to the disadvantage of the latter. For the Inupiat, values are to be lived and are evident in one's behavior. Perhaps that is why their lists (Table 55) sound so universal.

We have examined five key domains with the Inupiat value system--Kinship, Egalitarianism, Seniority and Respect, Inupiat Identity, and Subsistence. They consistently are produced as central concepts (Table 55) and can be used to understand some of the stresses being produced by the present rapid rate of change. Topics discussed in this connection were the Church, the school, the family, male and female roles and relationships, and leadership roles. The first two are institutions that have had and will continue to have a great effect on Inupiat life and culture. Adapting them to Inupiat needs is crucial for Inupiat cultural survival. The last three topics are several of the behavioral areas where significant change can be expected

in response to external demands. Wage employment has become and will continue to be a vital part of Inupiat economy, but its potential disruptions must be minimized. Leaders must deal with development pressures while protecting the Inupiat subsistence resource base. New adaptations are necessary, as the application of traditional Inupiat solutions will not protect Inupiat interests in what has become a much wider social and economic context. A dynamic form of Inupiat leadership and a new social contrast (or a larger scale application of the old one) must be developed.

#### IX. A FRAMEWORK FOR ASSESSING CHANGE

## Aspects of the Framework

#### PURPOSE

The first task of this project was to produce a baseline ethnographic description of Nuiqsut. From this was to be developed an analytical framework with which to assess or measure the effects of offshore oil leasing and development on Nuiqsut. This framework will highlight the most salient variables of the ethnographic field research. Mitigation of undesired effects is the ultimate aim, for which knowledge of the boundaries of the problem is a key first step. Prediction, and prevention, of undesired effects may be possible at some future date. Until that happy day, the definition and measurement of significant variables in the present so as to assess change from the past requires our full attention. Given such variables, future assessments can be made much simpler through a systematic monitoring program.

The primary beneficiaries of such a monitoring effort will be those people potentially most affected by oil development-residents of Nuiqsut and the other Native villages of the North Slope. Effective mitigation will also benefit the North Slope Borough as a whole. Since nearly all North Slope Borough tax revenues are paid by oil companies, a cooperative relationship between the two based on well-founded and shared knowledge is likely to be more productive than adversarial relationship based on uncertainty and mutual suspicion. The same may be said for the Minerals Management Service (big government) and the North Slope Borough (local government and, ultimately, individual people). Agencies of the Federal and State governments are too often thought of as agents or tools of big business--in the case of the North Slope, the oil

industry. In fact, these agencies have very complicated mandates which require a very careful balance of allowing one set of people to benefit from one set of resources while protecting the rights of another set of people to use a different set of resources. Where uses conflict, that is, where different people want to use the same resources for different things or where the use of one resource by one party lessens the value of another resource to a second party, useful compromises can only be based on an understanding of the cost and benefits of each use to each party. Lacking such complete predictive capability, a second-best solution is to be able to assess the effects of past and ongoing uses of resources upon present populations. Those effects that are negative can then be made the objects of mitigation plans. One key to the success of such mitigations is accurate and timely evaluation of the states of the components of the system in question. The ability to produce such evaluations on the village level for North Slope communities is the object of this technical chapter.

## PROCEDURE

The last step in this research is to recommend a feasible monitoring methodology. The requirements for such a methodology are several:

- variables must be relatively few;
- variables must be significant indicators, and all potentially important areas must be measured;
- Techniques for measuring or observing variable states must be relatively easy and not require a great deal of time;
- variables should be able to measure any imaginable change, not just a few of the most likely projected possibilities;

 Changes in variable values must be interpretable. These requirements will be discussed below. Here we will outline how we arrived at our monitoring recommendations.

Prior to field research, an extensive literature search was undertaken. Potentially significant sorts of information were identified in terms of a search for meaningful social indicators. Appendix A contains the measures checklist with which we began fieldwork. Parts of it are of course more general than others and it is far too ambitious an outline for four months of fieldwork. This list guided our selection of variables to investigate in the field, however. Those that were significant and accessible became our main sources of data and the center of our monitoring methodology (a practical happenstance--see Louis Berger and Associates 1983: 279-299). Significant areas not easily investigated had to be made so. Thus the process of operationalizing took place primarily in the field situation. This extractive process was refined once fieldwork ended. Data were analyzed, areas thought to be sensitive to social change defined and diagramed in a simple flow chart (Figure 18), and measurable variables related to those possible changes developed (Table 57). These, along with a description of some (but only some) of the potential changes to which Nuigsut may be subjected form our analytical framework for monitoring change.

## TECHNIQUES

At the most general level, we wish to establish "measures" or variables using a pre-post-test paradigm. This is at best an ideal (see below) but can be approximated and improved by an ongoing monitoring program. Our main contribution is to provide ethnographic baseline data and a set of potentially significant variables (with measuring indicators). These

# Table 57: PRIMARY OBSERVATIONAL VARIABLES

Demographic and Population

Total population census analysis Descriptive household statistics Inter-ethnic marriage, Differential sexual mobility

Social Development/Differentiation

Number of social groups Public place inventory Village facilities history and inventory

Well-Being

Clinic records Public safety records Visiting patterns\*

Economy (Cash/Subsistence)

Job inventory Work force characteristics Village economic enterprises Household income Household economic activities Cash/subsistence Consumption\* Percentage of wage labor in village working for government employer

Politics

Number of public meetings "Outsiders" in leadership positions

\* Will require household visits for interviewing and observation beyond that necessary for other data areas. See text. variables can then be monitored, additions and deletions made as necessary, and changes assessed. We of course lack the time depth to test our variables in this way.

There are four methods that we could have used to collect most of our field data. They are not exclusive domains, however, so some people may consider our division arbitrary or think that we have lumped several different methods together. We make no claims for this treatment of method except that it seems useful for the discussion at hand. The four methods are social surveys, participant observation, unobtrusive measurements, and archival/document research.

Social surveys can be either formal questionnaires or systematic but non-formal endeavors. Here we are using the former meaning. While they can provide much useful information, especially regarding population characteristics, the terms of the contract did not allow the use of formal survey instruments. We will return to their potential use in our monitoring recommendations, where we consider them essential.

Participation observation is the staple of the anthropologist and provided much of our data. The presence of a stranger is always potentially disrupting to any social situation, but once that informational-interactional bias is accounted for the data can be systematically analyzed and compared. Because anthropologists (and members of the study population) differ in their social skills, comparable topical information is not always available from different people. The entire question of sampling in a strict sense is very problematic. There is no easy way to deal with it except to be aware of the bias which exists in the data collection method so that one can correct for it. Participant observation is very effective at recovering feelings and attitudes, especially if extended observations are possible. Most people and groups do not

possess the capability to change their behavior for very long just because a stranger is present. Perhaps that is why strangers are so often excluded from groups when possible. Participation is one good way to discover what is important to a group of people. It is thus very useful in formulating potentially significant variables and measures.

Informal interviewing can be considered a form of participant observation. An interview is quite different from a conversation, however. Interviews can be conducted with strict and rigid protocols even if no physical interview schedules are used. This allows relatively standardized information to be gathered in relatively short time. The information is seldom completely comparable, however, and the social-conversational aspects of the situation increase the time required over that needed for formal interview. The researcher who has no informal interviews, but only conversations, has taken on a set of social responsibilities that cannot be ignored and which greatly affect the data. Information is seldom

Conversations are less focused than interviews. They can clearly indicate an informant's central concern at that specific time, but informal conversations can also make it easier for the study population to be uncommunicative without being unsociable. Natives can avoid the researcher without being obvious or rude. These can be advantages as well, as long as they are not allowed to be sources of frustration. If the researcher is perceived as more of a social creature than as a formal one,opportunities for observation of important data increase. Behavioral observations made during such conversations may be more significant than the information contained in the verbal interchange. Systematic and structured observations can be made about informal and unstructured situations. Again, such information is useful in the

conceptual stage of variable formation.

Unobtrusive measures (Webb et al. 1966, Rathje 1979, Sechrest 1979) are potentially among the most useful of methods to social scientists, but have been little used to this point. They are also termed "non-reactive" measures because they are essentially non-participant observations. They do not require interaction with or the cooperation of the study population and, as long as ethical proprieties are maintained, are no invasion of privacy. They are objective in that they are quite comparable from case to case. They are constructed by the researcher, however, and so may have no meaning to the study population. This is not a fatal characteristic as no population is totally self-aware. Valid social indicators are not always obvious to those to whom they apply. When combined with participant observation, unobtrusive measures allow a cross-check on the correspondence of the researcher's model with those which the study population considers important. They make ideal social indicators if they are actually meaningful (this is, validly reflect the state of a significant variable).

Archival/document research was useful in that it often is much more efficient to use information that already exists than to try to collect it oneself. A great deal of general information already exists concerning Inupiat subsistence, goals and values, and other life aspects. Demographic information also exists, but often at a level of aggregation that is not useful at the village level. Even where good documentary resources exist, some new data must be collected to test the applicability and representativeness of the documentary information. Within Nuiqsut not much in the way of documented history exists. Statistical information in some ways comparable to our baseline measures are available for period prior to our fieldwork (Dupere and Associates 1973, 1974, Schultheis

and Smythe 1978; Wickersham and Flavin 1982; and Alaska Consultants 1981, 1983). More verbal treatments are also available (Worl Associates 1978; Worl, Worl, and Lonner 1981).

The problems inherent in producing a systematic monitoring methodology from a detailed ethnographic data base or a detailed ethnographic data base from a process designed to produce a systematic monitoring methodology are best handled within a discussion of the limitations of our technical approach. These are not to be minimized, nor should their existence be disheartening. A realistic appraisal of our results is what is intended. First we will clarify what we mean by social indicators.

# SOCIAL INDICATORS--WHAT ARE THEY?

Social indicators are disaggregatable measures of social conditions measured over a period of time (time series) which display a pattern of variation associated with social change. The process of defining social indicators can be conceived as consisting of three steps:

- systematic relationship are formulated in terms of a model or set of variables,
- concepts which include all important aspects of these relationships and exclude those which are extraneous are formulated, and
- measures to operationalize these concepts are developed.

Of course, the process is iterative and self-improving over time. Properly applied, better and more accurate measures are developed (Rossi and Gilmartin 1980:49-57).

Direct indicators measure a variable of concern itself, but these are rare. Indirect indicators measure a variable assumed

to be closely related to the variable of main interest. Subjective indicators are based on informants' reports while "objective" indicators are based on counts or direct observations of behaviors and conditions associated with given situations (reactive versus non-reactive indicators). Descriptive indicators are not part of a theoretical framework or model whereas analytical indicators are interrelated with other variables in an explicit theoretical framework. The latter are easier to interpret and develop than the former.

There are many properties of social indicators that must be considered when constructing them. Among the most important in general, and clearly most important in our case for reasons developed below, are the issues of validity and disaggregatability. How well do the social indicators actually measure the variables and concepts they are meant to? To what extent can each social indicator be assessed and reported separately as a function of other variables? To a large extent, only by ensuring that our indicators are disaggregatable can their validity be tested and improved. Other characteristics of social indicators such as reliability, stability, responsiveness, availability of data, scalability, intertemporal and intergroup comparability, and understandability are also important. Responsiveness (the speed and magnitude of an indicator's response to changes in related aspects of society), data availability, and understandability will be addressed when appropriate in following sections. Many of the other characteristics can only be assessed longitudinally.

This briefest of outlines should suffice for the discussion to follow. The interested reader is referred to the social indicators literature (Bauer 1966; Meehan 1975; Taylor 1980; Rossi and Gilmartin 1981, especially pages 18-78, and Carley 1981) as well as to some of the more recent social impacts assessment literature (Finsterbusch and Wolf 1977; Soderstrom

1981; Leistritz and Murdock 1981; USDI, BLM 1982; and Finsterbusch, Llewellyn, and Wolf 1983).

## LIMITATIONS

Certain limitations are inherent in our study. Some are due to theoretical limitations. Others may be methodological or of a more practical nature. Most are interrelated, so our discussion will be general and not spend much time keeping the domains separate.

Our study is primarily a baseline ethnography and as such can provide none of the longitudinal (time series) data required to specify even suggested causal relationships. This lack of prior knowledge is what required a baseline study in the first place. Since there was little information to guide our initial selection of measures, our research design required a large set of variables. Research was necessarily confined to a smaller set of these. Thus, our social indicators began as descriptive rather than analytic indicators. All were linked to concepts, however, and are usable to create different scenarios of change in Nuiqsut. Even if our expected directions and rates of change are incorrect these measures should adequately describe the community and allow assessments to be made.

