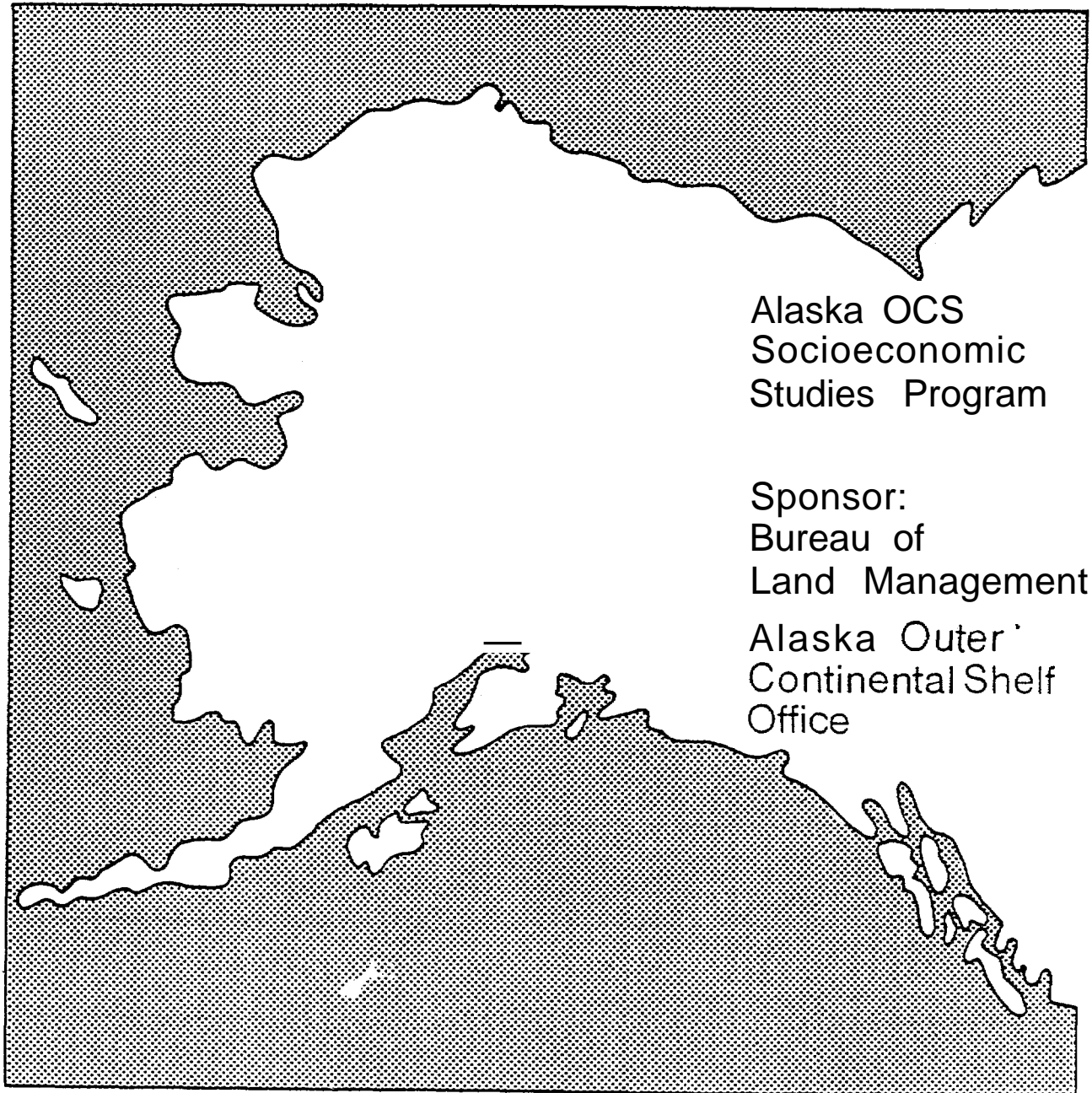


Technical Report  
Number 54 Volume 1



Alaska OCS  
Socioeconomic  
Studies Program

Sponsor:  
Bureau of  
Land Management  
Alaska Outer  
Continental Shelf  
Office

Bering-Norton  
Petroleum Development Scenarios  
Sociocultural Systems Analysis

The **United** States Department of the Interior was designated by the Outer Continental Shelf (**OCS**) Lands Act of 1953 to carry out the majority of the Act's provisions for administering the mineral leasing and development of offshore areas of the United States under federal jurisdiction. Within the Department, the Bureau of Land Management (**ELM**) has the responsibility to meet requirements of the National Environmental Policy Act of 1969 (**NEPA**) as well as other legislation and regulations dealing with the effects of offshore development. In Alaska, unique cultural differences and climatic conditions create a need for developing additional socioeconomic and environmental information to improve **OCS** decision making at all governmental levels. In fulfillment of its federal responsibilities and with an awareness of these additional information needs, the **BLM** has initiated several investigative programs, one of which is the Alaska **OCS** Socioeconomic Studies Program (**SESP**).

The Alaska **OCS** Socioeconomic Studies Program is a multi-year research effort which attempts to predict and evaluate the effects of Alaska **OCS** Petroleum Development upon the physical, social, and economic environments within the state. The overall methodology is divided into three broad research components. The first component identifies an alternative set of assumptions regarding the location, the nature, and the timing of future petroleum events and related activities. In this component, the program takes into account the particular needs of the petroleum industry and projects the human, technological, economic, and environmental offshore and onshore development requirements of the regional petroleum industry.

The second component focuses on data gathering that identifies those' quantifiable and qualifiable facts by which **OCS-induced** changes can be assessed. The critical community and regional components are identified and evaluated. Current **endogenous** and exogenous sources of change and functional organization among different sectors of community and regional life are analyzed. Susceptible community relationships, values, activities, and processes also are included.

The third research component focuses on an evaluation of the changes that could occur due to the potential oil and gas development. Impact evaluation concentrates on an analysis of the impacts at the statewide, regional, and **local** level.

In general, program products are sequentially arranged in accordance with **BLM's** proposed **OCS** lease sale schedule, so that information is timely to decisionmaking. Reports are available through the National Technical Information Service, and the **BLM** has a limited number of copies available through the Alaska **OCS** Office. Inquiries for information should be directed to: Program Coordinator (**COAR**), Socioeconomic Studies Program, Alaska **OCS** Office, P. O. Box 1159, Anchorage, Alaska 99510.

Alaska OCS Socioeconomic Studies Program

BERING-NORTON PETROLEUM DEVELOPMENT SCENARIOS  
AND SOCIOCULTURAL IMPACTS ANALYSIS  
VOLUME I

Prepared by  
LINDA J. ELLANNA

Prepared for  
Peat, Marwick, Mitchell, & Co.  
and the Bureau of Land Management,  
Alaska Outer Continental Shelf Office

April 30, 1980

NOTICE

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Alaska OCS Socioeconomic Studies Program  
Bering-Norton Petroleum Development Scenarios  
and Sociocultural Impacts Analysis

Prepared by  
Linda J. Ellanna  
Contract No: AA550-CT6-61

April 30, 1980

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LJ E

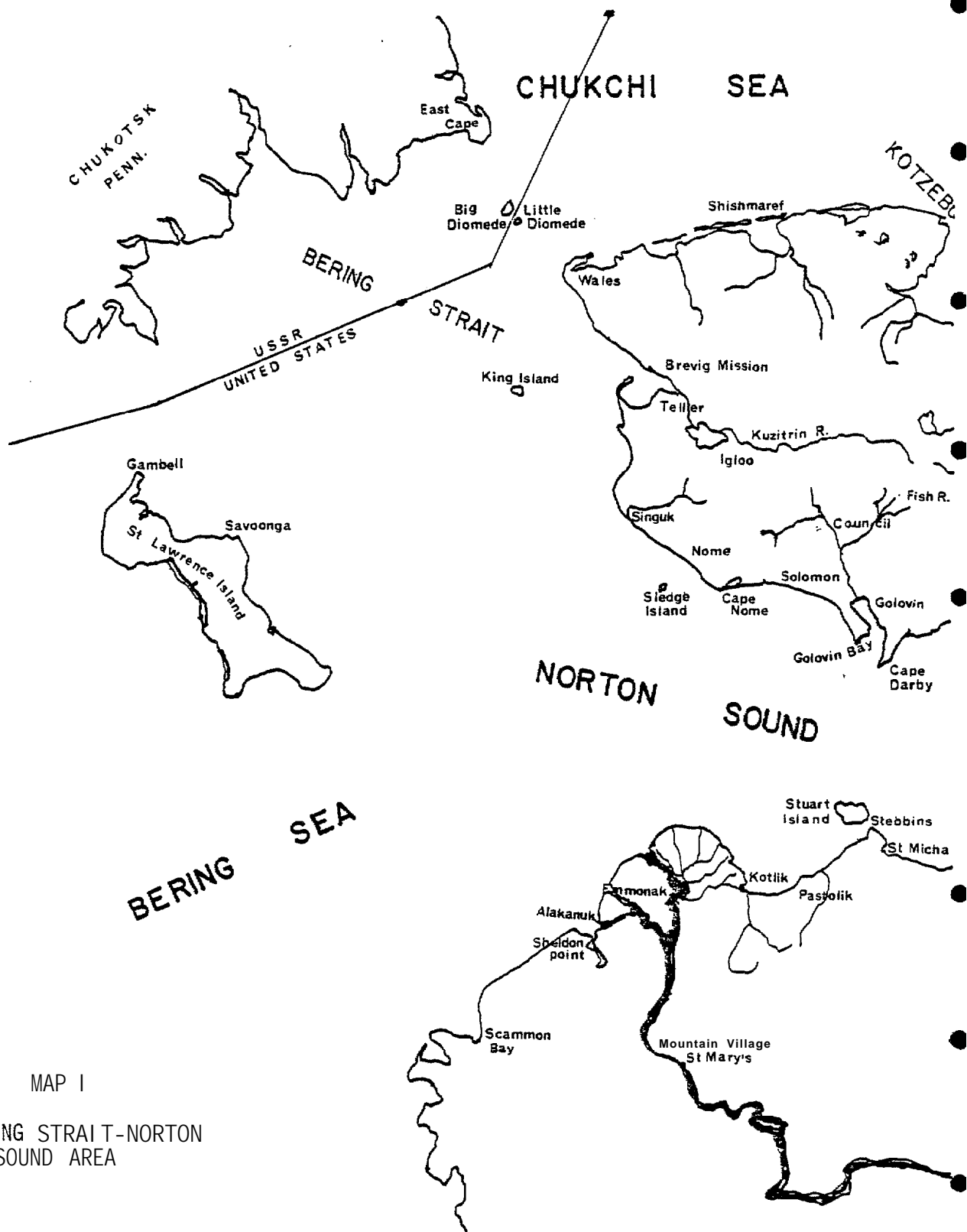
## I. INTRODUCTION

### Context of Study

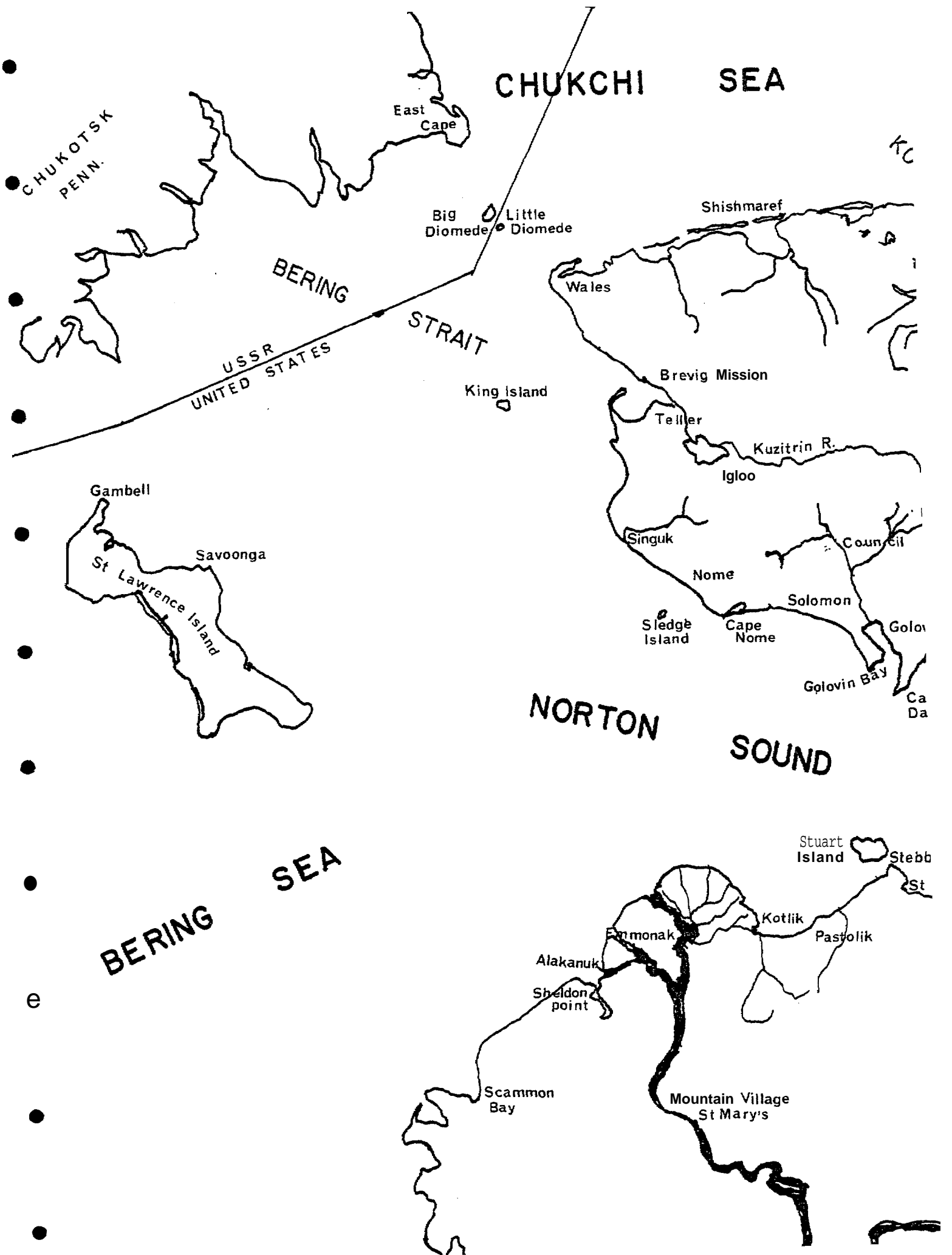
#### DESCRIPTION OF STUDY

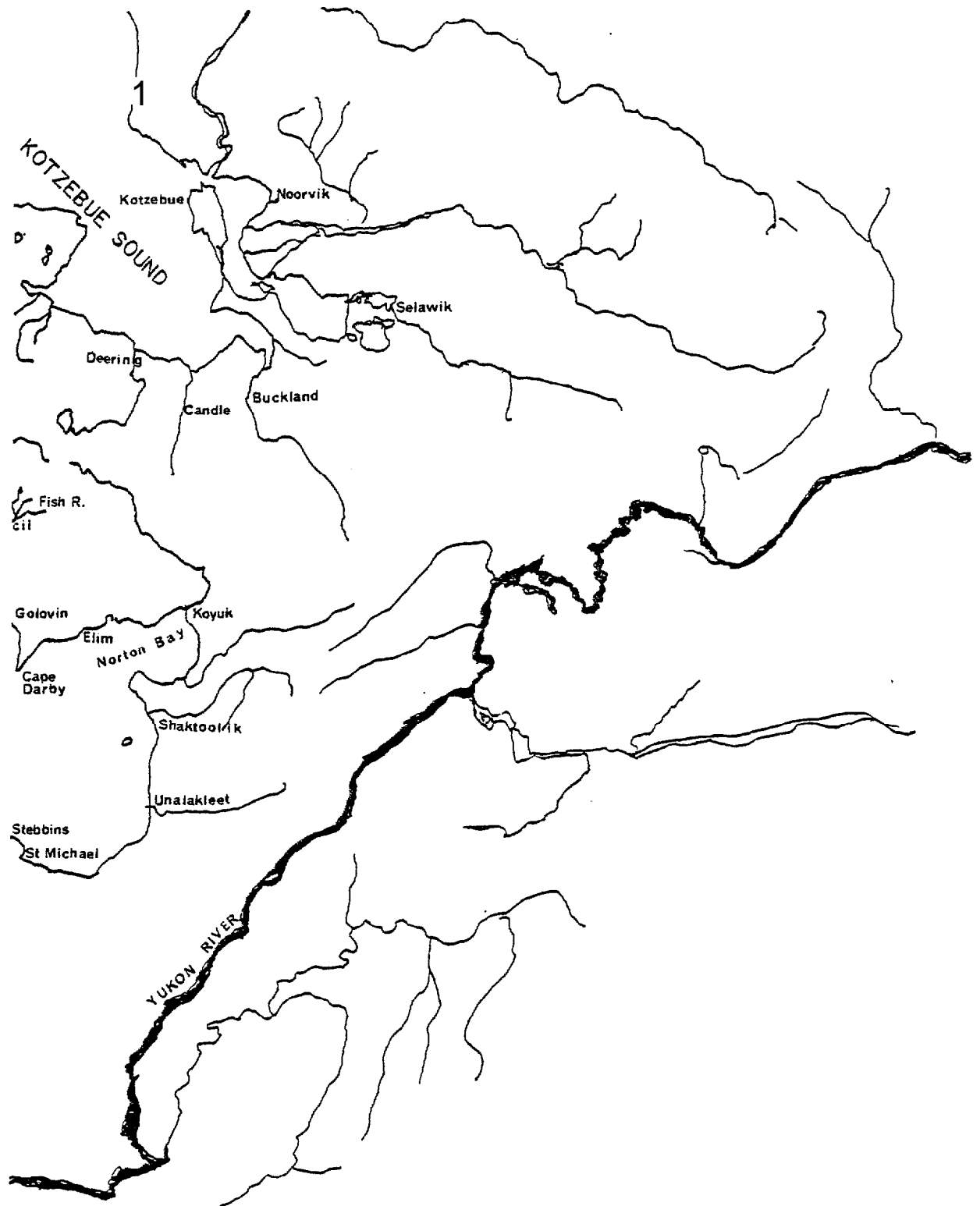
This is the first of two studies designed to analytically describe the sociocultural systems of the coastal areas adjoining the Bering-Norton Outer Continental Shelf (hereafter referred to as OCS) and to subsequently assess the potential impacts of projected OCS petroleum development on these sociocultural systems. These studies have been undertaken in response to Tentative Sale #57, presently anticipated to occur in September of 1982. The coastal and insular areas either adjacent to and/or potentially affected by the Bering-Norton OCS lease sale (i.e. the study area) extend from the coastal village of Shishmaref in the north to and including the entire coastline of the Seward Peninsula, Norton Sound, and the Yukon Delta to the south, including the Bering Strait islands of Little Diomedede (Inalik), King (Ukiuvok), St. Lawrence (Sevoukak), and Sledge (Ayak) (see Map I & II).

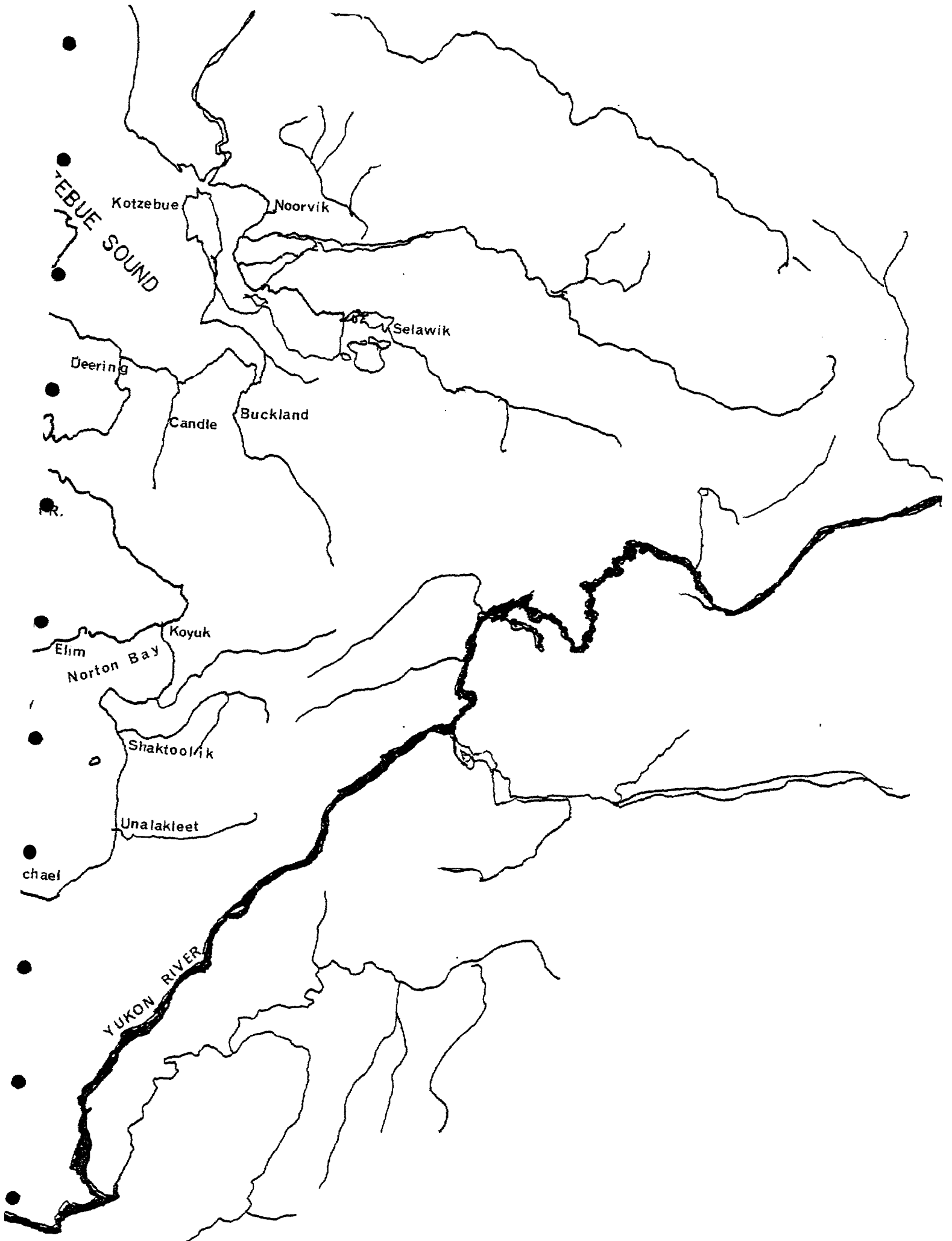
The focus of this study is basically a relatively qualitative analysis of the rural, primarily but not exclusively Inupiat or Yuit (northern and southern Eskimo respectively) sociocultural systems of this area, and the articulation of these systems with the more urban, internal and external, primarily non-Native components of the area's systems in their entirety. The baseline portion of this study is not static but rather



MAP I  
 BERING STRAIT-NORTON  
 SOUND AREA

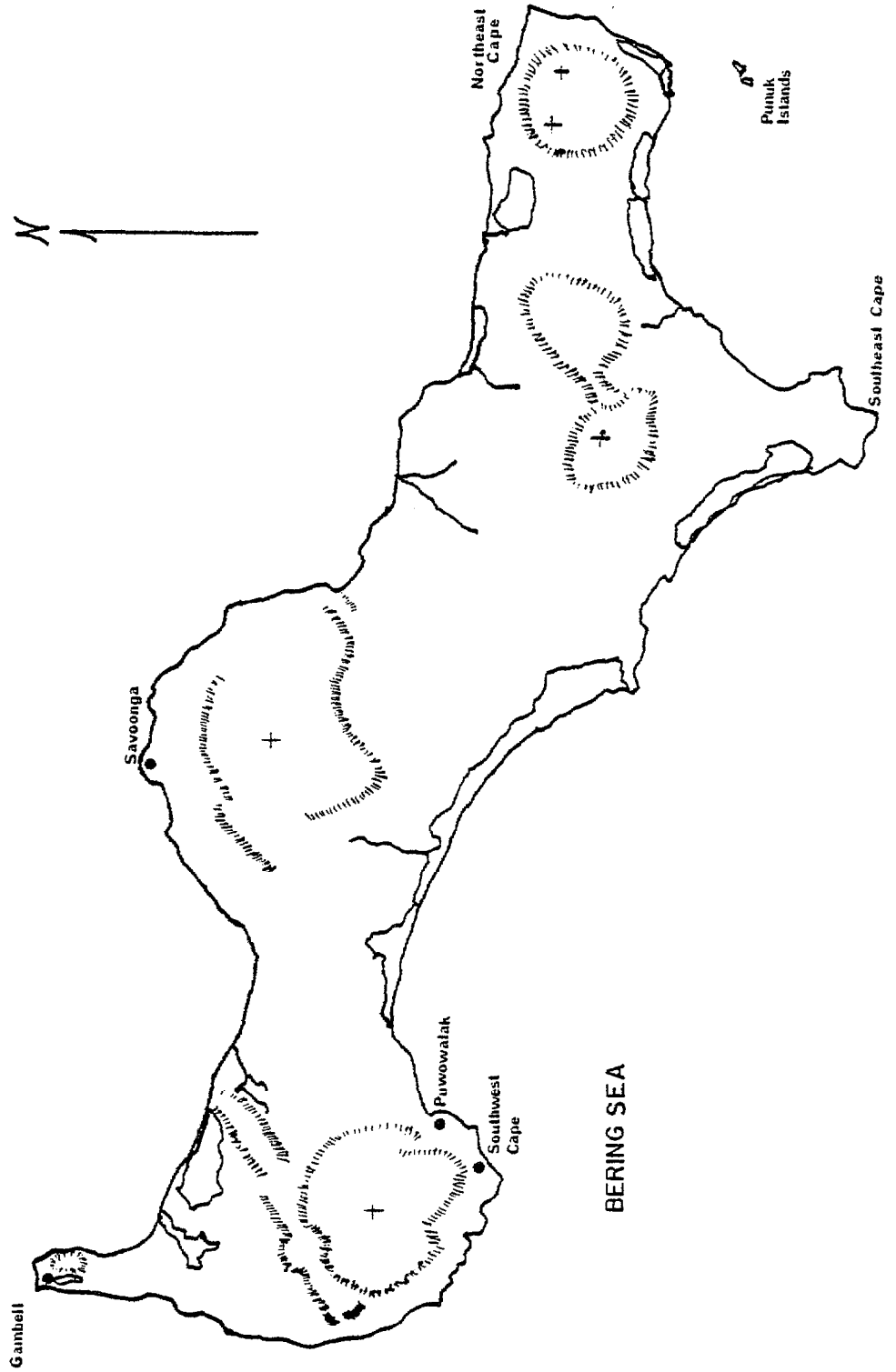






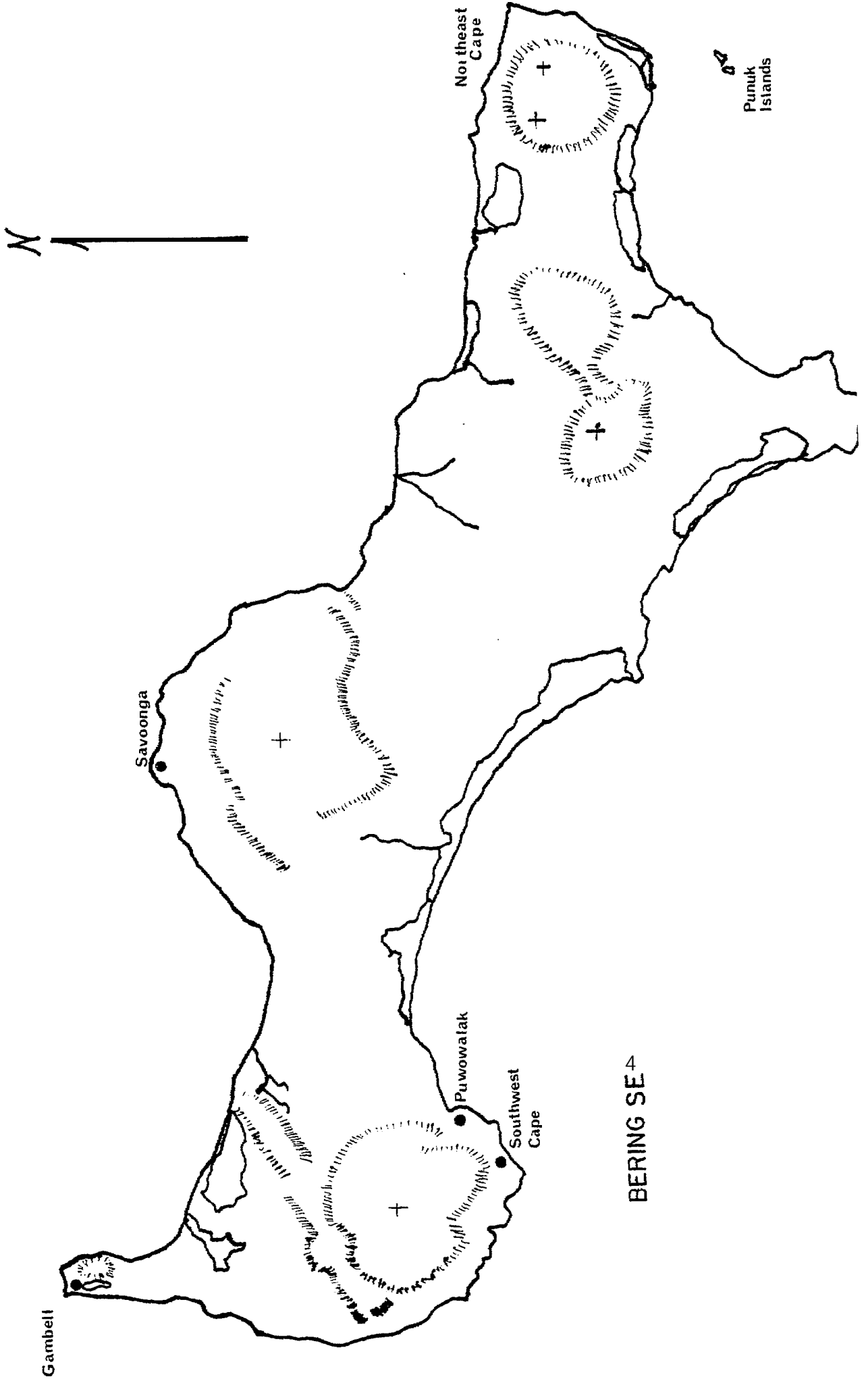
MAP II

ST LAWRENCE ISLAND





# ST LAWRENCE ISLAND



BERING SE 4

dynamically examines the sociocultural systems prehistorically and historically. These earlier time periods have relevancy for understanding the functioning of the populations and their sociocultural systems today and how OCS exploration and/or development may affect these populations and their sociocultural systems in the future. The latter considerations are the focus of the second or impacts portion of the study. This study is written for Peat, Marwick, Mitchell, & Co. (prime contractors) and the Socioeconomic Studies Program (hereafter referred to as SESP) of the Alaska OCS Office of the Bureau of Land Management (hereafter referred to as BLM). An attempt has been made to write it in language which would be comprehensible to all major parties concerned, especially governmental decision-makers who may not be expressly tutored in the social sciences, and rural residents of the area who ultimately will be the most affected by this potential lease sale. The utility of this study to agencies, institutions and individuals resident in and/or having a vested interest in the study area as well as to the non-social scientist federal audience makes the minimal use of technical terminology (such as jargon peculiar to the author's discipline) desirable. In cases where technical terminology is necessary, definitions are included. In this context, an explanation of the study title phrase "sociocultural systems" is in order. This phrase refers to arrangements of patterned or regular behavior, thoughts, and feelings that are practiced by and contribute to the survival of particular social groups (Harris, 1975, pp. 152-153). In utilizing the concept of "systems" it is necessary to look for functioning connections between all segments or parts of the societies and cultures being examined.

## INTEGRATION AND RELEVANCY OF STUDY TO ALASKA OCS PROGRAM

The baseline report and impacts projection for the Bering-Norton lease sale area are only one of several integrated socioeconomic studies (not to mention the biological and physical environmental studies) which have been undertaken in an attempt to gain comprehensive, multidisciplinary understanding of the relevant human aspects of the total environment of this area. Other studies focus on the transportation systems, commercial fisheries, the marine biological environment relevant to human utilization, and the socioeconomic systems of the study area. The focus of each study and expertise of the researchers differ.

It is probably important to point out at this time the basic distinction between a "sociocultural" and a "socioeconomic" study for these purposes. The area adjacent to the Bering-Norton lease sale is composed primarily of relatively small, rural communities with the exception of Nome and an overall population approximately 85 percent Eskimo (Inupiat or Yuit) (see Table II, p. 16 and Ellanna and Roche, 1976, p. 30). As this manuscript will indicate, the cultural or life-style differences between and history of the rural, primarily Native communities and more urban (although still primarily Native) Nome as well as between this entire area and "mainstream America" are significant. Therefore many research methodologies and analytical tools of disciplines that historically and contemporarily focus on Western, urban societies and/or individuals are often not effective, relevant, or accurate when applied to small-scale, rural, non-Western societies. Concerns about the relevancy of

study methodologies and content have been expressed by some local individuals more sophisticated about the problems inherent in applying Western research values and models to research in rural Alaska:

. . . that [subsistence] is the very essence and economic activity of a majority of the people affected. Raw statistics about employment, income, etc. do not reflect the social and cultural impact on a subsistence lifestyle. What about family structure? What about changes in values? Mores? . . . How does economic activity due to oil development change the lifestyle? How much hunting and fishing to the people now do? Can the income generated by jobs replace the nutritional value of the food that would be gathered if the jobs were not there? . . . Any change in the economic activities of the peoples from a subsistence to a cash economy is reflected in a change in culture . . .

(Johnson, 1978, p. 1)

In order to identify these non-quantifiable (uncountable) elements of the sociocultural systems of the study area, analyze the ways in which different cultural systems would respond to the same impact (namely OCS exploration and possibly development), and minimize the "bombardment" of small village residents by multiple unfamiliar researchers, PNM and BLM/OCS engaged both "sociocultural" and "socioeconomic" research for this area. The former, whose research is embodied in this report, focused on the rural, small community (village), primarily Native, and Native articulation with non-Native aspects of the total study plan utilizing research tools and models from cultural anthropology which have been designed primarily for researching more qualitatively small, non-Western, hunting/gathering, kinship-based, and highly interpersonal societies. Nome and its non-Native economic system will be the focus of the socioeconomic study, but since Nome is a regional center for most of the study area and is inhabited by a substantially large population

with village origins and significant cultural variations, the content of the sociocultural and socioeconomic studies will undoubtedly overlap. The meaningful distinctions between the two, then, will most likely be in research methodology, disciplinary standards for analysis, overall perspectives, and in the selection of social topics or categories to be emphasized in both the baseline and impacts projection.

## THE SETTING

The study area described in this chapter is portrayed in Maps I and II (pages 2 and 4 respectively). As previously mentioned this area extends from the community of Shishmaref along the northeastern coast of Seward Peninsula slightly south of the Arctic Circle to the communities of Alakanuk and Sheldon Point on the main channel of the Yukon Delta to the south including the Bering Strait islands -- St. Lawrence (Sevoukak), King (Ukiuvok), Little Diomed (Inalik), and Sledge (Ayak), -- and Norton Sound islands -- Stuart, Egg, and Besboro. Shishmaref is actually outside of the northern boundary of the lease sale area as designated by BLM/OCS (the northern boundary is approximately the Diomed Islands and coastal community of Wales), but it is included in this context because of its cultural, economic, and political ties to Nome and the Bering Strait area. Bodies of sea water involved in the Bering-Norton lease sale area include Bering Strait (narrowly defined as the 56-mile stretch of water from Wales in Alaska to East Cape, Siberia, and broadly defined as all of the Bering Sea from the latitude of the Yukon Delta to the latitude of the Diomed Islands -- Ray, 1975a), Norton Sound

(including Norton Bay), and the Bering Sea. The land area (i.e. in square miles) of the Seward Peninsula, Norton Sound Coast, Yukon Delta, and insular areas has little relevancy here in terms of land use and occupancy because the sea is the primary focus of human activity both historically and contemporarily. This area involves two political regions formed by the Alaska Native Claims Settlement Act of December 18, 1971 (hereafter referred to as ANCSA) -- (Arnold, 1976) the Bering Straits Region from Shishmaref to Stebbins including the Bering Straits Islands and the Calista Region to which all of the Yukon Delta villages belong.

The dominant physical features of the area topographically, economically, and culturally are the sea and the Yukon River, and almost all of the communities in these two regions border the coastline or the banks of the Yukon. Human activities on the water include maritime hunting, maritime or riverine fishing, and transporting when the sea and river are unfrozen (approximately late May or early June to mid-November) and sea ice hunting, sea ice or riverine ice fishing, and transporting on the ice by snowmachine or dog sled during the winter months. During both sea and riverine phases, activities are often hazardous due to strong maritime or riverine currents, heavy winds associated with frequent and sudden storms, and moderately low temperature ranges (summer 30° to 80°F, winter -44° to +40°F). Although precipitation levels are low (less than 20" annually), cloud cover, winds, and blowing snow make adequate provisions and caution necessary to prevent either freezing or hypothermia during all seasons.

The land areas include the Seward Peninsula, Norton Sound coast, Yukon Delta, and islands. The Seward Peninsula is composed of numerous topographical features including mountains, highland foothills, plateaus, coastal plains, and interior basins, valleys, and lakes (including hot springs and lava beds in the interior). With the exception of southeastern portions of the Peninsula and some of the Norton Sound coast which have spruce and birch forested areas and some interior peninsular river valley cottonwoods, the area is basically treeless with tundra vegetation, willows, some alders, and extensive permafrost (except for immediate beach areas). The Yukon Delta is uniformly low in elevation, approximately 40 to 50 percent wet and exhibits ponds, lakes, and sloughs too numerous to count and ranging in size from those of less than an acre to those of many thousands of acres (Alaska Geographic, 1979, p. 9). The Delta features are the result of thousands of years of deposition from the immense, meandering Yukon.

The islands of the Bering Strait are the remains of an ancient geological plateau and, with the exception of St. Lawrence, are steep-sided and basically lacking in extensive beach areas making the construction of air fields and the landing of watercraft either extremely difficult or impossible. They vary in size from St. Lawrence Island with its considerable land mass, mountains, vegetation, streams, bays, lowlands, etc. to the small but homogeneous islands of King, Big Diomedé, Little Diomedé, and Sledge. The latter islands lack the resource self sufficiency of St. Lawrence and traditionally and temporarily their populations had to maintain strong ties to the mainland.

to balance resource availability. Geographically St. Lawrence lies south of the actual Strait, but all share a geographic location advantageous to intersecting seasonally migrating sea mammals.

All of the aboriginal populations of the study area are Eskimo -- more accurately Inupiat and Yuit or Yupit (Ray, 1975a; Oswalt, 1967 and 1979). Today many non-Native people also reside in the study area, particularly in quasi-urban Nome. Within the study area today the Inupiat extend from Shishmaref to Unalakleet on Norton Sound. In the recent past (i.e. the late 19th century) the Inupiat boundary was further north and west in the vicinity of Cape Nome (Ray, 1975a). The populations of Little Diomedé and King islands are also Inupiat. The other major Eskimo population -- the Yuit or Yupit -- are represented by two major subgroups in the Bering-Norton area: the Siberian Yuit of St. Lawrence Island and the mainland Yuit from Unalakleet south along the coast and the lower reaches of major rivers. Relatives of the St. Lawrence Islanders are located on the eastern coast of the Chukchi Peninsula in the U.S.S.R. The terms Inupiat and Yuit or Yupit are derivations of the Native terms for the languages spoken by these populations -- Inupiaq and Yupik respectively (Oswalt, 1967; Hammerich, 1958). These major groupings were traditionally (and to some degree contemporarily) subdivided into named groups that exhibited cultural, linguistic, geographic, and quasi-political distinctiveness with some overlapping individual membership and the absence of rigid territorial boundaries (Ray, 1967 and 1975a; Oswalt, 1967). The Bering-Norton area is therefore not only culturally heterogeneous in regards to its



Eskimo/non-Eskimo populations but also in regards to its intra-Eskimo populations -- a fact that has considerable relevancy to the OCS issue as will be demonstrated in this study.

The vast majority of contemporary scientific data and opinion based upon biological, linguistic, cultural, and geological evidence have demonstrated the view that the ancestors of the Eskimo people (and their "relatives", the Aleuts of the Aleutian Islands) are the last population of aboriginal New World peoples to migrate from Asia to North America, probably via the Bering Land connection during the end of the Pleistocene (Ray, 1975a; Oswalt, 1967; Laughlin, 1963; Dumond, 1977 and others). This has been discussed in a previous OCS baseline study by World Associates, 1978. Questions regarding the internal diversity of the Eskimo people biologically, linguistically, and culturally are currently being researched and gradually answered by archaeologists, biologists, geologists, human palaeontologists, linguists, cultural anthropologists, and Native oral tradition.

Lastly, the contemporary functioning communities within the study area include (generally from north to south): Shishmaref, Wales, Little Diomedea, Brevig Mission, Teller, Nome (including King Island), Gambell, Savoonga, Council, Golovin, Elim, Koyuk, White Mountain, Shaktoolik, Unalakleet, Saint Michael, Stebbins, Kotlik, Emmonak, Alakanuk, and Sheldon Point (plus numerous small camps or seasonally occupied communities). Mountain Village and Saint Marys (Andreafsky) will be considered only as service centers for the Delta and Bethel as the regional

headquarters for the Calista Region. The interrelatedness of Yukon Delta communities to other lower Yukon non-coastal communities must be stressed because of their mutual reliance on basically the same salmon fisheries originating on the coast in their upriver migration.

To complete the setting of this study, a survey of the population totals of these communities and the study area as a whole is presented. Population data sources vary and include the following: (1) Ellanna and Roche, 1976 is 1975 winter data gathered, compiled, and analyzed primarily by the author of this study and published under the auspices of Kawerak, Inc., the Native non-profit corporation of the Bering Straits Region; (2) Ellanna, 1979 data are January to March, 1979 field-based updates of the 1975 data discussed in (1), done in conjunction with field research for this study and the author's dissertation research in demography; (3) NSHC, 1979 refers to demographic updates of some Bering Straits Region village populations completed by village health aides employed by Norton Sound Health Corporation and compiled for Norton Sound Health Corporation's "Long Range Plan"; and (4) Alaska Regional Profiles, 1976 refers to 1975 data published in the "Yukon Region" volume of Selkregg, 1976 (see bibliography) which was compiled for this volume by Alaska's Office of Community and Regional Affairs. In all cases, due to the nature of data collections and analysis in all of the above sources and the recency of the data, population figures are undoubtedly more accurate than that of the 1970 U.S. Census statistics. A current summer census of Nome was undertaken by Nome Eskimo Community, but apparently never has been completed. In addition there is some question regarding

the accuracy of a summer census with a highly mobile summer population. Table I (p. 15) presents community and study area population totals and Table II (p. 16) presents the ethnic distribution of this population where such data are available. It should be noted that the population breakdown presented here is basically a stable winter population. In the summer there is a substantial increase of temporary workers in communities that have wage employment. These temporary workers are primarily Caucasians ethnically with a small percentage of American Blacks, Japanese, Korean, and others. They come to communities like Nome to work in the thaw fields of Alaska Gold Co., longshoring for Arctic Lighterage, or for other agencies such as the Departments of Transportation or Fish and Game. They go to communities like Golovin, Moses Point, Emmonak, Unalakleet and Mountain Village for fish buying and processing. They may be relatives or friends of local residents (especially in Nome), college students, unemployed younger adults from elsewhere in Alaska or other states, or summertime "adventure seekers." There is a lesser number of village Eskimos who also migrate to larger communities in the summer also to find wage employment. For the Bering Straits Region an exact measurement of this transient population has not been done, but Alaska Gold Co. alone hired over 100 outsiders for the thaw fields this summer, (informal discussion, Robert Baldwin, General Manager, Alaska Gold, Nome 1979).