The collection of baseline information is quite different from the collection of monitoring information to assess change (and the adequacy of monitoring measures to do so). Monitoring, given valid measures, can be done quickly. The baseline, supplying the detail to construct the measures, supplies the context which allows the measures to be interpreted and takes more time. Measures by themselves are meaningless. It was the period of fieldwork which allowed us to weed out certain

variables and stress others by forming ideas about how they are interrelated. Even so, our measures of these variables have only the weakest sort of validity--face validity--and must be tested through use. There is no way to shorten this development process. The utility and validity of longitudinal measures can only be tested over time. There is no guarantee that we have picked wisely, although we think it probable that those variables most significant in the present will also be significant in the future. Our choice of measures to serve as social indicators for these variables must be seen as preliminary and subject to modification.

A more serious problem is the attempt to assign causal responsibility for identified socio-economic and sociocultural changes to oil and gas development. Most of the changes being effected in Nuiqsut are the result of growth, which is being fueled with oil-derived money. However, this is a socio-political decision more than a purely economic one. The North Slope Borough can be identified as the agent of change. The Alaska Native Claims Settlement Act by itself may have allowed the continuance of a predominately subsistence life-style on the land. One can only speculate. The financial aspects of ANCSA alone would not have allowed the massive cash infusion into Inupiat villages which is now occurring and which can be credited as the major direct agent of change.

Social effects assessment, or what in effect is prediction, is also difficult because the goals people strive for are never really known. Most social indicators are meant to measure aspects of social well-being, but these aspects (and measures) are all situation specific. Good health, low crime, etc. are perhaps universally desired, but measures of them are usually not transferable from one social context to another unless one can set up absolute standards. Social

indicators research is nowhere near such a state and, barring a world society probably never will be.

Even within any given social context (North Slope Native villages) when peoples' goals and desires are in theory known. compromise is always necessary. There is seldom complete agreement on such goals, there are often goal conflicts, and definitions tend to be fuzzy. One does the best one can within a limited set of resources and alternatives. The formation of the North Slope Borough took place within a social context of oil development and the assertion of a peoples' cultural identity. The use of the Borough as a regional government to represent separate village constituencies is a consequence of this context. In this sense, most of the change evident in Nuigsut is causally linked to oil and gas development. A more fruitful representation of the situation is that one is witnessing the ongoing adoption of cash economy resources into a system that has a basic nonmonetary tradition and ideology. Cash, or money, is being used as a temporary resource but is being built into the system as a permanent need in terms of maintenance costs, heating oil, and transportation. The short-term adaptational behavior of North Slope Inupiat to this sudden and limited financial bonanza will have long-term permanent consequences. How serious those are depends upon when the oil runs out (villagers in Nuiqsut say it never will) and money alternatives available at that time. Our variables are chosen to illuminate and measure the processes of the adaptation/ adoption.

To summarize the limitations of our study in relation to our selection of significant variables:

 variables must be relevant to the problem or relationship in question;

- variables must be measured, either directly or indirectly;
- variables must be interpretable.

None of these has been shown to be so for our measures, and could not be in terms of an ethnographic baseline study. The establishment of such validity requires a lengthy development period, of which this study can be just a beginning.

A discussion of disaggregatability follows quite naturally from a concern with validity and refinement of measures. If one is very sure of the variables to be monitored and their expected changes in value, very specific measures could (in theory) be designed. Lacking such knowledge, one can rely on the covariation of indicators to suggest interpretations for changes. This requires disaggregated data collected in a systematic way. One of our recommendations will be the design and implementation of a system to do so. Our research was hampered in the collection of detailed data by a restriction on formal survey instruments. In the absence of existing documentation, this made the systematic collection of comparable disaggregated data very difficult. We were able to form an image of the community and isolate variables of key importance, but must admit that in some respects our baseline data are incomplete or not as point-time specific as would be desired. This will be noted in specific data section discussions as appropriate.

#### SUMMARY

Our research made use of three main data collection techniques. Documentary research was limited mainly to background information, previous research, and the few current records which exist in Nuiqsut. Participant observation and conversation were used when attending meetings, visiting people, and so on.

A preformed idea of what to be alert for, issues to explore, and topics to avoid guided these observations. Direct observations, often done with the aid of a formal recording sheet, allowed us to record non-sensitive observations quickly and accurately. Such observations were neutral in the sense that no informant or village resident had to be approached or bothered to make them. Most involved inventories of one sort or another--numbers of snowmobiles, orientation of house doorways, store shelf stocks, and so on. A fourth data collection technique, formal interviews with the aid of standard questionnaires, would have simplified and sped up the collection of some of the basic data we gathered by observation. Such questionnaires and formal interviews were forbidden by our contract however, and may have interferred with the establishment of social rapport in any event. They may also have helped to establish our role to the community, though. As it was, many villagers never were too sure why we were in Nuigsut.

Some measures of concern are obviously easier to get at with one method than with another. The lack of much written documentation, the inability to use formal survey methods, and the lack of meaningful Inupiat verbal response to many of our (what were probably socially inappropriate) questions made observation our primary data collection technique. This explains where and why our information is strong in places and weak in others. Our demographic and economic data are certainly good enough for useful statements, but are not nearly as strong as survey based information could be. Health and well being indices reflect the general weakness of written documentation. Social political information reflects the richness which observational techniques can yield, and the versatility of observation is attested to by the quality of the data we were able to amass.

### Analysis--Variable Interrelations and Measures

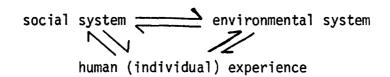
### INTRODUCTION

The analytical framework being developed to measure change in Nuiqsut focuses on two of the areas discussed above. This is not because they are the only areas of importance or even because they can stand alone. Rather, they are easier to treat as dependent and independent variables. As the system is interactive, all variables of interest acquire a fuzziness as to causality Demographics and economics will be our initial foci in a systems analysis approach to this specific case of development. A general rationale is followed by more specific hypotheses and assumptions about change which guide our choice of indicators. Qualifications and a general discussion follow that.

Introductory courses in anthropology often stress that the discipline very early identified itself with the study of peoples, their society, and culture, as whole units. "Holism" no longer appears in many anthropologists' discourse, but that quaint term still describes one of anthropology's strong ideological orientations. A peoples' society and culture are seen as a system, to be understood in terms of a functioning whole. Refinements in anthropological theory have taken the form of elaborating on the concepts of system and function. With the realization that systems vary in the degree to which they are complete in themselves (the continuum of open-closed systems) and that not all subcomponents of a system operate smoothly together, the ideal of society as a structuralfunctional system open to easy analysis is quickly dispelled. Perhaps that is why no social science has as yet generated a strong set of general theory. In any event, conceptual framework or analytical perspective is a better label for the orienting devices which social anthropologists rely upon.

Systems analysis is familiar enough not to need much elaboration in this context. Anthropologists have always treated societies as systems. Frequently, however, they were guilty of claiming completeness for a partial analysis. Culture and society were emphasized at the expense of other components of the system. In anthropology, the attempt to correct this bias, and to study society and culture as natural products of a human population within a given (restrictive) environment, has become known as human ecology. This is our general orientation.

This can be seen as an elaboration of a simple three component model (after Craik 1972):



That other people find this orientation useful is evident, but these researchers find that they must modify it according to their research interests. Detail is added and certain linkages are emphasized over others. Clearly the conception as diagrammed above is too general to be a usable model. Yet, most social impact assessment scenario-generating analytical frameworks can be distilled to this central core (Soderstrom 1981, Finsterbusch and Wolf 1977).

The data requirements for such a general theoretical orientation can be cast in terms of the social indicator literature already cited. Measures are components (or reflections of components) of a system. To deal with the entire system is in most cases impossible. Therefore, what are seen as data will depend upon what are perceived as the most critical components and relationships of the hypothesized system. The important point is that data are not self-evident. The

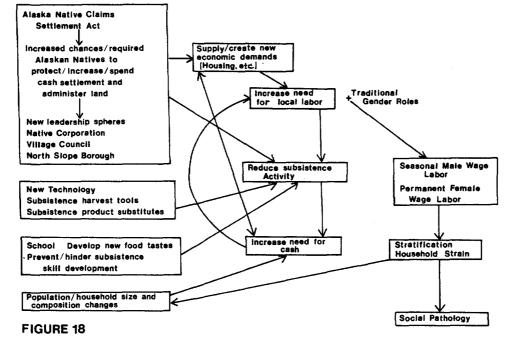
researcher defines what data are by the definition of the research problem.

VARIABLES AND CHANGE

Figure 18 represents graphically some of the connections we at present consider likely to be most significant. There seem to be four main areas of change represented:

- population/household characteristics are changing (Demographic Description, Subsistence Economy);
- sexual role division is becoming increasingly stressful (Cash Economy, Socio-Political Structures);
- the relationship of wage labor and subsistence activity in the integrated economy is rapidly changing (Social History, Cash Economy, Subsistence Economy); and
- political and other sorts of leadership roles require a much different kind of individual or at least different level of functioning than was required before (Socio-Political Structures, Values).

All are related to the articulation of Nuiqsut with the wage economy. All relate back to fundamental Inupiat values, yet we have not included values on our diagram. This is likely because we see values as the interpretaton of behavioral patterns. For Inupiat values, their culture, to survive, new behavioral patterns must be congruent with them. Our analysis does not allow us to project what we consider the most likely significant variables so as to say whether new behavioral patterns will support traditional Inupiat values. Our concern, obviously, is that they will not and our suggested measures are in the areas most likely to be detrimentally affected.



Some Hypothetical Developmental Relationships

We could not, on Figure 18, include a conceptualization of our household developmental model for household provisioning strategy in present day Nuiqsut except in rudimentary form. Population and household composition changes must be closely monitored, however. We believe, other things being equal, that an Inupiat family is most self-sufficient, and thus has more ability to choose how its adults will spend their working time, when children are few and either pre-school age or post-high school age. Of course, other things are not equal. Nuiqsut at present appears likely to experience an increase in total population (new housing) as well as an increase in households with dependents. This will place a strain on both village facilities and on subsistence resources. Wage labor appears the likely solution, but the NSB CIP program is scheduled to end in 1985, after which wage jobs will be difficult to find unless the NSB begins a new series of projects. The demographic situation describes the general provisioning problem in any event, and in Nuiqsut more dependents will create the need for more economic resources.

The present pattern of wage activity has certain implications for social policy. The current continued specialization of men as short-term seasonal wage labor and women as permanent year-round wage labor could potentially change the stability of the household structure and disrupt networks of kinship and sharing. Men still apparently treat wage labor as a short-term resource, to be exploited when "in season". Women are becoming professionalized as a sex-class, tending now to be more well educated than men. Interethnic marriage and differential sexual mobility will have to be monitored to see if females marry out of Nuiqsut (and perhaps Inupiat society altogether) more than men do. This would then have profound effects upon household composition and structure. In Nuiqsut, of the five mixed marriages/living together arrangements, all involve an Inupiat female with a non-Inupiat male. This

could be simply the result of few or no non-Inupiat single women in the north. However, also likely is the explanation that Inupiat men and women are diverging in the degree of their cultural identity.

Technological introductions replaced many subsistence products produced by women. Store parkas and lambskin take the place of caribou parkas. Commercial boots replace mukluks. Men must pay more for subsistence equipment, but the product of the hunt is as valued and perhaps increased in value because of the investment. Women are thus being, or have been, culturally disenfranchised faster than men have. Employment, especially female employment, should be carefully monitored.

Private employment has quite different implications than does the current emphasis on public employment. Private employment would decrease dependence on larger governmental bodies and increase locally generated stability. A locally based wage economy is potentially less seasonal than one dependent on outside financiers. One favorable economic scenario is for private, relatively permanent extractive industries such as gravel or coal to employ substantial numbers of local men. This does not seem likely to happen, however.

There are several related relationships that can be expected to affect Nuiqsut's social organization. Subsistence activities require an increasing capital outlay for necessary equipment. This means that those who have the least time for subsistence activities (because they are working for wages) are those who have the best chance to be successful (because they can afford the best equipment). They also tend to be more acculturated than non-wage earning Inupiat. Thus, the status they gain as hunters may not reinforce traditional values, and in fact may weaken them. This requires futher study, building on the excellent work of Kruse (1982).

Those hunters with the most time to devote to subsistence activities tend not to be able to afford the best equipment. Thus restricted, they find it difficult to train young hunters. Thus, traditional Inupiat education and values are not being transmitted in an efficient manner.

Women have greater access to education than men, which gives them greater access to wage jobs. This can be related to the increased incidence of female Inupiat, male non-Inupiat marriages. Apparently these are more common than the reverse, and pre-stage another failure in the transmission of Inupiat values.

All these factors tend to reduce the amount of subsistence activity that actually occurs. This in turn reinforces the hold of the wage economy on Native Americans.