For purposes of the subsistence analysis the study area will be subdivided into three major ecological zones (reference Maps I and II, pages 2 and 4 respectively). (1) "Bering Strait" includes all of the Bering Strait

TABLE I  
COMMUNITY POPULATION TOTALS<sup>1</sup>

<u>Community</u>	<u>Population</u>	<u>Date/Source</u>
Alakanuk	512	1975/A.R.P. <sup>2</sup>
Brevig Mission	144	1975/Ellanna and Roche
Council <sup>3</sup>	30	1975/Ellanna and Roche
Diomede	141	1975/Ellanna and Roche
Elim	202	1979/N.S.H.C. <sup>4</sup>
Emmonak (Emanquk)	545	1977/City records
Gambel <sup>1</sup>	434	1979/Ellanna, field data
Golovin	116	1975/Ellanna and Roche
Kotlik	284	1975/A.R.P.
Koyuk	177	1979/N.S.H.C.
Mary's Igloo <sup>3</sup>	2	1975/Ellanna and Roche
Mountain Village	513	1975/A.R.P.
Nome	2,3805	1975/Ellanna and Roche
(King Island sub-total )	(215)	1975/Ellanna and Roche
Savoonga	449	1979/Ellanna, field data
Shaktoolik	165	1979/N.S.H.C.
Sheldon Point	136	1975/A.R.P.
Shishmaref	306	1975/Ellanna and Roche
Solomon	6	1975/Ellanna and Roche
Stebbins	298	1975/Ellanna and Roche
St. Marys	415	1975/A.R.P.
St. Michael	244	1979/N.S.H.C.
Teller	211	1975/Ellanna and Roche
Unalakleet	620	1979/N.S.H.C.
Wales	115	1979/Ellanna, field data
White Mountain	111	1975/Ellanna and Roche

Study Area Total Population: 8,556

<sup>1</sup> Accuracy for Bering Straits Region community populations is probably greater than that for the Yukon Delta because of the author's first-hand involvement and familiarity with the demographic data from that area.

<sup>2</sup> Selkregg, 1976b.

<sup>3</sup> These village sites are usually seasonally occupied in summer by some winter time residents of other villages or towns, so this winter data does not accurately reflect their annual activity. All of these villages are recognized under ANCSA.

<sup>4</sup> Richardson, et al., 1979.

<sup>5</sup> Because of difficulty in gathering methods with this community, the total may be approximately 5 percent underestimated.

TABLE II  
ETHNIC DISTRIBUTION OF STUDY AREA POPULATIONS<sup>1</sup>

Community	Total Eskimo/%	Total Caucasian/%	Other/% <sup>2</sup>
Alakanuk	497 97%	15 3%	0
Brevig Mission	141 98%	3 2%	0
Council	25 83%	5 17%	0
Diomedea	139 99%	1 .5%	1 .5%
Elim	195 97%	7 3%	0
Emmonak (Emanuk)	525 96%	20 <sup>4</sup> 4%	0
Gambel	416 96%	16 3.5%	2 .5%
Golovin	114 98%	2 2%	0
Kotlik	275 97%	9 3%	0
Koyuk	170 96%	7 4%	0
Mary's Igloo	1 50%	1 50%	0
Mountain Village	493 97%	20 <sup>4</sup> 3%	0
Nome	1,444 60.6%	893 37.5%	43 1.9%
(King Island sub)	(215) (100%)	(0)	(0)
Savoonga	431 96%	7 4%	0
Shaktoolik	159 96%	6 4%	0
Sheldon Point	130 96%	6 4%	0
Shishmaref	298 97%	8 3%	0
Solomon	6 100%	0 0%	0
Stebbins	289 97%	6 2%	3 1%
St. Marys	363 87.5%	50 <sup>5</sup> 12%	2 .5%
St. Michael	231 95%	13 5%	a
Teller	196 93%	15 7%	0
Unalakleet	543 87.5%	75 12%	2 .5%
Wales	? 08 94%	7 6%	0
White Mountain	107 96%	4 4%	0
Study area totals:	7,296 85%	1,207 14%	53 1%
Total:	8,556		

<sup>1</sup> Unless otherwise indicated, sources are the same as those from which population totals were gathered.

<sup>2</sup> "Other" includes Alaskan Athabascans, Aleuts, and Tlingits; other North American Indians; American Blacks; Vietnamese; and very few Japanese, Chinese, Koreans, Phillipinos, and Thai.

<sup>3</sup> In July of 1979 raw census data from the 1975 Ellana and Roche census were reviewed for purposes of this study. It was determined that 155 known households had moved from Nome (at a household average of 4.12 persons/household, this equals 639 individuals). Another 75 households were questionable. Of the 155 only 47 had at least one Native member and only 10 of the 47 had a Native household head. The need for a thorough winter update is critical to accurate OCS projections of the Nome census data.

<sup>4</sup> Estimate from field work, June 1979.

<sup>5</sup> These are estimates based on knowledge of educational and other services that may employ non-Natives and the overall Calista regional breakdown according to Yukon-Kuskokwim Health Corp. Specific village by village figures were not available. They will be corrected in the final draft if they become available.

islands already discussed (including St. Lawrence Island) and the coastal Seward Peninsula communities from Shishmaref to Cape Nome; (2) "Norton Sound" includes the area from Cape Nome to Stebbins and St. Michael; and (3) the "Yukon Delta" includes the area southwest of Stebbins and St. Michael to Alakanuk and Sheldon Point and upriver to Mountain Village and St. Marys. The criteria used for this kind of subdivision is discussed in detail at the beginning of Chapter III.

#### STUDY DESIGN LIMITATIONS

There are numerous limitations to this study that are directly or indirectly a function of the research SESP design. These limitations will be briefly discussed here. Other limitations not related to the study design per se -- primarily field research or literary limitations -- will be discussed in Chapter II. The term "limitations" as used in this context does not have negative or positive implications but rather defines the parameters of the study.

The limitations most pertinent to this report included: (1) the contractual restrictions that only secondary source data could be used; (2) the content restriction to aspects of the sociocultural systems which would potentially be affected by OCS -- the problems here being that there are no relevant prior models for energy development in this area or an ecologically/culturally similar area, there are weaknesses inherent in the relatively new "science" of social impacts analysis, and, as Davis points out (Davis, 1979, p. 4), "a pitfall in this approach may be that,

when one isolates one aspect, what is left may be of equal or greater importance" or ". . . if too much time is spent trying to find something measurable, a larger perspective may be overlooked"; (3) the geographic expanse and traditional and contemporary sociocultural heterogeneity of the study area which encompasses two Native political and economic ANCSA regions, two major Eskimo linguistic/cultural groups (and several distinctly different subgroups), at least three significantly distinct human ecological niches, Native villages and one historically "white man's" mining town with a majority Eskimo population, and populations affected by diverse historic forces; (4) problems inherent in the dividing up of study tasks with overlapping objectives, differing methodologies, and a lack, to some degree, of common assumptions and standards; and (5) there are too many interrelated and uncontrollable variables in human socio-cultural systems to permit any precise or quantifiable method for deriving impacts projections, especially over long time periods; only general statements regarding impacts projections can be expected to approach reliability in this projections exercise.

In response to these limitations: (1) Secondary source data are uneven in coverage of time periods or topics, and much of the most relevant secondary sources are unpublished materials available through agencies and/or individuals currently active in research and planning within the study area. These difficulties were countered by the identification and use of nonpublished secondary sources and by the indispensable use of informal discussions as a research tool. The researchers' long-term first-hand familiarity with the Bering-Norton area moderated the effect

of this limitation for all but the Yukon Delta portion of the study area.

(2) Studies that have been completed for other potential or actual lease sale areas in addition to pipeline impact research (Baring-Gould and Bennett, 1976) have been analyzed. However, only the Beaufort socio-cultural systems study (Worl Associates, 1978) has focused on a study area that exhibits some cultural and environmental similarities to a limited portion of this study area, but the populations and environment adjacent to the Beaufort Sea area are politically, economically, historically, and, in other respects, culturally more homogeneous than the Bering-Norton study area. The sociocultural response to mineral (particularly gold) development in the Bering Strait, Norton Sound, and Yukon regions in the 1890's and early 1900's provides some previous impacts response data, but the analogies to OCS are limited. Since 1970 and the passage of ANCSA, each year has brought with it major political, economic, cultural, and regulatory issues that have made the projection process something less than accurate for all of rural Alaska (e.g. see Jones, 1976, on the Aleutians or Alaska Consultants, 1968, "Nome Comprehensive Development Plan" for case examples of how neither the rates nor directions of cultural change for these rural Alaskan populations have been very accurately assessed by professional social scientists). Nonetheless, within the constraints of this framework some meaningful projections are possible with all researchers involved in OCS impact projections drawing from one another for successful theoretical constructs and methodology that "prove themselves" as the various lease sale activities progress. Achieving a balance in effectively selecting and analyzing "impact categories" or "major variables of change\*" without losing the holistic or overall



perspective -- which is, without question, one of the major contributions of anthropology as a discipline -- is both a difficult challenge and, if successful, a meaningful contribution to social impacts analysis theory.

(3) The geographic expanse and heterogeneity of the study area are a reality related to the extent and geographic location of the potential lease sale area. It should be noted that the expanse and complexity of the study area required extensive time, travel, and organizational efforts due to the magnitude of data to be compiled and analyzed in addition to the difficulties in achieving uniform quality of data and analyses for the entire area. (4) In a sense, all researchers have "pioneered" their own standards and assumptions for their contribution to the set of studies to be integrated for a particular lease sale area while utilizing methods and macro-theory from their particular disciplinary orientation. In addition, the content of studies focused on a specific lease sale area overlap in some cases. Advantages to this overlap would include differing perspectives on the same subject matter or the selection of variables by one researcher that have been overlooked by another -- disadvantages would include unnecessary repetition and possibly even divergent analyses of the same variables or impact categories. (5) Although "predictions" of future sociocultural systems are not precisely or even imprecisely possible, through the process of analyzing past sociocultural trends and responses to other "impacts", it is possible to make tutored "guesses" as to how the sociocultural systems will respond to potential OCS impact given the continuity of contemporary trends of change. It should be realized, however, that present trends may not exhibit continuity through time and that other unexpected "impacts" could materialize and significantly change what

will be discussed as the *non-OCS* (or base case) projection -- that is, the "base case" about which the OCS projections focus is itself hypothetical.

Other minor limitations include the difficulties involved in writing for a lay audience as well as for social scientists and government decision-makers; and the frustrations of writing about "attitudes about OCS" and "anticipatory response to OCS" at a point in time in which phrases like "OCS", "industry", "coastal resource service area", and "social impact planning" are just beginning to have some meaning to most residents of the study area and therefore resulting in the formation of both attitudes and action. The latter limitation is an expression of the difficulty in saying "this is how things are today" when literally tomorrow some things may be very different -- the rate or rapidity of change at this time seems to be accelerating. Of course, this in itself is an important variable in the sociocultural systems of the study area.

#### Major Variables of Sociocultural Change: Impact Categories, Standards, and Assumptions

#### INTRODUCTION

The purpose of this section is to concisely discuss the major impact categories identified within Norton Sound sociocultural systems which were researched and described for purposes of this study and to present assumptions about these impact categories. The theoretical perspectives and methods used for deriving these impact categories will be discussed in

Chapter II. The identification of the major impact categories and assumptions at this point provides a summary of the key themes that follow in greater detail throughout the remainder of the study.

A few definitions of terms or phrases used in the previous paragraph and elsewhere in the study are presented below:

(1) variables of change: those aspects of a sociocultural system that are most susceptible to change from both external and/or internal forces. Change of these variables in time will effect more stable aspects of the sociocultural system since "systems" are made up of interrelated parts. Change is measurable for some variables quantitatively and for other more qualitatively. The SESP has identified population and economy as being the key variables of change relative to OCS.

(2) impact categories: those aspects of the sociocultural systems under study that are most subject to potential OCS impact. These will be discussed in more detail below.

(3) assumptions: for purposes of this study, assumptions are theories taken as fact founded in knowledge of the sociocultural system of the study area and knowledge of the dynamics of sociocultural change. The assumptions listed below for the Bering-Norton study area reveal by their content the "impact categories" and "major variables of change" for this study.

(4) standards: these are the relationships between parts of the socio-cultural systems as they exist today. These may be relatively stable and exhibit persistence through time (e.g. the intense tie between most Eskimos in the study area and the sea and its resources) or may exhibit definite trends towards change (e.g. the involvement of rural residents of the study area in formal education) (Davis, 1979; Braund and Behnke, 1979, conversation with Richard Schmidt, PMM, August 1979). These may be measurable or unmeasurable and material or non-material in nature. The contemporary portion of the baseline document (Chapter V) provides the standards from which OCS-related change will be measured.

#### IMPACT CATEGORIES

Due to the fact that cultures or distinct sociocultural entities are systems -- that is, made up of interrelated and interacting parts, it is therefore difficult to isolate the result of impacts on one element of the system without considering implications for other aspects of the same interconnected system. Nevertheless, the process of impacts analysis or even general sociocultural analysis common in contemporary anthropological endeavors necessitates the identification of subsystems of a sociocultural whole. For these purposes certain subsystems or "impact categories" have been selected as being more vulnerable to the kinds of change that are likely to be associated with OCS activity. These impact categories are outlined below and will provide the organizational framework for the contemporary and impacts projection portions of this study:

- Sea and Land: values, utilization, and control. Since OCS development would unequivocally involve the use and modification of the existing maritime and adjacent shore environments, this category of impact is significant in this context. This impact category will include a consideration of values relating to sea and land, use of the sea and land environs, and ownership and control of relevant maritime and adjacent coastline areas.
- Economic systems: subsistence, cash, and their interrelationships. Since the economic makeup of the study area includes both subsistence and cash economies and OCS exploration and development could affect both the environment critical to maritime subsistence as well as the cash sector of the local economy, this impact category is of utmost relevance. Included in this category are considerations of contemporary subsistence patterns, their cultural values, and economic significance; major contemporary subsistence issues; the implications of changing subsistence patterns; the current cash economy of the area and its significant trends; the interrelationships between cash and subsistence in the overall economy; and attitudes towards economic development.
- Social systems: family, community, and regional levels. Since population and economy have been identified by SESP as key variables of change, the impact of these variables on existing social systems at all levels must be considered. Included in this impact category are analyses of presently functioning, mostly rural,

family, household and kinship social units; community composition and functioning; and region-wide formal social or human service delivery systems.

- Political systems. Since there is a close interrelationship between resource control, economic dominance, and political influence, this category has particular relevance to impacts involving energy development. This impact category **includes** a consideration of Nome as a regional political center, regional governmental systems such as Native regional corporations, pan-Eskimo political organizations such as the Eskimo Walrus Commission, and a brief consideration of larger, non-Eskimo governmental systems.
- Interethnic attitudes and relationships. Since OCS development would probably bring an influx of outsiders into the study area, the present ethnic balance and nature of **interethnic** relationships would undoubtedly change. This impact category includes the present ethnic composition of both the communities and region as a **whole** and sources and diversity of interethnic contact and conflict.
- Indicators of response to change: positive and negative. This category examines criteria for measuring individual and group response to **sociocultural** change and indicators of the degree to which such responses have included either positive or negative individual and/or group adaptations to change. "Negative

indicators" include drug abuse, individual psychological pathologies, family disintegration, suicides, "homicides, and others.

"Positive indicators" include Eskimo cultural revitalization, positive ethnic identity and potential revitalization movements.

#### ASSUMPTIONS

The assumptions are organized here in a manner approximating the structure of the study. However, since many assumptions have emerged from a **consideration** of more than one impact category, their placement in any one major category is arbitrary.

##### Sea and Land: Their Implications.

- The core or central organizing principle of the **sociocultural** systems of the vast majority of Native residents of the study area -- including those who have successfully integrated a subsistence with a cash economy -- is subsistence. To be an Eskimo is to hunt, to fish, and to be in the country. This cultural dimension of subsistence is irreplaceable and will persist. Rural **people** will continue to overtly or covertly object to attempts, whatever their motivation, to change the basic character of this lifestyle.
- The Bering-Norton area is today basically non-urban, isolated, and sparsely populated with relatively abundant aesthetic values

and relatively easy access to hunting, fishing, and recreational use of the sea and land. The values or priorities involved in residing in such an environmental setting are important to a large segment of both the Native and non-Native population and have resulted in selective migration to this area from more urban areas within and without Alaska. Individuals preferring lifestyles in this kind of setting can be expected to opt for a minimization of alteration of this natural and social environment.

- Due to the relative isolation of this area, there presently is not a large number of sports hunters and fishermen who visit the area. An influx of a large number of people in conjunction with industrial development would undoubtedly create a real and perceived competition for the same animal resources that have been described as economically and evaluatively essential to particularly local Native and some local non-Native residents. This could be a point of considerable conflict and may be perceived as lowering the overall quality of life by local Native and non-Native residents.
- Increased governmental decisions affecting the environment, resources and populations of the area have resulted in a feeling of powerlessness on the part of many Native and non-Native residents. They perceive that their values and priorities regarding the environment and their lifestyle within this environment have had negligible or no impact on decision-making processes at



state and federal levels and, in some cases even regional and community levels. These attitudes have already been, and will probably continue to be, applied to the question of OCS development. Such attitudes, if held by a large number of area residents, are assumed to cause stress and create apprehension about the future.

- Due to current legal and political ambiguities relating to land ownership, regulatory control over land/water access and useage, and priorities of resource utilization, the oil industry will find it difficult to arrive at mutually satisfactory contractual agreement for the utilization of waterfront property.

#### ● Economic Systems.

- Subsistence activities, particular hunting of sea mammals and fishing are vital economically and nutritionally to the well-being of a large majority of Natives and a smaller percentage of non-Native residents of the study area. Any major disruption of the maritime environment, its resources, or the pattern of these activities will result in probably insurmountable hardship to these subsistence users. These users can be expected to object to and resist OCS development.
- At the present time the vast majority of Natives in the study area that are located in small, rural villages are opposed to OCS development and hesitant about supporting any economic development

that potentially may threaten the environment and their current subsistence lifestyles. Although many Native people in Nome, primarily of recent village origin, share this view, there is a segment of Nome's Native population more committed to a cash economy and economic development and therefore more supportive of OCS development in specific. It is unlikely, due to cultural and/or attitudinal differences and resultant priorities based on these differences, that an area-wide uniform position or policy towards OCS exploration and/or development will emerge.

- Commercial fishing to a limited extent just beginning in the northern portions of Norton Sound and Bering Strait and increasingly important each year (especially since the implementation of the 200-mile U.S. limit) in the southern Sound and Yukon Delta areas, is the **single** major source of **annual** cash income to residents of the southern Sound and Yukon **Delta**. Economic forecasts indicate that the **full** potential of the fisheries has not yet been realized. Based upon the knowledge that commercial fisheries and **oil** development have come into conflict in other areas of the state, it is projected that similar conflicts would arise in the study area if **OCS** exploration and development were to occur. Residents of these communities reliant on commercial fisheries also perceive a fisheries/oil potential conflict.
- **While** there has **been** no **history** of **intensive** commercial fishing in the northern Sound-Bering Strait area, recent intensive

commercial crabbing activities by non-local fishermen in this area as well as non-local herring activities in the southern Sound and Delta areas have indicated both potential conflict between local and non-local commercial fishermen and between subsistence and commercial fishermen of non-local origin. Were both local and non-local commercial fishing efforts to intensify, it is expected that the level of conflict will escalate.

- o In the absence of an economic "boom" (e.g. gold, oil, other minerals, tourism, etc.), it is expected that governmental services and subsidies will continue to provide the majority of cash flow into the economy of the area as a whole. Even in the communities heavily dependent on cash from commercial fisheries, governmental subsidy will continue to play an important secondary role economically
- Due to the fact that there are limited opportunities for making money in small, rural villages and that the present cash demands for contemporary necessities (e.g. heating oil, electricity, ammunition, etc.) require a precariously balanced subsistence/cash economy for maintaining even a minimal quality of life, any inflation of the area's economy not coupled with a uniform increase in cash would cause severe hardship or deprivation for rural, small-community residents.

- While unemployment levels are relatively high in quasi-urban communities like Nome, low-paying, unskilled jobs are available. In part because of low wages and in part because there are cultural and social values among many Native and non-Native residents that represent priorities that differ from the "white, middle-class work ethic", local employers experience high turnover rates, absenteeism, chronic tardiness, and the inability to fill some positions at a cost-efficient wage. Whereas employers often make evaluative judgments about individuals not embracing the concept of working year-round, full-time, 8-hours a day jobs, the reality of this phenomena more closely relates to differences in cultural priorities. It is reasonable to assume that any industry coming into the area would not only confront these same value conflicts but may intensify them for local employers.
- Due to the fact that at the present time there is no major economic base in this area with the exception of governmental services and subsidies and commercial fisheries in the southern portion of the area, the prospects of a major industrial development such as OCS are attractive to business-oriented individuals and organizations. Such individuals and organizations would be expected to support OCS exploration and development. Although the majority of these business-oriented individuals and organizations are non-Native and located in Nome, there is also one major Native organization located in Nome, several Native business owners, and a few rural Natives who would also favor this development as a source of

economic uplift to this area.

- Based on observable current attitudes towards commercial fishermen from outside the area and a general attitude of local criticism towards businesses or industries that hire "outsiders" when qualified local unemployed help is available, it can be assumed that any major industry such as oil that ignored local hire and services would be looked upon unfavorably by all factions of the area.
- Whereas in rural villages, primarily Native residents have an overall greater knowledge of their natural environment and means necessary for obtaining resources and surviving in this environment, their level of formal education and skill training tends to be lower than that of the non-Native residents of Nome (with the exception of some of the younger high school graduates who obtained skill training through pipeline and post-pipeline employment assistance programs). As a result of this formal education disparity, the primarily non-Native work force of Nome may be perceived by the oil industry as being useful to their efforts, Nome residents will perceive themselves as being more likely candidates for prospective industry-related jobs, and, conversely, rural villagers will perceive themselves as less likely to be able to compete for potential industry positions. The implication of these perceptions for receptivity to industry are great.

- Current interest in reducing lighterage costs for goods delivered to or via Nome through the construction of a deep water port and/or barge facility is favorable among virtually all regional factions. To the degree that OCS development may be perceived as either stimulating, planning, or in part financing such a facility, response to OCS exploration and development may be more favorable.
- With the exception of more knowledgeable organizations in the regional centers of Nome and Bethel, there is very limited knowledge of or active interest in OCS potential development in most rural villages in the study area at this time. It can be assumed that this low level of assertive interest will persist until either an intensive education/information program is implemented and/or tangible signs of OCS activities become apparent.
- Industry requirements for an adequate on-shore facility could potentially place either Nome land owners or Native corporation land owners in an advantageous economic (and probably political) position vis-a-vis industry. If, however, industry could successfully negotiate with a single outside owner of a large coastal tract for obtaining the needed on-shore staging area, it can be assumed that the economic and political bargaining power of local Nome or Native corporate land owners would correspondingly decline.

## Social Systems.

- Despite the fact that there has been, and continues to be, a considerable population turn over in larger communities, the population totals, age and sex distribution, and ethnic and Socio-economic makeup of the study area population have remained relatively stable since the end of World War II. Previous population fluctuations quantitatively and qualitatively have been the direct result of economic "booms" (e.g. commercial whaling, the "Gold Rush", commercial fisheries, and World War II). It is therefore reasonable to expect that another major economic "boom" such as OCS development or perceived "boom" would similarly bring about a substantial change in the number and character of the study area's population.
- There exists today a reluctance on the part of most small, rural, primarily Native community residents in the study area to expand their communities with a large number of people whom they perceive as "outsiders". This fact will have implications for the potential locating of on-shore facilities within or near existing small communities.
- If there were to be an expansion of well-paying jobs or a perceived expansion of the job market in Nome related to OCS exploration and/or development or indirectly related as a result of increased demand for services, there would probably be an

immigration of primarily younger males, some younger females, and a smaller females, and a smaller number of total family units from rural villages to Nome.

o Human services in this area -- specifically health care delivery, rural educational delivery, social services, mental health services, law enforcement, judicial services, manpower development -- are currently underfunded, understaffed and at overload case capacity. These service agencies are primarily controlled by funding and policy-making administrative superstructures external to the area (state or federal) which are usually slow to respond to needs and changing needs within the area. As a result of these factors, any major socioeconomic change in the study area would place additional stress on these systems that probably could not be accommodated under current conditions.

o Population growth in a community or a functional region changes the quality of social relationships along a continuum from personal to impersonal.

• A large rapid influx of non-Native residents would disrupt long standing sociocultural patterns and conflict with strongly held cultural values in small, rural, primarily Native communities. Slower rates of growth would not be as likely to cause as great a disruption.



o In the small, rural, primarily Native communities, kinship has remained the basis of social organization and is a key organizing factor in subsistence activities. This type of social organization will continue in the foreseeable future and will be important in enabling individuals to adapt to social, economic, and political change. This same form of social organization has remained primary among Nome Natives that have originated from village areas and therefore must be considered as an important functional system in Nome today.

- Community size as a variable shows a relationship to the ability to absorb social and cultural impact. In general, the larger the community, the greater amount of impact it can absorb without resulting in social disintegration. Although the populations of the communities in this study area vary, by urban standards they would all be considered small communities.

#### Political Systems.

- Due to the traditional, historical, political, economic, and linguistic diversity of the study area and its vast geographic boundaries and communication barriers, it is unlikely that these populations will exhibit future unity in values and actions even on issues in which they have a common interest. As a case in point, efforts to extend policy-making and regulatory decisions by pan-Eskimo organizations such as the Eskimo Whaling Commission

o and Eskimo Walrus Commission have met with only moderate success. Similarity the recent heated controversy over voting Nome "wet" or "dry" was a key issue on which non-Natives could and did choose widely divergent sides.

● Since the Native non-profit corporation of the Bering Strait area (Kawerak, Inc. ) and the environmental non-profit organization of the Calista region (Nunam Kitlusiisti) have already assumed positions of opposition to OCS exploration and development (primarily in their perceived role as protectors of Native culture and subsistence), it can be assumed that these organizations will come into conflict with Native organizations (profit and non-profit, village or regional) or individuals that are interested in participating in economic opportunities provided by oil companies.

● As ANCSA land conveyance issues proceed in settlement, Native villages and regional corporations will be placed in a more economically and politically powerful position in negotiating with oil companies for land and/or service facilities within their withdrawal areas.

● The anticipation of oil development as an outside-based "threat" or "opportunity" has initiated ideas and the beginnings of action to politically unify factions that share common perceptions -- either pro or con -- of oil development. It can be assumed that these trends to unify will continue and intensify as visible signs

and the timing of oil exploration become more of a reality.

- Existing overt or covert conflicts between regional Native political and/or economic organizations and Nome's municipal governing bodies can be expected to continue. OCS exploration and development as an issue may tend to intensify these conflicts and further polarize these organizations because of differing historical factors, cultural values, and economic and political priorities.
- Community conflict resolution for communities within the study area is, in most cases, still basically a continuance of traditional informal, highly personal methods occurring outside of the formal institutions of courts, judges, law enforcement officers, and jails. Although it is true that the latter formal mechanisms<sup>s</sup> are certainly utilized, they are so to a lesser degree than in urban areas and with greater informality even within larger communities like Nome. It can be assumed that the ability of local individuals and/or agencies to resolve conflicts with "outsiders" would be complicated by the absence of a mutual understanding of the rules of this system of conflict resolution.
- In the past few years the Native non-profit corporations, Kawerak, Inc. in the Bering Strait Region and Nunam Kitlutsisti and Association of Village Council Presidents (AVCP) in the Galista Region, have assumed politically influential roles as perceived

spokesmen for their constituency on matters such as subsistence, coastal zone management, and OCS. It is expected that these organizations and their personnel may play a larger role in interpreting, vocalizing, and implementing Native opinion in regards to OCS than any other organizations in their respective regions.

- Due to Bering Straits Native Corporation's (hereafter referred to as BSNC) recent history of unsuccessful investments and resultant financial deficits coupled with a new direction of management and interest in protecting the local environment and Native lifestyles, it is unlikely that they will participate in any development that they perceive as disruptive to the Native people of the region. On the other hand, in part as a result of BSNC's past management and financial history, some stockholders may have a lack of confidence in the validity of their decisions.

● Due to the geographic expanse between communities, isolation from "mainstream America", a relatively low level of media sophistication and availability, multi-lingual populations, relatively overall low reading levels, and cultural differences in communication patterns within the study area, adequate communication of information necessary for public awareness and consensus decision-making is highly improbable. The implications of these communication difficulties for OCS activity is self explanatory.

### Interethnic Attitudes and Relationships.

- In comparison to other large, primarily Native communities in the State, interethnic relationships in Nome appear relatively good. Interracial tensions and conflicts relating to dominant/subordinate relationships manifest themselves most frequently by inward-directed violence (suicide) or domestic disputes usually involving alcohol or other drug use. Overt or violent expressions of interracial conflict are relatively less frequent and then, when they occur, are usually associated with alcohol use. A large influx of a non-Native resident or even transient population that would exhibit overt prejudices and hostilities toward Native peoples would tend to increase the incidence of both violent and non-violent interracial hostilities and confrontations.
- Communities that have historically been exposed to and have had experience in dealing with a large number of "outsiders" may show greater flexibility in responding to OCS -- stimulated contact with "outsiders." It is interesting to note, however, that communities that have had a high incidence of previous contact seem, for the most part, to exhibit a poorer quality of community mental health than do more isolated communities in the study area.

- A large, rapid influx of non-Native residents to Nome would probably change the social makeup of Nome's non-Native population, may increase interracial tensions, and would create a situation in which Nome Natives may be economically and politically more powerless vis-a-vis the non-Native population. As in the villages there would be an increase in conflict between divergent cultural values. The smaller and slower the rate of influx, the lesser the degree of occurrence of all of the above phenomena.

o Due to the cultural diversity of communities having proximity to Nome and Nome's history of economic "booms" and transient populations, an attitude of overt acceptance of cultural and individual differences prevails over attitudes of prejudice and bias (although both views coexist) in the realm of interpersonal behavior relative to most small communities lacking this kind of social history. Given the above situation, a large influx of "outsiders" who fail to either have experience with or relatively positive attitudes towards a social situation of cultural and individual diversity would probably result in increased community and individual stress, violence, and decreased community cohesion.

#### Indicators of Response to Change.

- Crimes against property are relatively uncommon in communities in which there is a high level of personal relationships pervading the social system. All the communities in the study area today

to varying degrees display a high level of personal social interaction. A large influx of either transient or residential job-seekers associated with an actual or perceived "boom" will result in a decline in the level of personal social interaction and an increase in crimes against property. This same trend will probably apply to crimes against people of a non-racial nature.

o Alcohol abuse and other mental health problems affecting both Native and non-Native residents of the study area will tend to increase in response to any growth of economic disparities (the "haves" as opposed to the "have nets"), political powerlessness, sexual competition, population pressures, job competition, impersonal relationships, and loss of self identity. Any or all of the above conditions could be stimulated by potential OCS exploration or development.

• There are current trends towards Eskimo cultural revitalization, more positive self identity, and awareness of some degree of pan-Eskimo unity. "Revitalization movement" theory suggests that to the degree that OCS or other kinds of economic development is perceived of as being outside-based and controlled, providing minimal benefits to local Natives and maximum benefits to non-locals or local non-Natives, disrupting presently functioning systems, causing increased stress and dissatisfaction, and presenting a situation over which there is no local control, such development may result in increased revitalization-like views and activities.

## II. METHODOLOGY

### Theoretical Perspectives

This segment of the study is intended to briefly and as clearly as possible acquaint the reader with the primary theoretical perspectives of the researcher. Only in knowing where a researcher is "coming from" so-to-speak can the reader more accurately comprehend what is being said in a study.

It is not the intention of the researcher to expend time or effort exploring in depth anthropological theory in this particular context. Some comments are necessary, however, because the multidisciplinary nature of SESP alone provides the potential for differing perspectives of the same phenomena (not to mention divergent theoretical orientations within the same discipline).

"Theory" is a systematic, organized body of knowledge or view of the underlying principles of certain observable events or phenomena. Theory enables observers to explain happenings and provides a framework for explaining new information. The term "theory" often sounds academic and formidably complex, but in reality all people conduct their behavior in accordance with some organized view of life and expectations of cause and effect relationships based on day to day experience through time. Scientists (including social scientists) attempt to derive theories about large bodies of information outside of their individual every day life experiences -- theories to explain human behavior, non-human animal behavior, geological events, biological phenomena, etc. Theories are



really assumptions about large bodies of information. Some theories are accepted without proof or taken for granted based on logic -- others are subject to proof or disproof. Each discipline or area of study has theories, some of which are accepted virtually by everyone in that discipline therefore making that discipline distinct from other fields of study. Others are disputed within the same discipline. The discipline of this researcher is anthropology and a few broad theories characteristic of anthropology as a field of study and some more specific theoretical orientations to which this researcher subscribes (but to which not all anthropologists would agree) will be presented.

In Chapter I, "Study Design Limitations," reference was made to each researcher "pioneering" his/her own assumptions. This statement really refers to area-specific assumptions, as the SESP is built upon a set of assumptions that really fall into the category of theory. These include: (1) the assumption that major or critical variables of the study area's sociocultural systems can be identified; (2) the assumption that these major variables can be evaluated as to their degree of susceptibility or non-susceptibility to energy development impact -- or relevancy or non-relevancy to potential OCS activity; (3) the assumption that by describing these variables in their contemporary setting and analyzing historical factors that have played a role in the formation of how things are today, one can project the potential effect of OCS related impact on these same variables at future periods of time and at differing levels of OCS exploration and development. These assumptions are certainly useful in the necessary task of attempting to assess socioeconomic impact of OCS on the

area's sociocultural systems, but it should be recognized that there are weaknesses which have been reiterated by other researchers. In doing this analysis unexpected major occurrences (social, political, economic, or environmental) could render the projections based on trends of the present in large part obsolete (such as the implementation of ANCSA did to Dorothy Jones' assessment of Aleut cultural change - Jones, 1976). Of course the more thorough and complete the researcher's knowledge of his/her study area, the more chance the projections will approach accuracy. Lastly, it is always important to remember that the term "projection" differs considerably from the term "prediction". This study falls into the former category. As has been discussed by Davis, 1970; Braund and Behnke, 1980; Worl Associates, 1978 and others, "culture" is a key concept to this research. In brief overview, culture includes the entirety of patterns of behavior and thought transmitted from generation to generation by learning and shared as characteristic of any particular society -- the "blueprint" of human behavior and ideas. Culture is the primary means by which humans adapt as distinct from other animals who rely more heavily on biological or genetic adaptation than on learning. Culture is dynamic (always changing to maintain adaptive equilibrium), transcends the individual or group of individuals (i.e. is "superorganic" - Steward, 1955), is composed of integrated systems (e.g. economic, political, etc.), and can change at widely varying rates depending upon internal and external circumstances. Cultural differences distinguish groups from one another and individuals as part of these groups. This concept of culture is critical to this study as the area under scrutiny is populated by groups exhibiting, at least in part, differing cultural patterns today that are

rooted in very different cultural traditions of the relatively recent past.

Cultural change is, of course, the key concern of any impact study such as this. In approaching an understanding of cultural change relevant to this study, several theoretical issues and concepts should be mentioned:

- (1) Cultural ecology as a theoretical means for analyzing processes of culture change will be applied to this study. "Ecology" focuses on adaptation to environment, "cultural ecology" the relationship between cultural systems and environment (natural or physical and human environments). This relationship is one of interaction and change. In accordance with this theory, the most important or critical part (or subsystem) of the **sociocultural** systems of a society is the means by which people utilize the environment for food and raw materials or subsistence -- also referred to as the "**techno-economic**" subsystem (Harris 1975 and 1968; Steward, 1955). As Braund and Behnke (1980) point out, since the SESP model focuses on technological and economic change (i.e. energy development), this theoretical approach is implicit in their study design. Other aspects of the **sociocultural** systems (e.g. kinship, organization, political organization, etc.) indirectly relate to the **techno-economic** case. This approach may also be particularly relevant to studies focused on people who still rely **directly**, to a large extent, on the sea and land for subsistence -- such is the case for this study population.

(2) Acculturation theory focuses on the processes of change of socio-cultural systems and/or structures which result from contact between two or more distinct cultures. Although acculturation is not a one-way change process, it is usually perceived of as resulting in the majority of changing being done by the economically and politically subordinate culture(s) and minor changes be made in the economically and politically dominant culture(s). "Acculturation" is perceived by many writers reviewed for purposes of this report as directed, purposeful, positive (*vis-a-vis* the values of the author) change of a non-Western people (i.e. Eskimos) towards being more like "white", "middle-class", "Christian", "civilized" Americans (Wilson, 1958; Jackson, 1900-1908; Eide, 1952; Thornton, 1931; Alaska Consultants, 1968; and many others). A study of acculturation processes as viewed by anthropologists does not include value judgments regarding change in one direction or the other as being positive or negative. More psychologically and less socially oriented approaches focusing on the individual in the culture change process will also be considered (Hughes, 1960 and 1974; Braroe, 1975; Spindler, 1977; Chance, 1960 and 1965).

(3) The term modernization or its equivalent delocalization (Pelto and Pelto, 1979; Bodley, 1975) refers to processes of cultural change in which relatively small, rural, autonomous societies change in the direction of larger-scale, urban "civilizations". As with the concept of "acculturation", "modernization" has been utilized by developers, politicians, economists, and social workers to indicate

"progressive" change or an improvement in lifestyle. As utilized by anthropologists including this researcher, "modernization" is definitely a process occurring in this study area, but no value judgments are applied to this process -- its features are described for purposes of analysis. "Modernization" or "delocalization" involves relatively rapid change "... trending toward greater dependency on goods, services, and energy from other areas; loss of **autonomy**; usually increase in cash and commercial sectors of the economy; and growing articulation with industrialized societies" (Pelto and Pelto, 1978, p. 417). As the small society becomes more dependent on the larger society, its autonomy decreases and its ability to be self-sufficient economically decreases. While the use and production of local goods decreases, the hidden costs of an increasing **dependence** on traders and merchants through a credit/debt system are not so obvious and have long-range implications for irreversible cultural change. Inequalities between individuals increase as some individuals and/or families have greater access to cash, and cash is not shared with kinsmen in the same manner that local goods are distributed. In general, the decreasing use of local goods results in a nutritionally poorer diet (less protein) and a need for cash to purchase expensive, less nutritious, high carbohydrate foods -- one index of a decrease in the quality of life. From world-wide studies there is a definite indication that "delocalization [modernization] is socially less disruptive for those communities in which the basic subsistence economy remains viable, especially if that subsistence system can be partially diverted to a cash economy without serious disruption" (Pelto

and Pelto, 1979, p. 355). Finally, in general "modernization" includes, by its very nature, an involvement of the small community in increasingly complex, externally organized, bureaucratic structures not indigenous to or compatible with the culture of the group being "modernized."

(4) Cultural brokers are individuals within a society who are more receptive to change, usually because of their contact with a larger society through formal education, military service, or wage labor outside of their own society. These individuals are usually bilingual and, to an extent, bicultural. They are most often the individuals with whom "outsiders" (e.g. teachers, missionaries, traders, governmental representatives, etc.) deal in attempting to bring about cultural change. They may be marginal to their own society and may show individual stress related to attempting to adapt to more than one cultural system. The relevancy of this concept to this study lies in the fact that in some cases individuals that seemingly correspond to the "cultural broker" concept have become leaders of modern Native corporations, boards, and other entities. This factor had implications for contemporary leadership and attitudes towards potential OCS-related changes.

(5) Rates of cultural change are as critical to projecting potential future sociocultural directions as are the kinds of processes involved in change. Since sociocultural systems need to maintain some degree of equilibrium in order to continue functioning effectively to meet

the needs of its members (Aberle, 1950) and since culture is transmitted by learning from generation to generation, rapid change could and has created disequilibrium or social dysfunction and "generational gaps" in cultural transmission. This consideration is very relevant for the Native portion of the study population which has moved from basically small-scale, hunting/fishing/gathering, kinship-based sociocultural systems to elaborate interrelationships with "mainstream American culture" and all of its complexity in a period of time only slightly exceeding a single century. Since the passage of ANCSA in 1971 these populations have been politically and economically even more involved in contemporary nation-wide and even world-wide affairs (the international regulation of bowhead whaling and the 200-mile U.S. limit are only two examples of international events with very meaningful local implications).

The above are the major theoretical orientations of this study. Numerous applications of these theories and concepts will be illustrated with concrete examples throughout the remainder of the study and their utility will hopefully provide a greater degree of probability to the impact projections.

### Research Strategies

As previously discussed, secondary source (literary) research is specified by the research design as the primary means of data gathering. Due to the nature of the tasks and the unavailability of essential data in published

form, both field visits and informal discussions in the field setting and literary (secondary source) research were utilized methods for completing this study. Both will be discussed below.

#### FIELDWORK: PARTICIPANT OBSERVATION AND INFORMAL DISCUSSIONS

Anthropologists have long relied on the method of participant observation -- that is, to varying degrees, living with and participating in the lives of the population which is being studied -- as central to effective gathering of relevant and meaningful knowledge about human societies (Pelto, 1970). Through this process the researcher can learn to understand in greater depth the values and world view of the culture being studied mostly devoid of the researcher's own cultural biases and standards. In this respect, this study includes data gathered over a lengthy period of fieldwork which was preliminary to and not connected with the OCS work per se. This research has included numerous trips to every village from Shishmaref to Stebbins including all of the Bering Straits islands and extensive interpersonal relationships with individuals of all these communities in Nome. The Yukon Delta is not as familiar to the researcher but has been visited several times prior and during this study.

In an attempt to update knowledge of rural communities within the area for purposes of this study, residence in Nome was maintained from October 1978 to August of 1979 with several trips to Nome during the winter of 1979 and spring of 1980. Specific other village fieldwork directly related to this study included four days in Wales, two days in Shishmaref,



two weeks total (during three different visits) to the St. Lawrence Island villages of **Gambell** and **Savoonga**, a part of one day to Teller, one day in **Elim** and Moses Point (a summer commercial fishing site for the people of Elim and some surrounding communities), three days in **Unalakleet**, two days in **Stebbins**, five days in **Emmonak**, one day in Bethel, and one day each in Mountain Village and St. Marys. Visits with King Islanders have taken place in **Nome**. **Golovin** and **Unalakleet** were visited as part of a Kawerak-sponsored OCS workshop series prior to the contract period.