One surprising aspect of our study has been the minimal impact of oil employment in Nuigsut. The North Slope Borough through its CIP program has had great impact, but oil development as such is difficult to quantify as a factor. Thus, Nuigsut's village facilities should be monitored, as mirroring NSB CIP activity. Number of social groups and public places ("behavior settings") will also be an indicator of population growth as well as of qualitative change. There is a threshold of population beyond which an incremental level of services must be added. This will be different for different sorts of services, but if the new houses are completed as scheduled and only half are filled from outside of Nuigsut, there will be need for an increase in utilities capabilities, and perhaps a rearrangement at the school. A new or expanded store may be needed. The post office is already overtaxed. However, if the houses are completed and the NSB CIP program terminates in 1985, people may not be able to afford to buy homes in Nuiqsut. Such a turn of events would once again

place the emphasis in the household procurement system upon the use of harvested fish and game. It would not require a return to as extreme a dependence as the 1973 situation but would be a distinct shift from the current situation. Thus, Figure 18 is only partial. The disappearance of NSB seasonal wage labor would increase the use of the subsistence sector in Nuiqsut, and still allow most households an access to cash income through permanent jobs which are also mostly for the Borough. At present this remains highly speculative.

Another problem seen in Nuiqsut relating to outside introduced entities is the apparent lack of Nuigsut people to take charge of things. The cognitive dissonance inherent in Inupiat political roles needs investigation. The mayor and two councilmen, the head of utilities, and head of public works are all not registered as members of Nuiqsut's village corporation. None of them were among the original settlers, as all have come from Barrow within the past two years. This is a measure of the continuing influence of external social forces upon local social organizations. The number of non-Inupiat occupying key structural positions is likewise a sensitive indicator of local skill development and dependence/ independence upon the broader society. "Enforcement" may be something relegated to outsiders to perform. As Nuigsut grows, and it must if the houses are to be sold, the percentage of "outsiders" (those not registered as members of the village corporation) must increase. The number of non-Inupiat need not increase but will probably do so, at least until the NSB CIP program terminates. It is thus expected that Nuigsut will remain entangled in a much larger and complex system external to itself, with interconnections becoming more obvious rather than less so.

Nuiqsut's growth in size will not be spectacular in absolute terms but probably will be large in relative terms, which

will be reflected in the well-being indicators. Public safety records should indicate an increase in service calls faster than population growth. Clinic records should indicate the same. Visiting patterns should become more formal and restricted to much narrower portion of people who live in the village.

These expected relationships are all those expected in any community undergoing rapid growth. There are some sociopolitical catch-22's which will exacerbate these trends, however. Native corporations have the potential to create social class differentiations among the Inupiat population, when in fact they endeavor to do the opposite. The protection of traditional subsistence rights through the use of a foreign legal-political system simply introduces another avenue for fundamental change. It will be important to document the characteristics of Inupiat leaders. Clearly, in Nuigsut at least, there have been cases of eminently qualified people deciding that the most effective way to affect village life for the better was to act within the larger outside system. Local leadership positions are in fact subject to heavy regional influence. Clearly Nuiqsut's integration with the regional/state political system can be expected to increase.

People in Nuiqsut realize that change cannot be stopped. There are too many things to which they have become accustomed that are only available through the cash economy for them to do without cash incomes. The people of Nuiqsut want some say over the extent and speed of change, however. Inupiat culture and oil development can be compatible if efforts are made to make them so. One of the first steps in this direction is to determine what variables can best be used to assess the Inupiat adaptation to the cash/oil economy. We shall examine each of our data areas in an attempt to do so.

# DATA AREAS, VARIABLES, AND MEASURES

We will now try to briefly note what we consider the most useful significant variables and measures in each of our data areas. Some brief comments about measure justification, significance, or other indicator characteristics will accompany the list.

# Demographic and Population Information

Demographic information is perhaps the most important area for which systematic data collection is essential. The demographic dynamics of a community are the fundamentals of all social activity. Social organization does not reduce to demographics, but is certainly constrained by them. Unfortunately this information is almost totally lacking in Nuiqsut (and the North Slope Borough generally). Our attempts to deal with this are documented in our Demographic Description chapter. There are no vital statistics records in Nuiqsut and all census information is flawed for the purposes of demographic and mobility analysis (it was collected for other reasons).

For reasons stated above and below, the most useful data are those which can be disaggregated. Important demographic indicators for monitoring purposes are:

- Total population structure--age, sex, ethnicity;
- Household size and composition;
- Length of time present/absent in Nuiqsut since the last census;
- Birth rate and death rate;
- Percentage of unmarried adults by sex;
- Type, number, and frequency of inter-ethnic marriages.

We refer you to "Demographic Description" for information on present day Nuiqsut.

We recommend strongly that the recording and collection of such basic demographic information be encouraged. The importance of good demographic information cannot be over emphasized. Nearly all social analysis is facilitated by a detailed knowledge of population characteristics. In the absence of such knowledge, socio-economic patterns are difficult to unravel. Projections in terms of growth, decline, or a steady state become informed guesses, at best. If Minerals Management Service were to undertake this task, the restrictions on the use of formal survey instruments would of course need to be modified. Acting in conjunction with the North Slope Borough Planning Department and the Nuiqsut City Council would no doubt be necessary, both ethically and pragmatically, to ensure community cooperation. The resulting information base would be invaluable for planning purposes at all levels.

Censuses, both of people actually physically present, and those which also include people only absent from the village temporarily, should be conducted on a regular basis (at least winter and summer every year, if possible). This is especially important as long as immigration is a significant factor, either of population growth or as a counter balance to outmigration. Mobility information could then be supplemented by sample interviews. The formal recording of births and deaths should also be instituted as a preliminary to and check on such systematic surveys.

### Cash Economy.

The cash economy must be monitored both as an area subject to change and as a major determinant of social well-being. As with demographic population, disaggregatability is advantageous in terms of meaningfulness. A job inventory, broken down by employer characteristics, and employment characteristics is extremely important. Ours was constructed from observation and many separate pieces of information gleaned from numerous conversations. It is thus not completely accurate. We had hoped to obtain information from the NSB to use as a check. but could not. NSB CIP fund expenditures are useful in this regard to some extent. Village Corporation records exist but are not available to non-Kuukpik Corporation shareholders. Information on wages, hours, salary, etc. has similar constraints. Thus our estimates are based on informant information and extrapolation. Information on money from the sale of "subsistence products" comes from observation and informal interviews.

Most of the other information in "Cash Economy" was collected through selective interviews/conversations and observation. We refer you to that chapter for that discussion. Housing starts are observed and inferred from NSB CIP expenditures. Unemployment, sales tax receipts and revenues, and money orders are available as time series data from the appropriate offices. Unfortunately they are not completely comparable to each other. Some include Nuiqsut as part of a larger population, while others use an irregular time period to record the matter of interest.

Distribution of income and employment is a derived population characteristic. As such, it is a descriptive summary of much of the above. It is very useful in that regard.

It is a class of information very amenable to being collected by means of survey questionnaires.

Useful measures would be:

- Work force structure--age, sex, ethnicity, type of work;
- Percentage of jobs paid from government funds;
- Individual and household income (number of wage earners and hours worked is a good estimate); and
- Credit availability/liquidity and stability of money supply.

All except the last could be collected by a household survey. The cooperation of the village and the NSB would again be essential. As long as the CIP program continues, gross indicators of the above will be published by the NSB as CIP expenditures. Monitoring would require finer information, however. Surveys of employers rather than employees may be a faster data collection method, but may miss self-employed individuals. As differential access to cash and a sexual division of wage employment are two of the most significant change factors noted above, this information is critically needed.

#### Subsistence Economy.

Information on subsistence activity is difficult to document, as it occurs away from the village. Our "Subsistence Economy" chapter discusses this problem. People who hunted were identified but no way was found to gauge the level of hunting activity or the amount of resources actually harvested, except on an individual and opportunistic basis. The same is true for disposition or sharing of harvested resources and hunting/fishing party composition. Informants generally refused to talk about these aspects of hunting; rather, they did not refuse but simply talked about something else. Our report thus does not deal with resource harvest activities as such. Perception information comes from informant interviews and written transcripts of conversations others have had with selected Inupiat elders. Attendance at public hearings, at oil lease sales, and transcripts of earlier such meetings, were also useful in this regard.

Household economic activity measures involved the articulation of information categories discussed above with intensive observation of a sample of households. This was essentially the consumption survey sample discussed in the text. Observation is the only feasible way to obtain such information. Cost of living estimates come from observation, informants' answers, and our own consumer experience in Nuiqsut. Material goods inventories, which help measure many things, were observational. They indicate traditional/modern orientation insofar as ice cellars, sleds, and such functional items predominate over items such as motorcycles, stereos, and so on. They are measures of expendable income. They are also measures of preferred use of leisure time.

Operational measures of subsistence activity that we can propose for monitoring purposes are few:

- Observations of consumption patterns of a sample of households;
- Presence/absence of material objects associated with subsistence--ice cellars, usable drying racks, equipment; and
- Self-report and attitudinal surveys similar to Kruse 1982.

Observations could at least partially be coordinated with survey data collection. Such observations would require a fairly high investment of researcher time, however. A protocol for recovering consumption information in an interview situation may be possible. A long-term study of consumption with the cooperation of a sample of Nuiqsut households would be ideal for collecting such information. The record keeping for this would be less than the detailed time logs that would be required for detailed harvest effort data.

## Social Development/Differentiation.

Village facilities information can be obtained from informant recall (which is sometimes fuzzy as to years), checked by the NSB Capital Improvement Projects Funds expenditures for each year for most things. Some structures are built with other money and so are more of a problem. There are not many of these, however. Village facilities are also observable.

We collected information on existing structures mainly by external observation. Visits and informant information produced data on modifications, use, and inventories. Photographs facilitate comparisons.

Social groups were frequently observed, in formal and informal contexts. Informants could generally list groups that existed. A limited amount of written documentation exists. Informants were willing to discuss past activities and membership list of such groups to a limited degree. Observation was the primary source of information, however, especially about matters of process (topics, decisions made, decision-making, etc.). Public places and public events, once enumerated, again had to be observed more than talked about. People would tell us how well others spoke English by giving advice on when a

translation was necessary and when not. They would not rate or judge a person's fluency in general, however, or compare people to each other. Intravillage marriage patterns fall out of our census information. Intervillage marriages are problematic when people leave Nuiqsut, so our information there may well be incomplete. Number of children in school comes from a comparison of school enrollment lists with our censuses. School related events can be investigated by observation or conversation with Inupiat and non-Inupiat informants.

One failure on our part was in not being able to compile complete membership lists for village organizations. People were quite willing to let us observe, but rarely would they answer such questions as who belonged to what groups. Such formal lists do not always exist, apparently. Questions about who is expected to be at a certain meeting or to perform a certain task were usually not answered. At best they were seen as evidence of strange and perhaps improper behavior, at worst as "spying". This, along with the lack of written documentation, made the rapid collection of information difficult. Census information is basic and straightforward enough to obtain by means of a survey or questionnaire. This information is not, and requires a longer period of time for observation than was available to us. We could discover level of activity and gross patterns, but fine interactions and kinrelated behavior require more intensive effort.

Measures in this area thus are most reliably confined to observations:

- Number and type of structures;
- Public facilities and services available;
- Number and size of retail outlets;

- Number of "public places", use of same;
- Number of local groups and organizations, size of each

More detailed information would be useful, but the outline above should adequately measure the physical components of community growth. All except the last could be accomplished by observation. Interviews and use of existing records would speed this up. A few key informants should provide adequate information on local groups and organizations.

# Well Being.

Visiting patterns, sharing and exchange, and frequency of such behavior were very difficult to accurately document. Systematic visits to selected households, which was expected of the researchers anyway, allowed an estimate to be made for specific households. These observational data could then be applied to unknown cases, and an attempt made to check on the accuracy of this application by a conversational interview. The success of this varied, as questions we asked were either too general to elicit much response ("how often do you go visit?") or too specific to be polite ("how often do you visit household X?"). Airplane arrivals/departures could be documented easily enough, but no one we approached was interested in doing so systematically, even when we offered to hire them for that purpose. Questions about freight are similar. Proper connections with the air carrier could make this information readily accessible, however.

Health and safety information is readily available. Clinic records from Nuiqsut were analyzed in terms of age, sex, time and date of visit, and complaint. Court records and public safety statistics are available but the former are too few to really represent the community and the latter are uneven in quality and difficult to interpret. Access to the PSO service log or more detailed information, even with confidentiality assured, was denied by the Barrow office as not being permitted under current laws. Alcohol and drug use information is primarily based on our own observations of use and people under the influence, due to the exaggerated stories that tend to surround these substances. Reliable informants' information was accepted, subject to verification. Leisure time was investigated by observation and casual conversation. General questions were again seen as vague and specific ones as pushy. School attendance aggregate records, by month, were obtained from the NSB School District in Barrow. They are useful but flawed. School enrollment, from the same source, compared to our censuses gives us the percentage of children in school. High school graduates since 1979 are listed on the enrollment printout. Information on earlier graduates, obtained from informants, is incomplete.