Activities related to this study that have occurred during village visits have included systematic observations, attendance of village or city council meetings, attendance of Alaska OCS public information meetings, and, most importantly, informal discussions with residents and key-informants representing village or city councils, boards, or informed elders. Rural board meetings held in **Nome** (e.g. Norton Sound Health Corporation, Eskimo Walrus Commission, Northwest Community College, etc.) and **Nome** community meetings (e.g. School Board, **Alascom**, oil industry information, and **Nome Business Owners' Association**) have also been attended in the process of data gathering. It should be stressed that discussions with individuals have been informal but have focused on topics which were addressed as study questions.

A final comment should be made regarding the participant observation method of gathering data relevant to this study. Because of the familiarity of the researcher with many residents of the study area in various capacities (most recently subsistence issues and OCS), the researcher has sometimes

been sought out by residents desiring to comment on these topics -- that is, not all contact is researcher-initiated. Lastly, although the researcher has a slight knowledge of King Island Inupiaq, it was useful only for picking up conversation themes and not for actual communication. Translators trained in the social sciences were utilized in data gathering on St. Lawrence Island and in Emmonak. Informal translations were very helpful and appreciated in Wales, in a meeting with the-King Islanders, in Stebbins, and in the Elim-Moses Point visit.

#### LITERARY RESEARCH

Literary sources were divided into three categories: (1) primary sources based on original observations and/or research; (2) secondary sources which are basically compilations and/or interpretations of original research by another party; and (3) theoretical sources not directed toward this study area but having relevancy to the questions of the study. Although the use of secondary sources (as defined above) is an easier task, it is often less reliable as one has to sort through two biases instead of just one -- that of the original observer and that of the secondary interpreter. Therefore, where primary sources were available and useful within the time framework of this study, they were utilized. In other cases secondary source material was relied upon. Theoretical sources were used where applicable.

Primary sources include the following:

(1) Early historical observations, reports, journals, etc. written by

explorers, fur-traders, school teachers, missionaries, miners, government representatives, and journalists. Examples of this kind of work include Sheldon Jackson's annual reports on reindeer herding (1894, 1900-1908); Dorothy Jean Ray's excellent translations of original early Russian documentation on the Bering Strait area (1975a); Aldrich's journalistic discussion of commercial whaling (1889); Edward Harrison's discussion of Nome in its early days of gold mining (1905); explorers and revenue cutters personnel (such as Beechey, 1831 and von Kotzebue, 1821, etc.); teacher and missionary journals such as Eide on Diomedes, Thornton on Wales, and La Fortune on King Island and Diomedes (1953, 1931, and Renner, 1979 respectively); and government reports such as early census materials (U.S. Bureau of the Census, 1893, 1913, and 1915; Petroff, 1884). These sources are often very biased or ethnocentric evaluating Native cultural practices by Euroamerican standards and values, but they also frequently contain the earliest known written information on the Native residents of the study area and therefore are invaluable sources of information. Native "histories" were oral and therefore not written down until relatively recently.

- (2) Primary research by trained social scientists involves an expansive period of time and space, a variety of theoretical approaches, and no uniformity of coverage for the entire study area by topic. While regional archaeological studies (of minimal significance to this study) are referenced (e.g. Giddings, 1960 and 1967; Bockstoe, 1973), recent sociocultural research and current socioeconomic and

demographic research data have proven to be more relevant for these purposes. Examples of this kind of literature include many of Dorothy Jean Ray's references listed in the bibliography; Bogojavlensky on Bering Strait skinboat hunting patterns (1969); Ellanna's research on insular hunting and regional demography (1976 and in progress); some of Ernest Burch's references listed in the bibliography; bowhead whale utilization studies by Carrel, Marguette, and Peterson (1976, 1977 and 1978 respectively); Burgess' subsistence work on St. Lawrence Island and Eisler's work on Shishmaref, Wales, and Teller subsistence (1974 and 1978 respectively); Oswalt's work on the lower Kuskokwim which has applicability to the Yukon Delta (1963 and 1966); A.V.C.P.'s 1974 and 1976 compilation of subsistence food harvest and utilization on the Yukon-Kuskokwim Delta (1976); Hemming et al's. 1978 research on herring fisheries; Hughes' analyses of cultural change on St. Lawrence Island (1960, 1966, and 1974); Edward Nelson's pioneering volume on the ethnography of the Eskimo in the vicinity of Bering Strait (1899); special reports like the Kelso study on alcohol problems in the Norton Sound Health Corporation area (1979); the just recently completed tribal health plans for Yukon-Kuskokwim Health Corporation and Norton Sound Health Corporation (Bantz, 1979 and Richardson, 1979); various joint overall community economic development plans; Eskimo Walrus Commission and other Native organization subsistence data (such as Davidson, 1974 on Yupik subsistence); State Dept. of Fish and Game and Fish and Wildlife Service harvest statistics; regional newspapers such as "The Nome Nugget", "The Bering Straights", "Tundra Drums", and "The

Tundra Times"; a wide variety of other nonpublished agency and organizational data relevant to the study area; and many other articles and studies too numerous to mention but documented in the bibliography.

Second source compilation or interpretations of primary research data were not heavily relied upon, but they were particularly useful in organizing data from diverse sources or in presenting materials not otherwise available to the researcher. These included major works on Eskimos in general such as Birket-Smith (1959), Weyer (1932), and Oswalt (1967) -- to some extent these three sources included both primary data based on the authors' fieldwork and a considerable amount of compiling other researcher's data. Histories such as Bancroft (1960) and especially the major work of Ray on the history of the Bering Strait Eskimo, 1650-1898 (1975a) are examples of historical works that were useful. Arnold's work on ANCSA (1976), Selkregg's "Alaska Regional Profiles" on the Northwest and Yukon regions (1976a and 1976b) and various Field Committee for Development Planning in Alaska sponsored works were also relevant and organized large quantities of data. There are other histories on specific topics such as commercial whaling -- Bockstoce, 1977 -- and Jenness on Eskimo administration in Alaska (1962) that provided relevant information. Many of the sources listed as "theoretical sources" are also historical in nature and make reference to activities effecting the Bering Strait, Norton Sound, and Yukon Delta areas. Research like Ray (1975a) combine fieldwork, translations and questions of original documentation, and historical analyses or interpretations, so therefore do not fit neatly into any one of the three categories of literature but, in fact, provide more than one type

of resource.

Theoretical sources include a diverse array of topics related to specific questions of this study but not specifically written about the study area. Other SESP studies' would fall into this category. Other literary contributions that have been particularly useful for this study include the theoretical works of Burch on Inupait social organization and political interrelationships (1972, 1974, and 1975); Chance's work on Eskimo cultural change from primarily a culture and personality perspective (1960, 1964, 1965, and 1972); Davis' work on contemporary rural Alaskan cultural change (1969, 1973, and 1976); Steward, Harris, and Pelto on sociocultural theory applicable to this study (1955; 1968 and 1975; and 1979 respectively); Jones' work on Native/non-Native interethnic relations in the Aleutians (1972 and 1976); Kraus' and Bloom's works on suicide and psychological stress among Alaskan Native populations (1979; 1972 and 1973 respectively); Lantis' and Burch's work on Native revitalization movements (1973 and 1978 respectively); Laughlin's and Richard Nelson's work on hunting adaptations (1968; 1969 and 1978 respectively); Nowak's work on subsistence in relationship to cash economies in rural Alaska (1975a, 1975b, and " 977); Ray's work on Eskimo polity and land tenure (1967, 1971, and 1975b); and Van Stone's work on Eskimo ethnohistory and culture change (1958, 1960, 1964, and 1973).

#### RESEARCH LIMITATIONS

There were research limitations that were not directly related to the

research design (already discussed in Chapter 1). As perceived by the researcher, these are briefly discussed below:

- (1) Due to the expanse and diversity of the study area, on-site visitation of at least three days per coastal village in the study area in addition to the regional centers outside of the area's parameters (Bethel, "St. Marys and Mountain Village) would have been advisable prior to completing the study. Travel and per diem funding restriction and total time requirements were factors that made this ideal impossible. These additional field visits and time in each village would have provided more answers to the study questions from informal discussions and attendance of village meetings.
- (2) Location within Nome, while mostly advantageous, provided continuous study-related informational stimuli that made the selection of a cut-off point in data gathering for the baseline and assumptions portion of the study difficult.
- (3) The decision to rely heavily on primary literary resources provided research difficulties relating to the time requirement for reading a very large body of literature.
- (4) The inaccessibility of the petroleum development scenarios prior to completion of the assumptions portion of this task was definitely a research limitation, although they did become available prior to completion of the impacts portion of the study.

(5) Positive and negative attitudes on the part of residents of the study area towards oil development and federally subsidized "impact statements" related to this development may, and certainly has, influenced the kind of direct response the researcher obtained regarding "attitudes towards OCS" or other kinds of development. If residents expect OCS development to be economically advantageous to the area or to themselves personally, they tend to either publicly come out in support of such development or else they tend to keep such attitudes or support and/or knowledge of potential activities in relative confidence possibly because they perceive prior, unshared knowledge as providing them with individual advantages in profiting from such development. Conversely, individuals or groups that perceive OCS exploration and/or development as threatening either tend again to make such sentiments public, express concern to impact researchers, or else feel helpless about controlling or influencing the decision-making process regarding OCS exploration and/or development and cynically perceived the "impacts research" to be an exercise in futility or tokenism on the part of the federal government in considering local concerns. There are also supporters of OCS development that perceive the SESP as "just another meaningless federal study". This researcher has encountered all of the above-mentioned perceptions and considers either reluctance on the part of residents to express their "real" attitudes to impact researchers or cynical and negative perceptions of the SESP as being definite research limitations -- interesting and meaningful in their own right, however.



## Organization of Study

### SEQUENCE OF RESEARCH ACTIVITIES

The first step in conducting this research was to identify relevant literary sources on the study area. The Yukon Delta was added to the study several months after the original study was organized and therefore all sequence for the Yukon Delta lagged behind the Bering-Norton area. Literary research was the focus of attention until January, 1979. From January on field research, informal discussions and meeting attendance in Nome were carried out simultaneously with continued literary research. Because of the rapid pace of changing attitudes and activities especially regarding subsistence issues, land conveyance, and OCS public awareness in Nome, several critical organizations had to be visited periodically to keep in touch with what was happening. Almost all of March was spent in the field. Field activities subsided at the end of August, 1979, and the remainder of the study period was utilized primarily for purposes of organizing data and writing the draft and final technical reports. News media releases were monitored weekly throughout the study period.

### ORGANIZATION OF DATA

The baseline portion of the study will describe the presently functioning relevant sociocultural systems of the study area, describe how past conditions and events have influenced the present sociocultural systems, and derive OCS relevant assumptions about the major impact categories or parts

of these systems. The study commences in the past by briefly outlining major relevant **sociocultural** themes and facts of **pre-** or early-contact Native **sociocultural** systems and the response of these Native **socio-** cultural systems to the historical impact of non-Natives from approximately 1650 ~~to the~~ passage of ANCSA in December of 1971 -' - the former in Chapter III and the latter in Chapter IV. Chapter V describes the relevant aspects of contemporarily functioning **sociocultural** systems including both **Native** and non-Native since they cannot be separated but emphasizing the latter. Beginning in Chapter V the remainder of the study will be organized around the **impact** categories as described in Chapter I.



### III. TRADITIONAL ESKIMO ADAPTATIONS

#### Relevancy to Contemporary Baseline

As previously mentioned, the majority of the study area's population today is Eskimo (Inupiat and Yuit). At the time of first contact with Euroamericans in the 18th century and more intensive contact during the mid-19th century these people shared related lifestyles that were unquestionably distinct from those of the Euroamerican "intruders". Given the relative short duration of this contact period and the fact that the core patterns of *sociocultural* traditions have persisted through time, an understanding of contemporary Bering-Norton *socio-cultural* systems ~~would~~ certainly not be possible without at least a minimal understanding of the Eskimo *sociocultural* traditions in which much of the present is still deeply rooted.

This procedure is necessary in a study of change because change of any sort cannot be understood ~~without~~ knowing what it was that changed.

... This account of the "traditional period" thus constitutes a baseline against which changes can be clearly seen, and easily described by way of contrast.

(Burch, 1975, p. vi; Levy, 1952)

It ~~would~~ be unfeasible and of little use to this study to describe in detail a complete picture of traditional Eskimo *sociocultural* adaptations. Therefore key themes which have continuity with the major impact cate-

gories of the present will be discussed in general terms. The term "traditional" refers to the way things were before Eskimo exposure to western "civilization" and its material trappings -- "contact" is that point in time at which such exposure began. "Adaptation" in this context refers to the sociocultural means by which Eskimo populations successfully adjusted to their natural and human environments. The term "Eskimo" is not an Eskimo term and it would be more accurate and in line with contemporary practice to use the localized name each group had for themselves. However, because of the diversity of groups in this area, for convenience and understanding, and to facilitate readability, "Eskimo" will be utilized when discussing both Inupiat and Yuit together with an apology to those who find it inaccurate and/or offensive. When each group is discussed separately, it will be designated accordingly.

The following discussion of traditional Eskimo adaptations is divided into three major groups: Bering Strait, Norton Sound, and Yukon Delta. The phrase "Bering Strait" has been narrowly defined to include only the 56 mile body of water between Cape Prince of Wales and East Cape Siberia and more broadly defined to include an area from the northeastern portion of Seward Peninsula to the village of Stebbins on the southwestern shores of Norton Sound (Ray 1967; Nelson, 1899). Since there have continued to be subsistence pattern and linguistic boundary distinctions between the Inupiat big sea mammal hunters of the insular

and mainland areas north of Norton Sound, in this document "Bering Strait" will refer to the study area from Shishmaref to approximately the Cape Nome/Safety Sound and Golovin Bay areas (the former an ecological boundary, the latter a linguistic boundary) including the Siberian Yupik speakers of St. Lawrence Island because of their subsistence similarities to other Bering Strait insular peoples. This dividing line approximately corresponds to both archaeological and linguistics evidence (Bockstoe, 1973; Ray, 1964, 1967, 1971 and 1975a) for the mid-nineteenth century and earlier.

The geographical division between the two languages at the time of first white contact on Seward Peninsula (in 1778) was at Golovin Bay, 80 miles east of Nome, where Unaluk, a dialect of Yupik, was spoken, but the Inupiak [Inupiaq] boundaries shifted south during the historical period so the Unalakleet, once an Unaluk-speaking village, became trilingual with the addition of Malemuit and Kauwerak speech.

(Ray, 1971, p. 7)

"Norton Sound" refers to the remaining (and majority) coastline of Norton Sound to approximately the coastline slightly southwest of present day Stebbins but just north of the northernmost present channel of the Yukon -- the contemporary community of Kotlik and ethnohistoric community of Pastolik -- to Alakanuk and Sheldon Point on the southernmost contemporary Yukon channel. The reader should review Map I to clarify the locations of these areas. The "Yukon Delta" refers specifically to that geographical'ly distinct area. It should also be mentioned that the Yukon-Kuskokwim Deltas actually form a single ecological, cultural, historic and contemporary socioeconomic unit, so that the study boundary

at Alakanuk and Sheldon Point is responsive to the geographic location of the potential OCS lease sale area and not to any reality of human or environmental continuity. Since there has been considerably more early literature generated for the Kuskokwim portion of the contiguous deltas than for the Yukon, some Kuskokwim Delta materials for the "traditional period" will be applied to the Yukon. The contemporary period will, of course, focus on the Yukon Delta as a distinct unit. Concentration in all areas will be on the coast.

### Bering Strait

#### TERRITORIAL AND LINGUISTIC BOUNDARIES

There has been considerable controversy among anthropologists as to the appropriateness of the use of the term "tribe" in describing Alaskan Eskimos. The term "tribe" has generally referred to a social group, usually speaking a distinctive dialect, occupying a geographic area, and possessing cultural characteristics that mark it off as distinct from other groups. Usually some degree of political organization is implied. It is the questions of political organizations, territoriality, and common language or dialect that have caused problems in the use of the term for Alaskan Eskimos. Oswalt (1967) uses the term "tribe" for referring to social groups of Alaskan Eskimos that had a name for themselves that designated more than a single settlement and that had in-

group identification -- that is, "insiders" as opposed to "outsiders" (Oswalt, 1967, pp. 2 - 3). Oswalt's groupings share dialectical similarities, but Oswalt denies the factor of political organization:

It is acknowledged that the term tribe is inexact when applied to these people, and yet there is no more satisfactory designation. The Eskimos so classified did not [emphasis added] form distinct political units; in fact, political structure might scarcely exist even at the village level.

(Oswalt, 1967, p. 2)

The opinion of other researchers, however, that have spent more time in the field in the Bering Strait area and have done more detailed analyses of Bering Strait ethnohistorical and oral histories, disagrees with the former statement regarding political organization finding definite evidence of both political organization and concepts of territorial boundaries -- these social groups being referred to as both "tribes" and "societies" (Ray, 1964, 1967, 1975a; Burch, 1975; Bogojavlensky, 1969; Ellanna, fieldwork 1969-1979). For purposes of this study, however, the term "tribe" will refer for all study groups to "...people with a common language and culture who lived within well-defined boundaries recognized by themselves and contiguous tribes" (Ray, 1975a, p. 105). Tribal territories usually were located around the drainage of one particular major river and its tributaries, a piece of distinct coastline, or an island.

Keeping the above discussion in mind, then, there were approximately ten separate traditional (late 18th century) tribes in the area described as



"Bering Strait". These, and their territorial boundaries, are listed (from north to south) in Table III.

Traditionally within any one of these tribal groupings there was usually one large, relatively permanent principal village with several smaller villages and numerous temporary campsites within the tribal territory (Ray, 1967, p. 375). The number of these communities that have survived to the present is only a small percentage of those that existed traditionally in this area, although many abandoned villages or campsites (e.g. Singuk) are utilized for subsistence activities today. The vast majority of the remains of these villages or campsites are coastal and, in most cases, have not been excavated and studied for critical information about traditional cultures by archaeologists and/or residents of the region trained in archaeological method (Giddings, 1967; Bockstoce, 1973).

All of the traditional inhabitants of the Bering Strait area (as defined herein) were speakers of In̄upiaq with the exception of St. Lawrence Island whose inhabitants spoke what is now referred to as Siberian Yupik. (They were closely affiliated with the language, culture, and people of the Chukotski Peninsula 38 miles west of the contemporary village of Gambell). There were, however, two major subdialects of In̄upiaq represented in this area. One is the Kauwerak or Igloo subdialect spoken by all of the In̄upiat in this area with the exception of the Diomedes and Wales whose subdialect varied. Interestingly King Island and Sledge

TABLE III  
BERING STRAIT TRIBES

<u>Tribe</u>	<u>Contemporary Community(ies)</u>	<u>Territorial Boundaries</u>
Tapqaqmiut <sup>1</sup> (Tapkakmiut)	Shishmaref	Cape Espenberg inland to Serpentine Hot Springs and southwest along the coast of Seward Peninsula to approximately Lopp Lagoon
Diomed Islands (Ingalik and Imaklik <sup>2</sup> )	Little Diomede	Little Diomede (Ingalik) Island
Wales (Kingikmiut)	Wales	tip of Seward Peninsula from Lopp Lagoon southwest and then southeast north of Port Clarence
Port Clarence	Teller Brevig Mission	<b>the area including</b> and/or surrounding Port Clarence, Point Spencer, Grantly Harbor, and Tuksuk Channel
Kauwerak (Kuzitrin River, Igloo)	Mary's Igloo <sup>3</sup>	interior Seward Peninsula along the drainage of the Kuzitrin River
King Island (Ukiuvungmiut)	King Island <sup>3</sup>	King Island (Ukiuvok)
Nome	Nome Salomon	along the southeastern coast of Seward Peninsula north of Cape Rodney and south to the bluff area
Sledge Island	none	Sledge Island (Ayak)
Fish River <sup>4</sup>	Council White Mountain	drainage of the Fish River
St. Lawrence Island (Sivokak or Sevokak)	Gambel Savoonga	<b>St. Lawrence Island</b>

<sup>1</sup> The suffix "miut" means "people of" and is used in conjunction with the geographical name to refer to a tribal unit.

<sup>2</sup> Today Big Diomede belongs to the U.S.S.R. and is devoid of its Inupiat population -- not part of this study.

<sup>3</sup> Not occupied by a community year-round today.

<sup>4</sup> "During the early part of the nineteenth century it is uncertain whether the lower Fish River was occupied by the Unaluk-speaking LYupik people of Golovin or by the Fish River people, who spoke a Kauwerak-related dialect" (Ray, 1975a, p. 105).

Island residents spoke the *Kauwerak* dialect rather than that of the *Diomedes* not far to the north (although *Bogojavlensky, 1969*, has isolated linguistic elements peculiar to both King and *Diomedede* islands and differing from the mainland). The second is the *Malemiut* dialect of the *Kotzebue* Sound area spoken by some eastern Norton Sound residents as a result of the resettlement of this area by *Malemiut* in the nineteenth century.

Traditional population figures for these tribes are important to consider as a background for putting contemporary populations figures into perspective.

Tapqaqmiut	375	(1850 estimate, <i>Burch, 1975, p. 12</i> )
Little Diomedede	164	(1779, <i>Ray, 1975a, p. 110</i> )
Big Diomedede	398	(1779, <i>ibid.</i> )
Wales <sup>1</sup>	500-600	(early 19th century, <i>ibid.</i> )
Port Clarence	275	(1850 estimate, <i>Burch, 1975, p. 12</i> )
<i>Kauwerak</i>	200	(1850, <i>ibid.</i> )
King Island	275	(1850, <i>ibid.</i> )
Nome & Fish River	900	(1850, <i>ibid.</i> )
Sledge Island	50-60	(early 19th century, <i>Ray, 1975a, p.111</i> )
St. Lawrence Is.	1500	(pre-1978 estimate, <i>Hughes, 1960, p.12</i> )

<sup>1</sup> Actually composed of two villages -- agianamiut on the south and kiatanamiut on the north with equal populations (*Ray, 1975a, p. 111*).

The dates for each estimate are given as sources of estimates differed due to seasons and bases of estimates made, and introduced diseases greatly modified population totals from one year to the next (e.g. the 1878-1879 "starvation" on St. Lawrence Island decreased the islands' population by two-thirds -- Hughes, 1960, pp. 11-12). The total maximum estimated population for this area in approximately 1850 was 4,747 (including the people of Big Diomedé some of whom were relocated to the Siberian mainland and whose descendants politically are not part of the U.S. or this study and others who moved to Little Diomedé prior to the forcible abandonment of Big Diomedé).

#### SETTLEMENT PATTERNS

The phrase "settlement pattern" refers to the characteristic annual settlement or residence pattern of any specific group of people -- that is, within any group, who lives where during what part of each year. Traditional settlement patterns are important to discuss in this context because they: (1) are directly related to sea and land use; (2) are directly related to subsistence patterns; (3) have a definite continuity into the contemporary period despite their modification. Although in a world-wide perspective hunters/gathers/fishers are usually more nomadic than populations that are food producers (crop growers/animal domesticators), Alaskan Eskimos as a whole were traditionally much more sedentary than central Canadian Eskimos and considerably more sedentary with greater population densities than hunters in areas

with less food and raw material potential (e.g. the Bushmen of the Kalahari Desert in Africa). As Oswalt (1967) points out, "... community mobility is a function of subsistence resources, technological knowledge, and other sociocultural factors" and "... Alaskan Eskimos are best accommodated in the Central-based Wandering Level," "Central-based Wandering" being defined as a pattern in which communities spend part of each year wandering and the rest at a settlement or "central base" to which they may or may not return in subsequent years (Oswalt, 1967, p. 88). There was, of course, variation between Alaskan Eskimo groups, and not returning to a more or less permanent settlement in the Bering Strait area usually was the result of village shifts due to coastal erosion resulting from storms, changing patterns of river beds, animal migration patterns, or natural catastrophes such as landslides. The extent to which traditional shifts were the result of trading and/or warfare has not been clearly determined for the prehistoric period, but trading and population decimations were certainly factors in post-contact population shifts (as will be discussed in the "historic" section below).

Characteristic of all of the Bering Strait area was a pattern of a large village and several smaller villages located either on a distinct coastal segment, large river, or island (the smaller islands of King, Little Diomedé, and Sledge lacked satellite communities). The primary village of residence was usually deserted in the summer for the seasonal activities of fishing, berry picking, trading, or caribou hunting,

but ". . . a few old and young persons usually remained behind in large villages like Wales, Sinramiut [at the mouth of the Sinruk River], and Cape Nome" (Ray, 1975a, p. 106). This general pattern applied to smaller insular communities and was, in these cases, a necessity as King, Diomed, and Sledge islands all lacked abundant or diverse berries and other vegetation, salmon-spawning streams, and land animals. St. Lawrence, because of its size and topography, has some of these resources but its population traveled to the Siberian coast for trade, particularly for reindeer hides, and for other activities. Fishing, berry picking, and other resource specific activities were engaged in from campsites within the territory of the tribe unless agreements for use of another tribes territory were in effect -- a necessity for the small islands. Winter movements usually were associated with intercommunity ceremonial feasting, but this activity usually did not include island residents because of the near physical impossibility of traversing the constantly shifting ice masses of the Bering Strait. During periods of mobility village groups usually subdivided into camps with correspondingly decreased populations. It is essential to point out the fact that traditional interregional mobility, although probably stimulated in extent by Euroamerican trade, was substantial requiring the use of large seaworthy, skinboats or umiaks, kayaks, and dog traction. Although residence, as such, on the ice was not characteristic of Bering Strait populations due to the continuous shifting nature of this ice with tremendous natural energy, temporary hunting sites from the edge of shore-ice or leads occurred in both the

spring and winter. Ice definitely was a topographic feature that should be considered separately from that of land or sea (Worl, 1979; Nelson, 1969).

#### SUBSISTENCE PATTERNS AND VALUES

In recent years the term "subsistence" has been used frequently in everyday conversations and in political arenas in Alaska and elsewhere where the populations indigenous to the area have traditionally and contemporarily derived their sustenance from activities of hunting, fishing, and gathering from the land as opposed to the use of domesticated plants and animals and a cash economy. The latter is common to the populations that have encountered and, in most cases, economically and politically dominated these indigenous populations. In most cases, in Alaska the terms "subsistence" and "subsistence issues" have been utilized and/or discussed without agreement as to meaning and certainly not without considerable emotional response on the part of both Native and non-Native peoples (Worl, 1979, p. 107). In anthropological literature of the not-to-distant past "subsistence" was frequently a chapter title or topic dealing with the primary economic patterns of hunters/gathers/fishers as opposed to the economic patterns of Euroamericans. It more rarely has been utilized by non-anthropological social scientists and laypersons alike to refer to the bare minimum of food, clothing and shelter necessary to support life. In more current anthropological focus there have been theo-

retical arguments from cultural ecology and biobehavioral approaches that have given subsistence patterns (e.g. means by which hunters/gathers/fishers gain a livelihood from the environment) a more central role in providing the primary core about which sociocultural systems are organized (Harris, 1968; Laughlin, 1968; and many others). As a recent lay audience article in Alaska Magazine (Rearden, 1978) suggests, "subsistence" has been used by Native individuals and groups and legal experts to refer to a total lifestyle, not simply to a means of getting a living from the land. Although a precise definition of this concept is elusive and the concept is today infused with political and emotional issues, this study will employ the concept to describe the means by which Eskimo hunters/gatherers/fishers derived, and derive today, a living from the land while simultaneously utilizing the theoretical position that "subsistence" activities and values are at the core of the Eskimo sociocultural systems of the past and have remained the core of these modified systems in the present. It is possibly of interest to note that despite the frequent use of the term "subsistence" by anthropologists interested in hunting/gathering/fishing peoples, the meaning of the term is assumed and not debated by such researchers, and a brief survey of several of this year's texts in introductory or cultural anthropology has failed to find even one author who attempts a definition of this concept. In contrast many Native groups throughout the state are attempting to arrive at definitions to be utilized in the formation of public policy.



The Bering Strait area, as defined for this study, traditionally included three major subsistence patterns, differing in their focus while, for the most part, exhibiting similarities in broadly utilizing all available food resources of their environment.

The Bering Strait was one of the richest areas of the Eskimo world in fish, sea and land mammals, plant foods, fowl, and eggs. The comparatively high density of population reflected this abundance particularly on the small islands of the strait and at Cape Prince of Wales, which were near the migration routes of the walrus and whale.  
(Ray, 1975a, p. 111)

These major subsistence patterns have been described as follows: (1) the "Whaling" or "Arctic Whaling" or "Big Sea Mammal" hunting pattern; (2) the "Caribou Hunting" pattern; (3) the "Small Sea Mammal" or "Bering Sea Hunters and Fishermen" pattern. The focus of the first in this area was either the bowhead or Greenland right whale (Balaena Mysticetus)<sup>1</sup> or the Pacific walrus (Odobenus rosmarus); the focus of the second was the Barren Ground Caribou (Rangifer tarandus); and the focus of the third were beluga (white whale, Delphinapterus leucas) and/or seal: bearded, oogruk in Iñupiaq, mukluk in Yupik (Erignathus barbatus); ringed (Phoca hispida); ribbon (Phoca fasciata); and harbor or spotted (Phoca vitulina). Each of these patterns will be discussed in more detail as they apply to specific tribal groups within the Bering Strait area. As will be demonstrated, the major theme of all of these patterns (including the inland Kauwerak in-

<sup>1</sup>Taxonomic classifications will be provided only for species of major subsistence importance.

directly) was the sea and its resources.

The "whaling" or "Arctic whaling" or "Big Sea Mammal" subsistence pattern, common in certain advantageous locations to the north, was traditionally characteristic of the islands of the Bering Strait (Diomedes, King, St. Lawrence, and to a lesser degree, Sledge), and communities located on points of land that jut into the Strait therefore intercepting the migratory paths of large sea mammals moving north in the spring and south in the fall. Mainland communities in this area participating in this pattern included Wales and Cape Nome villages (Ray, 1975a, Bockstoce, 1973). The focus on whale, particularly the bowhead, as opposed to the Pacific walrus appears to have been a function of cultural preference, ice conditions, and species availability. In all of these areas, with the possible exception of King Island and the Diomedes, whaling was traditionally more prestigious, technologically complex, ceremonial, and involved more complex social implications -- Hughes, 1960; Bockstoce, 1973; Ray, 1975a; Thornton, 1931). The bowhead migration precedes that of walrus and is closely associated with ice at all times (Meyer, 1932; informal discussion with Alaska State Dept. of Fish and Game personnel, 1979). On the other hand conditions of ice and weather and varying migratory routes created a situation in which years passed in which very few or not bowhead whales could be taken and reliance on walrus may be necessary. Currently King

islanders do not whale and the focus of both King and Diomedes is definitely walrus. There is controversy over the extent to which Sledge Island residents whaled as no community on the island remains (archaeological evidence indicates that whaling, indeed, did occur -- Bockstoce, informal discussion, 1977; Ellanna fieldwork, 1977). In any event, walrus were certainly a primary food and raw material source (particularly cowhides for covering skinboats and ivory for implement production) for all of these locations within the Bering Strait area. Extensive archaeological studies by Bockstoce at Cape Nome and the Safety Sound (Nuk) area have indicated that Cape Nome was indeed a dividing line in separating the large sea mammal focus from the small sea mammal focus hunting patterns (Bockstoce, 1973). Other species important to populations practicing whaling and walrus hunting included other whales when bowhead were not available (California gray, minke, and beluga -- the former two particularly on St. Lawrence Island); northern sea lion (St. Lawrence Island); bearded seals (year-round); ringed seals (year-round); harbor and ribbon seals (seasonally); polar bears (winter only); five species of salmon with silver, dog, and hump-back primary (summer); and other fish such as grayling, tom cod, sculpin, whitefish, herring, smelt and others; crabs (winter), and clams (either from walrus stomachs or on the shore in the fall at Wales -- Senungetuk, 1971); migratory waterfowl and their eggs (spring and early

summer); caribou (either hunted or traded for); ptarmigan and rabbits; and summer vegetation such as berries, greens, and indigenous root plants. Fur-bearing animals, although available and utilized for pelts, were not a focus of traditional, pre-fur trading activities.

Several major points, relevant to the contemporary period, emerge from an examination of this subsistence pattern:

- (1) The utilization of the open skinboats (umiak) and large crews for the hunting of whales and walrus had social and valuative implications that have continued to pervade all aspects of the social systems of these communities.
- (2) The hunting of large sea mammals from the umiak was distinctly a , differing economic and social activity than that of individual or paired hunting by kayak or on the ice by foot (Bogojavlensky, 1969) again having extensive cultural implications.
- (3) Large sea mammal hunting encouraged greater sea-based mobility; skills in boat building and navigation; more extensive contact with mainland populations that, for ecological reasons, did not have access to these resources; social stratification related to food and raw material surpluses and inequitable distribution of these resources in accordance with crew membership, position, and umiak "captiancy"; and political factionalism based on crew membership

and competition.

- (4) Permanent community settlements with high population totals and relatively high population densities (Wales, with a population of 500 - 600 +, was possibly the largest village settlement in Alaska at one point in time, and King, Diomede and St. Lawrence islands maintained high densities -- Ray, 1964, 1975a; Oswalt, 1967; Petroff, 1884; Hughes, 1960; Joint Overall Economic Development Committee for Gambell and Savoonga, 1979).

The "Caribou Hunting" \* pattern was an inland adaptation focussed on the inland cooperative and individual hunting of caribou primarily, in this area, by the group referred to as Kauwerak. Caribou no longer inhabited Seward Peninsula after approximately 1880 bringing this subsistence pattern to an abrupt halt. Of relevance to this study is the fact that inland dwelling Inupiat of this subsistence pattern had an important secondary reliance on fish (salmon and whitefish -- many varieties of which migrated from the sea inland up rivers to spawn) and on sea mammal products, particularly seal and beluga. Sea mammals were critical for providing oil or fat for food and fuel (basically lacking in a caribou/fish diet) and raw materials for waterproofing clothing and skin-boats. Whereas caribou meat and hides were traded for a portion of these coastal products, there is unquestionable ethnohistoric evidence that inland groups such as the Kauwerak and Fish River peoples had access to

both seals and beluga that swam into bays, lagoons, and up rivers, and to territory of their alliances (political) for hunting seals and beluga:

Therefore, the Kauwerak and Fish River people were able to get them [seals] in Imruk Basin and as far inland as the mouths of the Pilgrim River and the Fish River. The beluga and spotted seal that went into Grantly Harbor were captured in nets near the mouth of Tuksuk Channel. Moreover inland tribes also went to the territory of their alliances for sealing: Kauwerak to Point Spencer; Fish River to Atnuk [Cape Darby]. The Kauwerak people camped and hunted in their designated places, and returned home in June or in the early part of July with their meat and oil.

(Ray, 1975a, p. 114)

Their reliance on other resources mentioned for the "whaling" subsistence pattern -- such as migratory waterfowl, other fish, and vegetation -- existed, but the major point of emphasis in this context is their reliance on sea animal resources despite their inland residence on the Kuzitrin or Fish Rivers.

The "Small Sea Mammal" hunting pattern is a coastal pattern characterized by a tripartite dependency on small sea mammals (seal and beluga), fish, and caribou. Specific primary dependencies related to both geographic location and species availability during any given year. In addition, considerable energies were expended in both coastal and riverine fishing and caribou hunting when available. Shishmaref is an excellent example of a community utilizing this subsistence pattern in the Bering Strait area. Whereas a periodic loss of one part of this

threefold economic base would probably not have been lethal to these populations, a continuous loss of one major resource or the simultaneous temporary loss of two would have caused major economic deprivation and probably relocation (Bockstoe, 1973). Most of the other animal and vegetable resources discussed for other subsistence patterns in this area were also available and utilized by these populations.

Lastly, although it is difficult to determine the value systems of pre-contact populations, there is definitive evidence from archaeology, ethnohistory and oral tradition that these traditional populations focused their ceremonial life, artistic motifs, and priorities of activities in their daily lives on respect for and an understanding of their entire environment -- animals, natural inanimate objects, and topographical features, all of which were believed to possess either souls and/or spirits. Their knowledge of and relationships and close ties to this total environment permeated seemingly every aspect of their daily lives.

#### SOCIAL ORGANIZATION: FAMILY AND COMMUNITY

Each of the . . . traditional Northwest Alaskan Eskimo societies was overwhelmingly kinship oriented, apparently much more so than most Canadian Eskimo societies . . . By this I mean that, both ideally and actually, kinship ties were emphasized at the expense of all others. In traditional Northwest Alaska, kinship formed the axis on which the whole social world turned . . . most traditional "settlements" were

in fact kinship units, and no one was ever voluntarily in a situation where no relatives were present.

(Burch, 1975, p. 22)

Burch goes on to point out how themes of kinship embraced even non-kin organizations such as the skinboat hunting crew. It should be explained, however, that whereas Euroamericans tend to perceive "kinship" as primarily biologically-restrictive and pivotal on the nuclear family model (mother, father, and offspring), Eskimos (and many other non-western peoples) expand the concept to include consanguineal ("blood"), affinal ("marriage"), adoptive, and other socially-defined categories of kinsmen embracing numerous generations and the living and non-living (although Eskimos did linguistically distinguish between "real" and fictive kinship -- Burch, 1975, p. 46).<sup>1</sup> Burch (1975) has completed a

<sup>1</sup>For these purposes several definitions as used in this discussion should be made: (1) the "domestic family" or "household" is a group of kinsmen who generally reside together; (2) the "local family" are kinsmen who reside in the same area but are subdivided into several "households" with frequently fluctuating membership; (3) "endogamy" refers to the practice of marrying within a group as opposed to "exogamy" or marriage outside of one's group; (4) "polygyny" refers to the practice of one man having more than one wife simultaneously, "polyandry" to the practice of one female having more than one husband simultaneously; (5) "trading partnerships" are relationships of mutual assistance between two domestic families (focusing on the male heads of each household) that may include what Burch refers to as "co-marriage" or a non-residential marital union between ". . . two conjugal (i.e., resident husband-wife) pairs into a larger marital unit via the mechanism of sexual intercourse between each man and the other's wife" (Burch, 1975, p. 106); co-marriages could exist within a single village or, traditionally, between couples living in different settlements and sometimes different tribes.



thorough examination of traditional and changing patterns of north-western Alaskan Eskimo kinship organization applicable to most of the Bering Strait area based upon both fieldwork and a compilation of data from other field research. Although this study is much too complicated and in depth to discuss in this context, some major points relevant to an understanding of contemporary social relations in this area will be mentioned based on what has just been described as the central importance of expanded kinship affiliations to Eskimo social organization as a whole.

From the point of view of an individual in Bering Strait Eskimo society, his or her kinsmen were the critical elements of his network of interpersonal relationships -- a person ending up in a group without kinsmen was indeed at a disadvantage at best and at worse may be killed as a dangerous "stranger" (Bogojavlensky, 1969; Burch, 1975; Weyer, 1932; Oswalt, 1967). Kinship was a means by which mutual interdependence, mutual obligations, mutual alliance, and other rules of interpersonal behavior were defined. Burch (1975) distinguishes a basic set of 27 kin relationships an individual could potentially have, and an ethical standard existed in which ". . . overwhelming emphasis was placed on kinship ties in an individual's strategies of affiliation" (Burch, 1975, p. 291). These kinsmen included relatives in ascending and descending generations resulting from biological descent and/or sexual intercourse (e.g. co-marriage), marriage, and other social means of defining

"fictive" kinship. In most of the Bering Strait area kinsmen of an individual would include both mother's and father's sides of the family, although St. Lawrence Island's kinship system tended to be more unilineal (one-sided) along the father's (patrilineal) line (Hughes, 1960). Marriage between individuals tended to be endogamous within a tribal unit. Burch, 1975, refers to these units as "societies" and states that endogamous trends tended to result in "societies" being equivalent to "demes" or clusters of individuals partially isolated genetically and spatially from other populations (pp. 11-12). In each one of these kinship roles the individual would have had culturally proscribed rules of behavior consistent with his or her role. This is an area of sociocultural patterning that tends to be resistant to sociocultural change, so therefore "traditional patterns" have immense implications for interpersonal relationships in the present.

The domestic family unit or household traditionally included membership beyond the "nuclear family" -- that is often a multiple spouse (especially females in the case of exceptional hunters), grandparents on either side, married siblings and their spouses and children, or other collateral relatives such as aunts, uncles, cousins (one type was usually referred to as "brothers" or "sisters"). Since the subsistence system required a relatively balanced distribution of work between the sexes and age groups, household membership often expressed the need for adult, non-elderly hunters to provide protein foods and females to care

for meat and fish, prepare clothing, gather vegetable foods, and care for immature offspring, and elders to provide guidance for the less experienced adults and the socialization of young children. In actual daily life kinship obligations and alliances defined and regulated the economic and social interrelationships of different domestic families or households, especially in regards to economic interdependency. Lastly, the size of a domestic family unit might fluctuate by season or year depending on available food resources or the dominant subsistence activity at any given time -- the largest social groupings at the family and tribal levels usually occurring in the winter. However, the need for cooperation in subsistence endeavors such as whaling, walrus hunting, or caribou corralling required a relatively large functioning community group as well as full participation of all actively able adults in a domestic family unit. Again, most themes of traditional family organization have tended to be persistent despite numerous pressures encouraging change.

Principal communities within tribes of the Bering Strait area always had a "community house" ("men's house" or kazgi). The exception to this is St. Lawrence Island populations that apparently did not have the institutions of the kazgi (also called kasgi, kashim and other derivations of the same concept) (Nelson, 1899; Hughes, 1960). In discussing salient features of community social organization of this area apart from St. Lawrence Island, it is necessary to discuss the kazgi, as this

institution represented the essence of intergroup and intragroup politics, social control, and the socialization of males in the society. The kazgi was also important in demonstrating the interrelationships between subsistence and social organization as well as the naivete and inaccuracy of early anthropological and lay opinion regarding the supposed lack of political organization in Eskimo society (Ray, 1967, 1975a; Bogojavlensky, 1969; Weyer, 1932) -- politics were certainly there but not in a form easily recognized by Euroamericans.

In the Bering Strait area kazgi membership was associated with affiliation between skinboat crews and skinboat crew membership and represented very real political factionalism (Bogojavlensky, 1969). It seems reasonable, therefore, that Inupiat communities that were more involved in the umiak hunting of large sea mammals and, partly as a consequence larger in size, tended to have a greater number of kazgis. Following is a list of communities and the number of kazgis reported for them by early ethnohistoric sources:

Shishmaref	2
Wales	4
Little Diomede	2
King Island	2 or 3 (depending on the period)
Amirak (Pt. Spencer)	1
Kalulik (Cape Douglas)	1
Sinruk	1
Kauwerak	1
Ayasayuk (Cape Nome)	1

(Ray, 1964; 1975a)

It is almost certain that other communities in the area, such as Kividluk a few miles up the coast northeast of Shishmaref, Nusak or Nuk (Safety), and Sledge Island also had at least one kazgi -- further archaeological work will be necessary to answer questions of this sort.

In brief, the kazgi was both a structure and an institution. As a structure it provided a place for men and older boys to work and exchange knowledge -- females entered usually only to provide food or during community ceremonies. As an institution its membership was closely associated with skinboat crew participation, alliances between two or more skinboat crews, other political alliances, and, at times, community wide or intracommunity ceremonialism. They were the centers of government in that decision-making processes involving primarily skinboat captains (with the most influential of these captains filling a "chief-like" role and the remainder a council) and influential elder males were conducted as a part of these institutions and within their membership and functioning (Burch, 1975) these institutions often transcended kinship groups in both structure and function. Kinship groups and/or individuals could change membership if more than one kazgi existed in the community. Communities without kazgis were politically tied to a larger community within their tribal unit that possessed one. On St. Lawrence Island where kazgis apparently did not exist, influential male hunters that also headed what Hughes (1960)

refers to as "patricians" (male-linked kinship groups associated with their place or origin) conducted similar sociopolitical processes in the absence of the kazgi structure.

The kazgi was also the location of the community function referred to in the literature as the "Messenger Feast." Although a powerful umealiq associated with a specific kazgi may be the prime sponsor who coordinated the accumulation of food and other goods from his family and crew members for distribution at the ceremony, the hosting of a "Messenger Feast" would provide the umealiq with considerable prestige (Oswalt, 1979, pp. 218-219). Guests would be from another village that had trading relationships with the host village and would be invited through a series of very defined gestures which have provided this ceremony with its name. It is apparent that the "Messenger Feast" was an intercommunity function" with economic, social, and political ramifications -- that is, the distribution of goods; intra- and intercommunity solidarity; individual, family, and crew-based social prestige; and the formation of sociopolitical alliances between villages and between specific high ranking skinboat crews within the same and different communities. There is no ethnohistoric data to support the existence of this social institution on St. Lawrence Island, but similar functions may have existed between the Island and Siberian communities.

Lastly, it should be noted that intercommunity social control was not exclusively in the hands of skinboat captains and/or councils -- in fact, even these individuals and/or groups' could not make coercive decisions or did not usually make decisions that would not be backed by majority community consensus. Many other informal, non-violent internal mechanisms of social control existed traditionally that have contemporary relevancy because of their perpetuation into the present side-by-side with formal Euroamerican legal institutions. These would include gossip, ridicule (often in a satirical vein), social ostracism, socially designated custodial care of those seeming unable to stay within the norms, and the extensive use of allegorical tales and praise, especially in the socialization of children (Ellanna, fieldwork 1969-1979)

In summary, it should be clear that the complexity of Bering Strait kinship and political organization was much greater than ever recognized by early untrained or trained observers. The ecological base provided a framework in which degrees of social stratification, political unity and factionalism, and complex interpersonal relationships could and did develop (Weyer, 1932; Steward, 1955). Many of these have continued into the present.

## Norton Sound

### TERRITORIAL AND LINGUISTIC BOUNDARIES

As defined for the scope of this study, this area includes all of coastal Norton Sound from approximately the Cape Nome/Safety Sound (Nuk) area to the present day community of Stebbins, including Norton Sound islands such as Besboro, Stuart, and other smaller islands. The details of traditional tribal and community distribution and early population estimates for this area are probably a little less accurate than for the Bering Strait area because of a population shift from Kotzebue Sound (the Malemiut "tribe") and Kauwerak to the eastern and southern Sound. These population shifts commenced with Malemiut fur-trading expeditions to the Yukon in the last decade of the eighteenth century for furs destined for the Anyui Trade Fair on the Kolyma River in Siberia and eventually resulted in Malemiut and a lesser number of Kauwerak settlements along the Sound by the mid to late 1800's (Ray, 1964, pp. 63-64). In addition, Ray's excellent analyses of settlement patterns and polity south of Koyuk have been less in depth than those north and west of Koyuk and in the Bering Strait itself (Ray, 1964, 1967, 1975a). There has been less early documentation and archaeological analyses of this area from which to draw conclusions regarding the traditional period.

Prior to the Malemiut and Kauwerak intrusion into this area, all populations were Yupik speakers of the Unalit dialect, but the northern



intrusion left communities of Inupiaq (Malemiut and Kauwerak) speaking peoples intermingled with Unalit speakers and communities such as Unalakleet and even families that today are trilingual in Eskimo not to mention English (Kaplan, Alaska Native Language Center, informal discussion, 1979). Table IV attempts to innumerate traditional tribal groupings in this area correlated with contemporary communities and territorial boundaries. "Tribal" entities, however, may be either too "lumped" or too "split" because of the confusion resulting from northern population intrusions and lack of good ethnohistoric documentation.

Within this area there were numerous communities that do not exist today and there are many archaeological remains of communities that have been only surveyed or described and/or partially excavated by early explorers, ethnographers, and later archaeologists, (e.g. Nelson, 1899). Cape Denbigh in mid-Norton Sound, for example, is the location of a very important archaeological site that was excavated by J. Louis Giddings in the 1950's and 1960's. There is ethnohistoric evidence of considerable contact between these populations and the people of the Yukon Delta. Many of these ties, especially for the southern Norton Sound area, have persisted to the present day. As with the Bering Strait area, many sites along the entirety of the Norton Sound coast remain as seasonal campsites or staging areas for subsistence activities today.

TABLE IV  
NORTON SOUND TRIBES

<u>Tribe</u>	<u>Contemporary Community(ies)</u>	<u>Territorial Boundaries</u>
Chiukak <sup>1</sup> (Golovin Bay area)	none	uncertain, taken from a miner's report and 1890 census and reported as having a <u>kazgi</u> (Ray, 1964, p. 71)
Ignituk <sup>1</sup> (Rocky Point)	none	Rocky Point at the western mouth of Golovin Bay
Atnuk <sup>1</sup>	Golovin <sup>3</sup> Elim Moses Point <sup>2</sup>	Cape Darby and Golovin Bay
Koyuk	Koyuk <sup>3</sup>	drainage of the Koyuk River and head of Norton Bay, west along the coast to Moses Point
Inglutalik	none	northeastern Norton Bay
Shaktoolik	Shaktoolik <sup>3</sup>	drainage of Shaktoolik River and eastern shore of Norton Sound Coast, Besboro Island
Egavik	none	eastern shore of Norton Sound
Unalakleet	Unalakleet <sup>3</sup>	drainage of Unalakleet River, southeastern shore of Norton Sound
Kikiktauik	none	east of contemporary St. Michael
St. Michael (Tachik)	St. Michael	"St. Michael Island" <sup>4</sup> on southwestern edge of Norton Sound and Stuart Island <sup>5</sup>
Stebbins (Atuik)	Stebbins	"St. Michael Island" west of St. Michael and Stuart Island <sup>5</sup>

<sup>1</sup> In Ray, 1967, the term "Golovin" or "Chinik" is used to describe a single tribe including several communities she later lists as separate "tribes" in her 1975 publication.

<sup>2</sup> Primarily occupied today seasonally as subsistence and commercial fishing community for primarily Elim residents.

<sup>3</sup> Inupiaq speaking today, or having some residents who speak Inupiaq or are "bi- or trilingual".

<sup>4</sup> "St. Michael Island" is today a cape separated only by a stream from the mainland and is not recognizable as an "island" on most maps.

<sup>5</sup> Populations of both communities have apparently utilized Stuart Island.

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Population figures for traditional tribal entities in this area are difficult to establish because of uncertainty as to which groupings of communities were actually tribes prior to Inupiat infusion, the diversity of sources and time periods for which population figures have been calculated, and gaps in the ethnohistoric and archaeological data. Therefore several different population breakdowns for varying periods will be presented:

(1) Oswalt (1967) refers to all of the people from Safety Sound to approximately 25 miles southwest of Stebbins as "Unaligmiut" suggesting a population of 850 for the year 1880 (p. 9). It is important, however, to remember that the 1880 census was after the 1838 smallpox epidemic which decimated populations from Unalakleet south, but which may or may not have affected populations north of Unalakleet -- Unalakleet had only 13 survivors as a result of this epidemic (Ray, 1964, p. 64). Therefore, undoubtedly this estimate from Oswalt is much lower than the traditional population actually was.

(2) Ray (1975a) indicates that caribou hunting communities (like Inglutalik, Egavik, Koyuk, and Shaktoolik in this area) ranged in population from 50 to 75 inhabitants (p. 111), while villages that were able to combine good small sea mammal hunting with caribou hunting had larger populations (e.g. Ignituk was reported as having more than 100 and Stebbins or Atvik 200 in 1822, although the latter may have been a combined population figure for all of "St. Michael Island" including

traders). Most other communities were smaller having populations ranging from single families to 50 persons. It should also be remembered that the original "St. Michael" was "Fort St. Michael" -- a Russian settlement established in 1833 -- and not the native village "Tachik" located in 1833 only about a quarter of a mile from the Russian post (Zagoskin, 1967).

- (3) Ray (1964) estimates a population of 400 for the Golovin-Koyuk area in the nineteenth century after 1838 but before 1900 (p. 67). This figure, of course, excludes all of the populations for the Koyuk River drainage south.

#### SETTLEMENT PATTERNS

Traditional settlements within the Norton Sound area were, as we have seen, generally smaller in size than were those of large sea mammal hunting communities of Bering Strait. Because of their predominant reliance on multiple food sources (small sea mammals, fish and caribou) available at different times and in different places, the settlement patterns in this area tended to be more nomadic over shorter distances than those of the Bering Strait, although movement from St. Michael to Golovin Bay was not uncommon. Stebbins people established sealing camps on Stuart Island and Shaktoolik people spotted seal hunting camps on Besboro Island seasonally (Ray, 1975a, p. 114) but the populations of this area

generally did not travel by boat across large expanses of water as did the Bering Strait peoples and tended to hug the shore when moving around the Sound (Ray, 1964). For the northern part of this area (Safety Sound to Ignituk) villages ". . . were composed solely of family groups, who would live at a site for a few years, and then move to another in the same subsistence area . . . this pattern would fit in more nearly to Chang's 'sedentary seasonal settlement pattern with transient base', although the reason for moving did not seem biological as much as psychological" (Ray, 1964, p. 71). Oswalt (1967) suggests considerable variation among those who he terms the "Unaligmiut" (Norton Sound as we have defined the area) by observing that whereas a few small settlements were occupied during most of any given year with houses permitting both summer and winter occupancy, other villages were moved every few years (pp. 90 and 102-103). Apparently in some cases village populations were rather sedentary throughout any given year but then may move their entire settlement to another location after a certain period of years. Previous mention has already been made of movement back and forth to the Yukon Delta for some Norton Sound populations. Community population movements also resulted from coastal storms, river erosion (and other erosion factors such as landslides), a small number of deaths in a community (probably making continued residence unlikely because of taboos or feelings of fear associated with death), a large number of deaths in a village making the community dysfunctional, and community and/or cultural preferences (simply getting tired of a place of residence).

A general picture emerges, then, of Norton Sound communities having diverse settlement patterns in response to both ecological demands related to food sources and other secondary concerns enumerated above. A greater understanding of the ecological factors will emerge after subsistence patterns are considered.

### SUBSISTENCE PATTERNS AND VALUES

With the exception of rare years in which walrus penetrated Norton Sound into Norton Bay (informal discussions, Elim-Moses Point, 1979) and the more frequent but marginal occurrence of walrus near Stuart and Besboro islands, the whaling-walrus subsistence pattern frequent in the Bering Strait area was essentially not represented in Norton Sound. Although, the majority of communities traditionally participated in the "small sea mammal" hunting subsistence pattern, at least four major communities (or "tribes") depended primarily on caribou and actively hunted them in organized drives into corrals. These communities ("tribes") included Koyuk, Inglutalik, Egavik, and Shaktoolik (Ray, 1975a, p. 104).

The major features of subsistence patterns focused on both caribou hunting and small sea mammal hunting have already been discussed previously in the section on Bering Strait subsistence patterns, so only specializations within these patterns more or less unique to Norton Sound will be considered here:

(1) The migration of the Pacific walrus tends to be in response to northern and southern seasonal movements of pack ice and in average years is most dense within the body of water more specifically referred to as the Bering Strait. The movement of the peripheries of this migration into the more shallow waters of sounds or bays outside of major ocean currents varies from year to year depending on ice conditions, food supplies, and carrying capacity of the environment relative to population numbers. This year (1979) was an excellent example of walrus possibly exceeding the carrying capacity of their ecosystem, early ice breakup, and other factors which stimulated the movement of walrus into Norton Sound and, more specifically, Norton Bay (Ellanna, field research, 1979). Ethno-historic documentation of this occurring in the past, particularly prior to the massive slaughter of walrus during the commercial whaling period, exists. The hunting of walrus by these groups described as basically small sea mammal hunters was, at this time, a deviation from their normal pattern. Nelson (1899) records the cooperative use of kayaks (rather than umiaks) to drive walrus ashore in shallow water dispatching them while on shore rather than on ice or in the water. They were also taken from Besboro and Stuart islands (Ray, 1975a), but the techniques utilized traditionally appear not to have been recorded but may have involved the dispatching of walrus hauled out on the islands.

- (2) Beluga played a more important subsistence role in Norton Sound than in Bering Strait. "The best known beluga shallows were . . . at Koyuk, at Inglutalik, in Golovin Bay, and near Pastolik, where Stebbins people hunted" (Ray, 1975a, p. 113).
- (3) Those Norton Sound tribes that depended primarily on caribou -- Koyuk, Inglutalik, Egavik, and Shaktoolik -- varied from the Kauwerak of Bering Strait in that they resided primarily on the coast but traveled inland to hunt caribou -- ". . . caribou hunting was exceptionally good in the hills between the Inglutalik and Koyuk rivers" (Ray, 1964, p. 66). Caribou could also be sometimes located on the coast in summer where they would go to gain relief from mosquito infestations.
- (4) Access to fish traditionally (and certainly contemporarily) was much greater for Norton Sound populations than for the large sea mammal hunter of Bering Strait. Salmon and herring runs were both seasonally earlier and more abundant in Norton Sound than in Bering Strait.
- (5) Access to king crab was negligible around Unalakleet and southward to Saint Michael, although they did occur around Egavik (Ray, 1975a, p. 116).



(6) A major distinction with widespread social and political implications was the general absence of large skinboat hunting activities with the corresponding absence of the complex crew/captaincy system.

Subsistence values, apart from those elaborated around the hunting of bowhead and other large whales and walrus, were similar for both Bering Strait and Norton Sound Eskimos. The absence of large sea mammal hunting, however, should not imply the absence of cooperation in hunting, as caribou drives, beluga drives (up rivers), and other activities often required the participation of hunters and/or fishermen from more than one domestic family unit.

#### SOCIAL ORGANIZATION: FAMILY AND COMMUNITY

That kinship was the basic theme on which traditional Norton Sound social organization was focused is indicated by what is known about Norton Sound Eskimo society today (Ellanna, fieldwork, 1969-1979), what is known about Eskimo society in general, and what can be put together from ethno-historic and archaeological information about prehistoric and early contact Norton Sound populations. However, it should be clearly understood that the specifics of traditional family and community organization for Norton Sound are much less thoroughly understood, recorded and/or researched than those of Bering Strait.

Traditional kinship and family organization for most of the Norton Sound area is not clearly described in early ethnographic accounts, although dispersed resources and decreased group size in the northern and eastern Sound would suggest smaller extended family households than those of Bering Strait. The intrusion into this area of Inupiat from the north and west would possibly also have brought about changing patterns in the nineteenth century. Knowledge about kinship patterns of the Stebbins and St. Michael area are briefly mentioned by Nelson (1899) and analogies to the salmon-dependent populations of the Kuskokwim and Yukon may also be useful in this regard. The Stebbins and St. Michael area pattern of family organization, like that of the Yukon and Kuskokwim, deviated most obviously from that of Bering Strait by the cultural practice of adolescent and adult males residing in the kashim or kazgi (men's house) with wives and younger male and female children and older female children residing in either independent households or, most commonly, in a household with extended female kin (matrilocal residence) (Nelson, 1899, p. 285; Oswalt, 1966, p. 129). Husbands would regularly visit their wife or wives' households but only occasionally remain overnight. The implications of this social arrangement may include a tendency towards female kin solidarity, but overall bilaterality in descent prevailed. When families moved away from the village to fish camps or other temporary residence, males would join a small extended family unit.

Early explorers such as Cook recorded that whereas large numbers ("fleets") of umiaks approached them in the north, "fleets" of kayaks greeted them in Norton Sound (Ray, 1975a, p. 94). This fact strongly suggests a general absence of the practice of large skinboat, crew-based hunting in this area. The implications of this for the social system are tremendous. The absence of large skinboat cooperative hunting may have resulted in more social prerequisites for intradomestic family cooperation in one-man kayak hunting, especially for larger species. In addition, although Bogojavlensky (1969) may reemphasize the inter-community functions of kazgis in Bering Strait insular communities, it seems likely from what we know about the absence of skinboat factions in Norton Sound that the kazgi was more of a community-wide structure and institution than it was in large sea mammal hunting communities of the Bering Strait area. Ray (1964, 1975), Nelson (1899), and Zagoskin (1967) document the existence of kazgis in some portions of this area, but it is of interest to note that based on this evidence there appears to have been only one kazgi per village (for those that are recorded):

Chinik (Golovin)	1	"probably"
Chiukak (Golovin Bay area)	1	
Ignituk (Rocky Point)	1	
Koyuk	1	"probably"
St. Michael	1	
Unalakleet	1	

Undoubtedly many other Norton Sound communities also had kazgis that are yet to be recorded in the literature. In addition, the community headman or "chief-like" leader has been described for the Unaligmiut, but these headmen were, interestingly, referred to by a term meaning "the one to

which all listen" rather than a derivation of the Inupiaq term umealiq of "owner of a boat" for this same position (Meyer, 1932, p. 209).

### Yukon Delta

#### TERRITORIAL AND LINGUISTIC BOUNDARIES

As previously discussed, the "Yukon Delta Area" refers specifically to the geographic delta and the area which encompasses all of its channels but no further upriver than contemporary Mountain Village. The population affiliation of the coastal area between the contemporary community of Stebbins and the abandoned community of Pastolik near the present north channel of the Yukon or to what extent this area of coast was even occupied is unclear from ethnohistoric sources. The now-abandoned community of Pikmiktalik was in this area but its affiliations apparently were with Norton Sound. In numerous ethnohistoric sources (Ray, 1964; Nelson, 1800; Zagoskin, 1967) comments about trading contacts and warfare between Norton Sound populations and the populations of the Yukon Delta indicate that this area may have been a buffer zone between tribes of these two major regions and/or utilized by both for subsistence activities and coastal travel.

All of the populations of the Yukon Delta were Yupik speakers with, according to Oswalt (1967), dialectical variations from Norton Sound to

the Kuskokwim Delta. He refers to all of the Yukon Delta people as being "Ikogmiut" with an 1880 population of 1,500 (p. 5) -- however, this figure again reflects the post-1838 influenza epidemic population and may have been reduced by as much as fifty percent (Ray, 1975a). Zagoskin (1967) distinguishes between the Yukon River Delta peoples -- which he calls "Kvikhlyuagmyut" -- and the peoples of the lower Yukon river occupying the banks 150 miles or so upriver from the Delta to the present location of Paimiut (pp. 209 and 306) -- which he calls "Kvikhpagmyut". This distinction may indicate a tribal division between Delta populations and the people of the lower river but not necessarily so. All sources indicate a definite distinction linguistically and politically between the peoples of the Yukon Delta and those of the adjacent Kuskokwim Delta, although their ecological and cultural similarities were great. Zagoskin (1967) names several Delta communities that were recorded in 1832 (prior to Zagoskin's voyage), and these will be listed below. The degree to which settlements may indicate tribal distinctions, however, is unclear, and researching early ethnohistoric sources leaves one with an impression of Yukon Delta "tribal" unity. Recorded settlements include: Pastolik (north channel -- a major trading center), Ttyguzhek, Mamikhpak, Kvikhlyuak, and Nugulkhbagvik. Zagoskin's source indicates that these were "populous native villages" (Zagoskin, 1967, p. 209). The population of Pastolik was 250 prior to the 1838 epidemic and reduced to approximately 125 by 1842-1844 (Ray, 1975a, p. 126). As Ray (1975a) points out, the ties of the Russian settlement of St. Michael (Ft. St. Michael) were

greater with the Yukon than with Norton Sound until the commercial whaling period. A Russian map entitled "Norton Sound" drawn in 1843 actually depicts twenty (of twenty-six total) villages on the Yukon and 3,460 inhabitants (out of a total of 3,768) located on the Yukon (Ray, 1975a, pp. 129-130). However, because the map is not available to this researcher, it is difficult to say how many of these villages or people were actually on the Delta and how far upriver populations are included in this total

In summary, the Yukon Delta traditionally seems to have been densely populated, definitely distinct from both Norton Sound and the Kuskokwim Delta linguistically and politically (but culturally similar to the Kuskokwim Delta), and possibly exhibiting minor variations but undoubtedly close ties with the populations of the lower Yukon. Contemporary communities on the Delta pertaining to this study from Mountain Village at the edge of the Nulato Hills (which topographically appears to be the beginning of the actual Delta along the contemporary Yukon portion of the combined Yukon-Kuskokwim Delta -- Selkregg, 1976b) include: Mountain Village, Kotlik, Emmonak, Alakanuk, and Sheldon Point. There are at least twelve other locations along only Yukon channels cited on a contemporary Yukon Delta map (Alaska Geographic, 1979) that are either seasonal camps and/or the permanent residence of single family units (not considered in this study to be "communities"). It should be pointed out, however, that the restriction in the scope of this study to the

Yukon Delta including only Kotlik, Emmonak, Alakanuk, and Sheldon Point (with Mountain Village and St. Marys important only as service centers) is misleadingly arbitrary, since human activities of these populations include a much wider geographic expanse on the Delta and any disturbance of salmon runs would, of course, bring about major impact for the entire Yukon River, its tributaries, and other coastal camps on the peripheries of the Delta.

#### SETTLEMENT PATTERNS

On the Yukon Delta the settlement patterns were coastal and riverine. Settlements were located and grew in size in direct relationship to the availability of food and shelter. Villages and individuals established rights to specific territory, land use, and water which were generally respected and guarded against foreign encroachment. Almost all villages were occupied in winter and periodically in summer. Permanent villages were distinguished from fishing, sealing, or berrying camps by the presence of one or more community houses -- kazgis -- that were often large enough to accommodate visitors from neighboring villages.

(Selkregg, 1976b, p. 246)

This quotation points out many salient features of traditional Yukon Delta settlement patterns. Since access to fish was primary and critical to survival and sea mammals secondary, permanent settlements and temporary camps were virtually always riverine (including sloughs) or coastal -- sites, of course, being selected for productivity which could, and did, vary seasonally and from year to year. Critical environmental shifts that brought about the onset of changing settlement activities included

breakup and freezeup -- during which times mobility would have been greatly restricted -- and the movement of fish and small sea mammals. Due to the nature of summer fishing with nets, it was advantageous for small family units to take up temporary residence in fish camps within socially designated areas. Migration back and forth between fish camps and permanent villages was frequent for social purposes (Oswalt, 1967; informal discussion, Emmonak, 1979). In the late spring or early summer during the time of smelt and herring runs, cooperative hunting groups would congregate at the river mouths to hunt beluga and seals (Oswalt, 1966). Travel to the coast during winter (after freezeup) would also occur for seal hunting and crabbing (Nelson, 1899). Temporary movements from permanent villages for purposes of fishing with traps in association with weirs was also common.

In general a picture emerges of relatively densely populated permanent communities with frequent movement of small groups to subsistence camps except during breakup or freezeup when populations were relatively immobile. The low elevation, abundance of lakes and marshy tundra of the Delta made summer mobility by kayak or umiak on navigable waterways a necessity and winter travel by sleds pulled either by a man or dogs depending on the sled's size and distance (and the portaging of kayaks by sleds) (Nelson, 1899). Lastly, inter- and intracommunity social activities in permanent villages, especially during the winter, encouraged temporary movement from permanent village to permanent village,



This basic settlement pattern persists today despite contemporary lifestyle pressures to restrict mobility (Ellanna, fieldwork, summers of 1978 and 1979).

#### SUBSISTENCE PATTERNS AND VALUES

Needless to say, the most abundant, reliable, and preferred subsistence resource was fish, primarily salmon (the subsistence pattern is referred to as "salmon fishermen" -- Oswalt, 1967). The only exception to this seems to be the large trading center of Pastolik which has been described as basically following a "small sea mammal" subsistence pattern (Ray, 1975a). Five species of salmon were available to Yukon Delta populations (in sequence of their appearance from spring to early fall): king or chinook (Oncorhynchus tshawytscha), red or sockeye (O. nerka), humpback or pink (O. gorbuscha), dog or chum (O. keta), and silver or coho (O. kisutch). Salmon fishing activities began as soon as the river broke up or as soon as the first run occurred (this period varies considerably from year to year). The settlement patterns for salmon fishing have already been discussed and drift nets, set nets, and traps in association with weirs were common fishing technology. The second most important food and raw material (skin and oil) source included beluga ("beluga" is not-a Yupik term), seals (bearded or "mukluk", ringed, ribbon, and spotted or harbor), and occasionally walrus. All of the above were hunted by kayak with the use of harpoons in addition to seals being

netted and hunted from ice in the winter (Nelson, 1899; Zagoskin, 1967; Selkregg, 1976b). Informants report that traditionally, and to some degree contemporarily, hunters traveled to the coast from Yuit communities substantial distances up the lower Yukon (informal discussions, Emmonak, 1979). Other fish utilized and desired for dietary diversity included herring, smelt, whitefish, grayling, pike, burbot, etc. Crabs, mussels, and squid were taken from the coast (Nelson, 1899). Although small fur-bearing mammals were available on the Delta, they were not an important food source (although their commercial value undoubtedly increased with the onset of Russian fur trading activities). Land mammal hunting (caribou and moose) was undertaken depending on availability, but, for true Delta dwellers this hunting pattern required travel over long distances to mountainous areas. More often Delta populations traded for caribou skins with peoples from the north. Lastly, migratory waterfowl played an important role in subsistence, as the Yukon-Kuskokwim Delta is topographically ideal for the nesting of these species. The entirety of the Yukon Delta subsistence pattern and values related particularly to fishing and sea mammal hunting have virtually remained intact with the majority of modification related to the use of the fisheries for both subsistence and commercial purposes.

#### SOCIAL ORGANIZATION: FAMILY AND COMMUNITY

As with all of the other major Eskimo groups discussed in this chapter, kinship again provided the focus for traditional social organization.

However, there were family and community patterns that varied significantly from those to the north. These variations will, therefore, be considered here.

The residence unit or household of the Yukon-Kuskokwim Delta differed from those discussed above in that the kazgi or gasqiq (Yupik, fire bathhouse) were much more strongly "men's houses" in the sense that men and older boys (from about the age of ten or younger) basically resided the vast majority of the time within this structure (Zagoskin, 1967; Oswalt, 1966). It is important to note that the men's bathhouse is today an extremely important, albeit modified, social institution in Yuit Yukon and Kuskokwim villages (Ellanna, fieldwork, 1968-1969, 1978-1979) indicating the extent to which sociocultural continuity with the past exists. Nelson (1899) recorded frequent occurrences of several kazgi or gasqiq on the lower Yukon and observed a relationship between the size of the community and the number of these structures (with a ratio of one kazgi to every twelve or thirteen houses common). In addition to the residential function of the kazgi, they served to provide a location for frequent inter- and intracommunity ceremonialism. While men and older boys were working, instructing, socializing, eating, and often sleeping in the "men's houses", women, girls, and young boys maintained the domestic family units with groups of females (extended female kinsmen) bound by kinship links through their mothers residing together (Zagoskin, 1967; Oswalt, 1966). During the times that permanent settlements were temporarily deserted for fish camps, females and children

(and possibly other relatives) accompanied their husbands or fathers to these small subsistence activity sites residing together as a unit (Zagoskin, 1967; Oswalt, 1966).

This researcher could not get early historic data on the specific rules for kazgi membership on the Yukon Delta, but since there were multiple structures in each community, the implication is that they were either kin groupings or political factions (or it is possible that they were both -- that is, indicative of kin-based political subdivisions). There is ethnohistoric evidence of Yukon Delta "headman" or "village headman" (Weyer, 1932; Zagoskin, 1967). On the lower Yukon and Kuskokwim these individuals were referred to as "nās-kuk" meaning "the head" (Weyer, 1932, p. 209). Finally it is clear that Yukon Delta residents traditionally spent considerable time socializing in ceremonial activities and that the ecological prerequisite for temporary movement away from the permanent village for fishing did not totally override the interest of these people in community social events and values as movement from camp to village and village to camp was frequent then as it remains today.

#### Interrelationships between Aboriginal Populations

It is important at this point to emphasize the fact that cross-cultural and intertribal contact (e.g. contact between populations having different lifestyles or people having different political affiliations) were

not a phenomena that suddenly emerged with the period of Euroamerican contact. Different cultures and/or tribes traditionally frequently met for purposes of trade, plunder, warfare, and socialization including the appropriation of new society members and the expansion of kinship networks through acquiring spouses. These societies were dynamic, constantly changing in response to new stimuli from other societies and/or cultures. All ethnohistoric evidence points to the Bering Strait/Norton Sound/Yukon Delta area as being a macroarea of intensive intergroup activity with contacts being common between coastal Siberian populations and Bering Strait insular and mainland Alaskan populations, insular Bering Strait Inupiat and Norton Sound/Yukon Delta Yuit, Norton Sound Yuit and interior Athabascan Indian, and Kotzebue Sound Malemiut and Norton Sound/Yukon Delta Yuit.

Trade for the well-being of an individual group was an activity that stimulated a large part of this intergroup contact. Weyer (1932), in a comprehensive text on Eskimos, makes the following observation on Bering Strait (in the broad geographic sense of the term) Eskimos:

This survey of the intertribal relations in Alaska depicts a combination of war and barter. There is a striving on the part of each group to get through plundering, in the case of war, otherwise by crafty trading, the resources which it cannot or will not secure by direct appropriation from nature. In each case, the well-being of the in-group is the primary aim; the felicity of the out-group is of little concern, be they Indians, or even other Eskimos.  
(pp. 157-158)

This quotation, however, ignores the formation of alliances between groups for mutual benefit. Insular and coastal requirements for inland resources -- particularly caribou -- and inland requirements for sea mammal products are an example of intergroup dependency which has already been discussed for both the Alaskan and Siberian Mainlands. It is difficult to discuss aboriginal trade without mentioning Euroamerican "contact", as trade networks across Siberia stimulated Alaskan Eskimo trade from at least the mid-1600's if not earlier (Ray, 1975a). The impact of Russian fur trade on Malemiut and Kauwerak trading with the Yukon (e.g. Sledge Islanders traded extensively with Norton Sound and Yukon Delta Yuit) and eventual population shifts into the Norton Sound area have already been discussed. It is important to realize that this kind of contact involving primarily technological diffusion preceded first hand or direct contact by a good many years. Large trade centers important for this area included Kotzebue (north and outside of the immediate study area), Wales, East Cape (Siberia), Chaplino (Indian Point in Siberia), Anyui tributary of the Kolyma River (after 1789), St. Michael (after 1833), and Pastolik (Ray, 1975a). Trading activity has implications for the size, density, and permanency of occupation of these communities as is evidenced by Wales which grew into a large, densely populated settlement probably as a result of its important role in Siberian trade (Oswalt, 1967).

Although economics related to the use of other's tribal areas for subsistence and to trade was an important incentive to intergroup relationships, alliances extended group political boundaries for purposes of mutual defense and support.

During the early nineteenth century primary alliances were in effect between Wales, Port Clarence, and Little Diomedé Island; Wales, and the Tapkakiut tribe of Shishmaref, Cape Espenberg, and Goodhope River; Kauwerak, Fish River, King Island, Port Clarence, and sometimes Nome; Nome, Fish River, King Island, and sometimes Kauwerak; Golovin, Shaktoolik, and Unalakleet; St. Michael, Pastolik, and sometimes Unalakleet. A larger alliance between Wales and Kauwerak, the two most powerful nineteenth century mainland tribes, particularly applied only to trade and exchange of the Messenger Feast, though families of each tribe used the other's resources. The relationship between these two tribes, however, was often marked by rivalry and animosity, which was not characteristic of the other alliances. Indeed, it seems probable that their friendly alliance had only recently evolved (during the eighteenth and nineteenth centuries) because tradition says that once they were bitter enemies.

(Ray, 1967, p. 384)

It is of interest to note that none of the alliances mentioned above were between Inupiat and Yuit tribes -- this has considerable implications for contemporary political alliances and/or factions within the Bering Straits Region, a region composed of villages from Inupiat and Siberian and mainland Yuit populations. Several sources (Zagoskin, 1967; Nelson, 1899; Oswalt, 1966) indicate no evidence of political alliances between the Yukon Delta and the populations indigenous to Norton Sound or between Yukon Delta and Kuskokwim Delta populations, although ties between Yukon Delta and lower Yukon Yuit are implied

(contemporary ethnographic data reinforces this interpretation -- Ellanna, fieldwork, 1979). Relationships between St. Lawrence Island and the Siberian mainland were both peaceable (including the recruitment of new members) and warlike. The Chukchi expressed fear of the St. Lawrence Islanders and mainland Inupiat to the Russians who first penetrated Siberia. Individual or family ties through kinship could exist between tribes not having political alliances, but individuals or families could only use foreign territory if they were sponsored by kinsmen. There were no councils or political positions representing a political alliance between two or more tribes. It should be noted that both offensive and defensive warfare were conducted between different tribal groups and alliances of the same culture and between groups representing different cultures -- archaeology, oral history, and early documentation clearly contradict the myth or stereotype of totally peaceable Eskimo groups cohabiting this-broad area.

In summary, alliances primarily served the function of providing balanced resource availability where ecological inequities existed. Inequities were not only areal but temporal -- an area abundant in resources one year may, due to factors of animal migration, climate, ice, etc., yield negligible food the next, making starvation (and means of preventing it) a matter of vital concern at all times and a reality that had to be dealt with. The sociopolitical implications of these economic realities were great. It is of interest to note that as contemporary conditions



have decreased the economic interdependence of Eskimo groups, social and political aspects of these traditional alliances have also correspondingly decreased. This factor has considerable relevancy for purposes of this study.

#### IV. THE HISTORICAL PERIOD: RESPONSES TO CHANGE

The preceding section has presented the salient features of traditional Eskimo (Inupiat and Yuit) sociocultural systems as relevant to the scope of this study. Prior to the gold rush at the end of the nineteenth century there was no large permanent non-Native population within the study area. This section examines the historic period from first direct contact to the contemporary period up to and including the passage of ANCSA in December of 1971. The impact of Euroamerican contact and, in some cases, relocation of "outside" populations into the study area on the traditional Eskimo sociocultural systems, the response of these systems to this impact, the sociocultural backgrounds of groups that migrated to or conducted activities in the study area, and the new sociocultural systems that emerged out of these historic changes will be examined in this section as relevant to purposes of the study. This section is subdivided into topics of change which roughly are historically organized (from the earliest to the most recent), but this type of organization does result in temporal overlap between sections.

##### The Exploration Period and Early Trade

The impact of early pre-direct contact Siberian trade in stimulating the growth of Eskimo trade centers and encouraging the expansion of abori-

ginal trade routes and, eventually, some population migrations have already been discussed. From approximately 1650 on, Cossack arrival and activity in Siberia included considerable inquiry about Alaska (or "The Great Land") as a potential source of furs. This included, of course, the necessity for mapping the relationships between land masses and water routes as potential trade routes.

This period could be called prehistoric for the Alaskan side of the strait; but the inauguration of European trade, and considerable diffusion of non-native traits across the strait during these 130 years [1650-1778] made it prehistoric only in a figurative sense. The events of this period took place for the most part in Siberia, but they must be given consideration for a thorough understanding of subsequent activities on the Alaskan side of the strait.

[Ray, 1975a, pp. 8-9]

In addition to bringing about the changes in aboriginal trading patterns and the demography of key communities, this period fortunately provides (primarily in Russian or Russian translation) most of the earliest recorded ethnographic information on Alaskan and Siberian Eskimo (including St. Lawrence Island), much of which was obtained second-hand via Chukchi groups with whom the Russian Cossacks had contact. Principle trade items for furs during this early period included iron (and some copper) implements, tobacco, and beads -- the desire for metal to replace lithic, ivory, bone, jade, and, to some degree, wood in traditional tools was a trend that was never reversed.

As trade opportunities intensified the people seem to have abandoned most of their old material cul -

ture with disarming ease. Some traditional forms continued to serve their original purpose but were now made with new materials. Examples include skin scrapers made from **bottle glass**, semilunar knife blades cut from metal, and spent cartridges used as blunt arrowpoints for hunting birds.  
(Oswalt, 1979, p. 281)

In addition, fur trading as an activity required the expenditure of time in trapping that, under non-trade conditions, could have been spent in other subsistence activities. This economic shift may have been gradual and its impacts subtle, but it commenced a chain of increasingly greater dependency on externally-produced implements and/or raw materials that eventually resulted in more far-reaching socioeconomic changes that have intensive and extensive contemporary significance. These included the beginning of the decline of Eskimo self sufficiency and autonomy, the inauguration of **exploitive** trade in this area, and changing settlement patterns in response to access to trading posts or centers. This set the stage for the acceptance and integration of western technology and ideas into traditional Eskimo cultures and differed from traditional trade in involving things and ideas that had emerged out of an entirely different cultural setting.

Although they had no direct effect on Bering Strait Eskimo populations, Russian-backed explorers such as Vitus Bering (in 1728) and Mikhail Gvozdev and Ivan Fedorov (in 1732) -- not to mention the questionable journey of **Dezhnev** in 1648 -- sailed into the Bering Strait area. The indirect effect was to expand knowledge of the area which would be utilized in future contact. Bering's commission was to determine whether the Kamchatka Peninsula and Alaska were located on separate continents.

He "discovered" and named St. Lawrence Island and Big Diomedes but failed to see the three-mile distant smaller Diomedes Island or the mainland during this voyage (Ray, 1975a, pp. 17-18). Bering's second voyage in 1741 was to the south and, although it was the beginning of a century of Russian fur trader exploitation of the resources and populations of the Aleutians and other areas to the south, it had no direct effect on the study area until the second and third decades of the nineteenth century. Gvozdev and Fedorov recorded the collection of tribute on probably St. Lawrence Island, were attacked by a volley of arrows on Big Diomedes and eventually landed there, but were unsuccessful in extracting tribute, attempted an unsuccessful and resisted landing on Little Diomedes, sighted the mainland in the vicinity of contemporary Wales, and had contact with a kayaker from King Island (Ray, 1975a, pp. 22-23). Later Russian explorers, Nikolai Daurkin (in 1765) and Ivan Kobel'ev (in 1779) added geographic knowledge, misinformation about Kauwerak village, the first demographic data on Diomedes and King islands and Wales, and a map of communities on the Seward Peninsula to the growing body of data on "The Great Land," but again these activities had no direct impact on populations in the study area. The overt resistance of the Bering Strait populations to paying tribute or to permitting open access to their communities is of interest, however.

More complete exploration, more frequent direct contact, and somewhat more expanded trade were initiated by the Europeans in 1778 in the form of the well-documented voyages of Captain James Cook. In surveying docu-

mentary accounts of early explorers, it should be kept in mind that these accounts varied in the degree to which they were ethnocentric, thorough, and/or accurate. The lifestyles of the Eskimos at this period of time were, of course, substantially different from those of eighteenth century Europe and Russia, and "culture shock" played a definite role in their observations. In addition, these observers tended to lump comments about "Eskimos" together and usually failed to make tribal specific distinctions in their observations (Oswalt, 1979). Cook bypassed the Kuskokwim and Yukon Deltas; landed and named Sledge Island (it was early August and he encountered no people on his way north but observed two umiaks at Cape Nome when he headed south); observed a cape opposite the island with evidence of habitation ("Point Rodney"); and named King Island and Cape Prince of Wales. It was only during the "Discovery's" reconnaissance of Norton Sound that he actually had recorded interpersonal contact with indigenous populations -- he engaged in trade involving knives for salmon and other fish in the vicinity of Cape Denbigh, present day Elim and Shaktoolik ("Chaktoolik"); he observed house types, physical characteristics of the people, the low population density of the settlements, and other obvious cultural characteristics; he named many geographic features of the area; and he observed the St. Michael-Stebbins area for what is thought to be the first time (Beaglehole, 1967; Ray, 1975a; Oswalt, 1979). The most relevant information for these purposes that can be gleaned from these contacts is the fact that at least populations encountered in Norton Sound at this early date were obviously already familiar with trading

for European technology and indicated a specific interest in iron knives. In addition, there seems to have been a greater receptivity to and interest in "outsiders" in Norton Sound than in the Bering Strait area -- this interpretation, however, is based on very little evidence.

There was, in this early period, rather intense competition between several European countries, Russia, and the newly formed American republic in the search for furs, but activities prior to the Billings expedition of 1791 had been, according to documentation, limited to an area south of the Aleutians. Billings, hired by the imperial Russian government, traveled to Cape Rodney (opposite Sledge Island) providing extensive ethnographic details of the population in this area (Ray, 1975a). Trading occurred on shore at this point and at the mouth of the Sinruk River, and by Inupiat travel by umiak to the ship with specialized signals indicating a "friendly" attitude -- trade again included knives, beads, and other metal implements. The experience of both Billings and Kobelev (in 1779) indicates a greater sophistication in trade on the part of Bering Strait Inupiat than that of Norton Sound, as they exhibited a greater abundance of trade goods (pelts), formality in trade proceedings (e.g. the outfitting of armor), and prior knowledge of Russians from the Diomedes and possibly from Siberian coastal Eskimo or Chukchi (Ray, 1975a). Their traditional middleman role was apparently already expanded to adapt to new trading prerequisites resulting from the penetration of fur traders from both Siberia, Europe, and America.

The voyages in 1816 and 1817 by Otto von Kotzebue, also commissioned by the Russians, involved more direct contact with coastal dwelling groups, particularly in the Shishmaref area (1816) and on St. Lawrence Island (1817) as relevant to the area of this study. This contact again included sophisticated trade on the part of the Eskimo, evidence that there was no previous knowledge of firearms in the Shishmaref area, the observance of groups deserting their villages when approached by these foreign vessels (on both Sarychev Island near contemporary Shishmaref and on St. Lawrence Island), the presence among the Eskimos of specialized implements designed in Siberia for Chukchi trade, and the practice of approaching Kotzebue's ship armed and resistant to boarding the intruding vessel (von Kotzebue, 1821; Ray, 1975a).

The period 1820-22 involved numerous expeditions by the Russian to the north stimulated by the perceived need to expand beyond the Aleutians and southeastern Alaska for the desired furs, a search for a water route from the Pacific to the Atlantic, and the fear of potential British and American competition for this market. These included the expeditions of Mikhail n. Vasiliev, Gleb S. Shishmarev, Vasilii S. Khromchenko, and Adolf Etolin. These voyages involved the first historic mention of the Yukon River and Golovin Bay; the first documented use of firearms within the study area; a survey of St. Lawrence Island; the observation that Bering Strait Eskimos were interested in trading primarily



for knives, hatchets, needles, gunpowder and lead, and not for tobacco or other items popular in other areas such as Norton Sound; the first recorded Euroamerican encounter with the population of the Stebbins area; the documentation of comparative barter -- that is, the people encountered near present-day Stebbins compared the value of Russian trade to that of trade with Sledge Island peoples; and probably the first reported case of syphilis (Ray, 1975a). In most of these incidents of contact the frequency of Euroamericans going ashore to "socialize" and trade increased as did the incidence of Eskimos coming aboard ships. However, even though the intensity of trade was increasing as was the incidence of interpersonal contact, direct contact was still minimal. The degree to which these activities were to directly influence the future course of the economic and social systems of the Eskimo populations is beginning to emerge. Oswalt (1979), with an extensive knowledge of the ethno-historic literature, suggests an interrelated sequence of change that was already fully in motion by the 1820's:

In Alaska the aboriginal economic base was badly eroded by about 1900. According to some observers this deterioration resulted from over-hunting with high-powered rifles and from an increased reliance on imported foods and manufactures.  
(p. 295)

In a broad outline of economic changes resulting from historic contact, we first find Eskimo manufactures and skins or pelts being offered in exchange for trade goods. Once lasting contacts were established with whites, most Eskimos were drawn into the fur trade. They recognized the effectiveness of firearms as a means of obtaining food and of steel traps for taking fur animals.