Interaction and travel information is available, but takes time to obtain. We hoped to receive information on telephone calls to and from Nuiqsut but were unable to make the proper connections with the phone company. This would provide information on Nuiqsut's contact beyond the North Slope. Measures would then include:

- Clinic records structure--age, sex, ethnicity, problem;
- Percentage of population visiting clinic, by age and sex cohort;
- Public safety records structure--age, sex, ethnicity, offense;
- Public safety and health clinic time series trends;

- Airplane arrivals and departures--numbers, frequency, to and from where; and
- Telephone calls-- to or from where, number, frequency

Clinic records measure a population's physical health directly. Public safety records should measure community growth and impersonalization by a pattern of service calls increasing faster than population does. The last two measures relate to Nuiqsut's contact with other places. If and when a road to Prudhoe is built, number of vehicles in Nuiqsut and frequency of trips will be a measure (as would the presence of the road itself).

# Politics.

Politics is an area where measures often fail to apply because the more successful a politician is, the more difficult it is to pin down exactly what he is doing and how he does it. Our field study is also complicated by the fact that Nuiqsut is part of a very complex, newly created and rapidly evolving political system. The education of the researchers as to where Nuiqsut fits into this is far from over. The information gathered on all political entities outside of Nuiqsut comes almost exclusively from printed sources. These entities are important, and Nuiqsut's economic and political position in relation to them must be examined-- but our report is not able to do justice to this analysis. That is a different sort of research topic, beyond our scope.

Formal political bodies and actors were observed in Nuiqsut. Informal political entities were also noted. Nearly all data was observational. Records for before August 1982 do not exist and all informants display considerable bias. While

knowing the direction and extent of such bias allows one to approximate what must really be the case, such information is best used only when validated by data obtained by some other method as well. The sorts of measures that are sensitive to change and easy to observe can be misleading:

- Number of political arenas or groups;
- Number of public meetings';
- Number of political leadership positions and characteristics of the occupants--age, sex, ethnicity; and
- Voter registration and votes cast.

Leadership roles should be investigated further. There seems to be a cognitive dissonance between the actions outside agencies require of Inupiat and how Inupiat prefer to behave. The concept of "enforcement" seems alien to Inupiat and may be relegated to Anglo-Americans or other "strangers" to perform. Decision making at the village and representational levels would relate directly to this.

# Values

There is no good way to measure values, which are essentially guides to ideal behavior. Values-in-behavior are context specific, however. Anglo-Americans "obey the law", but very few actually stop at "stop" signs. It is much more direct to look at behavior, which usually changes before values are rephrased anyway. Monitoring values would serve no useful purpose except to mark when previously noted changes were formally recognized by the mainstream culture. Table 55 lists few values which an Anglo-American would not subscribe to. Of those few, one may argue that Inupiat behaviorally act in accordance with only one. Successful hunters are respected but fewer Inupiat youth than ever before are learning the Inupiaq language or traditional domestic skills. Differences between expressed values and actual behavior, where the value specifies a unique behavior that is measurable, do indicate areas of change. These areas have been previously dealt with, however.

#### SUMMARY: PRIMARY OBSERVATIONAL VARIABLES

There are three basic criteria which primary observational variables must meet. Together, they must add up to an adequate baseline representation of the community at one point in time. The required information must be obtainable within a limited period of time using socially acceptable research techniques. The variables measured must be related to important factors underlying or subject to (at least potentially) significant social changes. Satisfying all three conditions at once is no easy matter and compromise is inevitable.

The importance of demographic and population information has already been stressed. Disaggregated census categories are one of the main devices used to sort other social data (household composition, village inter-ethnic marriage, etc.). Census information also allows one to begin examining mobility, both long-term and short-term.

Social differentiation and development can be measured most quickly with an inventory approach. Barker's "behavioral setting" concept is easily applied. Village facilities can be listed by inspection and observation. Locations for social activities are readily observable. Social groups can be observed and talked about. Indeed, one important characteristic of a social group or behavioral setting is just how visible it is to an outside observer. Observations

on use, group size, and so on can be made at the same time as the inventory.

Well-being can be investigated through the use of public documents. Given access to at least aggregated clinic and public safety records, basic indices of health and disruption can be formed. These can be compared over time. Visiting patterns between households are not so easy to observe and would require observation and interviewing. This could be potentially combined with the collection of census information.

Economic measures benefit, as does general population information, from the collection of data from a large sample of people. However, as long as the NSB and Kuukpik Corporation are the main employers in Nuiqsut, they could serve as a central source of this information. This would require their cooperation with the sponsor of the research, of course. Such a linkage would be much more efficient than if each research team responsible for each project had to forge such a connection independently. This would also serve to protect local populations and their interests and help them transform ethical principles (ACUNS Committee on Relations with Northern Peoples 1982; Society for Applied Anthropology 1974) from rhetoric into guides for behavior. The non-monetary sector of the economy requires such local cooperation even more, as observation is less useful here than it is for wage employment. Present information available is also relatively poor. The sorts of consumption observations made in our study can be made on a regular basis, but would need to adequately cover the entire year. Regularization would increase efficiency of observations, but the process would still be relatively time consuming.

Politics will remain a problematic area. A list of political positions, with current office holders and the length of their

tenure, is a start. Other community leadership positions (church, civic organizations, public social bodies) should be included. The number and frequency of meetings can now be counted from records, as local documentation has improved (accounts of debate and actions taken is still sparse, however). The socio-economic characteristics of leaders, in different positions and over time, can be compared. The observation of a meeting or meetings would give an opportunity for the observation of group dynamics. This should not be essential, however, as informal groups will have been observed in such social settings as the Kuukpik Corporation Office, the school, utilities, the bingo hall, and so on.

With the help of Inupiat assistants, two weeks to a month should suffice to collect the information outlined above. It will not be as detailed as that contained in our report, but it will allow a feasible monitoring program to be carried out. Given community support, it should prove very successful. Without such support, the quick and efficient collection of information will be impossible.

#### Recommendations

We start with a not unfamiliar observation:

...The outcome of any project is jeopardized when intended beneficiaries do not participate in project design and management; when overambitious objectives are placed on fragile organization; when there is inadequate leadership; when there is dependence on one imposing leader; when the project lacks access to technical support, funding and training; and when bad luck intervenes (Hartfiel 1982:28-29).

It is the first factor that most catches our eye. We will sketch some problems we encountered in the field work and

then suggest ways we think they may be minimized in the future.

In Nuiqsut, as in many other North Slope and more generalized research settings, eliciting critical information was very difficult. Villages were always hospitable and friendly to us as people. As researchers, we encountered problems. There was extreme resistance among Nuiqsut residents to talk about subsistence or wages in other than general terms. Rankings of other people or specific sorts of information about them were not expressed. People would change the subject or tell stories or remain silent or say they didn't know (the last was the first Inupiag expression learned by the researchers).

The use of native assistants was also difficult. The wages we paid were attractive enough for high school age and just graduated young adults. Our wages could not compete with other available work, however. Assistants also preferred to be flexible about hours worked, mornings being especially poor. They wanted to be paid every day and occasionally would not work if they had no purchase they wished to make. Translators especially expressed a willingness to work with us but could never arrange the time. Those who did work with us were good assistants and very helpful to our efforts, but very quickly experienced the resistance toward many of our questions and the suspicions of being associated with our study. Eventually, they were used more as informant checks and observers of indirect measures than as interviewers.

Interviewing key leaders was a problem as well. They were frequently outside of the village. When in the village, they had their own lives to lead. Sometimes the resistence of villagers was intensified in the case of key people, who had a larger amount of potentially useful information but who also realized what releasing it might mean in terms of social

reputation. There was general mistrust of any study in any way related to oil development issues, especially if funded by the Department of Interior. There is also the feeling that this was simply another study imposed from the outside, one in a series which "studies them to death" but produces no tangible benefits. This is not an uncommon feeling in communities experiencing energy development, growth, and rapid change throughout the western United States.

An effective monitoring process must actively involve the people who will be most affected, the study population. A social indicators approach, if it is to be more than merely suggestive, must validate its measures through a systematic collection of longitudinal data. This is best done (in the absence of pre-existing data, which is the general case on the North Slope), and perhaps can only be done, through the use of formal survey techniques. Given the realities of survey research, this would be impossible without North Slope Borough and village cooperation. Ideally, the NSB and the involved villages would have a direct voice in determining variables to investigate and devising measures of change. This is a programatic need and not one that can be addressed by individual researchers. In many cases, it may be worthwhile for a NSB department (planning, for example) to set up a section to collect these measures. A local entity with an interest in the accurate collection of demographic and socioeconomic information would greatly increase the speed and ease of data collection.

Monitoring is a long-term project and requires a long-term commitment on the part of everyone involved. Everyone is somewhat leery of strangers, but much of the suspicion of outside agencies results from a lack of systematic intercommunication (see, for instance, Wickersham & Flavin 1982:194-195, 201). Ethical reasons aside, local participation is

required precisely because of this long-term need. Such a cooperative working arrangement would relieve the researcher of the task of coordinating anew with villagers, the NSB, and the OCS Office each time that updated measurements were desired. It also provides a clear mechanism for ensuring that the village and the NSB understand the data needs of the program and the benefits that can be expected more clearly. Such official cooperation will also prevent the blocking of data information on the grounds of suspicion of inappropriate use. Data collection can be formulated as a joint effort to mutually benefit all parties to the agreement while at the same time protecting each individual's privacy. Without a long-term working relationship with the local community, informant confidentiality can be guaranteed only by aggregating data. Such indices can be useful in well-known systems, but have little utility in this monitoring context.

It is recognized that such an official working partnership would be difficult to negotiate and maintain. It appears as the most feasible solution, however, if access to the necessary information is to be maintained while protecting research populations from any potentially harmful effects the release of such information may have. Such arrangements also increase the speed and efficiency with which information can be collected. Potentially, the quality of information is improved as well, as local people learn the skills, theory, and purpose involved in the social monitoring process. The local community benefits by ensuring that the OCS Office receives information representative of the community. Such direct communication also ensures that the local community is well-informed of all OCS-oil related activity (and potentially all development activity). The data base generated would allow for improved local services in the fields of health, housing, and utilities by improving the quality of data available for planning purposes.

If such a formalized (survey oriented) program cannot be implemented, there is little to expect from monitoring. Information comparable to ours could be periodically gathered in an ethnographic way. Sampling in a village as small as Nuigsut is difficult, however. Too many factors could skew the data. Economic information could be adequately represented because of alternate data sources (employers) but demographic data would be impossible to collect. Crude growth measurements through number of structures and consumer demand could be made, but would lack the precision to even approximate rates of change. It is important to realize that the monitoring program we are recommending is not merely survey research. Survey research in Alaska in the past has tended to be short-termed and not directly responsive to the study population. A monitoring methodology would use survey instruments but in a precisely defined way. The results would be integrated with observational data where observation is the best collection method and guided by what are perceived as long-term issues of change. The observational components, local participation of the study population, and formalized research relationships would work together to ensure that measures are sensitive to local conditions and useful for dealing with change.