Fluctuations in fur prices and exploitation by  
traders kept their standard of living low . . .  
(p. 289)

Frederich William Beechey's voyages north during the years 1826 and 1827 are noteworthy in the extent to which they provided new ethnographic materials about the traditional Eskimo inhabitants of the study area, particularly about the residents of Wales who were encountered in the vicinity of Kotzebue Sound heading south at the end of the summer and the area and populations of Port Clarence, Grantley Harbor, and Imruk Basin (Bockstoe, 1979; Ray, 1975a; Beechey, 1831). By this period of time and with these particular groups trade involved a greater diversity of European goods, but Beechey notes that the Eskimos he encountered would never trade their implements and weapons (Beechey, 1831) -- this fact was noted by numerous other explorers. Beechey did provide substantial geographic data that influenced the penetration of the area in subsequent years.

The establishment of the first primarily non-Native settlement within the study area occurred in 1833 -- that settlement was the fortified trading post of St. Michael Redoubt (now St. Michael). This post was geographically located at the northern edge of the Yukon Delta. The significance of this particular location to the Russians was its proximity to an area which had potentially high economic value in the form of furs -- that is the Yukon River and the interior of Alaska (Zagoskin, 1967, p. 10). The

significance of this trading post to the traditional Eskimo sociocultural systems of the Yukon Delta, Lower Yukon and southern Norton Sound was its role in becoming a permanent, non-Native supported and, in part, non-Native inhabited trading center and staging area for exploration and trade along the lower Yukon and its tributaries, an area previously isolated from direct Euroamerican contact. This post was manned initially by men (most of which were genetically part Native or "creoles" as they were then referred to) in the employ of the Russian-American Company. The penetration of the Hudson Bay Company from the east in addition to a desire on the part of the Russian-American Company to disrupt the well-functioning aboriginal trade network with the Chukchi had provided adequate stimulus for Russian exploration and the establishment of trading centers on the Yukon. Zagoskin's explorations of 1842-1844 were an outcome of these concerns on the part of the Russian-American Company (Zagoskin, 1967) and are important as they contained the first and most complete ethnographic information about the people, cultures, and geography of about 600 miles of the Yukon Delta and Lower Yukon and actively engaged the residents of this area in direct trade with Euroamericans (Zagoskin, 1967). The disruption of traditional trade networks, however, was not immediately or comprehensively successful in that trade through aboriginal trade middlemen of the Bering Strait-Kotzebue Sound area persisted and was often preferred, and the establishment of Russian American trading centers was met with occasional open resistance. If language retention and/or the utilization of aboriginal place names can

be used as an index of either cultural continuity or culture change, the persistence of the Yupik language and Yupik place-names in the southern portions of Norton Sound, the Yukon Delta and the Lower Yukon indicate the relative recency of contact between Yuit of these areas and Euro-americans (Ray, 1975a). Lastly, St. Michael's function as a trading center encouraged Yuit population resettlement in that area, greatly intensified their dependency on Russian goods and decreased the mobility and reliance on subsistence of populations that remained in the vicinity of the post (Oswalt, 1966 and 1979). This trading center was later purchased by the forerunners of Alaska Commercial Company after the U.S. purchase of Alaska in 1867 and was to become a major trading center and later a staging area for mining activities up the Yukon at the turn of the century.

During the 1870s and especially the 1880s, an abundance of reports and travel accounts provided information about Saint Michael and the northward frontier as a prelude to permanent settlement by teachers, missionaries, and miners. From its beginning Saint Michael served as a wilderness center for expeditions as well as a trading post. The Russian-American Company had cooperated with the English and Americans by providing native interpreters and often food and shelter. After 1870 the Alaska Commercial Company-continued the tradition, and Saint Michael was literally the jumping-off-place for expeditions and collecting journeys from the 1870s until the gold rush at Nome. No expedition to the Yukon or to points north failed to stop at Saint Michael.

(Ray, 1975a, p. 195)

Today it continues to function in some of these roles, although its importance as a regional center has been considerably dwarfed by the

● establishment and growth of Nome and Bethel. "

● In summary, the major impacts of the early exploration and trade period that have relevancy for the contemporary sociocultural setting include:

(1) the earliest direct awareness by local Native populations of Euro-  
americans and the nature of their interest in the study area;

● (2) the intensification of local Native interest in Euroamerican trade goods and the concept of comparative trade good value apart from kin-based or other traditionally structured trade alliances;

● (3) for a few, the beginning of at least temporary changing settlement patterns in response to the availability of trade goods;

● (4) unlike the Aleutians and other areas of Alaska, early contact in this area did not include attempts to enslave or subjugate local Native people or confiscate goods without reimbursement (although the balance of trade may not always have been favorable for Native people according to western standards) -- these factors provided the setting for future interethnic relations.

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## The Commercial Whaling Period

Commercial whaling within the study area covered a period of time from approximately 1848-1915 (Foote, 1964; Oswalt, 1958), a period spanning the transfer of Alaska from Russia to the United States and including numerous intensified contact with the aboriginal Eskimo population:

After the Saint Michael post was established in 1833, the last altercation was behind them in 1836 (the "Azyagmyut" - Russian encounter), the Eskimos nowhere met the white man with lances in hand, nor did the white man post guards while camping. The strangers were no longer strange, and the white man, especially the trader, was a permanent and prominent part of Eskimo life. Though the trading posts of Saint Michael and Unalakleet were far distant from the northern villages, the native traders and families traveling back and forth provided almost constant communication.

(Ray, 1975a, p. 179)

Although numerous accounts of altercations between Eskimos and non-Natives after this time have, in fact, been documented (VanStone, 1958; Jacobsen, 1977), the point of the quotation in stressing the overall familiarity and frequency of interrelationships between the Eskimo population and non-Natives is well taken. Although commercial American whaling is probably the most influential impact activity of this period and therefore the focus of this subsection, its direct impact was greater on Bering Strait insular communities and communities within the narrow portion of the strait (e.g. Wales). However, its indirect impact provided,

in combination with other impact activities, the stimulus for socio-cultural response and change of major consequence and pertinence to this study.

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From 1848 to 1885 about 3,000 American whaling ships carrying approximately 90,000 men passed northward through Bering Strait. At the very least we can assume that Alaskan Arctic Eskimos came into contact with about one half of these ships.

(Foote, 1964, p. 305)

The influx of commercial American whalers to this area was the result of a gradual movement north of primarily New Bedford whalers in search of the valuable whale oil and baleen usually, (but not exclusively) from the bowhead whale. After the successful season of the single whaling bark "Superior" in 1848, 154 ships passed through Bering Strait the following year (VanStone, 1958, p. 1). This whaling fleet continued to grow until approximately 1855 (Ray, 1975a, p. 198), at which time it leveled off and started into gradual decline until such time that the commercial market for whale oil and baleen made the activity no longer economically profitable (approximately 1914 or 1915 -- VanStone, 1958, p. 10). This activity began with sailing vessels that would return south in front of the moving ice pack at the end of each summer (Aldrich, 1889), but the advent of steam whaling, the concentration on baleen, and the exclusion of taking large quantities of oil (which would require transport to a port) brought about the practice of "wintering-in" and the necessity for onshore supply stations (VanStone, 1958; Foote, 1964). In addition, the practice of "wintering-in" raised the incidence of onshore trade, put greater demand on

subsistence food sources to be utilized as items of trade to feed the whalers (particularly caribou), and increased whaler-Eskimo interper- , sons? contact frequency and intensity.

During this same general period of time, other activities of non-Natives were affecting the nature of Eskimo sociocultural systems as they existed in the mid-nineteenth century. These included the Western Union Telegraph Expedition of 1865-1867 involving approximately the two year residence of nearly 300 men within the study area; the purchase of Alaska by the United States and subsequent transfer of the Russian-American Company to the Alaska Commercial Company; and the overall increase of American trading ships within the Bering Strait-Norton Sound area. These enterprises, in association with commercial whaling, brought about, extensive sociocultural changes in the resident Eskimo populations -- these will be discussed below:

- (1) The aboriginal populations of this area lacked immunity to many diseases common to Europeans and Americans. Although some diseases had already brought about population decimations prior to 1850 (e.g. the 1838 smallpox epidemic, which probably did not get north of Koyuk, killed approximately one-third to one-fourth of the populations of the areas impacted -- Ray, 1975a, p. 178), the incidence, spread, and diversity of diseases during the latter half of the nineteenth century and early twentieth century were all increased (Foote, 1964; Ray, 1975a; Oswalt, 1979; VanStone, 1958). Generalized



respiratory diseases were common." Specifically the spread of syphilis brought about both short term, well-known effects (e.g. blindness, bone deterioration, ulceration, and ultimate death) and, even more important to population dynamics, the long-range effects of lowered rates of conception, increased miscarriage, and an overall lowering of the population number and level of health (Oswalt, 1979). In general, population-wide epidemics, such as the smallpox epidemic of 1838, the measles epidemic of 1900-1901, and the influenza epidemic of 1918, have devastating consequences for small societies that lack great quantities of food surplus. This relates to the fact that in small-scale societies without substantial food surpluses and in which virtually every adult member, both male and female, plays a daily role in meeting life sustaining activities (including food, water, raw materials, food preparation, heat, child care, etc.), the disability of a large number of this adult population brings about socioeconomic collapse. For the Eskimo of the study area, entire groups were unable to function:

Even if people survived the initial impact of an epidemic of influenza, measles, or smallpox, they often were unable to obtain food for the following winter and died of starvation.

(Oswalt, 1979, p. 288)

Illness may have played a role in the devastating death of two-thirds of the total population of St. Lawrence Island in 1878-79 (Hughes, 1960, p. 12). Lastly, population decimations seriously affected the operation of the sociocultural systems in eliminating key individuals

(e. g. leaders) and entire segments of the population of one or more age cohort.

- (2) The economic systems of the Eskimos were changed and ceased to function as effectively. The depletion of food resources was a fact, but its economic impact on the Eskimos has been debated. The whalers killed approximately 10,000 whale (fifty percent of which were bowhead) and 100,000 or more Pacific walrus between the years 1848 and 1885 (Foote, 1964, p. 305), although the accuracy of this count has been open to question (Bockstoe, informal discussion, 1977). There is no doubt that the bowhead whale and Pacific walrus were dramatically reduced in number (Ray, 1975a; Foote 1964; Aldrich, 1889; Eide, 1952; Alaska State Dept. of Fish and Game, informal discussion, 1979). The debate centers around whether this decline actually brought about periods of starvation for the Bering Strait Eskimo. Whereas Ray (1975a) feels that they still had adequate resources after this depletion, most other sources indicate that this population decline created difficulty in obtaining game and/or poor hunting seasons in general. The walrus harvest occurred in the mid-to-latter years of commercial whaling -- walrus were taken primarily for their ivory and, secondarily, for their tough hides which were used to drive equipment in eastern industrial manufacturing plants (Bockstoe, informal discussion, 1977). In addition to the sea mammal decline, the utilization of firearms obtained in trade in the practice of hunting caribou as a food source for whalers and others who

remained in the area during the winter months brought about a total decimation of the caribou herds of Seward Peninsula and the Bering Strait-Norton Sound coast in general. Caribou were preferred by Americans and Russians to sea mammals as a source of fresh meat. These game depletions stimulated the plan to introduce domestic reindeer to Alaska -- this will be discussed in a later subsection.

A major economic change involving the nature of Eskimo-white trade was a disruption of traditional Eskimo norms regarding reciprocity or balanced trade conducted between Eskimos.

In the Native trading operations, there were well-established procedures, routines, and units of exchange through trading partnerships, formalized ceremonial exchanges such as the messenger feast and feasts of the dead, and in independent exchange. Apparently trading techniques and unit price exchange had been familiar for years; but when the white man came in person with unfamiliar objects as well as large quantities of familiar and much-desired items like knives and tobacco, the exchange became skewed. Goods that were to be traded for usual and accustomed objects were sometimes held for such a high price that they were not sold, but others appeared almost to have been given away from the European viewpoint, though obviously satisfying to the Eskimos.

(Ray, 1975a, p. 180)

In addition, the practice of traders, explorers, and others giving away goods without expecting any reciprocal gestures on the part of the Eskimo was confusing and resulted in what is often referred to in early literature as Eskimo "begging" -- the amounts of material goods held by these white men were probably overwhelming in the perspectives of Eskimo cultures. Since a large part (if not a majority) of food sources in rural villages in the study area is still

obtained by subsistence and cash is sporadic and secondary in the economic system (in addition to the persistence of trade networks), it is likely that some of this historic confusion and contradiction between more traditional economic patterns and the requirements of a cash economy still persist today.

Closely related to the above mentioned economic changes was the in-production of the concept of "labor" as a commodity which can be purchased. Prior to 1850 there was no reason for actually employing Eskimos in direct labor. However, after approximately 1860 Eskimos were desired as potential employees by the Russian-American Company (and later the Alaska Commercial Company) and others such as American whalers and the Western Union Telegraph Expedition for purposes of interpreting, guiding, whale hunting, and other kinds of laborer activities (Foote, 1964; VanStone, 1958; Ray, 1975a; Oswalt, 1979). The concept of hiring an individual for his or her labor was distinctly foreign to Eskimo cultures. The end result of such a conflict in cultural practices resulted in a frequent occurrence of Eskimos working only in an activity which they liked, a reluctance to continue in an activity which they disliked, and the abandonment of the position if it conflicted directly with higher priority cultural practices or values (e.g. the reluctance of guides to cross tribal boundaries or the tendency to quit employment if it conflicted with hunting activities). The relevancy of this economic response and

change to an understanding of contemporary Eskimo wage employment patterns is indisputable.

Subsistence patterns were affected by all of the above mentioned factors and by a few others that are worthy of mentioning. As previously discussed, time spent in obtaining something for trade (whether the trade item was furs, ivory, meat, or other commodities) was, in most cases, time taken away from subsistence. In addition, this period intensified the use of firearms, although the evidence that they were introduced and being used as early as 1819 or 1820 has been substantiated (Ray, 1975b).

Only during mid-century were firearms sold in large enough quantities to cause any appreciable decline in game resources, or to alter the Eskimo material inventory.

(Ray, 1975b, p. 8)

The decline in caribou was unquestionably related to firearm utilization. The use of firearms in the hunting of sea mammals also occurred, but this practice required (up to the present day) the continued use of the harpoon as a retrieval implement. It is unlikely that whalers were primarily responsible for the intensified use of firearms as a trade item and much more likely that firearms were procured more frequently from the **Siberians**, American trading ships that frequented Alaska after U. S. purchase, the Russian-American Company, and later the Alaska Commercial Company:

It seems doubtful that the early whalers traded guns willy-nilly to the Alaskan Eskimos north of Bering Strait, for good reasons. First, since the whalers were frightened of, or at least skeptical about, the

Eskimos' intentions, it would be illogical to arm them. Second, the Arctic Eskimos did not possess trade goods worth a musket to a whaler. Third, trade in firearms was carried on by the ship's captain. A common crew member was not only notoriously poor but he did not have access to the weapons unless under the strict supervision of an officer.

(Foote, 1974, p. 305)

Although the validity of the second point above is in question (at least after 1880 when the price of baleen rose or when a crew was in desperate need of fresh meat), the other points have considerable validity based on documented information about the American whalers. VanStone (1962) suggests that by 1850 whalers were trading what firearms they had to the Chukchi for baleen, who then traded the firearms to the people of Wales for furs and jade that had been traded to them by the inland Eskimos of the Kobuk, Noatak, and Selawik rivers and Shishmaref for coastal products -- thus the Siberian Chukchi were ultimately the source of most whaler-traded firearms via the middlemen of Wales and Diomedes. It is documented that the majority of whaler trade was, in most years, along the Siberian rather than the Alaskan coast (Aldrich, 1889; Ray, 1975a, VanStone, 1958), although Port Clarence became an important gathering place, supply base, and trading center after the advent of steam whaling. The use of firearms undoubtedly affected the subsistence patterns in permitting more individualistic (versus cooperative) hunting of, to some degree, sea mammals but to a much greater degree the hunting of land animals, particularly the caribou. The efficiency of the use of rifles over

traditional technology in hunting caribou can be attested to in records of their number of kills after the introduction of firearms and, ultimately, in the decimation of the caribou herds. It should also be noted that by 1880 nearly every skinboat equipped for whaling had iron lances and darting guns (Van Stone, 1958). Both the Russians and the Americans took formal action to prohibit the sale of breech-loading rifles to Native people, but their abilities to implement such legislation were limited. The revenue cutters of the U.S. Dept. of Treasury, providing the first attempt by the U.S. government to enforce formal law in northwestern Alaska, were actually opposed to the ban on the sale of firearms to Eskimo people as they perceived them as a means of eliminating some of the hardships of life in the north (Ray, 1975a). Despite regulations banning firearms, by the mid-to-late 1800s virtually most Eskimos had obtained them and their necessary ammunition but had paid dearly for both. The effect of this, however, was a rather rapid loss of the ability to make and/or use some -- but certainly not all -- traditional items of technology.

- (3) The last major impact of this era that can be more directly linked to the whalers -- and which persists as an issue of the present -- is the introduction of alcohol to the Eskimos of northwestern Alaska in 'general and the study area in particular. The first recorded incidence of alcohol being requested and appreciated in trade was dur-

ing the 1849 search for Franklin's missing ships (Ray, 1975a, p. 144). By 1867 liquor was appearing throughout the Bering Strait - Norton Sound area and was being traded by whalers, traders, and the trading post at St. Michael (Ray, 1975a; VanStone, 1958; Foote, 1964). There is, again, a dispute among historians as to whether it was whalers or traders that dispensed the vast majority of alcohol among the populations of this area. VanStone (1958) notes that whaling captains boasted of carrying large quantities of alcohol as trade goods only to pour it over the side if approached by a revenue cutter trying to enforce the 1873 and 1884 legislation that prohibited the manufacture, introduction, or sale of "spiritous liquors" in Alaska (Ray, 1975a, p. 88). Ray (1975a) argues that the liquor was, in fact, sold primarily by Honolulu or Hong Kong based trading vessels (p. 179). In addition, the impact of alcohol on these populations is not agreed upon. While the journals of whalers, Russian-American Company personnel, telegraph line explorers, revenue cutter personnel, and others record incidents of alcohol-related disputes between Eskimos and between Eskimos and whites, other historical analysts attribute less severe effects resulting from alcohol.

By 1870, at the latest, we can assume that most, if not all, coastal people sought liquor as a trade item. But it is unknown how much alcohol was introduced each year and what its importance was to Eskimo society. It would seem that the quantities were relatively small and that drunkenness among the men occurred only for short periods in the summer. The desire for liquor might have



prevented some . . . food-gathering activities or caused them to barter away utensils and food vital to survival, but I doubt that this was widespread.

(Foote, 1964, p. 306)

The 1878-79 starvation on St. Lawrence Island has been attributed by some to excessive alcohol consumption during the fall walrus migration therefore preventing hunting critical to the survival of the people that winter (Hughes, 1960; Foote, 1964). However, as previously mentioned, this tragedy may also have been related to illness or poor hunting conditions and may, in fact, have resulted from all three factors. In any event, even when and where the trade of alcohol was limited by law and/or supply, the whalers and traders efficiently taught local groups the art of making "home-brew" and subsequently profited by the sale of the raw materials (e.g. flour, molasses, etc.) necessary for the production of alcohol. The Siberian Natives were also involved in the sale of alcohol to Eskimos north of Unalakleet (Ray, 1975a).

The commercial whaling activity of northwestern Alaska ceased when prices for both whale oil and finally baleen had fallen to the extent that it was no longer economically profitable. By this time, however, "... there was no turning back to an isolation from the white world and the old Eskimo ways" (Ray, 1975a, p. 184). Before the gold rush at the turn of the century and the establishment of Nome -- with the exception of St. Michael --, there was no "white man's" town in this area. Yet the changes of the traditional Eskimo sociocultural systems were already well underway.

## The Territorial Era: the Introduction of External Control

In Chapter 111 it was clearly established that traditional Eskimo societies had well established and functional norms, values, and sociocultural mechanisms for maintaining social control and resolving intergroup social conflict. The non-Natives who came into these areas and were involved in early contact with these aboriginal populations came, almost exclusively, from European and American societies that had much more formalized, codified, stratified, and specialized sociocultural institutions for maintaining a system of norms and social control. It is, then, easy to understand how these Euroamericans, coming from the perspectives of their own social and political systems, erroneously described the Eskimo societies as lacking structure, politics, or means of social control. , Since the nature of most early contact was brief, involving small numbers of individuals focusing on trade and dependent on mutual good will for success, these sociocultural differences were usually not of lasting significance since efforts of individuals representing both sides of the sociocultural "coin" were able to find commonalities of limited, usually nonverbal, communication and economic interests with which to carry forth their dealings. Although there were altercations (some of which have been mentioned herein), there had never really existed a situation of colonization -- that is, of one major political and economic power forcibly exerting externally-derived control and dominance over and exploitation of those of other cultures and societies (Pelto and Pelto, 1979). During

the period of Russian "ownership" and presence in Alaska, their activities in northwestern Alaska did not include enough personnel and military power (not to mention financial backing) to suppress the Eskimo populations. Their interest was in trading for economic profit and not in establishing permanent communities for settlement and political domination of the aboriginal peoples. In the entirety of their thirty-four year period of activity within the study area, only one "white" settlement was established in St. Michael. Even attempts to collect tribute from the insular people of the Bering Strait area failed (Ray, 1975a). During this period, then, the majority of internal social control and intergroup conflict were resolved in distinctly Eskimo fashion. Although the lifestyles of thousands of Eskimos had undoubtedly been affected by the presence of the Russians primarily in economic and technological spheres, their lands were never taken and their autonomy to retain internal social control was not superseded. The charter of the Russian-American Company specifically did not provide for deeds or titles to land and implied the rights of continued land and resource use by all Alaskan Natives (Arnold, 1976, p. 222). However, the treaty negotiating the sale of Alaska to the U.S. left the question of future dealings with aboriginal peoples nebulous and subject to the directions taken by the U.S. government (Arnold, 1976, p. 25).

Thus, without further ceremony, without even banqueting or speech-making, this vast area of land, belonging by right to neither, was

transferred from one European race to the offshoot of another.

(Bancroft, 1836, p. 600)

The Eskimo people inhabiting the study area were classified as "uncivilized" by the new American government (Oswalt, 1979, Ray, 1975a), but they functionally remained autonomous and sovereign for many years following purchase. The only external regulations specifically applying to these populations included laws forbidding the sale of alcohol and firearms to Native people, but we have already discussed the ineffectiveness of attempts to enforce even these regulations.

The annual cruise of a revenue cutter was the only sign of law and power of the United States government north of the Pribilof Islands until 1897, when the Saint Michael area was declared a military district.

(Ray, 1975a, p. 190)

The revenue cutters did attempt to intervene in enforcing alcohol and firearm sales (Jenness, 1962; U.S. Dept. of the Treasury, 1899; Oswalt, 1979) and in conflicts involving whites. The murder of Thornton (the 'dales teacher) in 1893 is an example of an affair in which the revenue cutter may have intervened had not the people of Wales themselves resolved the murder according to their own culturally proscribed rules (Thornton, 1931; Ray, 1975a). Their attempts to intervene in Eskimo-Eskimo altercations or even in Eskimo-white incidents were largely ineffective because of the distance to any judicial center and the wide range of their activities. Their doctors attempted to provide some

medical treatment but found shamanism still a prevalent practice (U.S. Dept. of the Treasury, 1899). The most frequently a revenue cutter would ever visit any given village in a summer season would have been once or twice unless unusual activities were to occur.

The sphere of law . . . had become an amalgam of both American and Eskimo law by the turn of the century, a situation that did not endure beyond the gold rush and the extension of mining and land laws to the Bering Strait area. Until the Klondike rush and the establishment of a military encampment at Saint Michael in 1897, the only evidence of law and the sovereignty of the United States north of the Aleutians was the annual journey of a single revenue cutter . . .

(Ray, 1975a, p. 246)

It was not until the passage of the First Organic Act of 1884 that the U.S. government -- through the auspices of formal education, teachers and/or missionaries (often one and the same), and reindeer herding -- provided for a civil government which had as its explicit goal the "assimilation" or total cultural change and cultural absorption of the Eskimos of the study area and Alaska Natives in general (Jenness, 1962; Ray, 1975a).

This impact will be discussed in the following subsection.

It should be kept in mind that the relevancy of this discussion of "internal" versus "external" control resides in the fact that norms, values, regulations, the distribution of power, and other features of social control operate more effectively and with less disruption to community and individual mental health if they are consistent with the sociocultural

systems of the populations on which they are imposed (Chance, 1964). Hence, when externally-derived norms and regulations are applied to a differing **sociocultural** setting (such as often occurs in the process of colonization, forced assimilation, or modernization); the end result may be different from that which is intended as has continued to be the case in the study area. On the other hand, it should be noted that the Eskimos of the study area were not the passive recipients of change in the years of contact already discussed or in the years yet to be considered. Despite the ever-escalating rates of change, the Eskimo populations had basically incorporated into their own cultural patterns the tools, values, beliefs, and practices that they found useful in their continuing adaptations. To a great degree this has continued to the present day despite the very rapid rates of change, the increases in **attempts** to implement externally-derived norms, values, and regulations, and the complexity of the larger "world" with which they have been forced to deal. Interestingly, the culture change process was certainly not one-way -- early non-Native residents and, to a lesser degree, more contemporary non-Natives have adopted many features of Eskimo culture. The early **Euroamericans**, except for those at St. Michael, resided in Eskimo villages (Ray, 1975a). In addition, for reasons primarily related to successful adaptation to the prerequisites of life in the north, many non-Natives utilized Eskimo skin clothing and tools, tried to learn Eskimo subsistence patterns, and, in some cases, internalized Eskimo values about the sea and land; however they did not

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usually utilize Eskimo patterns of social control. To a significant degree this also has become a part of the present.

Missionary Activity, Formal Education,  
and Reindeer Herding

Missionary activity, formal education, and reindeer herding are discussed together in this section because the commencement of all three activities in the study area are historically inextricably interrelated, because these combined events were conceived as a means of bringing about directed cultural change of nineteenth century Eskimo sociocultural systems in a sense not typical of previous impacts, and because they brought to this area the first Euroamerican population (with the exception of the few Russians at St. Michael) to take up residency in the study area. In more recent history, as the reader will see, segregation and specialization of these three activities occurred, although there has remained some interrelationships between formal education and churches up to the present day and both school and church have generally retained their acculturative goals in the study area (Wilson, 1958; Ellanna, 1972; Oswalt, 1979; Alaska Consultants, 1968; Jenness, 1962). Because of the increasing complexity of the impact history of this region and the fact that the topics of formal education, religion, and reindeer herding are ongoing today and their history must be treated up to the present, only the most salient features of these systems as relevant to

the study will be discussed in historical perspective.

The passage of the First Organic Act of 1884, emerging out of a growing interest in the mineral and fisheries resources of Alaska and pressure by missionaries to provide for the proper education and "civilization" of Alaska's aboriginal people, was the first legislation to formally appropriate funds for formal education in Alaska "... without reference to race" (Jenness, 1962, pp. 7-8). Sheldon Jackson was appointed General Agent for Education in Alaska and utilized this position for twenty-four years to promote, recruit for, and finance the missionary as teacher in his zeal to accomplish the assimilation of Alaskan Natives (Ray, 1975a; Jenness, 1962; Stern, 1977; Oswalt, 1963 and 1979). To Jackson and many of the missionary-teachers he hired, formal education and the transmission of concepts of Christianity were synonymous, and reindeer herding was to become a major tool in achieving this overt assimilationist goal as relevant to the Eskimos of the study area and Natives elsewhere in Alaska. The introduction of reindeer herding as an economic and social activity not indigenous to the Eskimo (or other Native) people in Alaska was an idea conceived by a naturalist on the revenue cutter "Bear", circulated by Captain Healy of the "Bear", and eventually promoted by Jackson in the U.S. Congress of 1890 and subsequent years until he received his first appropriation in 1892 to carry forth this activity with governmental sanction and support. Jackson's public rationales for this activity included his views that



coastal Eskimos were starving as a result of the depletion of whale, walrus, and caribou by commercial whalers and their increased resource pressures. This was a view disputed by some later historians, government officials, and public opinion, who critiqued Jackson's overt motivation as being a cover for providing a means of financing missionary activity in Alaska, providing a "revolutionary" meat market for the west coast, and providing a "work-study" or economically-oriented approach to educating Eskimos in the ways of "white" civilization (Ray, 1975a; Stern, 1977; Jenness, 1962; Lantis, 1950; Oswalt, 1977; Jackson, 1908). In the first years of Jackson's position as General Agent of Education for Alaska he contacted various Protestant missionary organizations and advocated and promoted their involvement in finding missionary or missionary-like teachers and funds to establish schools throughout strategic locations within the study area. The Russian-Orthodox Church and the Roman Catholic Church were already active in establishing missions at St. Michael and on the Yukon, but in their efforts to translate biblical materials and church services into Yupik and other Native languages they were in conflict with the assimilationist policies of the Organic Act. By 1895 the formal federal policy had changed in not hiring missionary-teachers, as the issue of church and state (e.g. education) separation was a concern. Nevertheless, Bureau of Education reports and other historical documents indicate the continued and overt interrelationship of missionaries and public rural education until 1908 when Jackson was pressured to resign (Stern, 1977; Ray, 1975a; Jackson,

1894 and 1900-1908; Ellanna, 1972). A general overview as to the impact of these activities on Eskimo sociocultural systems of the period and study area are summarized in the following statement:

Schools and reindeer herding began in only a few settlements during the last part of the century, but almost immediately the entire Bering Strait area was involved, not only through the ambitions of the teachers and administrators of the reindeer business but because the Eskimos themselves began to come from the surrounding areas out of curiosity . . . Schools and reindeer were not the whole of Eskimo life at this time -- subsistence and settlement patterns were still basically the same as before -- but their influence was plainly felt, since schools and herds were established in key mainland places: Wales, the largest village; Port Clarence, the whalers' rendezvous; Golovin, in the boundary zone between Yupik and Inupiak speakers, and Unalakleet, the village where three separate tribal groups had lived together since the Russian fur trade began. These activities of the last decade of the nineteenth century were therefore all-encompassing in a geographical sense and interpenetrated all aspects of culture.

(Ray, 1975a, p. 205)

More specific details up to approximately 1970 for each of these inter-related topics as relevant to the study area will now be presented.

The origin of formal education -- as opposed to traditional means of Eskimo education by oral tradition, imitation, observation, participation, and, more structured techniques of instruction -- has already been mentioned as being linked to the First Organic Act. To appreciate more fully the intent of this piece of legislation, a quotation from the act provides some insight:

... Education to be provided for the Natives of Alaska should fit them for the social and industrial life of the white population of the United States and promote their not-too-distant assimilation.

(Ellanna, 1972, p. 67)

Although a review of the history of education in the study area reveals a failure to achieve this primary goal (Wilson, 1958; Ellanna, 1972; Ray, 1975a), the impact of schools on Eskimo sociocultural systems has been significant. All of the earliest schools were under the direction of missionaries: St. Michael was a focus for many of the early attempts with Russian-Orthodox religious instruction prior to U.S. purchase of Alaska; an informal Episcopal school in 1886 while the teacher was awaiting location on the Yukon; a more formal Russian-Orthodox school during the same year; and a Catholic school in 1900 (Ray, 1975a). The Catholics also established a mission at Kanelik (south of contemporary Emmonak on the Yukon Delta) in 1888 later moving it to the present location of Holy Cross (Alaska Geographic, 1979; Ray, 1975a). The Moravians penetrated the Kuskokwim with a boarding school and day school (in contemporary Bethel) utilizing English as the language of instruction in 1884, but they were not effective in penetrating the Yukon (Oswalt, 1963). The first school north of the Kuskokwim was in Unalakleet, it first functioned in 1889, and was operated by the Mission Covenant of Sweden ("Swedish Covenant"); the Covenant church later also established a school in Golovin Bay (1893-94) (Ray, 1975a). A Congregational church school was established in Wales in 1890, while the first

school on St. Lawrence Island was established by the Presbyterians in 1894 not to be separated from the church until after 1910 (Thornton, 1931; Hughes, 1960). This "checkerboard" of religious affiliations or "division of fields" (Jenness, 1962) has, for the most part, persisted up to the present time and was the end result of Jackson's enthusiasm in obtaining missionary involvement in education. The first "public schools" were, in fact, reindeer schools, and, although these were established principally for reindeer herders (mainly Lapps, a few Chukchi, and Eskimo apprentices), some Eskimos did attend to learn English (Jackson, 1894, 1900-1908). The first of these, established in 1892-1893, was at Port Clarence and was referred to as the "Teller Reindeer Training School" (Ray, 1975a, p. 222). Missionaries had a significant effect on government schools established after the above mentioned -- Shishmaref, Norwegian Evangelical Lutheran; Diomedes and King Island, Roman Catholic; Kotzebue area (an indirect effect on the northern coast of Seward Peninsula), California Yearly Meeting of Friends; Savoonga, Presbyterian; and St. Marys and the Lower Yukon, Roman Catholic. Most historians agree that the ineffectiveness of formal education during the first decade or more for Eskimos of the study area in particular and Alaska Natives in general resulted from several factors (Ray, 1975a; Thornton, 1931; Jackson, 1894, 1900-1908; Ellana, 1972; Stern, 1977):

(1) Missionary-teachers were not aware of the cultural differences they were to encounter in rural Eskimo villages; their goals to bring

about rapid cultural change were not to be realized; their efforts were divided between resolving personal problems, managing reindeer herds, instructing in religious activities, procuring the necessities of their own daily lives, practicing medicine, acting as governmental representatives, and trying to devise a curriculum that would retain the interest of the peoples; language barriers were extreme since most of the pupils spoke only an Eskimo language with a few knowing rudiments of Russian or English; and they mostly failed to grasp a basic premise of contemporary anthropology -- that is, that the imposition of a educational system upon a population with differing cultural norms, values, priorities, and needs is intrinsically doomed to failure.

- (2) The teachers at reindeer stations were so deeply involved with the management of reindeer herds, the personnel management of first Chukchi and later Lapp herders, the recruitment and encouragement of Eskimo apprentices, the resolution of conflicts over rights to animals and/or range, and the continuing resolution of problems incurred by inept governmental administration of the reindeer program, that they were left with little time or energies to actually teach (Stern, 1977; Jackson, 1894, 1900-1908; Ray, 1975a).
- (3) Cultural conflicts between nineteenth century Eskimo sociocultural systems and Euroamerican formal education were great.

Keeping regular school hours was difficult for the pupils. There were no clocks, and time for the children was not ordered into strictly divided segments of time, but into irregular parts of a day or night governed by the movements of the family hunting and fishing, or by ceremonial activities that might take up hours, days, or even weeks. Eating and sleeping were fitted in without regard to specific hours, so the result was that attendance . . . was often irregular for an individual pupil.  
(Ray, 1975a, p. 217)

In addition, the content of the educational system had negligible relevancy for rural Eskimo life at this time and settlement patterns necessary for subsistence pursuits directly conflicted with regular school attendance.

In very revealing ways, the continuing history of education in the study area up to the end of the 1960's was to perpetuate these problems. Village elementary education was to remain, for most Eskimos, the only education they were to receive until post-war years for some and the 1960's for many others -- in 1975 the majority of Eskimo residents of the study area over the age of forty had completed no more than six years of formal education (Ellanna and Roche, 1976; Federal Field Committee for Development Planning in Alaska, 1968; Oswalt, 1979). Some, however, had the fortune or misfortune (depending on your perspective) to become the recipients of Bureau of Indian Affairs boarding school education outside of Alaska and later in southeastern Alaska (Sitka's Mt. Edgecumbe) or St. Marys and White Mountain (until 1951 -- Wilson, 1958) within the study area.

It was a missionary, Rev. Eleazer Wheelock, who in the eighteenth century conceived the idea of a boarding school in order to ". . . remove children from parental influence as a means of speeding up

the process of civilization".  
(Ellanna, 1972, p. 57)

The boarding school concept as a means to educate rural students at relatively low costs (to the government) and with lengthy absences from the sociocultural environments of their home communities has persisted up to the present time, although enrollments have declined initially because of the regional boarding school and urban boarding home program philosophies of secondary (and some primary) education of the late 1960's and later initiated and resolved by two civil class action suits (Molly Hootch vs the State of Alaska and later Tobeluk vs Lind) in 1976 that required the construction and operation of secondary schools within rural villages -- a legislative action still in the process of being implemented and currently under critique (Ellanna, 1972; Ellanna, fieldwork, 1968-1979; Barnhardt, 1979).

By as early as 1905, the responsibility for education within Alaska was already segregated by ethnic group and cultural practices. Incorporated towns were responsible for educating white children within their own boundaries and the territorial government was responsible for white children outside of organized municipalities -- in both cases, "creoles" or "... children of mixed blood who were leading a civilized life..." could also attend these "white" schools (the Nelson Act of 1905, Jenness, 1962, p. 20). These all eventually came under the jurisdiction of the State Department of Education. A few missionary

boarding schools continued to operate up until the present day primarily attended by Natives -- in the study area Covenant High School in Unalakleet and St. Marys High School in St. Marys on the Yukon. The Pilgrim Mission school operated by the Catholics as a boarding school and orphanage at Pilgrim Hot Springs following the influenza epidemic of 1918 was closed in 1941 (Nome Nugget, August 7, 1979). The remaining Native children were the educational responsibility of the Bureau of Education, later to be transferred (in 1931) to the Office (now Bureau) of Indian Affairs. The end result of this tripartite administration was essentially a segregated school system even in towns like Nome. For example, Nome had separate elementary schools, grades 1-4 and 5-8, for Eskimo and white children until 1946 and 1945 respectively. Eskimos students attending the Bureau of Indian Affairs school in Nome prior to desegregation, and following their absorption into Nome's public school even as late as 1957 (and probably later) came from an area extending from the Noatak River to Mekoryak on Nunivak Island including Little Diomedé, King, and St. Lawrence islands (Wilson, 1958). Following statehood in 1959 the plan was to gradually transfer Bureau of Indian Affairs (hereafter referred to as BIA) elementary schools in villages to the State Dept. of Education -- the subdivision of this office formally responsible was initially State-Operated Schools (SOS) and then the Unorganized Borough School District. After the 1976 Consent Degree signed by the Governor of Alaska regarding the provision of schools within rural villages, local governing districts or Rural Educational Attendance Areas (hereafter



referred to as REAAs) or public school districts assumed the control of the new secondary schools and the elementary schools that had elected to transfer from Bureau of Indian Affairs to State jurisdiction. In the Bering Strait REAA several elementary programs elected to retain BIA management due primarily to dissatisfaction with the functioning of the newly formed REAAs -- Unalakleet being the most recent community to select the option of remaining a BIA school at the elementary level (Bernhardt, 1979; Ellanna, informal discussion, 1979, and fieldwork, 1968-79).

The concise and generalized overview of the history of formal education above is necessary to an understanding of contemporary educational systems. Important concerns include the structural and functional diversity and, at times, disharmony of educational systems and their goals; the general acculturative goals of formal education; the lack of cultural and psychological preparation of most new teachers going into village schools; the effect of educational relocation programs on disrupting Eskimo cultural tradition and social unity; the effect of education in broadening the world view and expanding the perceived needs of rural-based young people; the systemic separation of Eskimo and white children in the majority of schools in the study area (except Nome); and the effect of subtle, albeit often naive, ethnocentrism, cultural misunderstandings, and cultural biases on the part of some village teachers towards the lifestyles, values, and individual behavior of village residents. To some degree these are all very poignantly a

part of the contemporary educational scene in the study area today (Barnhardt, 1979; Chance, 1971; Cline, 1974; Ellanna, 1972; Federal Field Committee for Development Planning, 1967; Jenness, 1962; Oswalt, 1979; Wilson, 1958; informal discussions, 1979).

In the sphere of missionary activity and "religious" change, the early history of the numerous religious organizations within the study area has already been, in part, examined in conjunction with the discussion of education since the two were so intricately interrelated during the late nineteenth century. However, some additional comments are in order. It is important to keep in mind that missionary activities brought numerous resident non-Natives to the study area in early years, and since the majority of these denominations have continued to be a part of the communities they originally proselytized, missionaries and their families often make up a significant segment of the resident non-Native population of primarily Eskimo villages in the study area and even larger communities like Nome today. In most communities the original missionary organization has been challenged for converts and attendance of religiously-oriented social activities by denominations that are more recent arrivals -- in most cases, the original church has prevailed, however. The endurance of the original' church in a given community may be related to the effectiveness of single membership in maintaining community solidarity as opposed to the factionalism that may result from multiple memberships (VanStone, 1964). In regards to the specifically non-educational

impacts of missionaries on Eskimo sociocultural systems, the following observations of change and response to change can be made:

- (1) The shaman was the traditional specialist in dealing with the part of the Eskimo world that had to do with spirits of animate and inanimate things and souls of humans. He or she also was the traditional practitioner of healing. It was, of course, the institution of shamanism that was directly attacked by missionaries as a competitor in the same sphere of social activities and system of values. Introduced diseases, as already discussed, killed many people and the shaman had poor odds in the successful treatment of diseases like smallpox. The missionaries often had some access to medicines or medical knowledge regarding diseases unknown to Eskimos and were able to use such as a means of discrediting and reducing the influence of the shaman (Oswalt, 1963 and 1979; Ray, 1975a; VanStone, 1964). As is often the case in cultural impact situations, a new concept or practice may be reinterpreted to conform to or achieve comparability with the sociocultural setting to which it is introduced (Pelto and Pelto, 1979). In some respects the missionaries were probably perceived to be powerful shaman of a different sort (as revenue cutter captains were often perceived to be powerful umealiq or skinboat captains) (VanStone, 1964). In regards to shaman activities pertaining to the critical features of the animal world, the prevalence of contemporary respect for and taboos associated with the natural environment as

well as suggestions in the ethnohistoric literature regarding the continued importance of shaman activities in these areas indicate less direct impact on shamanism in this realm (Ellanna, fieldwork, 1969-1979). Again, substitutions also occurred such as the prerequisite for attending church services prior to hunting -- however, missionaries attempted to integrate new taboos such as prohibiting hunting on Sundays. In general, missionaries regarded the shaman as symbolic of Eskimo religion and as a "satanic" influence -- certainly a force that needed changing in the course of assimilation.

- (2) Certain Eskimo behavior patterns were antithetical to the Christian moral code. Infanticide, plural marriages, and temporary spouse exchanges were most deplored. The missionaries did not realize that taking more than one wife helped compensate for the population imbalance resulting from the many accidental deaths among hunters, Nor did they view infanticide as a response to economic adversity, or spouse exchange as an important form of socioeconomic integration.