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DEMOGRAPHIC AND POPULATION INFORMATION Total Population (number) Males Disaggregated by as many variables as Females possible: age, occupation, education, Ethnicity income, wealth, subsistence activity, household characteristics, ethnicity. Some of these are detailed below. Household Information Age at marriage Number of children Age at birth of children Inter-ethnic marriages (type, frequency, number) Birthplace of married couple, of children Household size (number) Household composition (age, sex, relatedness) Length of time in household Length of time in village Community of origin/birth Mobility Absences from the village Who is absent Reason given for absence Length of absence (time) Where the person is in his/her absence Mechanism of travel Source of funding for travel, living expenses Permanent migration from the village Who, why, where, source of funds In-migration (to village) Prior residents "Strangers" Who, why, where from, funds source ECONOMY Cash economy Job inventory, by employer a) Male, female, permanent, seasonal, irregular, Inupiat, non-Inupiat disaggregated by b) Public, private, self-employed Money wages/salary Hours worked and distribution (day, week, month, year) Method of obtaining work Self-rating of wage/salary employment Money from sale of "subsistence products" Self-employment Other cash income Grants, transfer payments, welfare benefits

Cash economy-Continued Unemployment Numbers, rates Credit Availability, distribution, differential use Local businesses Numbers, volume Number filing sales tax receipts Annual sales tax revenue, NSB Number and value money orders sold Number housing starts Number of stores in village Degree of specialization (inventory) Volume of business (inventory, money) Consumption patterns Store stock inventories Store records Village purchases (in Nuigsut) vs. non-village purchases Amount of food bought vs. amount gained from subsistence Variety Observed consumption behavior Reported consumption preference Material goods inventories Distribution of income and employment "Subsistence" economy Number of people who hunt Number/frequency/duration/itinerary of hunting trips Number of fish camps Occupied at what time, for how long Resources actually harvested (per day, trip, aggregate) Disposition of resources harvested Necessary equipment for subsistence activities Inventory Cost (cash, time for manufacture, other) Hunting/fishing party composition Perception of resource availability Perception of competition for subsistence resources Number of whaling captains (active/inactive) Number of whaling crews (active members) Number man-days spent hunting Household economic activities (integrated economy) Subsistence resources used Wage earners/cash income Cost of living Ratio of Subsistence economy time/cash income time % Livelihood gained from subsistence activities Material goods inventories Ice cellars (active/new/inactive) Outboard motors Boats

Material goods inventories-Continued Sleds Vehicles (snow machines, trucks, autos, tri-wheelers, motorcycles) Durable goods (television, radio, stereo, stove, washer, dryer) Clothing worn "Native" or "western" Homemade or purchased Age and worth (estimated) POLITICS Arenas Nuiqsut Barrow North Slope Borough Alaska Federal Governmental agencies Non-governmental agencies Native corporations Non-native corporations Non-profit organizations Hierarchical (formal) relations between and among the above Non-hierarchical (informal) relations Formal bodies Number Composition (structure) and powers Actors Issues Decision-making process and dynamics Scheduled meetings, number and frequency Actual meetings, number and frequency How membership chosen Membership characteristics Payment or compensation Employees Overlapping authorities Multiple role occupations Actors who overlap boundaries of political arenas "Outsiders" Non-Inupiat intrusions/influences SOCIAL DEVELOPMENT/DIFFERENTIATION Village Facilities Water Electricity Sewage Treatment Recreation Education Public Safety Fire

SOCIAL DEVELOPMENT/DIFFERENTIATION-Continued Existing structures Type (residential, government, etc.) and number of each Interior square footage "Typicalness" of (standard plans, similar styles, etc.) Modifications To increase space (amount) To rearrange space (partition, departition) Stylistic Maintenance Fixtures Use of structures **Residential** Household members/structure Square feet/household member Storage Multi-function use of space Organization of space Other structures Daily person flow (mininum, maximum, average) Lot size-land associated with structure Inventory of material possessions inside structure Inventory of material objects within rooms Inventory of things outside of, but associated with, structure Inventory of junk in the village (litter index) Social groups (households and politics separate) Number For each: Date of formation Identity or category Membership (active/passive) Stated purpose Topics of discussion/action Decisions made (and process) Frequency of meeting (expected/actual) Dynamics (reported/observed) Social service and other formal organizations (see above) Organized churches (see above) "Public places": number, type, use Public events: what, where, who, when, why Number English speakers Fluency, when spoken Intra-village marriage, number and percentage Inter-village marriage, number and percentage School related events Number children in school Place of birth

WELL-BEING Visiting patterns and ties of solidarity In village Who visits whom Sharing of possessions and foodstuffs Who shares what with whom Frequency Number and frequency of airplane arrivals/departures Scheduled or charter Number passengers arriving/departing Purpose of trip Length of trip Point of departure/destination Amount of freight arriving/departing Types of freight Point of origin/destination Health and Safety Illness: types, numbers, frequency (rates) Hospital admissions Accidents: types, numbers, rates Crime Acts against: people, property Type Number and frequency Same people (repeaters) or different Own property or different Number of court cases Number and frequency of police calls Alcohol use Other drug use Structure of leisure time (non-wage, non-subsistence) Amount of such time Distribution of such time (day, week, month, vear) Activities during such time School attendance (age and sex, monthly, seasonal, daily) Percentage of village children in school Percentage population over 19 graduated from high school Interaction, travel Number long distance phone calls - when and where Number telephones Number local calls Number trips - destination, length of stay, purpose source of funds Amount postage sold

## APPENDIX B

# NORTH SLOPE BOROUGH CAPITAL PROJECTS FUND: SCHEDULE OF APPROPRIATIONS AND EXPENDITURES FOR NUIQSUT

# Education and Service Center Facilities

Year Ending		Project	Project Appropriation
6/30/75 6/30/76 6/30/77 6/30/78 6/30/80 6/30/81 6/30/78 6/30/79 6/30/80 6/30/78 6/30/80 6/30/81 6/30/81	6-7 Nuiqsut E 6-7 " 6-7 " 6-7 " 6-7 " 6-7 " 6-7 " 6-31 Nuiqsut T 6-31 " 6-31 " 6-31 Wiqsut W	arehouse aint. & Storage Bldg.	
	Public R	oads, Streets, Etc.	
6/30/75 6/30/76 6/30/77 6/30/78 6/30/79 6/30/80 6/30/81	7-5 " 7-5 " 7-5 " 7-5 " 7-5 " 7-5 "	oad to Airport ""new Airport """"""""""""""""""""""""""""""""""""	220,000 280,000 280,000 280,000 280,000 280,000 280,000
6/30/75 6/30/76 6/30/77 6/30/78 6/30/75 6/30/76	7-6 " 7-6 " 7-6 " Nuiqsut R 7-7 "	coad to Water Source	211,000 550,000 550,000 650,000 304,000 435,000
6/30/77 6/30/78 6/30/79 6/30/80 6/30/81 6/30/75	7-7 " 7-7 " 7-7 " 7-7 " 7-7 "	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	435,000 435,000 1,000,000 1,000,000 984,000 252,000
6/30/75 6/30/76 6/30/77 6/30/78 6/30/76	Nulqsut C 7-8 " 7-8 " 7-8 " 7-31 Nuiqsut,	Community Roads	253,000 1,273,000 1,273,000 800,000 405,000

APPENDIX B

	/			
Education	and	Service	Center	Facilities
ملاقيسينية المتعند الانطار بسليتين بدرايل كالتجربين				

Prior Years	Expenditures Current Year	Total	Unencumbered Balance	Encumbrances
\$ 107,462 245,394 850,518	\$ 137,932 605,124	\$ 245,394 850,518	\$ 6,115,606 5,624,482	\$
917,201	66,683 1,174,942	917,201 2,092,143	2,982,799 5,623,795	1,209,062
2,092,143	5,829,539	7,921,682	1,418,581	355,737
7,921,682	3,938,776	11,860,458	465,373	174,169
11,860,458	737,008	12,597,466	29,329	23,205
0 - 400	97,490	97,490	272,510	
97,490	284,516	382,006	12,994	
382,006	7,822	389,828	5,172	
	57,639	57,639	2,361 640,000	
	325	325	1,609,675	
	020	020	200,000	
	144,662	144,662	247,338	
	Public	Roads, Street	ts, Etc.	
	725	725	219,275	
725	2,133	2,858	277,142	
2,858	2,998	4,856	275,144	
4,856		4,856	275,144	
4,856	958	5,814	274,186	
5,814	3,807	9,621	270,379	
9,621	41,099	50,720	229,280	
14,673	14,673 38,567	14,673 53,240	196,327 496,760	
53,240	3,866	57,106	490,780	
57,106	581,789	638,895	11,105	
	<b>,</b>		304,000	
			435,000	
			435,000	
	44.300		435,000	10 000
44 100	44,108	44,108	942,832	13,060
44,108 693,859	649,751 287 429	693,859	21,132	285,009
000,000	287,439 135,263	981,298 135,263	2,702 117,737	
135,263	201,665	336,928	939,072	
336,928	401,218	738,146	534,854	
738,146	51,114	789,260	10,740	
-	69	69	404,931	

# Public Roads, Streets, Etc. - Cont'd.

Year Ending	Project	Project Appropriation
6/30/76 6/30/77 6/30/78 6/30/79 6/30/80 6/30/81 6/30/79 6/30/80 6/30/80 6/30/80 6/30/81 6/30/81 6/30/80	<pre>7-30 Mobile Equipment Storage 7-30 " " " " " 7-43 Nuiqsut Comm. Center &amp; Exp. Roads 7-43 " " " " " " " " 7-43 " " " " " " " " 7-43 " " " " " " " " 7-53 Nuiqsut Rd to Water Source, Ph.II 7-53 " " " " " " " " 7-55 Nuiqsut Road to Fuel Storage 7-55 " " " " " " 7-64 Nuiqsut Warehouse 7-64 " " 7-72 Nuiqsut Equip. Storage Upgrade</pre>	300,000 550,000 550,000 150,000 200,000 200,000 500,000 500,000 100,000
6/30/81	7-72 " " " " "	100,000
	Public Housing	
6/30/75 6/30/76 6/30/75 6/30/76 6/30/77 6/30/75 6/30/76 6/30/77 6/30/78	Nuiqsut Housing - Phase II 8-7 """""" Nuiqsut Housing - Phase III 8-8 """"""" 8-7 Nuiqsut, Phase II and III 8-7 """"""""""""""""""""""""""""""""""""	236,000 236,000 236,000 236,000 643,000 236,000 236,000 550,000 591,000
6/30/79 6/30/80 6/30/81 6/30/77 6/30/78 6/30/79 6/30/80 6/30/81 6/30/79 6/30/80 6/30/81	8-9 " " " " 8-9 " " " " 8-9 " " " " 8-10 Nuiqsut, Phase V and VI 8-10 Nuiqsut, Phase V 8-10 " " " 8-10 " " " " 8-10 " " " " 8-30 Nuiqsut Public Employee Housing 8-30 " " " " " " 8-30 " " " " " "	756,000 756,000 771,000 1,100,000 662,000 1,312,000 2,067,000 370,000 394,000 394,000 395,000

	Expenditures			
Prior	Current		Unencumbered	
Years	Year	Total	Balance	Encumbrances
\$	\$ 271,456	\$ 271,456	\$ 628,544	\$
271,456	402,656	674,112	225,888	
		014 500	250,000	0 000
014 500	214,580	214,580	82,092	3,328
214,580 508.489	293,909 6,291	508,489 514,780	40,585 35,220	926
000,405	0,201	014,700	350,000	
-	122,004	122,004	27,996	
	181,528	181,528	18,472	
181,528	1,167	182,695	17,305	
	109	100	500,000	
	183	183	<b>499,</b> 817 100,000	
	37	37	99,963	
	•••		,	
		Public Housin	<u>6</u>	
	136,159	136,159	99,841	
136,159	94,125	230,284	5,716	
			236,000	
075 504	145,220	145,220	90,780	
375,504	193,937	569,441	73,559	
569,441	10,018	579,459	63,541 236,000	
	38,175	38,175	197,825	
38,175	9,885	48,060	501,940	
48,061	110,979	159,040	309,390	122,570
1 <b>59,04</b> 0	473,362	632,402	123,169	429
632,402	123,791	756,193	(1,544)	1,351
756,193	11,959	768,152	2,848	
			1,100,000 662,000	
	5,342	5,342	656,658	
5,342	665,909	671,251	636,749	4,000
671,251	1,342,495	2,013,746	53,254	
	224,558	224,558	134,965	10,477
224,558	143,335	367,893	26,107	
367,893	25,999	393,892	(2,621)	2,729
393,892	557	394,449	551	

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# Public Roads, Streets, Etc. - Cont'd.

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## Public Housing - Cont'd.

		Project
Year Ending	Project	Appropriation
6/30/78	8-38 Nuiqsut Housing, General	580,000
6/30/79	8-38 " " "	975,000
6/30/80	8-38 " " "	1,011,000
6/30/81	8–38 " " "	998,000
6/30/80	8-63 Nuiqsut	454,000
6/30/81	8-63 ''	748,000
6/30/80	8-64 Nuiqsut	507,000
6/30/81	8-64 ''	780,000
6/30/81	8-74 Nuiqsut 3 Bedroom	988,000
6/30/81	8-75 Nuiqsut 4 Bedroom	355,000
	Water Facilities	
6/30/75	Nuiqsut Water Distrib. System	31,000
6/30/76	9-2 " " " "	31,000
6/30/77	9-2 " " "	31,000
6/30/78	9-2 " " "	310,000
6/30/79	9-2 " " "	79,000
6/30/80	9-2 " " "	77,000
6/30/78	9-10 Nuiqsut Water	900,000
6/30/79	9–10 " "	1,161,000
6/30/80	9-10 " "	1,161,000
6/30/81	9-11 " "	1,161,000
6/30/80	9-25 Nuiqsut Water Distrib. Ph. II	53,000
6/30/81	9-25 1 1 1 1	158,000
	Sewage Treatment Disposal Facilities	
6/30/75	Nuiqsut Sewage T&D Facilities	31,000
6/30/76	10-2 " " Disposal Equip.	31,000
6/30/77	10-2 NQT Sewage Disposal & Lagoon	31,000
6/30/78	10-2 " " " " "	79,000
6/30/79	10-2 " " " " "	79,000
6/30/80	10-2 " " " "	71,000
6/30/78	10-11 Nuiqsut Sewage Disposal	900,000
6/30/79	10-11 " " "	1,161,000
6/30/80	10-11 " " "	1,161,000
6/30/81	10-11 " " "	1,161,000
6/30/80	10-24 NQT Sewage Vehicle, Phase II	53,000
6/30/81	10-24 " " " " "	192,000

NOTE: Many houses (perhaps up to 20) are currently under construction.

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Public	Housing	- Cont'd.

Prior Years	Expenditures Current Year	Total	Unencumbered Balance	Encumbrances
\$ 97,527 926,831 993,130 229,518	\$ 97,527 829,303 66,299 4,785 229,518 501,210	\$ 97,527 926,830 993,130 997,915 229,518 730,728	\$ 366,122 48,170 16,740 85 223,482 17,272	\$ 116,351 1,130 1,000
262,241	262,241 482,354 681,312 210,065	262,241 744,595 681,312 210,065	221,221 12,866 306,688 144,935	23,538 22,539
		Water Facilit	<u>cies</u>	
35 434 589	35 399 155 270	35 434 589 859	30,965 30,566 30,411 309,141	
859 74,587	73,728 1,408	74,587 75,995	2,199 1,005 900,000	2,214
428,641 513,580	428,641 84,939 120,272	428,641 513,580 633,852	570,766 484,996 527,148 53,000	161,593 162,424
	100,649	100,649	57,351	
	Sewage Trea	tment Disposa	al Facilities	
	155		31,000 31,000	
155	155	155 1 <b>5</b> 5	30,845 78,845	
155 47,499	50,474 24,009	50,629 71,508	26,157 (508) 900,000	2,214
5 397	5,387	5,387	1,155,613 865,034	
5,387 295,966	290,579 430,948	295,966 726,914	431,398 53,000	2,688
	125,865	125,865	66,135	

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## Airport & Airport Terminal Facilities Fund

		Project
Year Ending	Project	Appropriation
6/30/75	Nuiqsut Airport Design	4,700
6/30/76	11-2 Nuiqsut Airport	50,000
6/30/77	11-2	45,000
6/30/78	11-2 " and Terminal Bldg.	500,000
6/30/79	11-2 " " " "	3,500,000
6/30/80	11-2 " " " " "	5,500,000
6/30/81	11-2 " " " "	5,500,000
	Light, Power, & Heating Systems	
6/30/75	NQT Elec Distrib. & Light	120,000
6/30/76	13-1. NQT Elec., Distrib. & Light	222,000
6/30/77	13-1 " " " "	222,000
6/30/78	13-1 " " " "	1,200,000
6/30/79	13-1° " " " " "	1,250,000
6/30/80	13-1 " " " " "	1,325,000
6/30/81	13-1 " " " "	1,425,000
6/30/78	13-23 NQT Distribution Expansion	30,000
6/30/79	13-23 " " "	30,000
6/30/80	13-23 " " "	130,000
6/30/81	13-23 " " "	145,000
6/30/79	13-6 NQT Fuel Facility	4,000,000
6/30/80	13-6 " " "	1,000,000
6/30/81	13-6 " " "	1,000,000
6/30/80	13-37 NQT Elec. Expansion, Phase II	200,000
6/30/81	13-37 " " " "	650,000
6/30/80	13-44 Nuiqsut Equipment Storage	250,000
6/30/81	13-44 " " "	1,150,000
6/30/81	13-50 NQT Distrib. & Light, Phase II	485,000

## Sanitary Facilities

6/30/80	15-18 Nuiqsut Land-fill	200,000
6/30/81	15–18 " "	183,000

## Health Facilities

A health center is currently under construction.

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Prior Years	Expenditures Current _Year	<u>Total</u>	Unencumbered Balance	Encumbrances
\$	\$	\$	\$ 4,700	\$
Ψ	¥ 43,980	<b>43,9</b> 80	6,020	Ψ
43,980	•	44,200	800	
44,200		48,290	451,710	
48,290		113,205	3,326,341	60,454
113,205		398,520	4,914,851	186,629
398,520		4,776,083	31,065	692,852
000,020	1,011,000	1,110,000	51,000	002,002
	Light, Po	wer. & Heating	g Systems	
	<u></u>	noi, a nouvin	<u> </u>	
			120,000	
	79,020	79,020	142,980	
79,020	•	83,124	138,876	
83,124		127,952	1,005,554	66,494
127,952		861,182	105,655	283,163
861,182	•	1,236,559	34,159	54,282
1,236,559		1,404,472	11,507	9,021
1,200,000	101,010	1,101,112	30,000	0,021
	19,494	19,494	10,506	
57,204		104,229	16,145	9,626
104,229	•	141,420	(2,283)	5,863
104,223	293,266	293,266	3,485,796	220,938
293,266	•	532,266	97,395	370,339
532,266	•	580,960	419,040	010,000
002,200	100,974	100,974	99,026	
100,974	-	390,948	214,650	44,402
100,97	_ •	1,400	248,600	47,402
1 400	1,400 0 91	-	1,148,509	
1,400		1,491 162,541	301,199	21,260
	162,541	102,041	301,199	21,200

Airport & Airport Terminal Facilities Fund

## Sanitary Facilities

		200,000
182,716	182,716	284

## Police Protection & Jail Facilities

Year Ending			Proj	ect		Project Appropriation
6/30/75		Nuigbut	Public	Safety	Bldg.	72,000
6/30/76	14-2	17	ŤŤ	11	11	72,000
6/30/77	14-2	**	tt	11	11	84,000
6/30/78	14-2	**	11	11	**	180,000
6/30/79	14-2	**	**	11	11	•
6/30/80	14-2	*1	11	11	11	*
6/30/81	14-2	**	**	11	**	*
6/30/80	_	NQT Fire	e Statio	on & Equ	uipment	900,000
6/30/81	14-16	11 11	11	., -	11	*

NOTE: Both the Public Safety Building and the Fire Station have been completed (1981 and 1983, respectively)

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### Police Protection & Jail Facilities

Prior Years	Expenditures Current Year	Total	Unencumbered Balance	Encumbrances
			\$ 72,000 72,000 84,000	
*	*	*	180,000	*
			÷	
*	*	*	*	*
*	*	*	*	*
			900,000	
*	*	*	*	*

\* Information not available as the project does not appear in this report.

#### SOURCES

### Annual Financial Report of the North Slope Borough

Years Ended June 30, 1975 and 1974
 Years Ended June 30, 1976 and 1975
 Years Ended June 30, 1977 and 1976
 Years Ended June 30, 1978 and 1977
 Years Ended June 30, 1979 and 1978
 Years Ended June 30, 1980 and 1979

North Slope Borough Capital Projects Funds Financial Statements in Accordance with Statutory Requirements, June 30, 1981

### REFERENCES CITED AND SELECTED MAJOR SOURCES

- ACUNS Committee on Relations with Northern Peoples. 1982. Ethical principles for the conduct of research in the north. Association of Canadian Universities for Northern Studies, Ottawa.
- Alaska Consultants. 1976. North Slope Borough: coastal zone management program consideration. Alaska Consultants, Anchorage.
- \_\_\_\_\_. 1976. North Slope Borough: issues overview. Alaska Consultants, Anchorage.
- \_\_\_\_\_. 1977. Social analysis, Beaufort Sea lease sale. Unpublished. Prepared for the North Slope Borough and the Alaska Department of Community and Regional Affairs.

. 1981. Detailed socio-economic information: North Slope Borough traditional communities. Anchorage. Prepared for the U.S. Bureau of Land Management.

. 1982. July census. Unpublished.

- \_\_\_\_\_. 1983. North Slope Borough background for planning: Nuiqsut. Anchorage. Prepared for the North Slope Borough.
- Alaska Department of Fish and Game, Subsistence Division. 1981. July census. Unpublished.
- Alaska Department of Natural Resources. 1983. Five-year oil and gas leasing program. Unpublished. Prepared for the First Session Thirteenth Alaska Legislature.
- Alaska Outer Continental Shelf Office. 1982. Diapir Field final environmental impact statement, proposed oil and gas lease sale 71. Unpublished. United States Department of the Interior, Bureau of Land Management.
- Alonso, W. and E. Rust. 1976. The evolving pattern of village Alaska. Study No. 17. Joint Federal-State Land Use Planning Commission for Alaska. Anchorage.
- Anders, G. 1982. Alternative perspectives on Alaska's rural development. In P. G. Cornwall and G. McBeath, eds. Alaska's Rural Development. Westview Press, Boulder.

- Anderson, B. 1982. Regional subsistence bibliography--Volume I: North Slope Alaska. Subsistence Technical Paper No. 1. Anthropology and Historic Preservation Cooperative Park Studies Unit, University of Alaska, Fairbanks.
- Anonymous. n.d. Nuiqsut Cultural Plan. Mimeograph copy on file at Kuukpik Corporation Office, Nuiqsut, Alaska.
- Arctic Environmental Information and Data Center. 1977. Naval petroleum reserve No. 4, annotated bibliography. Arctic Environmental Information and Data Center, Anchorage.
- Arctic Institute of North America. 1974. The Alaskan Arctic coast, a background study of available knowledge. Arctic Institute of North America, Anchorage.
- Arctic Policy Review. 1983. ICC-Frobisher Bay-1983. North Slope Borough, Barrow, Issue for October-November 1983.
- Armstrong, T. 1978. Ethical problems of northern development. Polar Record 19:3-9.
- Arnold, R. D. 1976. Alaska native land claims. Alaska Native Foundation, Anchorage.
- Baker, E. J. and J. G. McPhee. 1975. Land use management and regulation in hazardous areas: a research assessment. Program on Technology, Environment and Man Monograph NSF-RA-E-75-008. Institute of Behavioral Science, The University of Colorado, Boulder.
- Baker, P., ed. 1977. Human population problems in the biosphere: some research strategies and designs. MAB Technical Notes 3. UNESCO, Villeneuve-Saint-Georges.
- Barclay, G. W. 1958. Techniques of populations analysis. Wiley, New York.
- Barker, R. G., and P. Schoggen. 1973. Qualities of community life. Jossey-Bass Publishers, San Francisco.
- Bauer, A. 1966. Social indicators. MIT Press, Cambridge.
- Bigjim, F. S. and J. Ito-Adler. 1974. Letters to Howard: An interpretation of Alaska Native land claims. Alaska Methodist Univ. Press, Anchorage.
- Boyden, S. 1979. An integrative ecological approach to the study of human settlements. MAB Technical Notes 12. UNESCO, Villeneuve-Saint-Georges.

- Brower, W. A., H. W. Searby, J. L. Wise, H. F. Diaz, and
  A. S. Prechtel. 1977. Climate atlas of the outer
  continental shelf waters and coastal regions of
  Alaska, Vol. III: Chukchi-Beaufort Sea. U.S.
  Department of the Interior, Bureau of Land Management,
  Alaska OCS Environmental Assessment Program, Anchorage.
- Brown, B. S. 1977. The impact of the new boom towns: the lessons of Gillette and the Powder River Basin. U.S. Department of Health, Education and Welfare. New Dimensions in Mental Health series.
- Brown, W. E. 1979. Nuiqsut heritage: a cultural plan. Arctic Environmental Information and Data Center, Anchorage.
- Burch, E. Jr. 1975. Eskimo kinsmen: changing family relationships in Northwest Alaska. West Publishing Co., New York.

\_\_\_\_\_. 1979. The ethnography of northern North America: a guide to recent research. Arctic Anthropology 16(1):62-146.

. 1980. Traditional Eskimo societies in Northwest Alaska. In Yoshinobu Kotani and William Workman, eds. Alaska Native Culture and History. National Museum of Ethnology, Osaka, Japan.

\_\_\_\_\_. 1981. The traditional Eskimo hunters of Point Hope, Alaska: 1800-1875. North Slope Borough, Barrow.

Carley, M. 1981. Social measurement and social indicators. George Allen and Unwin, London.

Christensen, J. D.. ed. n.d. Inupiat Ilitquisiat yesterday, today and tomorrow. Special Edition of NUNA.

Cline, M. S. 1974. Community factionalism and teacher survival in the Alaskan bush. Human Organization 33(1):102-106.

- Collier, J. Jr. 1973. Alaskan Eskimo education: a film analysis of cultural confrontation in the schools. Holt, Rinehart and Winston, New York.
- Condon, R. G. 1981. Inupiat behavior and seasonal change: a study of behavioral ecology in the Central Canadian Arctic. Unpublished Ph.D. thesis, University of Pittsburgh.