(Oswalt, 1979, p. 286)

In the sense that the shaman may have been regarded as powerful, some of these new taboos were accepted -- others commonly went "undercover" or assumed new forms. Missionary ridicule of cultural practices did have some influence on cultural pride, self-identity, and shifts within the sociocultural system. On the Kuskokwim where the kashgee or kazgi was important as a place of residence for men, the Moravians encouraged its decline in favor of what they

considered the "normal" family household -- the nuclear family (Oswalt, 1963). This researcher has not been able to identify analogous shifts on the Yukon as the ethnohistoric literature is unclear -- however, some overlapping influence may have been evident. Almost all missionaries discouraged dancing and other ceremonial activities -- in places where church services were held in the kazgi, this function may have again at least in part substituted for more traditional forms.

- (3) In the cases in which missionaries acted as supporters of Eskimo rights vis-a-vis more self-serving agents of contact (such as some traders) and in which they provided a concept of what they (the missionaries) termed "the supernatural" as being less potentially , dangerous -- especially in the face of severe illnesses and death -- than did "traditional" beliefs, they did bring about some more positive responses to a rapidly culturally shifting setting.

There is, among anthropologists and other social scientists, some views that "religious" shifts were more overt than covert, more superficial than in depth, more structural than functional -- and that the real core of earlier Eskimo belief systems have persisted until the present day (Oswalt, 1963; U.S. Dept. of the Treasury, 1899; VanStone, 1964) (this will be discussed again in Chapter V). For the more culturally sensitive missionaries that learned the language of their congregation, exhibited a reciprocal

interest in learning about their culture, and failed to condemn the vast majority of their cultural practices as being "immoral," such impact was undoubtedly less traumatic to the Eskimo and certainly had more character of an interchange rather than indoctrination (Renner 1979). It can certainly be said with assurance that the degree of impact varied with the mandates of the missionary society and the personalities of particular missionaries despite their common involvement in education and herding in early years. Those missionary groups to come later did not experience these earlier historic ties, at least not with the same intensity. The present reflects much of this past although in more subtle forms.

This leads to the last development of this subsection -- reindeer herding. As previously mentioned, reindeer herding was ostensibly promoted by Sheldon Jackson for the purposes of filling the gap in Eskimo subsistence resources created by the depletion of whales, walrus, and caribou -- secondarily it was conceived of as a tool for teaching the Eskimos the marketable skills of herding, an occupation more "civilized" in Jackson's view than that of hunting and fishing (Ray, 1975a; Jackson, 1894, 1900-1908; Stern, 1977; Olson, 1969). This topic provides an excellent case study of an economic development plan conceived of by a "colonizing" society for the benefit of an indigenous population but doomed to failure in terms of its original intent when the main thrust of the economic

plan is in conflict with elements of existing, indigenous sociocultural systems.

During the decade 1892 to 1902 Jackson, using his position with the Bureau of Education, legislative subsidy, and revenue cutter assistance, was successful in purchasing 1,280 head of reindeer in Siberia and transporting them to Alaska (Ray, 1975a; Stern, 1977; Jackson, 1894, 1900-1908; Olson, 1969). In association with the importation of animals in 1892, Jackson also arranged to initially bring Siberian Chukchi to "... teach the mechanics of reindeer herding to the Eskimo and the white personnel of the station" (Ray, 1975a, p. 230) and in 1894 several Laplanders to take charge of the herds and assume the program of training Eskimo apprentices. The success of Chukchi herder instruction was somewhat less than satisfactory, as "no one seemed to have considered that traditionally the Siberians and Alaskans had been bitter enemies" (Stern, 1977, p. 39). The first reindeer camp to be established was the Teller Reindeer Station at Port Clarence. It is interesting to note that by the end of the first decade of herding in Alaska, Jackson's original proposed intents seemed somewhat modified:

With the increase of domestic reindeer in Alaska it will become possible for white [my emphasis] men to own large herds, but the men that will do the herding and teaming will always be Eskimos and Laplanders. Thus the Eskimo, trained as herder or teamster, will prove valuable to the white man in turn, as director and employer will be valuable to the native.

(Jackson, 1904, p. 21)

By this time he had also given or lent to missionaries 1,059 deer -- the beginning of his support omissions by reindeer imported for the benefit of the Eskimos (Stern, 1977; Olson, 1969). This trend was to continue until 1906 at which time the reindeer herd had multiplied to 12,828 head -- of these only 5,153 were owned by a total of 99 Eskimos with 14 additional Eskimo apprentices owning no deer (Jackson, 1908, p. 12). Since most authorities on reindeer herding agree that a herd has to number at least 1,000 to be profitable, it is clear to see that the ratio of Eskimo herd owners to deer (99:5,153) was indicative of the lack of potential economic success even at this early date. However, since the deer had originally been promoted as a food source, even a few deer could have provided that. Yet the operation of the stations persisted in restricting Eskimo use of the deer as food and fed them to the Lapp herders instead (Ray, 1975a, Stern, 1977; Lantis, 1950; Olson, 1969). By 1905 Lapp herders owned sixteen percent of the deer and had full utilization of any deer they so desired. By this time the Eskimos were fairly certain that the reindeer were for the benefit of whites and would never really belong to them in any significant number. Even E.O. Campbell, principal teacher and herder at Gambell, states in 1904 that, "I know that the old men are counting on a big killing of deer as soon as the boy's time [the apprentices] is out" (Jackson, 1905, p. 82). It was Jackson's unwillingness to separate the schools from the missions and both his unwillingness and failure to place the reindeer in the hands of the Eskimo that brought about his



forced resignation from the Bureau of Education in 1908 and the resultant change of policies regarding reindeer ownership and distribution on the part of the Bureau under congressional investigation (Stern, 1977, p. 27; Ray, 1975a; Olson, 1969).

From this time until the 1930's it was the policy of the government to place as many deer as possible into Eskimo control, so by 1916 there were over 1,200 Eskimo herders in Alaska with an average herd size per owner numbering less than 50 deer (Stern, 1977, p. 27). The distribution of herds within the study area is summarized in Table V. The percentage of deer ownership between the years 1907 to 1914 is shown below:

	<u>1907</u>	<u>1914</u>
Government	23	7
Missions	22	10
Lapps	14	17
Natives	41	66

(Olson, 1969, p. 13)

Between 1914 and 1922 the Lomen family, having political prominence and financial backing in Nome, purchased 8,700 deer from missionaries and Lapp herders despite legislative restrictions on the sale of female deer to non-Natives -- this became the nucleus of their herd which was increased by purchase alone to 14,083 deer by 1929 (Stern, 1977, p. 62; Lantis, 1950; Olson, 1969). Lomen's financial ability to build or buy packing plants, slaughterhouses, freezing plants, transportation systems and their knowledge of how to develop a market for meat, hides, and antlers outside of Alaska led to their dominance of the industry during this period (Lantis, 1950 and 1952; Stern, 1977; Olson, 1969). The Eskimos

TABLE V  
 REINDEER ON THE SEWARD PENINSULA 1892-1919  
 DISTRIBUTION AND DATE OF ESTABLISHMENT OF THE HERDS<sup>1</sup>

Station and Herds	Date.	Station and Herds	Date
Teller	1892	Iglotalik No. 1	1910
Wales No. 1 (Mission)	1894	Shishmaref No. 3	1910
Golovin No. 1 (Mission)	1896	Tubutulik	1910
Eaton (Unalakleet R.)	1898	Unalakleet No. 2 (South R.)	1911
Savoonga (St. Lawrence Is. )	1900	Wales No. 2 (Ootenna's)	1911
Shishmaref No. 1	1905	Iglloo No. 2	1912
Council	1907	Spruce Creek	1912
Egavik	1907	Iglotalik No. 2 (Bonanza)	1913
Golsovia No. 1	1907	Nome	1913
Iglloo No. 1	1907	Golsovia No. 2 (Pitnuktalik)	1914
Shaktoolik	1907	Iglloo No. 3	1914
Sinuk	1907	Wales No. 4 (Cape York)	1914
Golovin No. 2	1908	Iglloo No. 4	1915
Mountain Village	1908	Shishmaref No. 4	1915
Wales No. 3 (Kozuks)	1908	Shishmaref No. 5 (Keok)	1915
Shishmaref No. 2	1909		

<sup>1</sup> Adapted from Stern, 1977, p. 48.

failure to compete with Lomens during this period was based on a very limited number of Eskimos who even had an interest in reindeer herding as a commercial venture and mismanagement on the part of the federal government in providing Eskimo herders with herds too small to reap commercial benefits and in legislatively restricting the killing or sale of females with the potential for bearing offspring. Due to the fact that the Lomen operations never produced earnings on a steady or dependable basis, there is certainly good evidence that reindeer herding as an economically viable and profitable enterprise was basically unfeasible for any owner:

As a profit generating enterprise based on the raising, processing, and marketing of reindeer products, the Lomen operations were destined never to succeed.

(Olson, 1969, pp. 45-46) ,

During this time the government did try to organize reindeer herding associations and cooperatives, but they basically were unsuccessful because of disputes over deer ownership, over who was to do the actual restrictive or tedious (in the Eskimos' view) labor in the herding venture, and over general misunderstandings regarding the concept of a formal cooperative, economic, social organization (Stern, 1977; Olson, 1969; Lantis, 1950).

Between the period 1930-1937 the reindeer reached their maximum abundance, but there is some question as to the reliability of herd size estimates during this time since there were virtually no roundups or

or actual counts, Native stock corporations estimated herd numbers using unrealistic reproductive rates and no adjustments for mortality, and Lomen operations purposefully exaggerated head counts for purposes of expanding collateral (Olson, 1969; Stern, 1977). It was also during this period that the market for reindeer declined due to the nationwide economic depression and the post-mining population decline in Alaska. Prior to this period Eskimo deer owners had established a system of trading deer for credit at Lomen commercial stores (receiving as high as forty cents a pound), but by 1935 deer were worth only two dollars a head in credit for commercial goods (Olson, 1969). The large percentage of deer now in the hands of non-Eskimos and a desire on the part of Lomen enterprises to dump the unmarketable deer resulted in legislative action in 1937 (the Alaska Reindeer Act) that required governmental purchase of all non-Native owned reindeer and equipment in Alaska in the hopes of establishing a self-sustaining Alaska Native industry (Olson, 1969; Stern, 1977; Jenness, 1962) -- ironically a return to the original overt intent of the reindeer purchase at the turn of the century. During this period an actual count of reindeer indicated that previously recorded herd populations had been grossly overestimated leaving supposedly wealthy and successful Eskimo herders with negligible reindeer assets,

During the time of World War II virtually no reindeer herding activities occurred and by the end of the war the total number of deer had declined to less than 100,000 (Stern, 1977, p. 117). By 1944 the government began

reactivating commercial herding through the process of lending deer for a period of years with repayment in kind. Tables VI through VIII indicate the location, operation responsibility, years in operation, and estimated herd size for the study area during the 1948-1968 period. A review of these Tables indicates that by commercial standards these herds were not large enough to provide a sole means of cash support for herd operator/owners -- their importance as a source of meat should not, however, be overlooked. Some cash for Seward Peninsula Eskimo herders was provided by the sale of meat -- in 1968 there was a gross dollar value of \$176,652 derived from meat sales, but this amount was not shared equally among herd owners and does not reflect the costs in hiring help or purchasing and/or leasing equipment and materials necessary for the operation. During these years and until at least 1976 local stores purchased reindeer meat and sold it to Native and non-Native consumers at prices substantially lower than beef (and culturally preferred over beef by many Eskimo families). However, the inflation of the market for antlers, occurring recently and to be discussed in Chapter V, has in part disrupted this source of meat commercially.

In summary, the major impacts of reindeer herding in historical perspective on the Eskimo and non-Eskimo populations of the study area were as follows:

- (1) Reindeer herding as a governmentally-sponsored program to bring about directed Eskimo cultural change generally failed in its goals

TABLE VI  
REINDEER HERD OPERATIONS, GOVERNMENT AND PRIVATE 1948<sup>1</sup>

<u>Location</u>	<u>Operator</u>	<u>Years in Operation</u>	<u>Estimated Size</u>
St. Michael-Stebbins	Government	8	500
Egavik	Government	8	220
Golovin	Government loan to Siegfried Aukongak	2	1,177
Teller	Fred Topkok	4	650
St. Lawrence Island	Savoonga Reindeer Co.	NA	300

TABLE VII  
REINDEER HERD OPERATIONS, GOVERNMENT AND PRIVATE 1958<sup>2</sup>

<u>Location</u>	<u>Operator</u>	<u>Years in Operation</u>	<u>Estimated Size</u>
Stebbins	Stebbins Community Assoc.	18	2,700
Unalakleet & Egavik	John Kotongan	4	650
Golovin	Siegfried Aukongak	12	5,231
Teller	Johnny Kakaruk	8	2,250
St. Lawrence Is.	Savoonga Reindeer Co.	NA	NA

<sup>1</sup> Adopted from Stern, 1977, p. 126 and Joint Overall Economic Development Committee of Gambell and Savoonga, 1979, p. 27.

<sup>2</sup> Adopted from Stern, 1977, p. 128 and Joint Overall Economic Development Committee of Gambell and Savoonga, 1979, p. 27.

TABLE VIII

x REINDEER HERD OPERATIONS, GOVERNMENT AND PRIVATE 1968<sup>1</sup>

<u>Location</u>	<u>Operator</u>	<u>Years in Operation</u>	<u>Estimated Size</u>
Golovin	Siegfried Aukongak	22	4,500
Shishmaref	Fred Goodhope Sr.	10	2,702
Teller	Johnny Kakaruk	18	2,957
Teller	Ralph Kugzruk	3	600
Nome	Lawrence Davis	1.5	525
Nome	Government Model Herd	3	643
Koyuk	Archie Henry	7	517
Shaktolik	Gustoff Sagoonick (operating the former Kotongan herd)	1	275
Stebbins	Stebbins Community Herd	28	600
St. Lawrence Island	Savoonga Reindeer co.	NA	800-1,000

<sup>1</sup> Adopted from Stern, 1977, p. 130 and Joint Overall Economic Development Committee of Gambell and Savoonga, 1979, p. 27.

due to a lack of knowledge on the part of the agents of change concerning the subject populations.

- (2) Reindeer herding, although subsidizing in part missionary education of Eskimos in the 1890's, played a negligible role in the process of formal education and often, in fact, conflicted with these endeavors. To the extent that herding brought Eskimos into contact with Siberian Chukchi and European and American white teachers, governmental officials, and herders, undoubtedly informal education in dealing with the outside world occurred.
- (3) Reindeer herding probably was the first activity to stimulate conflict over access to land between Eskimo groups and between Eskimos and non-Eskimos such as Lomen enterprises.
- (4) Reindeer herding provided the first opportunity for the attempted implementation of western-structural organizations such as cooperatives and associations within Eskimo society -- a practice that was to be intensified in future years focused on different issues.
- (5) Herding did provide those Eskimos that persisted in their attempts to become successful herders with knowledge of governmental agencies and procedures thereby potentially enhancing their abilities to comprehend and deal with western culture and the people who were its



carriers.

- (6) For a period of time the Lomen enterprises poured substantial sums of money into the Nome area economy and their involvement persisted into the recent past.
- (7) Reindeer herding management resulted in an attitude of suspicion and mistrust on the part of involved Eskimos towards government officials and processes -- an attitude that would be perpetuated through subsequent governmental dealings.
- (8) To a limited extent reindeer herding did provide a source of meat and hides (and later some cash) that were no longer readily available from local resources (i.e. caribou) -- in doing this, however, it probably disrupted the impetus for a substantial portion of the trade with Siberian Eskimos and Chukchi.
- (9) Interethnic conflicts and the formation of prejudices and biases between Eskimos and whites were stimulated by the management of reindeer herding programs.
- (10) The system of credit in exchange for reindeer established by Lomen enterprises intensified Eskimo participation in a cash system through indebtedness -- a system that has continued, in varying de-

grees, to the present time.

(11 ) The nomadic requirements and individualistic nature of herding (along with fur trapping -- an activity commonly performed by herders; Stern, 1977) were in conflict with the centralization trends resulting from residing in larger groups near missions and schools. In addition, it should be noted that in much of the study area aboriginal settlement patterns were often more sedentary and in larger social groupings than possible for herding and trapping activities (Burch, 1975).

#### Mineral Exploration

The history of mineral exploration within the study area is basically an account of the first resource exploitation that involved large numbers of whites coming into the area and settling for lesser or greater durations of time -- some descendants remaining today. It is also an account of the first attempts on the part of non-Natives to acquire and lay claim to land areas previously utilized by and associated with particular Eskimo groups. The birth of Nome as a regional center and its origins as a white miners' town also come from this period. Burch (1975) interprets the impact of miners as bringing about non-intentional change:

The explorers, whalers, and miners contributed to social change in Northwest Alaska less by intent than by accident. They were concerned with

knowledge or profit, and the Eskimos interested them only insofar as they were relevant to the achievement of those goals. The missionaries and teachers, on the other hand, came with the explicit goal of "saving" the natives, which meant, in practice, the elimination of most of the fundamental values that the Eskimos had.

(p. 32)

On the other hand, Ray (1975a) assesses this impact on Native socio-cultural systems as being of great significance despite it being primarily non-intentional:

Mining activities created the most widespread changes in Eskimo life since the beginning of European trade in Siberia . . . Both the traders and their trade items were readily accepted by the local inhabitants . . . The various expeditions -- even the ones that wanted the Eskimos to work -- were accepted in a holiday spirit as the Eskimos visited their ships and headquarters. The Eskimos met the newcomers on their own terms. But mining was in an entirely new sphere. It brought persons interested in exploitation and ownership of large areas of Eskimo land. Up to this time, the Eskimos had usually accepted new ideas and objects voluntarily, but the new mining pursuits suddenly eliminated choices, and the disruption of settlement and subsistence patterns and a new authoritarian government were only a small part of the involuntary changes the Eskimos faced as their land was disturbed and its nonrenewable products extracted without their permission. (p. 204)

A brief historical sketch of mining activities within the study area and a more detailed analysis of these impacts follows.

The mineral exploration activities in the Norton Sound/Bering Strait area overlapped temporally with commercial whaling in its latter stages and reindeer herding at its onset, and it was, in fact, a whaler who in the latter 1870's initially reported the silver-bearing Galena ore from the

Golovin Bay area that stimulated miner migration to Golovin Bay, Fish River, and Ophir Creek (Harrison, 1905). During the Western Union Telegraph activities of the 1862-1865 period employees also had recognized the mineral wealth of parts of the Seward Peninsula (Harrison, 1905; Ray, 1975a, Carlson, 1947a). The Omilak Silver Mines and the Fish River Mining District (encompassing all of the Seward Peninsula) were organized in 1881 (Harrison, 1905, p. 130). These activities, however, were overshadowed in contact intensity by first the Canadian Klondike gold rush of 1897 and the subsequent discoveries of gold at Anvil Creek (near present day Nome) by a former member of the Western Union Telegraph project and his associates in 1898 (Blake, 1900; Carlson, 1947a; Harrison, 1905; Ray, 1975a). The Klondike was accessible via the Yukon, and Saint Michael suddenly became the staging , and supply center for constant riverine traffic up the Yukon and the point of entry to Alaska of gold seekers from many diverse educational , ethnic, and social backgrounds, some of whom were to later participate in the Anvil Creek activities. Saint Michael was also to become the seat of the first resident U.S. governmental authority in northwestern Alaska -- a military rather than a civil authority. The Libby, Blake, Mordaunt, and Melsing party with their Eskimo guide, Quarick, established the first white settlement west of Saint Michael -- Council City -- in 1898 prior to their journey up the coast to the mouth of the Snake River (the present site of Nome) and eventually Anvil Creek and the mouth of the Sinuk River. The events which were to follow included

the establishment of Anvil City (later to be referred to as Nome) and the subsequent growth of Nome as a center of mining activities with a population growth from May, 1899 to the end of July, 1899 of nearly 3,000 would-be miners (Carlson, 1947a). The discovery of beach gold deposits the following year (1900) brought 15,000 additional people ranging from Lapps who had deserted herding activities to numerous Scandinavian migrants, to lawyers, missionaries, physicians, professional gamblers, merchants, and disillusioned Klondike gold-seekers mostly from the west coast of the United States (Carlson, 1947a; Harrison, 1905). Most came without adequate knowledge, expertise in the north, supplies, and cash to establish themselves in this area more accessible than had been the interior reaches of the Yukon Territory. Disputes over claims and Nome homesites ran rampant controlled only by the St. Michael military detachments, traveling Federal judicial officials, and eventually by the internally formed Consent Government led by miner representatives (Carlson, 1947b; Harrison, 1905; Ray, 1975a).

In historical accounts of this period only relatively few Eskimos are mentioned in passing. They apparently brought ore samples to white miners, but their motivation for doing so is never explained (possibly for purposes of trade or in response to missionaries' and/or trader inquiries). They apparently were disinterested, for the most part, in mining for their own gains as probably gold had little perceived value

in their existent subsistence/trade economies and the process of mining possibly would have been perceived as monotonous. Some were involved in providing guide service and transportation by means of skinboats, dog sleds, reindeer traction, and later schooners; they also occasionally were involved in sporadic labor activities for wages:

Prospectors wandered into Eskimo settlements, hunted and trapped in hereditary Eskimo hunting-grounds, and engaged Eskimo men to transport their supplies by boat and dog-sled. The natives themselves rarely attempted to mine on their own account, and they generally kept aloof from the regular mining camps where they were mere hewers of wood and drawers of water; but they welcomed every opportunity for wage-employment on tasks with which they were already familiar, and on-mechanical jobs . . . . The King Island natives become longshoremen at Nome during the summer months. . . ; and Eskimos from different settlements along the coast manned the motorized schooners that began to frequent the Bering Sea and the Arctic Ocean. As early as 1907 the natives of Unalakleet built and manned seven or eight small schooners, which they operated in Norton Sound and on the lower Yukon River.

(Jenness, 1962, p. 13)

Mineral exploration and production, although expanding from gold to other minerals and territories (e.g. tin at Lost River in 1901) generally persisted as a non-Eskimo enterprise and continued to be sporadically productive until the present time involving, however, a considerably smaller number of people after the "boom" days at Nome. Gold mining was at a lull from World War I to 1935 and then, again, from World War II until 1974 and the federal deregulation of gold price and ownership (Selkregg, 1976). Eskimo individuals continued a limited involvement

through wage labor with mining companies and, very rarely, first and second generation involvement in claims. As an example a Delta man who discovered a platinum lode in 1926 lost his claim to a Scotsman to whom he had entrusted a fifty percent share in exchange for aid in staking his claim (Alaska Geographic, 1979, p. 32). Nome remained at the regional center and, to a great degree, the character of a "boom" expectant community.

This brings us to an analysis of the impacts of mineral exploration on the sociocultural makeup of the study area today:

- (1) Mineral exploration -- particularly the discovery of gold in the Nome area -- provided an economic base for the development of a fairly large and permanent white community in a previously primarily Eskimo area. Anticipation of further developments of mineral resources known to be present in the area has been the primary incentive for the core non-Eskimo population to remain during periods of economic lull.
- (2) The need for human support services (e.g. education, health, law enforcement, judicial services, welfare services, merchandising, transportation, etc.) expanded the non-Eskimo population of the study area and particularly Nome, and created a self-propagating human services bureaucracy for all of the study area (except the Yukon Delta which is administered from Bethel) -- a bureaucracy which has persisted up until the present day.

(3) The tendency of post-contact Eskimos to abandon, at least in part, subsistence-based or subsistence-prioritized settlement patterns in favor of more centralized, sedentary, and populous communities around a trading post, church, and/or school was magnified by the relative abundance of goods, services, and wage employment in Nome. Whereas in the past centralization of Eskimo populations had occurred in areas also favorable to subsistence activities making a functional subsistence/cash economy possible, the seasonal or permanent location of large numbers of primarily Inupiat (and lesser numbers of Mainland or Siberian Yuit) in Nome was generally not favorable to subsistence thereby encouraging increased dependency on non-Eskimo commodities and services -- this effect, to a lesser degree, influenced the residents of rural communities in close proximity to Nome. After the establishment of Nome it usurped Hotham Inlet/Kotzebue's role in trading and became the major trade center for Eskimos from all over (Harrison, 1905).

(4) With the exception of Saint Michael, no town in the North was a "white" town; and when the first teachers and missionaries came to Unalakleet, Golovin, and Wales, they came as individuals taking up residence in an Eskimo town.  
(Ray, 1975a, p. 187)

This statement has great sociocultural significance since the Eskimo residents of "white" miners' towns such as Nome and Council City



were then in the position of residing in communities in which the behavioral norms, values, means of social control, social institutions, and economic patterns were non-Eskimo in nature. In these social situations sociocultural differences were pronounced and the Eskimo populations were, to some degree, both intentionally and non-intentionally segregated (e.g. education and housing -- King Island village in Nome); economically and politically dominated by whites who ran these towns; and generally were considered as a group to be second-class citizens because of their cultural differences (e.g. they did not have the right to vote until 1912 and failed to participate in this right in large numbers even up to the present time due to educational factors, isolation, and formal political naivete' or disinterest).

- (5) The makeup of the non-Eskimo population of the study area and some of the Eskimos drawn to Nome was primarily influenced by mineral exploration activities, as it was mining that brought the first non-Eskimo population to Nome and the potential for mineral production and secondary indirect support activities (e.g. retail businesses, transportation, governmental services, etc.) that have provided a major impetus for a core non-Eskimo and a portion of the Eskimo population to remain in this area. A large proportion of this population, then, is composed of individuals who choose to function in the context of a "boom-bust" sociocultural setting.

As has been noted for "boom-bust" developments in other areas (Baring-Gould and Bennett, 1976 ), populations 'attracted to such socioeconomic settings tend to often be unprepared psychologically or economically to survive "bust" cycles therefore requiring extensive public assistance and often have job skills that are unmarketable during economic lulls. More difficult to quantify but certainly a social reality are other features of "boom"-oriented individuals such as their desire for adventure; their willingness to involve themselves in high-risk ventures; their strong orientation towards individualism as opposed to social cooperation; their intense valuation of high profit in relationship to low investment of time and/or capital; and their tendency to be dissatisfied with more conventional lifestyles. These characteristics of early mining town populations in the study area have been noted by numerous historians (Harrison, 1905; Blake, 1900; Jenness, 1962; Carlson, 1947a and 1947b; Ray, 1975a, and Burch, 1975). Harrison (1905) notes that Nome was a particularly difficult community to adapt to during individual or collective "busts" because of its relatively harsh environmental requirements and high cost of living -- as old "sourdoughs" said, "even God leaves Nome on the last boat." As will be discussed in Chapter V these characteristics have significant relevancy for a portion of the population of present day Nome and adjacent non-Eskimo communities, although this certainly does not describe the makeup of the entirety of this

populati on.

- (6) Although alcohol was introduced prior to the period of mineral exploration, its impact became greater during and subsequent to the period of intensive mining activity within the study area. Whereas access to alcoholic beverages was more or less sporadic prior to mining, new basically non-Native communities formed during this time had breweries and establishments which sold liquor. The men at the Omilak silver mine in Golovin Bay brought a still for Eskimo use in 1883 and it is reported that Wales' still brought about the worst winter for drunkenness, disorderly conduct, and bloodshed in 1897 (Ray, 1975a, p. 193). In November of 1890 Nome had twenty saloons, four wholesale liquor stores, and one brewery and liquor, was relatively expensive (wine cost \$3.00/bottle, champagne cost \$7.50/bottle, and whiskey cost \$12.00/gallon or \$30.00/case) (Carlson, 1947b, pp. 240-241). Council City had eleven saloons during the 1903-04 year, Solomon had saloons, Teller had saloons, and along all principle trails there were roadhouses at frequent intervals all providing alcohol for sale (Harrison, 1905, pp. 157-158). The continuous availability of alcohol affected the more sporadic drinking patterns of Eskimo people, it provided settling whites continuous public availability of commercially-produced alcohol, but for both populations the use of commercial alcoholic beverages required cash or its equivalency (e.g. ivory carvings). The impact of excessive

alcohol consumption on subsistence pursuits and intracommunity social harmony has already been addressed and continues to be apparently nonadaptive to populations within the study area today.

- (7) Mining settlements and activities provided considerable stimulus for Eskimo economic change, as commercial commodities requiring cash or trade equivalents were available in much greater quantity, diversity, and frequency. In addition, despite the negligible direct involvement of Eskimo people in mining activities, their indirect involvement (e.g. through acting as transporters, guides, longshoremen, etc.) resulted in the intensification of the concepts of wage labor; the use of a fixed standard for exchange (i.e. currency); the concept of labor being worth a certain amount of cash; the concept of deferred economic gratification (i.e. working for a wage to be paid in the future or saving money earned for some commodity to be purchased at a future point of time); the concept of working on a time schedule having virtually nothing to do with the more natural (to the Eskimo) daily, seasonal, and annual cycle of subsistence activities; and, in general, a progressively intensifying loss of economic self-sufficiency and more traditional patterns of economic exchange between individuals and groups within the same community.
  
- (8) Mineral explorations, through the process of the formation of non-Eskimo communities with large populations, brought about the first

exposure of Eskimos to American and European cultures in a more holistic configuration or context -- previous exposures has involved a view of isolated segments of these cultures out of their functional whole. Those Eskimo individuals and groups that came into contact with these communities were forced to acquire an extensive and intensive knowledge of Euroamerican sociocultural patterns, whereas white residents of these communities had few requirements for learning much about Eskimo sociocultural patterns with the possible exception of learning some aspects of their successful means of adapting to the natural environment. This was, then, a case of primarily unidirectional acculturation. Even today Eskimo residents of the study area have a much greater knowledge of Euroamerican sociocultural systems than white residents, as a whole, have of surviving Eskimo sociocultural systems -- a phenomena suggesting the often erroneous conclusion that Eskimo people in towns and, to a lesser degree, villages have already become quite thoroughly acculturated.

The historical analysis of mineral exploration of the past, then, suggests numerous impact implications for a parallel development -- namely OCS gas and oil development -- for the future.

## The Development of Commercial Fisheries

The historical development of commercial fisheries in the study area has its origins in the aboriginal concept that food or subsistence items could be traded between groups to gain resources not readily available or possibly indigenous to a specific group's territory. The knowledge that this occurred is derived from precontact (i.e. second-hand) documentation, early contact documentation, archaeological data, cultural continuity to the present day, and a general understanding of hunter/fisher/gatherer economic systems. The transfer of this concept to the trading patterns established between Inupiat and Yuit peoples and early explorers, traders, whalers, etc. was not difficult to achieve since these European and American newcomers certainly had trade goods not indigenous to the territories through which they were traveling and probably found fish a more palatable fresh protein food source than sea mammal meat or other resources available in the area. As with other kinds of trade between Eskimos and Euroamericans, the balance of trade seemed to weigh in favor of the Euroamericans as they perceived it and in the light of contemporary economic facts. It certainly can not be definitely stated, however, that the Inupiat or Yuit traders perceived it as inequitable at that point in time.

For only four knives, made from an old iron hoop,  
Captain Cook was able to purchase almost four  
hundred pounds of fresh fish.

(Ray, 1975a, p. 42)

The application of these trading patterns from fish for knives to fish for cash, however, could not logically precede the availability of a market in which cash could be used to purchase goods not locally accessible -- hence the existence of St. Michael and the development of Nome at the turn of the century provided centers or markets in which experience with the use of cash for purchase and in payment for subsistence goods and/or Eskimo services could be gained. Other economic rules inherent in a cash economy -- namely the concepts of credit and indebtedness, a comprehension of the value of money as a standard *vis-a-vis* the value of subsistence items, services or labor, and commercial goods, and the idea of "saving" money for a future investment -- were in part culturally foreign to Eskimo economic systems and have not been successfully internalized up to the present time, setting up a socioeconomic condition in which Inupiat and Yuit peoples could be and were economically exploited. The relevancy of these ideas to the development of commercial fisheries in the study area will be explored.

Russians were the first Euroamericans to undertake commercial fishing activities in Alaskan waters in 1785 operating off Kodiak Island. However, commercial fisheries, utilizing salting and drying as preservation techniques, had a limited market until the introduction of canning in 1864 which revolutionized primarily the salmon fisheries in Alaska (Hewes, 1947). For the study area, species of historic importance for commercial fisheries were salmon and herring, although some interest

was expressed in developing a cod-liver oil industry in Nome in the early 1900's (Jackson, 1903) -- this latter economic venture never did materialize, however. For purposes of the historical discussion, Norton Sound and the Yukon Delta will be discussed separately due to their basically distinct commercial fishing histories.

The first commercial fisheries in the study area were established in 1909 for herring and in 1917 for salmon when the Arctic Fish Company commenced fishing for salmon in the Golovin area, salting the products and shipping them to the west coast (Hemming, Harrison & Braund, 1978; Warner, 1977; Selkregg, 1976, p. 175). From this time to the present, commercial fishing for salmon in the Golovin area was continuous at fluctuating levels of productivity. Commercial herring fishing in the same location ceased in 1941 and wasn't reestablished until 1963; factors responsible for the commercial decline of herring in Norton Sound have been suggested as including a disruption of the world market (in part because of World War II and herring exportation), a possible reduction of the total number of herring due to over-fishing, no catch reported due to no commercial fishing attempts, changing herring migratory patterns, and/or a natural ecological cyclical fluctuation (Warner, 1977; Hemming, Harrison & Braund, 1978; Kawerak statement at a Herring Fisheries Workshop, Nome, September 1979). Although the commercial fishing of herring was reestablished in the Golovin area in 1963, the intensive fishing activities of primarily the Russians and Japanese depleted



herring stock to the point that commercial fishing was no longer feasible and in 1970 herring fisheries in international waters (at that time outside Alaska's 12-mile limit) was closed by mutual agreement between the Russians and Japanese (Hemming, Harrison & Braund, 1978; Warner, 1977). It should be noted, however, that the early years of commercial fishing in the Golovin Bay area involved people who had originated outside of the region -- primarily Scandinavian fishermen (Braund, personal communication, Oct. 1979). At one point in time during the 1930's Golovin had adequate herring to support three processing plants (Hemming, Harrison & Braund, 1978, p. 61). Although local residents were undoubtedly involved in the actual fishing and aspects of the processing (documented historical data is unclear as to the extent of this involvement), it was apparently non-Native interests that promoted the commercial fishery during the early period. However, when the 1963 herring fishery was reestablished in Golovin Bay, local residents were responsible for a 1.6 metric ton spring catch and subsequent gill net fisheries to meet the sac roe demands were also local in nature. Undoubtedly non-local ideas and methods involving commercial herring fishing were transmitted to local residents, although other aspects of the impact of non-local commercial fishermen are not clear in the historical record. The sequence of commercial salmon fisheries development in the Norton Sound area was less sporadic than that of herring. In 1961 stimulus to the commercial salmon fisheries of the Sound involved the regulatory expansion (by Alaska Dept. of Fish and Game) of the commercial fishing area from Golovin to include the Shaktoo-

lik and Unalakleet subdistricts and the availability of a freezer ship to buy salmon from local fishermen. By 1962 the Norton Bay, Moses Point, and Golovin Bay subdistricts were also opened to commercial fishing and two cannery ships worked the area (Selkregg, 1976, p. 176). The majority of this fishery involved local residents utilizing gill nets from small outboard-powered boats, but the non-local buyers continued to play an important role up to the present time.

The history of commercial fisheries on the Yukon Delta was a much more complicated and sporadic endeavor involving both local Yuit residents and fishing interests from outside the area:

The first commercial fishery on the Yukon River began in 1918 when the Carlisle Packing Company established a floating cannery at Andreafski, now St. Marys. This Company fished primarily in Kwikluak Pass and Kwiguk Slough until 1922 when it switched to areas outside the river mouth. Because of conflicts with subsistence harvests, the fishery was entirely eliminated following the 1924 season and did not resume until 1932 when a highly regulated harvest of king salmon only was allowed. A limited harvest of chum and silver salmon was permitted in 1952, 1953, 1954, and 1956.

(Selkregg, 1976, p. 231)

The above quotation outlines the main patterns of earlier commercial fishing activity on the Yukon. This development, however, involved a series of complicated attempts to assess the viability of the fisheries resource, to assess to what extent commercial fisheries conflicted with subsistence fisheries, and to impose externally derived (federal and later state) regulatory controls on the commercialization of an aboriginal economic acti-

vity (Pennoyer, et al., 1965). Examples of specific regulatory actions that more intensely affected the fishing patterns and general lifestyle of local residents are useful in assessing local impact of commercial fisheries development. The first phase of commercial fishing preceded regulation and was carried on by primarily non-local people. This period was perceived by the U.S. Bureau of Fisheries as depleting salmon resources to the point that subsistence fisheries were in potential danger and as having a negative psychological effect on local residents related to the fact that they were competing for a resource against intensive and highly technological cannery boat operations with what may have been perceived by the Delta Yuit as massive amounts of gear compared to that utilized by local residents (Pennoyer, et al., 1965). During this initial phase there was limited involvement of local residents through the sale of portions of their fish harvest to the canneries. This phase ended in 1924 when all commercial fishing was closed by federal regulation. The second phase, opening in 1931 or 1932 (sources vary), was an attempt to encourage the greater involvement of local residents by regulation limiting the use of the productive fish wheel for commercial fishing to "... Indians and permanent white residents" (Pennoyer, et al., 1965, p. 3). Further steps were taken to ensure local involvement in 1951 by limiting all commercial fishing activities to local Natives and permanent white residents. Regulatory powers shifted from the federal government to the State Department of Fish and Game in 1960, and subsequent regulations required a two-year residency in the area for commercial

fishing on the Yukon. Regulatory trends until approximately 1971 (the end of the "historical period" in this study) included a gradual expansion of commercial fisheries through the mechanism of state regulation (see Table IX). The commercial expansion was encouraged by the state based primarily on the assumption that changing transportation patterns (namely dogs to airplane and, later, to snowmachine) had brought about a decreased need for subsistence fisheries (Alaska Geographic, 1979; Pennoyer, et al., 1965). In addition, the increasing depletion of salmon fisheries elsewhere in the state enhanced the potential of the Yukon and the Kuskokwim for commercial fisheries activities. During this entire period, two additional key factors should be considered: (1) buyers continued to be exclusively non-Yuit until the development of local fisheries cooperatives in the early 1960s and even then non-local buyers have persisted in wielding considerable economic influence through the price paid for fish and, in some cases, systems of fishermen credit to the present day; (2) although the role of salmon as a subsistence (direct) food source has remained central in the lives of Yukon Yuit, the availability of a commercial market in which they were participants played an important part in a gradual shift from a wholly subsistence to combination subsistence/cash economic system.

An analysis of the sociocultural impacts of commercial fisheries on residents of Norton Sound and the Yukon Delta and the responses of the local residents to these impacts are summarized as follows:

TABLE IX

COMMERCIAL SALMON HARVEST, YUKON DELTA, 1918-1971<sup>1</sup>

Year	Number	Year	Number
1918	112,304	1945	19,727
1919	469,790	1946	22,782
1920	214,122	1947	54,026
1921	181,744	1948	33,842
1922	16,825	1949	36,379
1923	13,393	1950	41,808
1924	27,375	1951	47,196
1925	Closed	1952	34,405
1926	Closed	1953	59,273
1927	Closed	1954	59,401
1928	Closed	1955	58,684
1929	Closed	1956	71,478
1930	Closed	1957	63,623
1931	Closed	1958	63,259
1932	4,739	1959	78,632
1933	8,829	1960	67,597
1934	25,365	1961	165,096
1935	7,265	1962	171,842
1936	20,963	1963	122,623
1937	6,226	1964	104,364
1938	13,727	1965	141,886
1939	9,987	1966	183,627
1940	18,053	1967	189,889
1941	29,905	1968	187,204
1942	22,487	1969	298,378
1943	27,650	1970	439,837
1944	14,232	1971	412,395

<sup>1</sup> Adapted from Pennoyer, et al., 1965 and Mclean and Delaney, 1978.

- (1) Because of the nature of commercial fisheries (i.e. an activity that had an aboriginal economic mode?) cultural adaptations to this activity were primarily quantitative rather than qualitative requiring little technological change and the continuity of the concept of utilizing surpluses for obtaining resources or goods not locally available.
- (2) Commercial fisheries provided an early and persistent conflict between commercial and subsistence utilization of the same source.
- (3) Early commercial fisheries provided an additional opportunity for contact between local Inupiat and Yuit peoples and non-local, non-Native peoples (primarily fishermen of Scandinavian origin); the intensity of cross-cultural or interpersonal effects of this contact are not clear from the published historical record.
- (4) Commercial fisheries created an ecological, economic, and social setting that encouraged federal and state government intervention with externally-derived regulatory controls; this intervention was the result of a perceived rather than scientifically-derived assessment of the impact of commercial fisheries and such regulatory intervention has persisted with considerable controversy to the present time.
- (5) Commercial fisheries provided local residents with sporadic cash in-

come through means of traditionally acquired skills; the present day valuation of commercial fishing as a personally satisfying, "traditional," and prestigious occupation (as opposed to other forms of cash labor) is related to this continuity of an aboriginal economic practice.

- (6) The availability of cash through commercial fishing involvement intensified a shift from a wholly subsistence to a subsistence/cash economy and its concomitant economic practices of credit/indebtedness and dependency on non-locally produced goods.
- (7) Commercial fishing provided a socioeconomic setting for fisheries cooperatives modeled more like western than Eskimo sociocultural institutions -- these have persisted to the present day.
- (8) Due to the transportation prerequisites of commercial fishing, new concepts of travel were made available to local residents (i.e. airplane travel and outboard motor-powered boats) decreasing their utilization of dogs and, hence, need for salmon as dogfood.
- (9) Commercial fisheries requires competitive technology for competitive yields; this technology places increasing cash requirements on the local commercial/subsistence fisherman escalating his commitments to a cash economy.

(10) As previously mentioned, the utilization of cash disrupts traditional patterns of reciprocity. The exchange of goods between kinsmen and more formalized trading partners (reciprocity) was noted in "Chapter III and elsewhere in this chapter. Cash is not subject to the same economic rules in terms of reciprocal obligations.

(11) Because commercial fisheries historically have become increasingly critical to the economy of resident Inupiat and Yuit populations in Norton Sound and the Yukon Delta, any disruption to the fisheries would destroy the major source of cash income available to local residents of these areas today.

### World War II

Following the "gold rush" at the turn of the century there was negligible "outside" interest in Alaska on a large-scale until World War II when the strategic location of Alaska vis-a-vis Japan and Russia became apparent. The Japanese attack on Dutch Harbor, the occupations of Attu and Kiska in the Aleutians, and reconnaissance activities on St. Lawrence Island intensified military activities in Alaska ultimately leading to important, and in some respects, long-lasting impacts on the study area.