- Cornwall, P. G. and G. McBeath, eds. 1982. Alaska's rural development. Westview Press, Boulder.
- Craik, K. 1972. An ecological perspective on environmental decision-making. Human Ecology 1:69-80.
- D'Argencourt, L.I. 1979. Northern efforts against alcohol abuse: community action. Inuit Today 8(1):48-67.
- Davis, N. Y. 1978. Historical indicators of Alaska Native culture change. Bureau of Land Management, Alaska Outer Continental Shelf Office, Anchorage. Alaska OCS Socio-economic Studies Program Technical Report 15.
- Division for Socio-economic Analysis Sector of Social Sciences and Their Applications. 1977. Indicators of social and economic change and their applications. Reports and Papers in the Social Sciences No. 37. UNESCO, Paris.
- Draper, H. H. 1977. The aboriginal Eskimo diet in modern perspective. American Anthropologist 72:306-316.
- Draper, H. H., F. A. Milan, W. Osborn, and O. Schaefer. 1979. Draft report of the nutrition panel. Report for the aboriginal/subsistence whaling panel, International Whaling Commission.
- Dupere and Associates. 1973. North Slope Borough reconnaissance study: an inventory of the Borough and its communities. Prepared for the North Slope Borough, Barrow.

\_\_\_\_\_. 1974. North Slope Borough manpower development and community survey reports. North Slope Borough, Barrow.

Durham, F. E. n.d. Ancient and current methods of taking the bowhead whale. Alaska Sea Grant Report No. 73-9. University of Alaska Sea Grant Program, Fairbanks.

- Feinup-Riordan, A. 1983. The Nelson Island Eskimo, social structure and ritual distribution. Alaska Pacific Univ. Press, Anchorage.
- Finsterbusch, K. 1980. Understanding social impacts: assessing the effects of public projects. Sage Library of Social Research Volume 10. Sage Publications, Beverly Hills.
- Finsterbusch, K., and A. B. Mote. 1980. Social research for decisions. Wadsworth Publishing Company, Belmont, California.

- Finsterbusch, K. and C. P. Wolf, eds. 1977. Methodology of social impact assessment. Dowden, Hutchinson and Ross, Stroudsburg, Penn. Community Development Series #32.
- Finsterbusch, K. C., L. Llewellyn, and C. P. Wolf, eds. 1983. Social impact assessment methods. Sage Publications, Beverly Hills.
- Foote, D. C. 1959. Economic base and seasonal activities of some Northwest Alaskan villages, a preliminary study report. U.S. Atomic Energy Commission, Oak Ridge Publication PNE-440.
- \_\_\_\_\_. 1961. A human geographical study in Northwest Alaska. Atomic Energy Commission, Cambridge.
- . 1965. Exploration and resource utilization in Northwestern Arctic Alaska before 1855. Unpublished Ph.D. thesis, McGill University.
- Freeman, M. 1973. Demographic research in the Canadian north: some preliminary observations. In Science and the North: A Seminar on Guidelines for Scientific Activities in Northern Canada 1972. The Sub-Committee on Science and Technology of the Advisory Committee on Northern Development. Information Canada, Ottawa.
- Freuchen, P. ed. 1961. Book of the Eskimos. World Publishing Company, Cleveland.
- Gilliam, J. K., and P. C. Kent, eds. 1982. Preliminary proceedings of the NPR-A caribou/waterbird impact analysis workshop. U.S. Department of the Interior, BLM Alaska State Office.
- Gooding, L. A. and L. L. Naylor. 1976. Alaska pipeline impact bibliography: social/cultural parts I and II. Alcan Pipeline Co. and the Univ. of Alaska, Fairbanks.
- Gourdeau, E. 1973. The social impact of Panarctic's employment policy in Arctic Bay and Pond Inlet. The Arctic Institute of North America, Montreal.
- Gubser, J. J. 1965. The Nunamiut Eskimo hunters of caribou. Yale Univ. Press, New Haven.
- Harrison, G. S. 1972. Flow of communication between government agencies and Eskimo villages. Human Organization 31(1):1-9.

- Hartfiel, A. 1982. In support of women: ten years of funding by the Inter-American foundation. A paper presented to the IAF Board of Directors.
- Helmericks, C. and H. Helmericks. 1948. Our summer with the Eskimos. Little, Brown and Company, Boston.
- Hensley, W. 1973. Arctic development and the future of the Eskimo societies. Pages 111-121 in Jean Malaurie, ed. Le Peuple Esquimau Aujourd'hui et Demain. Mouton, Paris.
- Hewitt, K. and F. K. Hare. 1973. Man and environment: conceptual frameworks. Commission on College Geography Resource Paper No. 20. Association of American Geographers, Washington, D.C.
- Hild, C. W. 1981. A community's approach to solving its major health problem. Paper presented at Fifth Symposium on Circumpolar Health. Copenhagen, Denmark.
- Hippler, A. E. and J. R. Wood. 1977. The Alaska Eskimo: a selected bibliography. Univ. of Alaska, Fairbanks.
- Hobart, C. 1975. Work adjustment of Inuit workers to oil exploration employment. Western Canadian Journal of Anthropology 4:73-38.
- Hobart, C. and G. Kupfer. 1973. Inuit employment by Gulf Oil Canada. Westrede Institute, Alberta.
- Hoffman, D. G. 1983. Village economics: The danger of village economies based on government spending. Alaska Native News (July):15-17.
- Hoffman, D. G., D. Libbey, and G. Spearman. 1978. Nuiqsut: a study of land use values through time. CPSR OCCAS Paper No. 12. Univ. of Alaska, Fairbanks.
- Hopson, E. 1976. Mayor Hopson's warning to the people of the Canadian Arctic. North Slope Borough, Barrow.
- Huskey, L. 1982. The coincidence of rural development and major resource development. In P. Cornwall and G. McBeath, eds. Alaska's Rural Development. Westview Press, Boulder.
  - . 1982. Rural labor force participation and OCS development in Alaska. In L. Huskey et al., eds. Economic and Demographic Structural Change in Alaska. Bureau of Land Management, Alaska Outer Continental Shelf Office. Alaska OCS Socio-economic Studies Program Technical Report 73.

- Huskey, L., W. B. Nebesky, B. Tuck, and G. Knapp, eds. 1982. Economic and demographic structural change in Alaska. Bureau of Land Management, Alaska Outer Continental Shelf Office. Alaska OCS Socio-economic Studies Program Technical Report 73.
- Inupiat Community of the Arctic Slope. 1979. The Inupiat view. Vol. I. National Petroleum Reserve-Alaska 105 (c) Final Study, U.S. Department of the Interior, Anchorage.
- Jenness, D. 1957. Dawn in Arctic Alaska. Univ. of Minnesota Press, Minneapolis.

. 1962. Eskimo administration: I. Alaska. Arctic Institute of North America Technical Paper No. 10.

\_\_\_\_\_. 1968. Eskimo administration: V. analysis and reflections. Arctic Institute of North America Technical Paper No. 21.

- Johnson, P. R. and C. W. Hartman. 1969. Environmental Atlas of Alaska. Institute of Arctic Environmental Engineering, Institute of Water Resources, University of Alaska, Fairbanks.
- Jones, D. M. 1977. Strategy straddling: a community organization dilemma in an Alaskan Native village. Human Organization 36(1):22-23.
- Juster, F. T. and K. C. Land, eds. 1981. Social accounting systems: essays on the state of the art. Academic Press, New York.
- Klausner, S. Z. and E. F. Foulks. 1982. Eskimo capitalists: oil, alcohol, and politics. Allanheld and Schram, Montclair, New Jersey.
- Klausner, S. Z., E. F. Foulks, and M. Moore. 1980. Social change and the alcohol problem on the Alaska North Slope. Center for Research on the Acts of Man, Philadelphia.
- Kleinfeld, J. S. 1979. Eskimo school on the Andreafsky: a study of effective bicultural education. Praeger, New York.
- Kleinfeld, J. S., J. Kruse, and R. Travis. 1981. Different paths of Inupiat men and women in the wage economy: the North Slope experience. Institute of Social and Economic Research, Fairbanks.

- Koster, D. 1978. Going to the colony. In Muller-Wille et al., eds. Consequences of Economic Change in Circumpolar Regions. Boreal Institute for Northern Studies, Edmonton, Alberta.
- Kruse, J. 1982. Subsistence and the North Slope Inupiat Eskimo: an analysis of the effects of energy development. Institute of Social and Economic Research, Fairbanks.
- Kruse, J. A., J. Kleinfeld, and R. Travis. 1982. Energy development on Alaska's North Slope: Effects on the Inupiat population. Human Organization 41:97-106.
- Kruse, J., J. Kleinfeld, R. Travis, and L. Leask. 1981. Energy development and the North Slope: a quantitative analysis of social and economic change. Institute of Social and Economic Research, Fairbanks.
- Kruse, J., M. Baring-Gould, W. Schneider, J. Gross, G. Knapp, and G. Sherrod. 1983. A description of the socioeconomics of the North Slope Borough. Minerals Management Service, Alaska Outer Continental Shelf Region, Anchorage. Social and Economic Studies Program Technical Report 85.
- Kupper, G. and C. W. Hobart. 1978. Impact oil exploration work on an Inuit community. Arctic Anthropology 15:58-67.
- Leistritz, F. L. and S. H. Murdock. 1981. The socio-economic impact of resource development: methods for assessment. Westview Press, Boulder, Colorado.
- Leland, J. 1979. Alcohol, anthropologists, and native Americans. Human Organization 38(1):94-99.
- Levy, J. and S. J. Kunitz. 1974. Indian drinking: Navajo practices and Anglo-American theories. John Wiley & Sons, New York.
- Libbey, D., G. Spearman, and D. Hoffman. 1979. Nuiqsut synopsis. In North Slope Borough Contract Staff. Native. livelihood & dependence: a study of land use values through time. U.S. Department of the Interior, National Petroleum Reserve in Alaska 105 (c) Land Use Study, Anchorage. National Petroleum Reserve in Alaska Work Group 1 Study 1.
- Lloyd, T. 1973. The development of the North American Arctic and the future of the Eskimo society. In Le Peuple Esquimau Aujourd'hut et Demain. Jean Malaurie. Mouton, Paris.

Lobban, M. C. 1971. Cultural problems and drunkenness in an Arctic population. British Medical Journal 1:344.

- Lonner, T. D. 1983. Major construction projects and changing substance use patterns in Alaska. Center for Alcohol and Addiction Studies, Univ. of Alaska, Anchorage.
- Lowenthal, D. 1961. Geography, experience, and imagination: towards a geographical epistemology. Annals of the Association of American Geographers 51:241-260.
- Louis Berger and Associates, Inc. 1982. Forecasting enclave development alternatives and their related impacts on Alaskan coastal communities as a result of OCS development. Minerals Management Service, Alaska Outer Continental Shelf Office, Anchorage. Alaska OCS Socioeconomic Studies Program Technical Report 76.
- \_\_\_\_\_. 1983. Social indicators for OCS impact monitoring present states of community well-being in two selected regions of Alaska. Minerals Management Service, Alaska Outer Continental Shelf Office, Anchorage.
- Maas, D. 1982. The Native Claims Settlement Act and selfdetermination values in Alaska's development process. In P. Cornwall and G. McBeath, eds. Alaska's Rural Development. Westview Press, Boulder.
- MacLean, E. 1971. Genealogical record of Barrow Eskimo families. Unpublished. Naval Arctic Research Laboratory, Barrow.
- Malaurie, J. ed. Le peuple Esquimau aujourd'hui et demain. Fourth International Congress of the French Foundation for Nordic Studies. Mouton, Paris.
- Marshall, M. 1979. Weekend warriors: alcohol in a Micronesian culture. Mayfield Publishing Company, Palo Alto, California.
- Masnick, G. S. and S. H. Katz. 1976. Adaptive childbearing in a North Slope Eskimo community. In B. A. Kaplan, ed. State Univ. Press, Detroit.
- MacAndrew, C. and R. B. Edgerton. 1969. Drunken comportment: a social explanation. Aldine, Chicago.
- McBeath, G. 1981. North Slope Borough government and policy making. Institute of Social and Economic Research, Fairbanks.

\_\_\_\_. 1982. Government-assisted development in rural Alaska: borough and regional quasi-governments. In P. Cornwall and G. McBeath, eds. Alaska's Rural Development. Westview Press, Boulder.

- McBeath, G. and T. A. Morehouse. 1980. Dynamics of Alaska Native self-government. Univ. Press of America, Lauham, Maryland.
- Meehan, E. J. 1975. Social indicators and policy analysis. In F. P. Scioli Jr. and T. J. Cook, eds. Methodologies for Analyzing Public Policies. Lexington Books, Lexington, Massachusetts.
- Minerals Management Service. 1982. Scoping. Newspaper Supplement published by the Minerals Management Service, Alaska Outer Continental Shelf Region - U.S. Department of the Interior.
- Moyer, D. S. 1971. The social context of economic change: a study of Eskimo boat management. Human Organization 30(1):11-24.
- Morehouse, T.A., and L. E. Leask. 1978. Governance in the Beaufort Sea region: petroleum development and the North Slope Borough. Bureau of Land Management, Alaska Outer Continental Shelf Office. Alaska OCS Socio-economic Studies Program Technical Report 16.
- Muller-Wille, L., P. J. Pelto, L. Muller-Wille, and R. Darnell, eds. 1978. Society for Applied Anthropology 34th Annual Meeting, Amsterdam 1975. Papers of the Symposium on Unexpected Consequences of Economic Change in Circumpolar Regions. Boreal Institute for Northern Studies, Edmonton, Alberta.
- Murdoch, J. 1892. Ethnological results of the Point Barrow Expedition. U.S. Bureau of American Ethnology, 9th Annual Report 1887-1888. Government Printing Office, Washington, D.C.
- Nebesky, W. 1982. Patterns of resident employment in Alaska's outer continental shelf industry. In L. Huskey et al., eds. Economic and Demographic Structural Change in Alaska. Bureau of Land Management, Alaska OCS Socio-economic Studies Program Technical Report 73.
- Nelson, R. K. 1969. Hunters of the northern ice. The Univ. of Chicago Press, Chicago.