The sequence of events relevant to these purposes occurred both within and without the study area. Military buildup doubled the state's population after 1941 and, although the Aleutians and urban areas such as Anchorage and Fairbanks were the centers for this major population shift, other areas that were designated to provide supportative defense services also were impacted by the in-migration of substantial numbers of military personnel. Within the study area the communities of Bethel, Unalakleet, and Nome were most intensely affected with Nome, in particular, playing a significant role as the point of departure for lend-lease airplanes being flown from Ladd Field in Fairbanks to Nome and then on to Anadyr in Russian by Russian pilots. "Operation Bingo", the first massive military airlift in history, resulted from an expected Japanese invasion of Nome in 1942. Within less than 24 hours over 2,272 men, 20 anti aircraft guns, and tons of equipment were moved from Anchorage to Nome using military and appropriated private aircraft. This airlift continued for several weeks bringing 900,000 pounds of men and equipment to Nome (Garfield, 1969, pp.118-120). Apparently some local residents went inland to mining camps in the interior of Seward Peninsula during this time. The attack never materialized, but Nome's strategic military importance for the lend-lease effort was established. Other communities like Bethel provided communication links and, in some cases, medical facilities. In many communities the period of the war stimulated the construction of airfields and road systems that would remain to later provide a stimulus for increasing the intensity of

rural village air travel. Nome was the location of a large airfield, medical facility, and a substantial residential facility for support primarily of the lend-lease endeavor and it later became the headquarters of the Second Scout Battalion (Marston, 1969; Jenness, 1962). Because of the increased trade and cash employment opportunities in Nome and Bethel (and, to a lesser degree, in other secondary support communities), there was a considerable migration of primarily village males to the sites of military activity (Burch, 1975). This pattern continued between the years of 1941-1945. Some rural Inupiat and Yuit men served on active duty, but their number was not substantial due to the high incidence of active tuberculosis in rural areas, geographic isolation, linguistic barriers, and military ethnic biases. Following the war the population of Nome leveled off at 1,500 people, No population figure for Nome during the war was available in the literature, but a 1930 census figure of 1,213 is estimated to have increased at a 2-3%/year rate after 1930 therefore suggesting that the 1945-47 population of 1,500 was a decline (not to mention the absence of the troops) (Alaska Consultants, 1968).

World War II provided the rationale for the development of both an Alaska Territorial Guard and, more specifically for the study area, the Eskimo Scouts along the western and northern coast of Alaska from the Alaskan Peninsula to the communities of Barrow and Kaktovik. The Eskimo Scouts or "Tundra Army" was the realization of an idea promoted and

implemented by Governor Ernest Gruening and Major Muktuk Marston. This organization was initially formed in the spring of 1942 and included, within the study area, the communities of Bluff, Diomedes, Elim, Gambell, Golovin, Haycock, Igloo, King Island, Koyuk, Nome, St. Michael, Savoonga, Shaktoolik, Shishmaref, Sinuk, Solomon, Stebbins, Teller, Teller Mission (now Brevig Mission), Unalakleet, Wales, White Mountain, Alakanuk, Bethel, Hamilton, Kwiguk, Mountain Village, and Pastolik (Marston, 1969). The formation of the Eskimo Scout battalions was, ostensibly, to provide a militarily-organized, guerilla-like force composed of local residents whose functions were to include coastal surveillance, the communication to defense centers of any observed enemy activities, and the initial -- and for practical purposes the only -- defense of residents living in small communities along the Alaskan coast. Weapons, ammunition, and limited training were provided to achieve these ends. The Alaska Territorial Guard was disbanded after the war in 1947 but was reestablished to include the two Scout Battalions in the following year (Marston, 1969, pp. 214-215).

The events within the study area precipitated by World War II had some far-reaching impacts on the resident population and their sociocultural systems. These will be analyzed and summarized below:

(1) World War II in general increased U.S. public awareness of Alaska and in specific provided an opportunity for the first-hand contact between large numbers of "outside" military personnel and local

residents of the study area. The extent of this knowledge has probably influenced a substantial body of public opinion of and political action toward contemporary issues of the area (i.e. subsistence, ANCSA, d(2), OCS, etc.).

- (2) To a limited degree the Inupiat and Yuit peoples of the study area were made aware of world politics through World War II activities and the anti-Japanese indoctrination of the Eskimo Scout Battalion organizers, but it is doubtful that many were able to fully comprehend the implications of politics from a world perspective based on this event alone.
- (3) The familiarization of local residents with the "outside" world was, in general, broadened and revived by both contacts with non-local people within the study area and, for a limited number of males, by contacts with the "outside" world provided directly through active military service.
- (4) Due to military-related construction and support activities, opportunities for wage employment and the trade of traditional goods increased Inupiat and Yuit participation in the cash economy. These activities also resulted in the acquisition of job skills for which there was limited demand locally after the war.

- (5) Employment opportunities in larger communities within the study area brought about an intensification of trends towards the centralization of rural populations in quasi-urban centers thereby creating population densities in these centers too great for effective subsistence practices and decreasing the necessary manpower available for subsistence pursuits in smaller villages.
  
- (6) Other demographic shifts included a temporarily large number of transient males (whereas the total number of military personnel stationed in Nome is not recorded in available published materials, local sources estimate approximately 3,000 -- informal discussion, Major Robert Bean, Nome, October 1979) and the potential impact of this population on the male/female demographic balance and local male/female interrelationships; the intensification of the process of local female outmarriage and resultant outmigration; and the presence of military hospital facilities decreased Inupiat and Yuit infant mortality and increased adult longevity (Burch, 1975) having far-reaching sociocultural implications.
  
- (7) Thus military operations in and around Nome placed the grazing grounds of 5,000 reindeer out of bounds to their Eskimo owners and indirectly sentenced to destruction the entire herd; . . . .  
 (Jenness, 1962, p. 40)
  
- No further reference to this is made in the literature.

- (8) The construction of airfields in conjunction with World War II intensified and accelerated the reliance of residents of the study area on air transportation.
- (9) The influx of a large number of non-Natives embracing discriminatory values towards non-Caucasians and a clearly delineated policy of racial discrimination operative within the administration of the U.S. Army (i.e. Native women were not allowed in U.S.O. Clubs, blacks and Indians were placed in segregated units, etc.) combined with local non-Native economic, political, educational, and social discrimination to compound Inupiat and Yuit negative self-identity, lack of confidence in dealing with whites, distrust of whites, and feelings of inadequacy in dealing with an ever-expanding world and its demands,
- (10) The distribution of firearms and ammunition to Eskimo Scout enrollees vastly expanded access to modern, non-traditional weaponry that could be used for subsistence pursuits. The implications of this for increasing the caliber of firearms, the distribution of firearms to village hunters irregardless of their capacity for purchasing them, and the efficiency of hunting some kinds of animals (e.g. the loss of walrus is greater with the use of rifles although the overall take per crew or per hunter may be greater) are obvious. These firearms undoubtedly enticed men to join the Eskimo Scouts,

although Marston perceived them as doing so exclusively for reasons of patriotism or the prestige of belonging to a white man's organization (Marston, 1969).

(11) The requirements for speaking and reading English in later National Guard activities placed additional acculturation requirements on rural Inupiat and Yuit of the study area. In addition, post-war training outside of Alaska and encampments at Alaska military posts increased the opportunities for sociocultural change resulting from direct contacts with the non-village world.

(12) Initial Eskimo Scout leadership was placed primarily in the hands of non-Native village residents such as teachers, miners, or traders (Marston, 1969). Later authority was, however, often given to younger men or older individuals who were not leaders in a more traditional sense, therefore probably bringing about internal conflicts in leadership roles. This trend has, to some degree, continued to the present time.

(13) Membership in the National Guard has provided a relatively stable (although not abundant) source of cash within the village setting.

(14) World War II and participation in the Eskimo Scouts provided local Inupiat and Yuit people with an expanded awareness of world affairs

and a familiarity with a non-traditional authoritarian and militaristic organization that set the stage for their more active involvement in the Korean and Vietnam conflicts as well as the peacetime army. This sequence of events has tended to increase out-migration of both males and females and diffused, to some extent, social bonds from family and community to a much larger socio-cultural grouping.

The Alaska Native Claims Settlement Act:  
the Restructuring of Economic  
and Political Systems

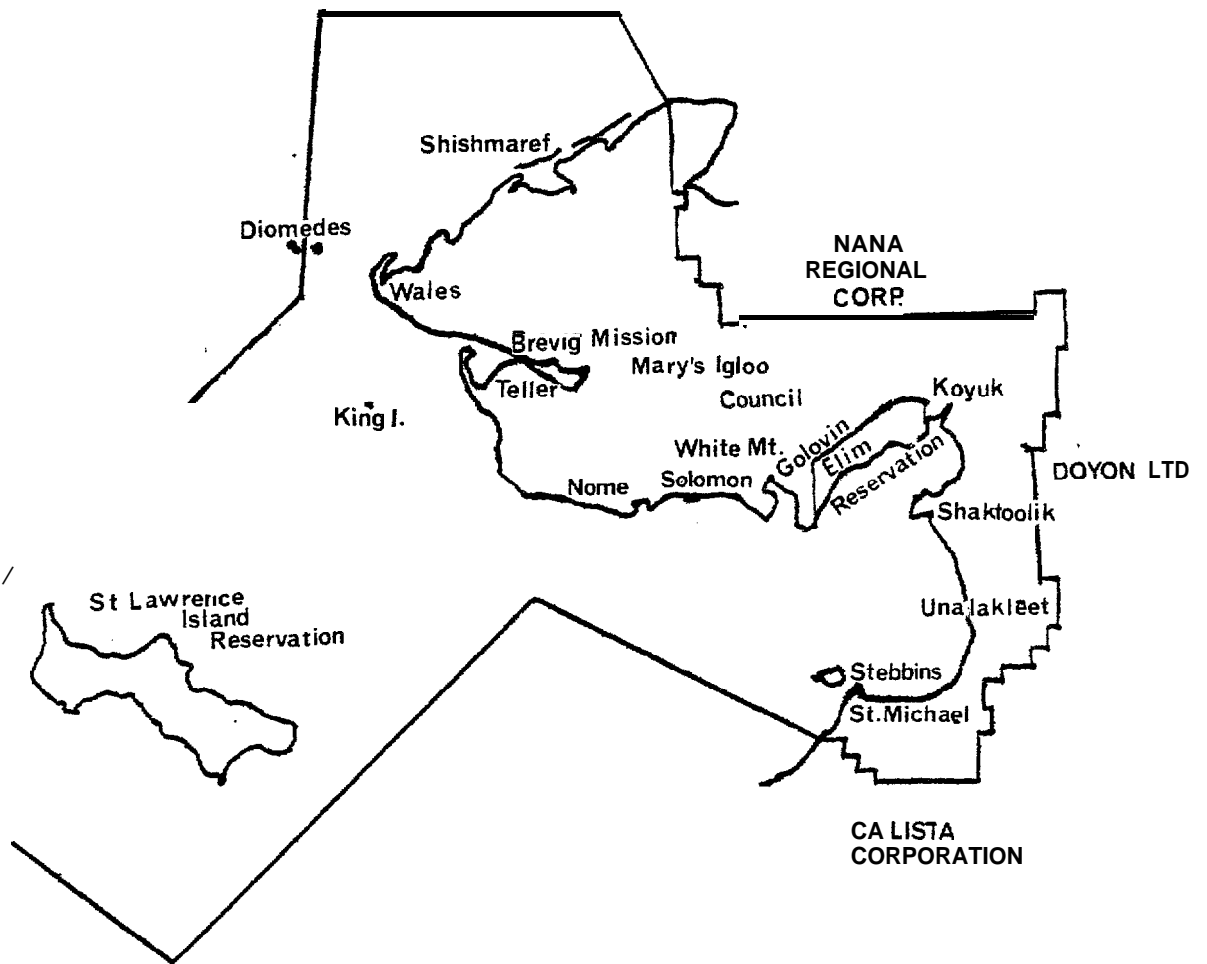
The passage of the Alaska Native Claims Settlement Act of December 18, 1971 brought to enrolled individuals within the study area membership in one of two regional corporations and, for most, one village corporation with the exception of those individuals living outside of Alaska who opted to enroll in the thirteenth regional corporation. Other general provisions of ANCSA are omitted here as they have been considered in other OCS studies and only details relevant to the study area will be discussed in this document.

The Bering Straits Native Corporation, with corporate offices in Nome, includes the villages and village corporations of Shishmaref, Inalik (Diomedes), Wales, King Island, Brevig Mission, Teller, Marys Igloo,



Sitnasuak (Nome), Council, White Mountain, Golovin, Koyuk, Shaktoolik, Unalakleet, Stebbins, and St. Michael (see Map IV) (Arnold, 1976). Elim, Gambell, and Savoonga, former reserves, opted to take fee simple title to both surface and subsurface land under Section 19 of the act and therefore were not actually part of the Bering Straits Native Corporation, but they have functionally continued to receive services and technical assistance from regional bodies. The village of Solomon was initially ruled ineligible, but this ruling was reversed and Solomon was found eligible in September of 1979 after a lengthy and complex appeal procedure. In accordance with ANCSA's stipulations, the regional corporations were delineated on the basis of "common heritage" and "common interests" (Price, 1975a) including factors of language, ecological adaptations, and traditional social bonds (Federal Field Committee for Development Planning in Alaska, 1967; Arnold, 1976). The Bering Straits Native Corporation boundaries included the southern Norton Sound communities of Stebbins, St. Michael, and Unalakleet that were (and are today), Yupik-speaking with closer affiliations to the populations of the Yukon Delta than to Nome or the majority Inupiat constituency of the Bering Straits Region. Of these three communities only Unalakleet has residents that represent the early historic penetration and residence of Inupiat people in the Norton Sound area -- a few of these individuals are, in fact, multilingual speaking two dialects of Inupiaq and a single dialect of Yupik in addition to some English (personal communication, Larry Kaplan, Alaska Native Language Center,

BERING STRAITS NATIVE CORPORATION <sup>1</sup>



MAP III

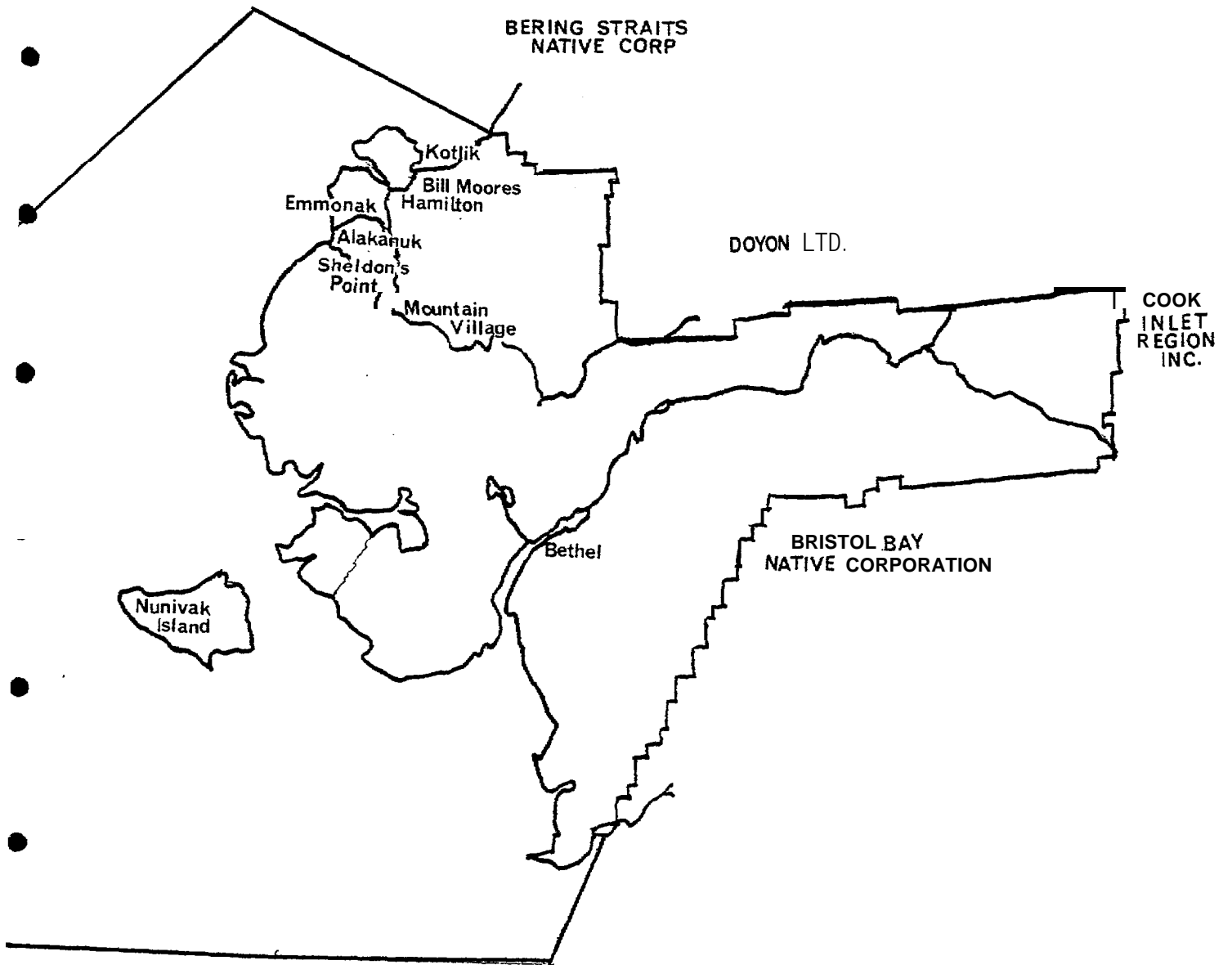
<sup>1</sup> Adapted from Arnold, 1976.

1979). In any event, these communities, like many others in the state, did not quite fit into the Bering Straits Region as delineated by ANCSA, and contemporary economic, political, and social consequences have reflected this fact (as will be discussed in greater depth in Chapter V). In addition, St. Lawrence Island traditionally -- and even in the first half of this century -- had ties primarily to the Chukchi Peninsula mainland rather than to Alaska in general or the Seward Peninsula/Norton Sound area in specific. This factor probably had some influence on their decision to take title to the island and maintain a sociopolitical identity apart from the Bering Straits Region. Interestingly, Elim represents a "pocket" of Yupik-speaking people with sociocultural ties to the south surrounded by Inupiat -- they also opted for reserve status under ANCSA. By the time Arnold had compiled the data for his 1976 publication, Bering Straits Native Corporation had more than 6,900 stockholders with approximately one-half residing within the regional boundaries -- Sitnasuak (Nome) Native Corporation had 2,060 of this regional total and was, by far, the largest of the village corporations (p. 176). All of the Bering Straits regional villages including Savoonga, Gambell, and Elim are in the study area,

The villages of the Yukon Delta that are part of this study area were included in the Calista Regional Corporation with the passage of ANCSA. These villages -- Kotlik, Emmonak, Alakanuk, Sheldon's Point, Mountain Village (as a subregional service center), St. Marys (as a subregional

transportation center), and Bethel (principal regional center) -- are noted on Map V in the context of the entirety of the Calista Region. As can be seen these villages compose only one portion of the extensive region that includes both the Yukon and Kuskokwim river deltas and lower river (primarily Yuit-inhabited) drainages. As previously mentioned, the consideration of only the villages bordering the northern portions of the Yukon Delta for this study is arbitrary resulting from geographic proximity to the Norton Basin lease sale area and, in reality, these villages function within a regional body, the majority of which is outside the study area. Arnold (1976) describes a regional enrollment of almost 13,500 stockholders for Calista with a regional population of 13,000 with 56 villages (p. 182). Bethel was the primary regional community at the time of ANCSA's passage, but the main Calista office was located in Anchorage. None of the village corporations within the study area were denied eligibility and included the following profit organization (these are listed separately from the names of contemporary villages since many have Yupik names and also because a couple of other Delta communities are included that are not actually on the coast nor occupied by many people on a year-round basis): Kotlik Yupik Corporation, Alakanuk Native Corporation, Emmonak Corporation, Swan Lake Corporation (Sheldon's Point), Kongni Ilnomiut Yuita Corporation (Bill Moore's Slough), Nunapiglluraq Corporation (Hamilton), Chuloonawick Corporation, Azachorok, Inc. (Mountain Village), and St. Marys Native Corporation (the communities considered in this study),

CA LISTA NATIVE CORPORATION<sup>1</sup>



MAP IV

<sup>1</sup> Adapted from Arnold, 1976.

The Calista communities of concern in this study had (and continue to have) sociocultural ties with the Stebbins and St. Michael area of the Bering Straits Region. They did, however, recognize a sociocultural identity similar to but distinct from the residents of the Kuskokwim.

An analyses of ANCSA impacts on the study area are much more relevantly considered in Chapter V when the contemporary sociocultural institutions and their interrelationships -- the sociocultural systems -- are analyzed in relationship to OCS activities. Perhaps it is sufficient to say in a historical context that ANCSA brought about a restructuring of economic and political systems that had, and continues to have, a major impact on the interrelationships between Natives and the large number of non-Natives (primarily in Nome) of the Bering Straits Region. In addition, for both Bering Straits and Calista there was a significant impact on the interrelationships between the newly created, corporate, regional bodies and the communities of the region that were rather abruptly mandated by legislation to design and implement institutions and processes of interaction with one another that were neither clearly understood by the vast majority of "stockholders" nor for the most part, modeled after more traditional social institutions. The cultural, linguistic, and politicoeconomic diversity of particularly the Bering Straits Region only added additional complexity to this situation. Even at the community level new kinds of leadership emerged that often diverged from more traditional leadership patterns.

Traditional leaders were generally older members of a community whose powers derived from individual abilities in traditional activities and community respect for these abilities. Leadership of the newly formed corporations has required the ability to speak English, formal education, and knowledge on non-Native social, economic, and political systems. These were, and to a certain extent still are, skills and personal abilities not necessarily highly valued or embraced by all of the more traditional Native residents of the study area. The balance of political and economic power between Native and non-Native residents of the regions and in the State as a whole was subject to change with the passage of ANCSA, although the realization of this potential involves questions to be examined in Chapter V for the study area. Lastly, from the passage and implementation of ANCSA there emerged not only the profit-oriented regional corporate bodies but also the non-profit, human service-oriented regional bodies very viable in the contemporary sociocultural scene. These non-profit entities may be heavily influenced by potential OCS development and, through their political role, may significantly influence this potential development of OCS gas and oil resources in the Bering-Norton lease sale area. These non-profits include Kawerak, Inc. and Norton Sound Health Corporation in the Bering Straits Region and Nunam Kitlutsisti, Yupiktak Bista, Yukon-Kuskokwim Health Corporation, and A.V.C.P. (Association of Village Council Presidents) in the Calista Region. The role of these institutions, the regional corporations, and other ANCSA-related

sociocultural entities or processes will be discussed in the context of the contemporary sociocultural systems analysis to follow.





## v. CONTEMPORARY SOCIOCULTURAL SYSTEMS

### Sea and Land: Their Implications

This subject is presented at the beginning of the contemporary socio-cultural systems chapter as a central focus for the following reasons:

(1) the cultures of the Native groups composing the majority population of the study area are prehistorically, historically, and contemporarily organized primarily around the relationship of these people to their sea and land environments; (2) economic and political power within the study area today, as in the past, are directly related to access to and control of the sea and land and their respective resources; and (3) proposed OCS development involves direct impact upon the sea environment and land areas necessary for access to the sea and for on-shore facilities as well as indirect impacts upon human populations whose present patterns of access to and utilization of these sea and land areas and their resources will potentially be affected.

#### CULTURAL VALUES

As previous discussions in Chapters III and IV ("Traditional Eskimo Adaptations" and "The Historical Period: Responses to Change" respectively) have indicated, the intense ties of the Inupiat and Yuit to the sea and land and their respective resources evolved from centuries of

successful sociocultural adaptations. These interrelationships between people, the sea, and the land survived, relatively intact, nearly a century and a half of contact with Euroamerican culture. The contemporary values regarding sea and land as held by Inupiat and Yuit residents of the study area will be explored and compared to those of both resident and non-resident non-Native populations.

The nature of the relationship of human groups that primarily hunt, fish, and gather to their natural environment tends to differ qualitatively from that more typical of agriculturalists and pastoralists and, even more so, from that of residents of industrial societies (Nelson, 1978; Worl, 1978; Harris, 1975; Laughlin, 1968). Concepts of exclusive territoriality, fixed and restrictive boundaries, individual or group ownership of sea and land areas and resources, and the accumulation of these resources ' to wield economic and political power over individuals and/or groups are ideas basically alien to human populations that live from the sea and land as did the ancestors of today's Inupiat and Yuit residents of the study area. To a considerable degree these concepts have remained foreign today despite contemporary economic and political pressures for Native people to become "owners" of territory and/or resources. Native people of this area today, as in the past, designate themselves by group names with the suffix "-miut" meaning "people of" added to a word stem that designates a specific geographic area or physiographic feature of an area (Ray, 1967; Ray, 1975b; Oswalt, 1967; and many other sources). For example, Ukiuvungmiut (the

Iñupiat term used by King Islanders for themselves) means "the people of the winter place" or "place where you spend the winter" referring to their traditional occupation of Ukiuvok (i.e., King Island) during the winter months (Ellanna, fieldwork). Hughes (1960 and 1974) suggests that even the patrilineal "clans" of the St. Lawrence Island people were named after and focussed on a geographic location rather than a personal or animal totem more typical of many of the world's people. Iñupiat and Yuit residents have, for the most part, continued to perceive of themselves as living with the land and sea or from the land and sea rather than being "owners of" land, sea, and resources (Nelson, 1978; informal discussions throughout the study area, 1978-1979). This theme can be expanded to include the views that people should live in harmony with their natural environment; that they should have respect for their environment and its plant, and animal resources; and that it is only through a harmonious coexistence with their environment that they can, in fact, survive since to offend or violate their environment would result minimally in hard times and maximally in potential death and disaster to human populations (Ellanna, fieldwork, 1968-1979; Hughes, 1974; Worl Associates, 1978 and Worl, 1978; Nelson, 1969; others). In a very real sense the sea, the land, and animal and plant resources are perceived of, by Iñupiat and Yuit, as living beings with spirits, feelings, emotions, and a cognizance of the natural order of life usually attributed only to humans by people in industrial societies,

The concept of "home" and the emotional ties implicit in this term include, for the majority of Inupiat and Yuit residents of the study area, not only a dwelling or a community of residence but also a complex of geographic areas utilized by these residents for camping, fishing, hunting, berry picking, egg gathering, and many other activities. These areas have not only geographic expanse and identity but "historical" and personal depth in the sense that there is, today, a high level of awareness through oral tradition of ancestral connections with the sea and land and their respective resources (Burch, 1975).

Despite the minimal presence of western concepts of rigid boundaries; exclusive ownership of sea, land, and resources; and individual (as opposed to group) possession of "pieces" of the natural environment, the Inupiat and Yuit peoples have continued to recognize traditional patterns of land and resource utilization by specific families, as in the case of St. Lawrence Island, and/or, more usually, larger groupings such as each group that shares a common stem name with a "-miut" suffix. This has been, in part, reflected in selection of regional and village withdrawal areas under ANCSA or individual Native allotments, as allotments are often on or near ancestral group lands. On the other hand, it is important to note that it was not (and is not) uncommon for groups to extend privileges of unresisted resource utilization, passage, and seasonal occupancy to neighboring groups and extended kin requiring access to resources in other than a "home" territory (Eisler, 1978; Ray, 1975b; informal discussions, 1978-79). In other words, concepts of land tenure and polity are undoubtedly a part of the traditional value system of Native residents of the study area

(Ray, 1967) , but the nature of these concepts differ qualitatively and quantitatively from those of industrial societies.

As has been previously discussed, the history of non-Native interest in the study area has involved primarily the extraction for profit of available resources (e.g., baleen, ivory, gold and other minerals, and now oil, natural gas, and thermal energy). The ownership of land and sea and restrictive access to their resources or wage labor extracting these resources have continuously and historically been a high priority for the majority of non-Native residents of the area. Other non-Native residents have come to the area with an interest in working at business and/or service professions that support both Native and non-Native populations of the study area. To many of the present non-Native residents of the area, however, the sea and land are important sources of both recreation, alternative food sources, aesthetic value, and, to some, adventure as well as a source of resource wealth. This fact may prove to result in conflicting interests that will require, at some point, resolution and the establishment of priorities. In general, the majority of transient non-Natives perceive of the area as a "land of opportunity", such opportunity being some form of personal wealth and/or experience, with negligible interest in long-term effects of such activities on the area or its permanent population (informal discussions, 1978-1979; Alaska Consultants, 1968; Baring-Gould and Bennett, 1976; historical references already cited). The values relating to the sea and land are substantially different from

● those of the majority of both resident Native and non-Native populations.

● It should be unequivocally stated that the profiles of cultural values relating to the sea and land described above have definite individual exceptions irrespective of ethnic identity or cultural affiliation. The

● major distinctions in values relate closely to the entirety of different cultural patterns represented on one hand by Inupiat and Yuit peoples and on the other by individuals who have come to the area representing very different cultural orientations. In reality, however, these values, to

e some degree, are represented as a continuum rather than as a dichotomy between cultures, and at the individual level certainly involve innumerable exceptions not associated with ethnic differences. In part the mandates of ANCSA and participation in a cash economy have required the re-

\* latively new Native corporations to view land, sea, and resources with an increasingly more intense profit-making orientation and motivation that already have established the basis for potential value conflict between corporation management and their village-based shareholder priorities

● (informal discussions, 1978-1979; Davis, 1979b).

#### ● UTILIZATION PATTERNS

● In a following section entitled "Subsistence Patterns", a detailed analysis of primarily Inupiat and Yuit sea and land utilization patterns by major ecological groupings or subregions will be presented. In this

section a general overview of contemporary sea and land utilization patterns will be presented from a perspective not limited to subsistence concerns.

The traditional patterns of Native sea and land utilization have, for the most part, continued into the present with an emphasis on the location of residences and temporary campsites along the entirety of coastal and insular Bering Strait and Norton Sound, in addition to riverine valleys and inland lakes. Marine resources (or resources migrating from the sea such as salmon) are still the major factor in the selection of both permanent and seasonal Native-occupied sites. Although in all parts of the study area the total number of communities has declined from the nineteenth century (Ray, 1964 and 1975b) and the size and permanency of contemporary communities have increased (with some exceptions such as Wales which has exhibited a substantial population decline--Ellanna and Roche, 1976), the vast majority of the Native communities are still located on the coast and/or along rivers. Seasonal activities for residents of these communities require the movement of people to strategically located subsistence camps extending primarily along coastal areas of both the mainland and islands, up and down fish-bearing streams and rivers, and, to a lesser extent, to inland lake fishing, hunting, and vegetation-producing sites. Mobility to these seasonal sites is made possible in the spring, summer, and fall primarily by boat and secondarily by vehicle and, in winter months, by snowmachine and dog team.



Within the study area the majority of the non-Native population resides in Nome. Although Nome's coastal location is strategic in its role as a transportation and service center for most of the study area (with St. Marys and Bethel servicing much of the Yukon Delta), its formation at this particular location was intimately associated with the discovery of gold at the turn of the century. Because of shore ice conditions and shallow water depth, Nome proper is not a particularly good subsistence or port site. Because of the existing facilities in Nome, however, land within and adjacent to the townsite is in demand and rapidly increasing in value.

Most inland sites in private ownership (i.e., not including Native withdrawal areas, national monuments, or State selections) are, with the exception of Native allotment campsites, oriented like Nome around primarily non-Native owned mineral exploration and/or production sites. Some of these areas are located on the road system out of Nome (i.e. Teller road, the Kougarok road, and the Council road) and others are accessible only by aircraft, boat, or tracked vehicles.

Recent federal claims to large areas of land within the study area under provisions of the Antiquities Act and to offshore areas of the outer-continental shelf by both the state and federal governments have been the subject of considerable local concern by both Native and non-Native residents of the area. The focus of these concerns is not so much the issue

of governmental ownership but rather the issue of what is perceived to be restrictive, regulatory controls over useage of the land, sea, and navigable inland waterways by both federal and state regulatory agencies (informal discussions, 1978-1979).

#### POTENTIAL LAND OWNERSHIP AND CONTROL

The purpose of this section is to provide a concise outline of potential and existing patterns of land ownership and control within the study area. This information is relevant to OCS impact because: (1) there will be requirements for land to be used for onshore facilities and access to such facilities in conjunction with OCS activities; (2) decision and public opinion regarding OCS activity will be influenced by the owners of coastal lands adjacent to or bordering the marine environment to be explored and/or developed for petroleum resources; (3) the majority of Native claimed and owned lands are coastal because of their sociocultural dependency on the resources, and therefore these corporate or individual land "owners" will have a particularly intense vested interest in OCS activities that may impact the maritime environment utilized from their coastally located lands. Since the vast majority of ANCSA lands have not yet been conveyed nor, in some cases, agreed upon, and other federal and state land selections are still unsettled, the data presented here are educated projections but certainly not the final word on this topic.

Due to the status of most potential federal land ownership in the study area (i.e. refuges, wilderness areas, national monuments, etc.) and to the limited amount of privately owned land, it is most likely that industry will find themselves in a situation of having to deal with Native corporation land owners for coastal access. Following is a listing of each village corporation in the study area, its acreage entitlement under ANCSA, and its priorities for land selection. The reader would be advised to refer to the U.S. Geological Survey map "Bering Straits Native Corporation Regional Planning Map" for a visual representation of the verbal description that is to follow. Information for this discussion is not adequately documented in any published sources and has been compiled primarily from discussions with Tom Frank and Richard Atuk of Bering Straits Native Corporation (in the summer and December of 1979); a discussion with John Garrison now of Sitnasuak Native Corporation but previously (following the passage of ANCSA) of Bering Straits Native Corporation (June, 1979); discussions throughout the study period with village corporation stockholders in the majority of the villages of the study area; a discussion with Oscar Kawagley and Nelson Angapak of Calista Corporation (November, 1979 and January, 1980 respectively); and a review of weekly issues of the newspapers The Bering Straights and The Nome Nugget during the study period. This discussion of village land selection will proceed from north to south within the study area:

- (1) Shishmaref: entitlement 115,200 acres; selection extends along the coast of the Chukchi Sea northeast and southwest of Shishmaref, along the shores of Shishmaref Inlet and Arctic Lagoon, and along rivers draining into Shishmaref Inlet; priorities in land selection included subsistence access to marine and riverine resources and coastal control; projected conveyance July 1980.
  
- (2) Wales: entitlement 92,160 acres; selection extends along the coast of the Bering Strait northeast and southwest of and including the entirety of the coastline of Cape Prince of Wales (including the shores of Lopp Lagoon) and a distance inland from the Cape; priorities for selection were access to subsistence areas, coastal control, and a small amount of areas with mineral potential; projected conveyance July 1980.
  
- (3) Inalik (Little Diomedé): entitlement 92,160 acres; selection included all of their home island (Little Diomedé) with some coastal interests to the south and selections at Lost River for minerals; priorities for selection were the island as the present historic, and prehistoric home of Inupiat residents and strategic location for rich and varied sea mammal hunting, mainland coastal access, and minerals; projected conveyance June 1980.

- (4) Brevig Mission: conveyance of 88,354 acres occurred in December, 1979; selection included the coast northwest of the village, the majority of Point Spencer and shoreline adjacent to Port Clarence and Grantley Harbor; selection priorities included primarily coastal access with a secondary interest in minerals and subsistence.
- (5) Teller: entitlement " 15,200 acres; selection included all of the coastline of the area not selected by Brevig Mission bordering coastally (to the south) King Island's mainland withdrawal area and areas inland surrounding Grantley Harbor, Tuksuk Channel, and the western entrance to Imruk Basin (all important subsistence areas for present residents); selection priorities were coastal access, subsistence and minerals; projected conveyance July 1980.
- (6) King Island: entitlement 115,200 acres; selection included all of their prehistoric, historic and recently occupied home island (King Island or Ukiuvok)--now a temporary summer home for many and primary subsistence site with great economic, social, and emotional meanings for King Island residents of Nome; and the mainland coast adjacent to the island from Cape Douglas to Sitnasuak's coastal withdrawal in the vicinity of Cape Rodney; selection priorities included retaining King Island, subsistence, mainland coastal access in proximity to the island as a potential village site for relocation from Nome as well as a base for hunting in the vicinity of the

island with coal deposits a minor concern; projected conveyance June 1980.

(7) Sitnasuak (Nome Village Corporation): entitlement 161,280 acres; selection included coastal and inland river drainage areas from the termination of King Island's withdrawal south and east to the Safety Lagoon area, surrounding the city of Nome and other privately owned third party interests, and along the El Dorado and Flambo river drainages; priorities for selection included a complex of diverse concerns including mineral potential, coastal control, subsistence, and major river drainage areas; projected conveyance July 1980.

(8) Marys Igloo: entitlement 92,160 acres; selection included the eastern end of Imruk Basin and the drainage of the Kuzitrin and other rivers draining into Imruk Basin; selection priorities included areas of traditional and contemporary seasonal subsistence utilization by enrolled shareholders living primarily in Teller today, an interest in selection around Pilgrim Hot Springs and to Kougarok bridge (on the Kougarok road), and some interest in minerals; conveyance projected for July 1980.

(9) Solomon: entitlement 69,120 acres followed a series of court battles from 1974 to settlement on August 8, 1979 regarding Solomon's eligibility as a village corporation under ANCSA (the settlement invol-

ved Solomon, Bering Straits Native Corporation, and the State of Alaska who had an interest in Solomon's coastal lands and Bonanza River selections); selection included the coast beyond eastern Safety Sound and inland from Solomon--the coastal segment is only approximately twelve miles from the beginning of White Mountain's coastal withdrawal; selection priorities were about 50 percent mineral access and 50 percent coastal access.

(10) St. Lawrence Island (Gambell and Savoonga): the residents of St. Lawrence Island opted to maintain reserve status with no money but virtually the entire island (surface and subsurface rights)--a total of 1,137,000 acres which was conveyed in July, 1979 (the largest single ANCSA land conveyance to date); selection priorities and , reserve status decisions ~~focused~~ primarily on subsistence, secondarily on coastal access, and thirdly on mineral potential, although overriding all concerns was the desire to have full title to the island and its resources.

(11) White Mountain: entitlement 92,160 acres; selection included Norton Sound coastal areas approximately twelve miles beyond the end of Solomon's withdrawal beyond Bluff and south including some of the tidelands of the northwesterly portion of Golovin Bay and the Fish River drainage; selection priorities included coastal and tideland access and Fish River for subsistence and commercial fishing--some

mineral interest although mineral potential, except for the Bluff area, had not been determined; conveyance was finalized in March 1980.

(12) Golovin: entitlement 92,160 acres; selection included the two peninsulas that form Golovin Bay and of course the coast of the bay except for its northwesterly portions; selection priorities included control of a relatively deep water bay, subsistence, commercial fishing, and the potential for uranium development; conveyance projected for March 1980, but has not been finalized as of the writing of this document.

(13) Council: entitlement of 69,120 acres; selection included an inland area surrounding the community of Council, portions of the Niukluk and Fish River drainages; selection priorities included mineral potential and subsistence hunting and fishing campsites; conveyance projected for March 1980, but has not been finalized as of the writing of this document.

(14) Elim: the residents of Elim opted to maintain reserve status thereby receiving no money under ANCSA but surface and subsurface rights to 297,982 acres which were conveyed in 1979; selection priorities included retaining the entire reserve, timber resources, Moses Point as a commercial and subsistence fishing site, subsistence hunting and fishing, and some mineral potential.



- (15) Koyuk: entitlement 92,160 acres; selection included coastline around Norton Bay and Koyuk Inlet and the drainage of the Koyuk River; selection priorities included maximal coastal frontage, access to primary subsistence areas, and control of navigable river frontage; conveyance projected for July 1980.
- (16) Shaktoolik: entitlement 115,200 acres; selection included coastal areas of Norton Sound from Ungalik in the northeast to Besboro Island (including the northern portion of Besboro Island) to the southwest and inland along the lower drainage of the Ungalik and Shaktoolik rivers; selection priorities included coastal access and control, subsistence, reindeer grazing areas, and potential minerals and oil; conveyance projected for January 1980, but has not been finalized as of the writing of this document.
- (17) Unalakleet: entitlement 161,280 acres; selection included the coastline bordering on Shaktoolik's withdrawal southwest to Toisto Point and along the lower drainage of the Unalakleet River; many residents of Unalakleet felt restricted in this selection relative to hunting and fishing subsistence use areas that focus in the federally withdrawn Wild and Scenic River that begins approximately 14-18 miles up the Unalakleet River from the community of Unalakleet; selection priorities included coastal and navigable river access for subsistence hunting and fishing and commercial fishing and, to a much lesser degree, an interest in coal--much of the area desirable

(21) Bill Moore's Slough (Kongnikilnomuit Yuita Corporation): entitlement 69,120 acres; selection included lower reaches of the most easterly channel of the Yukon Delta including surrounding marshy lowland areas; selection priorities beyond access to subsistence and commercial fisheries resources and possibly migratory waterfowl areas are unknown.

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(22) Hamilton (Nunapiglluraq): entitlement 69,120 acres; selection included portions of the drainage of the lower reaches of both the main and easterly channels of the lower Yukon; selection priorities beyond subsistence and commercial fisheries resource access are unknown.

(23) Emmonak: entitlement 138,240 acres; selections included Delta coastal areas and the lower reaches of the main channel of the Yukon Delta; selection priorities included coastal and riverine access to subsistence fishing and sea mammal hunting areas and commercial fisheries access--other priorities are unknown.

(24) Alakanuk: entitlement 138,240 acres; selection included coastal areas of the Delta and portions of the lower reaches of both the western and main channels of the Yukon River; selection priorities included coastal and riverine access to fisheries and sea mammal subsistence sources and commercial fisheries--other priorities are unknown.

(25) Sheldon Point (Swan Lake): entitlement 92,160 acres; selection included Delta coastal areas, adjacent sloughs, and the lower reaches of the westerly channel; selection priorities included coastal and riverine access to fisheries and sea mammal subsistence resources and commercial fisheries--other priorities are unknown.

The communities of St. Marys and Mountain Village are not key coastally adjacent Delta communities but are mentioned in this study because of their important subregional and transportation center roles relative to the rest of the Delta with the implications of these roles for direct OCS impact.

(26) St. Marys: entitlement 115,200 acres; selection included lower portions of the Yukon River drainage and some adjacent upland areas; priorities beyond subsistence and commercial fisheries are unknown but it is likely that access to the jet airstrip located between St. Marys and Mountain Village and the newly constructed road (1979) connecting these two communities was of interest to the local corporation.

(27) Mountain Village (Azachorok, Inc.): entitlement 138,240 acres; selection included portions of the lower Yukon River drainage, upland areas towards St. Marys, and westerly towards Owl Village; selection priorities beyond subsistence and commercial fisheries and interest in connecting transportation links to St. Marys are unknown.

It should be reiterated that all of the Yukon River villages--not just those located on **the** coast--would be directly and critically impacted by any disruption to salmon migration from the sea up the Yukon River. It also should be mentioned that the Calista Corporation has art interest in developing onshore oil and gas on the Delta only under the strict provisions of exploration and extraction that could not possibly contaminate any of the drainage waterways of the Delta (discussion with Oscar Kawagley, November 1979).

It should be summarized that ANCSA 12b and 14hl land selections have not yet been settled and will include additional coastal areas and archaeological and historic sites on the coast (e.g., Cape Nome) and inland. A major goal of both Bering Straits Native Corporation and Calista Corporation has been to gain title to and control of coastal areas within their respective regions and, in some cases, to select available coastal lands between village corporation selections in order to achieve this goal. For the Bering Straits Region alone over seventy-five percent of their total village and regional withdrawal areas are coastal. Informal discussions with regional and village corporation officials have stressed that only through coastal land withdrawal and an effective role in management of coastal lands can their highly valued lifestyle persist in a viable form. The possibility of the coast having viable economic potential or being necessary for developing inland minerals has not been ignored by the regional Native corporations, however, as they are mandated by the provi-

future are sources of concern to local residents. Some local residents find it perplexing that onshore lands must be protected from customary and basically non-commercial human useage for purposes of "national interests," while the offshore environment is opened to petroleum development in the face of potential environmental hazards again in the name of national and state interests.