- Nelson, R. K. 1979. The environmental setting. In North Slope Borough Contract Staff, Native Livelihood and dependence: a study of land use values through time. U.S. Dept. of the Interior, National Petroleum Reserve in Alaska 105(c) Land Use Study, Anchorage. National Petroleum Reserve in Alaska Work Group 1 Field Study 1.
- Nielson, J. M. 1977. Beaufort Sea study--historic and subsistence site inventory: a preliminary cultural resource assessment. North Slope Borough, Barrow.
- Nooter, G. 1976. Leadership and headship: changing authority patterns in an east Greenland hunting community. E. J. Britt, Leiden.
- North Slope Borough. 1975-1980. Annual financial report of the North Slope Borough. North Slope Borough, Barrow.

\_\_\_\_\_. 1976. North Slope Borough Alaska: general information and economic factors. North Slope Borough, Barrow.

\_\_\_\_\_. 1977-1981. Annual overall economic development program report. North Slope Borough, Barrow.

- \_\_\_\_\_. 1978. Traditional land use inventory. North Slope Borough, Barrow.
- . 1978 Overview volume: North Slope Borough contract 105(c) studies. U.S. Dept. of the Interior, National Petroleum Reserve in Alaska, Anchorage.

. 1980. Synopsis and staff review reports. Unpublished.

- North Slope Borough Commission on History and Culture. 1980. SEE Smith, R. J.
- North Slope Borough Contract Staff. 1979. Native Livelihood and dependence: a study of land use values through time. U.S. Dept. of the Interior, National Petroleum Reserve-Alaska 105(c) Land Use Study, Anchorage. National Petroleum Reserve in Alaska Work Group 1, Field Study 1.
- North Slope Borough Health and Social Services Agency. nd. Paglan (welcome). Pamphlet.
- North Slope Borough School District. 1981. Ulgunigmiut: the people of Wainwright. Vol. I. Produced with students of Alak High School, Wainwright, Alaska. North Slope Borough, Barrow.

- North Slope Borough School District. 1982. Nagsragmiut (people of the Summit). Produced by Nunamiut School students, Anaktuvuk Pass, Alaska. North Slope Borough, Barrow.
- North Slope Borough Utility Department. 1980. Newsletter No. 1. October 1980.
- Northern Alaska Health Resources Association, Inc. 1982. Health resource development plan for northern Alaska: 1982. Northern Alaska Health Resources Association, Inc., Fairbanks.
- Okakok, L., ed. 1981. Puiguitkaat. North Slope Borough Commission on History and Culture, Barrow.
- Olson, D., and B. Tuck. 1982. The role of regional native corporations in Alaska's rural development. In, P. Cornwall and G. McBeath eds. Alaska's Rural Development. Westview Press, Boulder.
- The Organization for Economic Co-Operation and Development. 1982. The OECD list of social indicators. Organization for Economic Co-Operation and Development, Paris.
- Patterson, A. 1975. Inventory: subsistence harvests in five native regions: Arctic Slope, NANA, Bering Straits, Doyon, Ahtna. Joint Federal-State Land Use Planning Commission, Resource Planning Team, Anchorage.
- Peat, Marwick, Mitchell and Co., URSA, ccc/Hok and Dames and Moore. 1977. Literature survey. Bureau of Land Management, Alaska Outer Continental Shelf Office, Anchorage. Alaska OCS Socioeconomic Studies Program Technical Report 2.
- Pedersen, S. 1979. Regional subsistence land use North Slope Borough. Alaska Occasional Paper No. 21. Conservation and Environmental Protection, North Slope Borough; and Anthropology and Historic Preservation Cooperative Park Studies Unit, Univ. of Alaska, Fairbanks.

\_\_\_\_\_\_. 1979. Biotic resources of the North Slope Inupiat. In, North Slope Borough Contract Staff, Native Livelihood and Dependence: A Study of Land Use Value Through Time. U.S. Department of the Interior, National Petroleum Reserve in Alaska 105 (c) Land Use Study, Anchorage. National Petroleum Reserve in Alaska Work Group 1 Field Study 1.

- Rainey, F. G. 1947. The whale hunters of Tigara, Anthropological Papers of the American Museum of Natural History Vol. 41, New York.
- Rathje, W. L. 1979. Trace measures. In, L. Sechrest, ed. New Directions for Methodology of Behavioral Science, Vol. I: Unobtrusive Measurement Today. Jossey-Bass, San Francisco.
- Riches, D. 1982. Northern nomadic hunters-gatherers: a humanistic approach. Academic Press, New York.
- Rossi, R. J. and K. J. Gilmartin. The handbook of social indicators: sources, characteristics and analysis. Garland STPM Press, New York.
- Schneider, W. 1982. Subsistence in Alaska: a look at the issue over time. In, P. Cornwall and G. McBeath, eds. Alaska's Rural Development. Westview Press, Boulder.
- Schneider, W., S. Pederson, and D. Libbey. 1980. Barrow-Atgasuk Report: A study of land use values through time. CPSU OCCAS. Paper No. 24. Univ. of Alaska, Fairbanks.
- Schultheis, M. C. and G. Smythe. 1978. Beaufort Sea Region: manmade environment. Bureau of Land Management Alaska OCS Office, Anchorage. Alaska OCS Socio-economic Studies Program Technical Report 8.
- Scioli, F. P. Jr. and T. J. Cook. 1975. Methodologies for analyzing public policies. Lexington Books, Toronto.
- Sechrist, L., ed. 1979. Unobtrusive measurement today: new directions for methodology of behavioral science. Jossey-Bass, San Francisco.
- Segal, B. n.d. Review and analysis: social change and the alcohol problems on the Alaskan North Slope - a study conducted by the Center for Research on the Acts of Man. The Center for Alcohol and Addiction Studies, Univ. of Alaska, Anchorage.
- Shaffir, W. B., R. A. Stebbins, and A. Turowetz, eds. 1980. Fieldwork experience: qualitative approaches to social research. St. Martin's Press, New York.
- Shepard, S., K. Bennett, and J. K. Gilliam. 1982. National Petroleum Reserve in Alaska (NPR-A) technical examinations TE-1: an analysis of the type and likely level of NPR oil development(s). U.S. department of the Interior Bureau of Land Management, Anchorage.

- Shinkwin, A. and M. Pete. 1982. Alaskan villagers' view on problem drinking: "Those who forget". Human Organization 41(4):315-322.
- Smith, R. J., ed. 1980. Qiniqtuagaksrat Utuqqanaat Inuuniagninisiquu: the traditional land use inventory for the Mid-Beaufort Sea, Vol. I. North Slope Borough Commission on History and Culture, Barrow.
- Society for Applied Anthropology. 1974. Statement on professional and ethical responsibilities. Human Organization 33:218.
- Soderstrom, E. J. 1981. Social impact assessment: experimental methods and approaches. Praeger, New York.
- Sonnenfeld, J. 1957. Changes in subsistence among the Barrow Eskimo. Unpublished Ph.D. thesis, Johns Hopkins Univ., Baltimore.
- Spencer, R. F. 1959. The North Alaskan Eskimo: a study in ecology and society. Smithsonian Institution, Bureau of American Ethnology Bulletin 171. U.S. Government Printing Office, Washington, D.C.
- Stefansson, V. 1914. Prehistoric and present commerce among the Arctic Coast Eskimo. Canada Museum Bulletin No. 6. Anthropological Series No. 3. Government Printing Bureau, Ottawa.
- Swenson, J., and G. Rosenthal, eds. 1980. Warm springs: a case study approach to recognizing the strengths of American Indian and Alaska Native families. The American Academy of Child Psychiatry, Washington, D.C.
- Taylor, C. L., ed. 1980. Indicator system for political, economic, and social analysis. Oelgeschlager, Gunn, and Hain, Cambridge, Massachusetts.
- Tener, M. E. n.d. Nuiqsut villagers then and now. Manuscript, 6 pp (author uncertain).

. 1974. Letter of April 23, 1974. Mimeograph 2 pp.

Trapper tracks; Nuiqsut school yearbook. 1975-1976. n.p. (Nuiqsutmiut Nanigiaqtuqtiqatigiitch Tumini).

Trappers: Nuiqsut school yearbook. 1978-1979. n.p.

- Travis, R. 1981. Myths about problem drinking and social problems in Barrow, Alaska. Institute of Social and Economic Research, Fairbanks.
- Tussing, A. 1981. The outlook for Alaska North Slope crude oil production: 1981-2000. Institute of Social and Economic Research, Univ. of Alaska, Fairbanks.
- Underwood, L. S., W. E. Brown, and J. LaBelle. 1982. Socioeconomic profile: National Petroleum Reserve in Alaska. U.S. Department of the Interior, National Petroleum Reserve in Alaska 105(c) Land Use Study, Anchorage. National Petroleum Reserve in Alaska Task Force Study Report 3.
- U.S. Department of Commerce. 1977. F.E.I.S. International Whaling Commission's deletion of Native exemption for the subsistence harvest of bowhead whales. Vol. I: summary and text. National Oceanic and Atmosphere Administration, National Marine Fisheries Service.
- U.S. Department of the Interior, Bureau of Land Management. 1981. Draft supplement to final environmental statement, proposed five-year OCS oil and gas lease sale schedule January 1982-December 1985. Washington, D.C.
- \_\_\_\_\_. 1981. National Petroleum Reserve in Alaska: draft environmental assessment, federal oil and gas lease sale. Anchorage.

\_\_\_\_\_. 1982. Guide to social assessment. Social Effects Project. BLM.

- U.S. Department of the Interior, Geological Survey. 1982. Socioeconomic assessment of proposed Arctic National wildlife refuge oil and gas exploration. Report, prepared by the University of Alaska Arctic Environmental Information and Data Center, Fairbanks.
- U.S. Department of the Interior, Office of Minerals Policy and Research Analysis. 1980. Final report of the 105(b) economic exploration, development, production, transportation, and distribution of the petroleum resources of the National Petroleum Reserve in Alaska (NPR-A). U.S. Government Printing Office, Washington, D.C.
- Van Tassell, J. and K. L. Michaelson. 1977. Social impact assessment: methods and practice (Interstate 88 in New York). Department of Anthropology, State University of New York at Binghamton.

- Webb, E. J., D. T. Campbell, R. D. Schwartz, and L. Schrist. 1966. Unobtrusive measures: nonreactive research in the social sciences. Rand McNally and Co., Chicago.
- Whyte, A. V. T. 1977. Guidelines for field studies in environmental perception. MAB Technical Notes 5. UNESCO, Villeneuve-Saint-Georges.
- Wickersham and Flavin. 1982. Comprehensive plan: North Slope Borough. North Slope Borough, Barrow.
- Williamson, R. G. 1973. Eskimo value persistence in contemporary acculturation. In, J. Malaurie, ed. Le Peuple Esquimau Aujourd'hui et Demain. Mouton, Paris.

Woodburn, J. 1982. Egalitarian societies. Man 17:431-51.

- Worl Associates. 1978. Beaufort Sea Region sociocultural systems. Bureau of Land Management, Alaska Outer Continental Shelf Office, Anchorage. Alaska OCS Socio-economic Studies Program Technical Report 9.
- . 1978. Assessment of change in the North Slope, Beaufort Sea Region socioculturla systems. Bureau of Land Management, Alaska Outer Continental Shelf Office, Anchorage. Alaska OCS Socio-economic Studies Program Technical Report 22.
- Worl, R. 1980. The North Slope Inupiat whaling complex. In, Y. Kotani and W. Workman, eds. Alaska Native Culture and History. National Museum of Ethnology, Osaka, Japan.
- Worl, R., R. Worl, and T. Lonner. 1981. Beaufort Sea: sociocultural systems update analyses. Bureau of Land Management. Alaska Outer Continental Shelf Office, Anchorage. Alaska OCS Socio-economic Studies Program Technical Report 64.
- Wynn, A. C. 1977. A quantitative analysis of Numamiut Eskimo settlement dynamics: 1898 to 1969. Unpublished Ph.D. theses, Univ. of New Mexico.