Third party land ownership, as previously mentioned, involves primarily lands with mineral potential, homestead or allotment sites, townsite residential or business lots, and military and/or communication installations. The amount or location of these lands is not of great consequence for purposes of this study because of the relatively small size of these holdings. Alaska Gold, previously owned by UV Industries and now a part of Sharon, Steel Industries, and Northeast Cape on St. Lawrence Island, are exceptions to this generalization, as their holdings are substantial in size and some are strategically located near the coast and/or near Nome.

Regulatory control over land, sea, and resources should be accorded a status of social and economic significance equal to that of ownership. Differing from land in more temperate parts of the United States and in more agricultural and industrial areas, land and sea in this region have negligible intrinsic worth but are valued because of the animal and plant resources that come from land and sea which are still critical to human survival. In addition, the sea and land have value particularly to the

Native population as the scene in which their ancestors played out their lives (i.e., historical and emotional value) and developed a respect for all aspects of nature that still form the underlying core of their religious, ceremonial, aesthetic, and intellectual life. Ownership of land without provisions for access to and protection of these resources is, for most Inupiat and Yuit, meaningless. A recent (undated) petition from the Community of Shishmaref to the Bureau of Land Management provides an excellent example of this perception:

The Inupiat People of the Bering Strait Region have always inhabited and used the Bering Strait coast, for at least the last 5,000 years; even before the Europeans, Russians and Americans came into this area. Our way of life today, our very health, our welfare, livelihood and survival as Inupiat and U.S. citizens, Depend critically on our Abilities to Hunt, Fish, Trap, Raise and Graze Reindeer and Pick berries and other edible plants - in our Traditional Ways, the lands adjacent to our village of Shishmaref.

Because we number over 306 people, it should not eliminate "Our Right" to have a Major Influence in any or all decisions that will Greatly Affect our Traditional Way of Life and Lands adjacent to our village, that we have used for thousands of years.

Therefore We - The People of Shishmaref, Alaska . . . Demand that any decisions or actions regarding our way of life and our lands, be made only with Direct Input and Representation from the majority of the Residents of Shishmaref and that any public hearings and committee meetings regarding our way of life and our lands, be held here in Shishmaref . . . .

(Shishmaref subsistence statement, date unknown)

This petition was signed by 121 adult residents.

Regulatory control, then becomes a key social, political, and economic issue that will be explored in some depth in the section on subsistence.

### Economic Systems

#### SUBSISTENCE

The problems inherent in a definition of "subsistence" have already been discussed in this study. For purposes of this discussion, then, the topic of "subsistence" will include the following (Davidson, 1974; Laughlin, 1968; Nelson, 1969 and 1978; Nowak, 1977; World Associates, 1978 and World, 1978, etc.):

- (1) the hunting, fishing, trapping, and gathering of naturally occurring animal and plant resources for purposes of supplying food, raw materials (e.g. for shelter, transportation, clothing, etc.), or, indirectly, cash that has become necessary for purchasing requisites for survival (e.g. fuel oil) or items of technology necessary to continue contemporary subsistence practices (e.g. ammunition, firearms, outboard motors, etc.);
- (2) the knowledge (and transmission of knowledge) of weather patterns, sea ice conditions, maritime winds and currents, animal behavior (ethology), geography, technical proficiency, subarctic survival, and the many other skills and areas of expertise necessary for successful subsistence pursuits;

- (3) Socioeconomic organizational patterns that directly or indirectly relate to obtaining primary animal and plant resources from the sea or land and to the reciprocal exchange and/or redistribution of such resources between primarily kinsmen or structured extensions of kin-based obligations to non-kin;
- (4) aspects of the value system of hunters/gathers/fishers regarding the sea, land, animals, plants, and all other features of the natural environment that basically are distinguishable from the value systems of agriculturalists, pastoralists, and industrial (urban) populations.

In these respects this discussion of subsistence has primary applicability to Inupiat and Yuit populations of the study area since it has traditionally and contemporarily been the focus of these cultures, However, "subsistence" in these terms should not exclusively be racially or ethnically defined, as there are some non-Inupiat and non-Yuit peoples in the study area who also practice basically subsistence lifestyles and some Inupiat and Yuit peoples who almost exclusively participate in a cash economy (Davidson, 1974, p.42). In addition, the reality of contemporary subsistence lifestyles in the study area (as in the rest of Alaska) includes a combination of subsistence and cash economies, since processes of cultural change over the last couple of centuries have brought about some greater or lesser degree of involvement in aspects of



Euroamerican culture--a process of change which is not, for the most part, reversible (Pelto and Pelto, 1979; Hughes, 1960; Steward, 1955). This should not negate the fact, however, that individuals and groups perceive of themselves as predominantly practicing, preferring, and requiring a subsistence-based rather than a cash-based lifestyle (informal discussions 1978-1979; Davidson, 1974; Hughes, 1960; Nelson, 1978; Worl Associates, 1978 and Worl, 1978). It is in light of this perception of subsistence as a primary practice, preference, and basic need as well as the environmental and sociocultural constraints on realizing alternative lifestyles that subsistence is probably the most critical variable for purposes of this study.

#### Subsistence Patterns and Their Significance.

Due to the ecological and cultural diversity of the study area, the lack of information at this time as to which specific offshore areas may potentially be explored and/or developed by industry and the fact that the geographic constriction of the maritime environment and all of its migratory fauna into a narrow (at one point fifty mile wide) strait provide less margin for minimizing environmental impact of petroleum-related activities. It would have been not only preferable but critically useful to have considered subsistence on a village by village basis. However, the contractual constraints of research and writing time, the prerequisites for relying primarily on secondary source data, limitations

on travel monies, and the vast overall scope (areally and topically) of this study, limited treatment of subsistence under this contract to ecologically and, to some extent, culturally distinct subregions or groupings of contemporary communities. These subregional groupings focus on similar subsistence adaptations and geographic proximity and include the following:

- (1) small sea mammal hunting, inland hunting, and fishing pattern: the contemporary communities of Shishmaref, Brev'g Mission, Teller, and Marys Igloo;
- (2) large sea mammal hunting pattern: the contemporary communities of Wales, Inalik (Little Diomed), King Island, Gambell, and Savoonga (St. Lawrence Island) ;
- (3) Norton Sound fishing and coastal and inland hunting pattern: the contemporary communities of Solomon, Golovin, White Mountain, Council, Elim, Koyuk, Shaktoolik, and Unalakleet;
- (4) Yukon Delta fishing and small sea mammal hunting pattern: the contemporary communities of St. Michael, Stebbins, Kotlik, Bill Moore's Slough, Hamilton, Emmonak, Alakanuk and Sheldon Point.

Several points relative to the above groupings should be made: (1) subsistence pattern titles are illustrative of the major subsistence focuses and, as will be seen in the subsequent discussions of each, are not exclusive of other activities (similar to Oswalt, 1967); (2) Nome itself is a difficult community to classify since prehistorically there was not an Iñupiat village directly at this site but during various periods of prehistory communities in the vicinity of Nome (e.g., Cape Nome and Sledge Island) fit, at certain time periods, most appropriately into the "big sea mammal hunting pattern" (Bockstoce, 1973) while others such as Singuk and Nuk (Ray, 1975b and Bockstoce, 1973) fit more appropriately into the "small sea mammal hunting, inland hunting, and fishing pattern"; contemporary Native occupants of Nome come from a variety of communities and tend to follow the subsistence patterns of their place of origin if possible; (3) in regards to mainland communities, there are not abrupt subsistence pattern boundaries between the four major groupings but rather a continuum that may shift during certain years due to resource availability; (4) the islands, due to their size and location, are more restricted in self-contained resource variation but tend to have a more dependable and abundant subsistence base.

On the following pages in Table X, "Biotic Resources Utilized by Residents of the Bering Strait/Norton Sound Study Area", a list of animal and plant resources most frequently mentioned in informal discussions and literature regarding subsistence in the study area is presented. This list has

TABLE X

BIOTIC RESOURCES UTILIZED BY RESIDENTS OF THE  
BERING STRAIT/NORTON SOUND  
STUDY AREA 1/2

<u>Common Name</u>	<u>Scientific Name</u> <sup>3</sup>
<u>Primary Food and Raw Material Sources</u>	
whale, bowhead	<u>Balaena mysticetus</u>
whale, beluga	<u>Delphinapterus leucas</u>
walrus, Pacific	<u>Odobenus rosmarus</u>
seal, bearded ( <u>ugruk</u> or <u>mukluk</u> )	<u>Erignathus barbatus</u>
seal, harbor or spotted	<u>Phoca vitulina</u>
seal, ringed	<u>Phoca hispida</u>
salmon, king	<u>Oncorhynchus tshawytscha</u>
salmon, silver	<u>Oncorhynchus kisutch</u>
salmon, chum	<u>Oncorhynchus keta</u>
salmon, humpback	<u>Oncorhynchus gorbuscha</u>
salmon, sockeye	<u>Oncorhynchus nerka</u>
moose	<u>Alces alces</u>
caribou or reindeer	<u>Rangifer tarandus</u>
whitfish, broad	<u>Coregonus nasus</u>
whitfish, humpback	<u>Coregonus pidschian</u>
sheefish	<u>Stenodus leucichthys</u>
<u>Secondary Food and Raw Material Sources</u>	
seal, ribbon	<u>Phoca fasciata</u>
whale, grey	<u>Eschrichtius gibbosus</u>
bear, polar	<u>Ursus maritimus</u>
bear, black	<u>Ursus americanus</u>
bear, grizzly	<u>Ursus arctos</u>
beaver	<u>Castor canadensis</u>

<sup>1</sup> Not all of the biotic resources are utilized by all communities within the study area because of the ecological and cultural diversity of the region. This is, however, an area-wide list as the species of the entire area may be subject to direct or indirect OCS impact.

<sup>2</sup> Adapted from Pedersen, 1978, pp.48-50.

<sup>3</sup> Eskimo names are not given because of linguistic diversity of the study area's population.

TABLE X (continued)

<u>Common Name</u>	<u>Scientific Name</u>
<u>Secondary Food and Raw Material Sources</u> (continued)	
squirrel, arctic ground	<u>Citellus parryi</u>
porcupine	<u>Erethizon dorsatum</u>
hare, snowshoe	<u>Lepus americana</u>
auklet, least	<u>Aethia pusilla</u>
auklet, crested	<u>Aethia cristatella</u>
auklet, parakeet	<u>Cyclorhynchus psittaculus</u>
eider, common	<u>Somateria mollissima</u>
eider, king	<u>Somateria spectabilis</u>
eider, spectacle	<u>Lampronetta fisheri</u>
eider, Stellar's	<u>Polysticta stelleri</u>
oldsquaw	<u>Clangula hyemalis</u>
pintail	<u>Anas acuta</u>
black brant	<u>Branta nigricans</u>
snow goose	<u>Chen hyperborea</u>
white fronted goose	<u>Anser albifrons</u>
crane	<u>Grus canadensis</u>
murre, common (particularly eggs)	<u>Uria aalge</u>
murre, thick billed (particularly eggs)	<u>Uria lomvia</u>
ptarmigan, willow	<u>Lagopus lagopus</u>
ptarmigan, rock	<u>Lagopus mutus</u>
crab, king	<u>Chionoecetes opilio</u>
crab, tanner	<u>Paralithodes platypus</u>
clams	<u>Macoma calcerea</u>
blackfish	<u>Dallia pectoralis</u>
char, arctic	<u>Salvelinus alpinus</u>
cod, saffron	<u>Eleginus gracilis</u>
tomcod, Pacific	unknown
flounder, arctic	<u>Boreogadus saida</u>
grayling	<u>Thymallus arcticus</u>
pike, northern	<u>Esox lucius</u>
herring, lake	<u>Coregonus sardinella</u>
herring, Pacific	<u>Clupea harengus</u>
halibut, Pacific	<u>Hippoglossus stenolepis</u>
smelt	<u>Osmerus mordax</u>
mussels (several species)	unknown
sculpin	<u>Cottus cognatus</u>
burbot	<u>Lota lota</u>
whitfish, east of Sco	<u>Coregonus albula</u>
whitfish, arctic cisco	<u>Coregonus autumnalis</u>
seaweed	unknown

TABLE X (continued)

<u>Common Name</u>	<u>Scientific Name</u>
<u>Secondary Food and Raw Material Sources (continued)</u>	
greens	<u>Rhodiola rosea</u>
potato	<u>Claytonia tuberosa</u>
willow leaves	<u>Salix (species ?)</u>
sourdock	<u>Rumex archius</u>
salmonberry (cloudberry)	<u>Rubus chamaemorus</u>
crowberry	<u>Empetrum nigrum</u>
blueberry	<u>Vaccinium uliginosum</u>
cranberry	<u>Vaccinium vitis-idaea</u>
whortleberry	<u>Vaccinium uliginosum</u>

Raw Material (no scientific name given)

fox, arctic<sup>4</sup>  
fox, red<sup>4</sup>  
lynx<sup>4</sup>  
marmot, hoary<sup>4</sup>  
marten<sup>4</sup>  
mink/weasel<sup>4</sup>  
muskrat<sup>4</sup>  
wolf<sup>4</sup>  
wolverine<sup>4</sup>  
driftwood  
willow  
alder  
spruce (black & white)  
birch  
sod

<sup>4</sup> Most of these forbearers were not used for food except in times of food shortage--at most not a preferred food source.

limitations in not being exhaustive and in not including Inupiaq or Yupik terminology -- the latter was not feasible because of the linguistic diversity of the study area. The reader may want to refer to Dames and Moore, 1980a, for additional comments about some of the major subsistence faunal species of the study area, although it should be noted that species distribution and concentration, as mapped in the Dames and Moore study, do not necessarily conform to subsistence useage patterns nor include all subsistence species.

In the following discussions of subsistence by subregion an attempt will be made to: (1) designate major species utilized; (2) designate the sea and land areas in which resources are primarily harvested; (3) describe the seasonality of resource availability and harvest; (4) present general comments on methods used for harvesting (including technology, strategies, and division of labor when relevant); and (5) describe the utilization of these resources by the populations involved. Quantification of these data (i.e. harvest figures) will not be presented in most cases for the following reasons:

(1) Data have not been systematically and uniformly gathered by any agency or researcher for the entire study area or over time, so that the quality of that information on a particular species, for a given period of time, and in a particular location is not comparable quantitatively or qualitatively.

(2) Alaska Dept. of Fish and Game's harvest data are recognized by both subsistence users and the agency itself as being incomplete and/or inaccurate in many instances due to the facts that survey methodologies have varied from year to year and location to location and often have involved very brief visits to communities under study. The data gathering agency is also a regulatory and enforcement agency leading to hesitancy on the part of subsistence users to report harvest data. Data gathering often relies on hunter participation which assumes a functional use of English, extensive record keeping, and an understanding of the procedures and goals of fish and game research projects. Subsistence users often are unwilling to cooperate because they perceive that data will be used to further regulate subsistence practices. In addition there is limited funding and manpower for doing comprehensive harvest research and varying political pressures regarding goals of the agency and species under their jurisdiction (e.g. walrus which have shifted from federal to state to federal control within the time span of 1972-1979) (informal discussions with Dan Thomas, Robert Nelson, and Robert Pegau, Department of Fish and Game, Nome, 1979).

(3) For some areas and/or time periods recorded harvest data is virtually nonexistent.

(.4) Harvest data tend to be species specific and resources of minimal importance during normal conditions become extremely important under



adverse conditions (e.g. the use of sea lions on St. Lawrence Island -- Hughes, 1960).

(5) Paradoxically a highly successful harvest of a preferred species in a given year may be reflected in harvest data as an overexploitation of one species without note that the use of other species have correspondingly declined -- a real problem in analyzing any kind of harvest data by species without observing the totality of the subsistence pattern.

(6) Studies conducted by other regulatory and/or research agencies such as U.S. Fish and Wildlife Service, National Oceanographic and Atmospheric Administration, etc. often have specific objectives (e.g. population census or response to petroleum contamination) and therefore are not comprehensive, are not usually oriented towards human useage of faunal resources, rely heavily on sampling techniques in arriving at species population totals, migration patterns and distributions, and are usually short-term and/or seasonal in duration.

(7) With the exception of some anthropological studies or studies recently initiated by subsistence user organizations (e.g. the Eskimo Whaling Commission, the Eskimo Walrus Commission, Nunam Kitlutsisti, Kawerak, Inc., etc.), the majority of biological species studies in the area do not include and/or holistically consider human subsistence useage as a part of the total functioning ecosystem. Attempts to make use

of subsistence user data for this study was only partially successful as many of these studies are not completed at the present time (e.g. Kawerak's subsistence studies). Another useful (although again incomplete) source of information was a map on the Norton Sound lease sale area compiled by Alaska Dept. of Fish and Game, Marine and Coastal Habitat Management, and AEIDC based on recent marine faunal data compilation of this area.

In summary, many different sources were consulted for this section including many of those mentioned above. These data were integrated with extensive informal discussions with subsistence users, previous field research on insular subsistence patterns, and the few available subsistence studies that have been done on this or closely related areas (Anderson, Bane, Nelson, Anderson and Sheldon, 1977; Association of Village Council Presidents, 1976; Bogojavlensky, 1969; Burgess, 1974; Davidson, 1974; Eisler, 1978; Hughes, 1960; Nelson, 1969 and 1978; Nowak, 1977; Patterson, 1974; Pedersen, 1978; Peterson, 1978; Worl Associates, 1978; and Worl, 1978).

Small sea mammal hunting, inland hunting, and fishing pattern: As previously mentioned, communities of the study area included in this subsistence pattern include Shishmaref, Teller, Brevig Mission, and seasonally occupied Marys Igloo. All of these communities are located on the Seward Peninsula coast or adjacent harbors and lagoons (with the exception of Marys Igloo which is connected to the coast by a waterway). It should

be mentioned that Teller is a relatively new community and is composed, for the most part equally, of people who originated either on Little Diomed Island or were previous residents of the inland Igloo area (Bogojavlensky, 1969). In light of their origin it can reasonably be expected that subsistence patterns and interests of these residents will vary greatly depending upon their place of origin. For example, Diomeders were and are big sea mammal hunters and this interest has persisted despite the different ecological setting of Teller. The major source of data for this subregional subsistence focus is a subsistence study done by David Eisler (1978) for the Cooperative Park Studies Unit of the National Park Service in 1976-1977 for purposes of informing legislators about current subsistence practices in areas adjacent to the proposed Chukchi-Imruk National Reserve (now the Bering Land Bridge National Monument). Field research was conducted primarily in Shishmaref but included Udales, Teller, Brevig Mission and Deering.

The most outstanding single feature of the subsistence pattern of this grouping of villages is the seasonal diversity of faunal and floral resources available and harvested. In terms of total animal resources utilized by residents of these communities (particularly by Shishmaref with Brevig Mission second in quantity utilized and Teller third), seals (ugruk or bearded, ringed, and spotted in order of harvest frequency) are a critical food source. In a recent (1979) subsistence statement from the village of Shishmaref, the following reference to the harvest of seals is made:

. . . We have always harvested an average of 150 to 175 bearded seals, a season, in the last 6-7 years. A yearly harvest (average) of about 800-1000 hair seals, in the last 6-7 years (due to not using it for dog-feed). (p. 1)

Subsistence activities occur in a year-round seasonal sequence with seals being taken during most months (in both open leads and on ice), but with the majority of particularly bearded seal hunting occurring from mid-May to July while shore ice, on which the large bearded seal hauls out in the spring, is still in the vicinity of the village or range of residents who travel today mostly by 25-30' wooden boats with outboard motors (aluminum boats are also utilized by residents of this subregion but the use of skinboats has virtually disappeared). Traditionally, residents of these communities, with the exception of Teller Diomeders, did not venture far out to sea for purposes of hunting large sea mammals, but for at least the last decade residents of Shishmaref, Brevig Mission, and Teller have been hunting as far as 30-40 miles out to sea for walrus, and walrus harvests for these villages has generally been on the increase. Walrus, when intercepted, are also found in association with broken sea ice and attempts are made to dispatch them while hauled out due to the difficulty in retrieving or butchering a walrus in water. Since these villages are not located directly on walrus migratory routes, the majority of walrus meat and raw materials (e.g. such as female hides for skinboats) in the past were obtained through trade with Wales, Little Diomed, and King Island. However, the use of outboard motors have provided these populations with an opportunity to use a greater range of the maritime environment and obtain these necessary products directly. Walrus hunting for

these communities, however, is much less complex both technologically and socially than for insular walrus specialists. Eisler also states that contemporary residents of these communities may travel as far as 50 land miles up and down the coast in the winter by dog teams or snow-machines in search of seals in open leads or breathing holes (1978, p. 11). It should be reiterated that seals and walrus are important as a source of meat, oil, and raw material. Although both residents and Eisler mention past utilization of beluga, both sources agree that beluga have not been available in any significant number for at least the last 20 years. Bowhead whale are not directly harvested by residents of these communities. Polar bear, apparently increasing in number since aerial sports hunting was made illegal in 1972, are occasionally encountered and when taken fulfill an important source of hunting respect and prestige.

Fish and migratory waterfowl provide a substantial portion of the dietary needs of these communities, are a resource available when sea mammal reserves may be running low such as during the spring or when some variety to a sea mammal diet is nutritionally advantageous (Heller and Scott, 1967), and are highly valued by residents. From mid-April on residents of these communities are keenly aware of and interested in the return of migratory waterfowl north as these species have been of critical importance to subsistence for undoubtedly hundreds if not thousands of years (as indicated by archaeological evidence and oral tradition).

Numerous international treaties regarding the spring hunting of migratory

waterfowl have made spring harvest by Alaska Natives technically illegal since as early as 1906 (personal communication, Robert Pegau, Alaska Dept. of Fish and Game, Nome). Due to the nutritional and economic importance of these species, hunting has continued for subsistence purposes and has been both formally and informally overlooked by regulatory agencies, although such hunting for subsistence has just recently been relegalized. Knowledge of the illegality of such hunting in the past caused stress to both resource users (Eisler, 1978; informal discussions, Shishmaref, 1978-1979) and agency personnel. Migratory waterfowl are hunted up and down coasts, lagoons, and inland up rivers by snowmachine prior to breakup and by boat after breakup and in the fall during their return migration. Bird rookeries and lowland nesting areas are an important source of eggs in late spring and early summer. The many species of birds utilized are mostly listed in Table X and some of these were referred to in Dames and Moore (1980a).

Fish, including whitefish, more than one species of salmon depending on the area (at Port Clarence, for example, chums, pinks, and reds are available in the greatest number), arctic char, graylings, herring, and tomcod are obtained year-round dependent on the species and ice conditions.

In July, after the ice has moved far from the shoreline, when there is no longer any danger of ice becoming caught in nets, and men are no longer involved in ugruk hunting, people set whi tefish nets, kubroyzeruk, and later, salmon nets, kubrauruk.

(Eisler, 1978, p.81)

Nets are set both in the vicinity of the villages and also at fish camps which may be located a considerable distance up and down the coast, bays (e.g., Port Clarence), harbors (e.g., Grantley Harbor), lagoons, and channels (e.g., Tuksuk Channel), and inland up the drainages of any major salmon-spawning streams and inland bodies of water (e.g., Imruk Basin):

Today Teller families continue to depend on the fish runs and at least part of every family travels to the fish camps for anywhere from a day to a month of net setting. . . . After the July to August salmon runs most families have large stores of dried fish which last throughout the winter. Surplus fish are sold to the store for cash or credit. Whi tefish are also an important fish netted during spring and summer.

(Eisler, 1978, p.99)

It is important to stress that mobility to and residence in fish camps are highly valued activities by residents of these communities. Herring are a very important fall harvest in areas where they are available (Port Clarence is a herring wintering area) and additional herring, smelt, grayling, whi tefish, flounder, sculpin, tomcod, and other fish are obtained through the ice with lures, nets, and spears. It is essential to realize that virtually all edible fish are utilized by preference and degree of accessibility, that all families have some

participants in fishing activities, that fishing is a highly valued social activity, and that excess fish are distributed to other villagers through kinship networks or sold at the local store for cash or credit. They may also be used as a trade item for other subsistence resources not locally available or abundant and are easily processed for winter storage and, hence, a means of insuring a stable food supply (Ellanna, fieldwork; informal discussions, 1979; Eisler, 1978).

Although and resources may be less likely to be directly impacted by OCS activities, a meaningful portrayal of the economics of the area should at least mention the importance of land fauna and flora.

Moose and reindeer (which functionally have taken the place of caribou) are the largest of the land mammals and very essential to the diet. Moose have only become available on the Seward Peninsula for the last two or three decades (informal discussions 1978-1979; Eisler, 1978):

From the middle of September to freeze-up (about second week of November) the hunt is concentrated into hunting moose, during the open season. During this short open season about 50% of the licensed moose hunters bag their one moose. During the latter half of the open season the people are immobilized by the freezing rivers and the thin ice on the lagoon, for access by snow machine or dog teams.

(Shishmaref subsistence statement, PO 1)



The correspondence of moose seasons to conditions of practical mobility and needs for meat is a subject of local controversy and some bitterness and has resulted in at least one recent incident of punitive legal action being taken against subsistence users. Caribou disappeared from the peninsula in the latter 1800s and reindeer were introduced near the turn of the century (see Chapter IV). Reindeer herding will be discussed in a subsequent section as a cash-producing endeavor. However, the use of reindeer meat and hides by residents of this subregion through herd ownership or purchase from owners was relatively extensive in recent years until it was somewhat limited during last year by inflation of the reindeer antler market. Individual herders still permit some sale of animals for meat and hides to local residents and poaching of grazing animals is not unknown. Other land-based fauna such as ptarmigan and arctic hare are still heavily utilized. In addition, the nutritional needs of these populations are relatively well balanced (Heller and Scott, 1967) because of their access to and utilization of abundant vegetation> primarily greens and berries. All of these activities require seasonal mobility and entail social and valuative significance.

In general terms, for all of the subsistence subregions men do the vast majority of both marine and land hunting, although individual older women and an increasingly greater number of younger women occasionally participate. More traditional female roles of childrearing, butchering seals and cutting up portions of larger mammals, splitting and hanging

fish, processing animal hides, preserving foods, skinsewing, and meal preparation are still practiced but less enthusiastically by some of the younger women, especially those who have left the village temporarily for schooling and/or employment. People of all ages and both sexes enjoy fishing, staying in fish camps, picking berries, and traveling by boat, snowmachine, and dogteam. Most residents today perceive of "going out into the country" for subsistence pursuits as being a pleasurable and important activity, and most men, women, and children in these villages today perceive of the primarily male activities of hunting and trapping as being critical to their continued survival and well-being.

Although relatively unquantifiable evaluations of the economic importance of subsistence to the villages within this subregion may be open to critique, some qualitative analysis is useful for purposes of this study. This brief analysis is based primarily on the author's field experience in these communities, information that has emerged from Kawerak's involvement in rural village economics, informal discussions in the villages during this study period, Ellanna and Roche (1976), and Eisler (1978). Of the three villages (not considering Marys Igloo because of its seasonal occupation), Shishmaref is the largest with a 1975 winter population of 306, Teller the next with 211, and Brevig Mission the smallest with 144 -- all of these figures probably are higher today (Ellanna and Roche, 1976).

Eisler (1978), Alaska State Dept. of Fish and Game data, and field data indicate that of these three communities, Shishmaref residents participate the most actively in subsistence pursuits with Brevig Mission and Teller residents being second and third respectively in this continuum. Of these three communities the author has spent the greatest period of continuous time in Shishmaref, and residence in and visits to households in this community indicate that probably between 75 to 80 percent of the total protein, fats, and vegetation in the diet of most residents comes from subsistence resources discussed in this study. Most carbohydrate foods consumed are purchased from the local stores and/or an urban marketing center. Shishmaref definitely also has the greatest number of positions providing cash remuneration with Eisler (1978) reporting 20 full time jobs of 6 months or more in 1977 (p.115) and that number probably greater today if seasonal employment and self employment through arts and crafts production, arts and crafts marketing, trapping, reindeer product marketing, etc. are included. Cash requirements of village life are rapidly increasing (Nowak, 1975b; Worl Associates, 1978; Eisler, 1978) and particularly electricity, transportation, fuel, and commercially produced goods are excessive in this area when compared to an urban area like Anchorage. Interestingly there seems to be no inverse correlation between increased cash in a community and degree of subsistence efforts for villages in this subregion, and it is evident by the quality and quantity of modern subsistence technology in particularly Shishmaref (e.g., outboard motors, snowmachines, firearms,

wheel and track vehicles) that much of the cash income is being directly reinvested in subsistence activities. Teller's proximity to Nome and the seasonal highway between Nome and Teller in addition to a longer history of contact with mining activities, commercial reindeer herding, wage employment, and local non-Native entrepreneurs have probably had some influence on the relative degree of subsistence activity in that community. Even these factors have not decreased the need for subsistence resources for food and the value of subsistence activities to the majority of the population. Brevig Mission is probably one of the "poorest" communities in the entire Bering Straits Region based on the criteria of total cash income to residents of the village, so that an economic and nutritional need for subsistence resources in the diet of Brevig Mission residents is unquestionably great. Attempts to convert subsistence resources and efforts into cash equivalency have not proven successful for social scientists or subsistence users up to the present time, although researchers and user organizations have begun thinking in these directions (Davidson, 1974; Rosita Worl, personal communication; Michael Nowak, personal communication; Jon Larson, attorney, Nome, personal communication; Tony Vaska, Nunam Kitlutsisti, personal communication; and Kawerak, Inc. staff, personal communication). The valuative aspects of subsistence activities are definitely not convertible into cash equivalency.

Large sea mammal hunting pattern: Communities grouped within this subsistence pattern include all of the Bering Strait insular villages (Inalik or Little Diomede, King Islanders in Nome, Gambell and Savoonga on St. Lawrence Island) and the mainland community of Wales. The major sources of secondary data for this subregional grouping include primarily: (1) two dissertations; Bogojavlensky (1969) which is based on fieldwork in the latter half of the 1960s with King Islanders and, secondarily with Little Diomeders; and Burgess (1974) on St. Lawrence Island which is based on fieldwork at Gambell in the early 1970s; the emphasis of the first is skinboat hunting and its relationship to political factionalism while the emphasis of the second is resource utilization and its relationship to the cash economy and population structure; (2) fieldwork by Charles Hughes at Gambell during the years 1954-1955 which focused on cultural change, culture and personality, and demography -- this data appeared in two published works (Hughes, 1960 and 1974) (3) contemporary government funded research on the impact of regulations and quotas on bowhead whaling on northwestern Alaskan Eskimo including, for these purposes, Gambell, Savoonga, and minimal data on Wales (Carroll, 1976; Marquette, 1977; Peterson, 1978; U.S. Department of Commerce, 1977). It should be mentioned that the populations that have been studied have raised some objections to the content of all of the government funded studies and have criticized portions of the content of Bogojavlensky and Burgess. Hughes' work has probably been critiqued the least and he was asked to return to

St. Lawrence Island in 1977 to update his fieldwork as a consultant for the law firm representing Gambell resident interests in recent litigation (personal communication, Charles Hughes, 1978; personal communication, Jon Larson, attorney, Nome, 1978 and 1979). Primary data (Ellanna fieldwork, 1969-79) have also been extremely important in balancing and updating this secondary source data. Unfortunately, data being compiled by the Eskimo Whaling Commission and AEIDA (Arctic Environmental Information and Data Center) on bowhead whaling in this region (Rosita Worl, personal communication, 1979) would have been very useful but were not available at the time this study was completed. Alaska Department of Fish and Game and U.S. Fish and Wildlife Service data are highly suspect in the opinion of subsistence users with the exception of work done on sea mammals by biologists John Burns and Francis Fay (some limited examples of which are Burns, 1969 and Burns, Shapiro, and Fay, 1976).

The reader should be reminded that St. Lawrence Island is technically geographically south of Bering Strait proper (about 150 miles) and is linguistically and, to some degree, culturally different from both King and Little Diomedé islands but is quite similar to them in terms of subsistence patterns. Wales is a mainland community and was grouped by Dames and Moore (1980b) with mainland Seward Peninsula communities. However, it is clear from prehistoric, ethnohistoric, and contemporary information about Wales that the residents have been primarily large

sea mammal hunters for as long as there is information about them and that it has been large sea mammal hunting that has permitted the existence until very recently of one of the largest and most sedentary Inupiat communities in all areas of Eskimo distribution. Their fortuitous location on the tip of the major headland (Cape Prince of Wales) that juts into the Bering Strait at its narrowest point from the North American side has made such an ecological adaptation possible and highly productive. The recent decline in Wales' population and number of hunting crews has been the end result of disease impact and sociocultural change rather than ecological change, and large sea mammal hunting is still the most singularly valued activity by Wales' residents.

Unquestionably the open skinboat (umiak) hunting of the Pacific walrus is economically and culturally the most important subsistence activity of the populations within this subregional grouping. Bogojavlensky's (1969) entire dissertation and fieldwork already completed by the author clearly establishes that walrus hunting comprises the mainstay of the economic system for King Island and Little Diomedé and that skinboat hunting for the walrus comprises the foundation of even the contemporary social system. Bogojavlensky (1969) points out that although bowhead whaling was traditionally and temporarily a highly prestigious activity and during successful seasons could contribute large quantities of biomass to the communities, ". . . , it should be

noted that whaling has always been of secondary economic importance in this region" (p. 1). The residents of St. Lawrence Island contemporarily practice bowhead whaling to a degree much greater than Little Diomedé and Wales and are currently deeply involved with the Alaskan Eskimo struggle against the International Whaling Commission to retain their rights to whaling for economic, social, and valuative reasons (informal discussions, Savoonga and Gambell, 1979). However, walrus hunting even for this group is economically a priority:

Ever since the people was formed on the island we eat most walrus meat, and we like it best.

But if we get one whale, we forget about walrus meat for awhile. But we never get tired of walrus meat. I think because we raised by them. (resident of Gambell 1 quotation in Hughes, 1960, p. 102)

For the community as a whole, undoubtedly the most important form of hunting is boat hunting for walrus. For the individual hunter, seal hunting at the shore water and on the winter ice occupies the bulk of hunting time when walrus are not present. But seal hunting will be discontinued and walrus sought when they are in the area.

(Burgess, 1974, p. 148)

Walrus are taken primarily in the spring during their migration north from wintering areas in the Bering Sea. A major wintering area for the majority of walrus is a portion of the Bering Sea just southwest of St. Lawrence Island. This area is critical to overwintering because of favorable ice conditions and the availability of food; the Marine and Coastal Management division of Alaska Department of Fish and Game



estimate that 100,000-115,00 walrus winter in this area (AEIDC, 1978). Depending on ice conditions the major thrust of walrus hunting may begin as early as late March or early April for St. Lawrence Island and late April to May for islands north continuing until the migration has passed these areas which is often as late as the first week of July for Little Diomedé, King Island, and Wales. Cows and calves form the forward advance of the migration while bulls and barren cows bring up the rear. Access to the cows are essential for all walrus hunters, as only the hide of the cow walrus is suitable for use in covering the primary item of hunting technology -- the skinboat or umiak. Failure to obtain cow hides in order to keep the boat operable may, in conjunction with other factors, bring about the economic demise of a skinboat captain and his crew with considerable socioeconomic consequence. The reliability of cow and bull harvests from year to year vary greatly depending particularly on ice conditions and weather. The pressures of state village quotas had only exacerbated this situation as quotas increased boat competition rather than cooperation and encouraged hunting in adverse weather and ice conditions. Ethnohistoric evidence of starvation clearly indicates that failure to retrieve a substantial number of walrus could mean a hard winter or even death and starvation. Burgess (1974) and others suggest that the taking of large numbers of walrus (possibly 10,000 in a single season) by commercial whalers in 1880 and previous years may have been a contributing factor to the massive starvation that occurred on St. Lawrence Island during the

1878-1880 period (p. 69). Even today low harvest years such as 1968 and state quotas have caused hardship for these communities and increased their dependency on commercial goods for which they do not have adequate cash and which themselves are often in short supply in island villages. In addition walrus, since the turn of the century, have become an important source of cash through their ivory and the subsequent carving of ivory by village residents. Not only does a bad hunting year mean reduced immediate protein as a food source but also reduced raw materials that can be converted into the cash necessary for the purchase of alternative protein sources if available (which they usually are not) as well as investment in necessary hunting technology for the next season -- a vicious economic cycle.

Walrus are hunted as a cooperative rather than individual activity, by a crew ranging from seven to ten men, directed by a skinboat captain (umealiq in Inupiaq and angyaelik in Siberian Yupik), usually in an open skinboat (umiak in Inupiaq and angyak in Siberian Yupik), and in open water preferably near broken sea ice. Personal interrelationships, social factions, and economic distribution and well-being focus on the skinboat crew composition and the success of that boat and crew during any given season (informal discussions, 1979; Bogojavlensky, 1969; and Hughes, 1960). Although skinboats are still a viable technology in the Bering Strait area, the use of aluminum and/or wooden boats has not abolished many of the basic patterns associated with skinboat hunting but has, in effect, transferred them to the new

technological form. The use of commercial boats by some crews has, however, enabled some individuals with fewer traditionally-desirable and respected qualities, skills, and experience but more cash at a younger age to become "captains" and has decreased the potential amount of meat which can be hauled at the same time from a given kill site. The use of harpoons in conjunction with modern rifles has been necessary for purposes of successful retrieval.

Of all Alaskan Eskimo groups, the Inupiat and Yuit peoples of the Bering Strait area were and are the most far ranging and competent hunters in open sea conditions that may become treacherous for traveling with very little notice. With the caution based on centuries of knowledge of maritime currents, winds, and ice conditions, Bering Strait walrus hunters (particularly King Islanders and Diomeders) may venture 50 miles or more out to sea if ice conditions make such a range necessary to obtain walrus. King Islanders now residing in Nome must often travel extensive distances from the shallow waters and shorefast ice of Norton Sound to intersect walrus migrations, and as soon as feasible they will fight pack ice, shore ice, winds, fog, and penetrating cold to travel the 40-50 miles up the coast to Cape Woolley and 30-35 miles west from the Cape to reach walrus in the vicinity of King Island (Ellanna, fieldwork, 1969-1977). The use of modern outboard motors has made distant travel more efficient. The important point is that, although hunting of walrus is preferable as

close to the home village as possible, the variables of ice condition, migration timing, winds, and general weather conditions may require a hunting range in excess of 50 miles from shore and 100 miles in either direction up and down the coast if necessary to obtain the critically needed walrus. In general, however, hunters from Nome's King Island community will most usually hunt off the coast of Nome to Cape Nome and north to Sledge Island, Cape Rodney, Cape Douglas, Cape Woolley, north towards Little Diomedé and Wales, and out to a range surrounding King Island. Hunters from Gambell would most often hunt to the south, west, and north of the island from the village site on the northwest cape. Savoonga hunters tend to hunt north and northwest of the village site following the herds. Little Diomedé hunters today are limited in their hunting to the west because of the restrictive boundary of the Soviet Union, so they hunt primarily south drifting back north with moving currents in the course of the hunt. Wales hunters usually do not need to go far from the village to obtain game. All of the above generalizations depend, of course, on the ice and sea conditions of that particular year and considerable variation in range and direction may be possible. For the most part St. Lawrence Island hunters tend to stay within approximately 12 miles of the island unless the weather is particularly good and the access to walrus encourages further travel (informal discussions at Gambell and Savoonga, 1979). Fall hunts for walrus during their southward migration occur but are less productive because of the absence of sea ice (it is

much more difficult to butcher or haul out a walrus killed in open water), intense and sudden storms making sea travel dangerous, and the presence of newly forming sea ice which is destructive to boats of any material. Cases of newly formed sea ice wearing holes in wooden crafts have been frequently discussed by residents of this area.

The importance of walrus as a food source (protein, fat, and critical vitamin nutrients -- Heller and Scott, 1967; Burgess, 1974) has already been discussed as has been its importance as a raw material source for skinboats, rawhide line, drums (from the stomach), and ivory for carving saleable items that provide cash to reinvest in subsistence technology and other necessities (e.g. fuel oil, electricity, transportation, etc.). A Bureau of Indian Affairs report estimates that in 1973 Savoonga residents consumed walrus in the amount of 3.89 lbs./person/day and Gambell 1.28 lbs./person/day (this discrepancy for Gambell resulted from a lower harvest for that particular year) (U.S. Dept. of the Interior, 1977b, p. 154). Both of these figures are undoubtedly conservative estimates as will hopefully be demonstrated by future data. The sharing of walrus initially between crew members and then into a broader kinship-based network provides an economic and nutritional stability for all ages and sexes which cannot be functionally replaced by a cash-based equivalent. The implications of walrus hunting by skinboat crews has tremendously complex and temporarily viable implications for the social system which must be kept in mind

but cannot be explored in any greater depth here. The valuative importance of walrus hunting to all of these communities, but particularly Little Diomedes and King Island, cannot be quantitatively measured but qualitatively is probably their singularly most highly valued activity.

Bowhead whaling is the most prestigious and culturally important activity for the people of St. Lawrence Island today, and their concern with its undisrupted continuation is tantamount as a contemporary issue. This issue is so important that it has encouraged joint activity between Siberian Yupik residents of the island and northern Inupiat (whom St. Lawrence Islanders consider "different") in opposition to the International Whaling Commission and the potential of OCS development as having harmful effects on the whale resources. While grey whale, beluga, and other whales are harvested and utilized, the bowhead is preferred as a food source and bowhead hunting is preferred as an activity. In the absence of an adequate bowhead take, grey, beluga, minke, and other whales will be taken in greater number to compensate for the protein and fat deficit created by a lack of bowhead products. Killer whale are not hunted as they are thought to have human characteristics (informal discussions, 1979; Hughes, 1960).

The bowhead whale, an extremely large (sometimes 50-60 ton) sea mammal, is available to St. Lawrence Island and Wales residents only during their spring migration -- the fall migration proceeds along the coast

of the USSR after leaving the northern Alaska coast and is therefore out-of-range to Alaskan Bering Strait hunters. The spring hunt usually commences in early April but may vary by a couple of weeks in either temporal direction. Bowhead whaling, like walrus hunting, is a cooperative venture undertaken in skinboats from either whaling camps along leads or in open water with the village as home base. In the case of Savoonga, whaling boats and gear must be hauled approximately 35 miles across the island to the southern shore and the whaling camp called Powoiliak near southwest cape (informal discussions, 1979). A combination of traditional and modern technology, for the most part introduced by commercial whalers after 1850, is utilized today. Whale products are distributed very formally between boat crews participating in the capture, to those who help haul out and butcher, and often, at the option of the boat captain making the first strike, to other residents in both villages (Gambell and Savoonga always share their catch). Both the number of boat crews participating (e.g. 18 in Gambell in 1974, 19 in Gambell in 1976, a minimum of 3 in Savoonga in 1976, 2 in Wales in 1976, etc. -- Marquette, 1977) and total harvest may vary from year to year depending on a complex of environmental (e.g. ice conditions, winds, etc.) and sociopolitical variables (e.g. regulatory agencies, federal quotas imposed since 1978, access to the cash required to outfit a boat and crew, etc.). This study will not present harvest data of bowhead for villages in this subregion, because there is considerable dispute over the accuracy of the data that have been

compiled in recent years by various agencies and researchers; because these data reflect confusion over whale species harvested, "struck" and "lost" categories, retrieval rates, total species numbers, etc.; and because these data have been gathered for political purposes (i.e. the imposition of quotas by the International Whaling Commission) by outside researchers (i.e. non-users) and therefore may not be accurate and/or objective (Marquette, 1977; Carroll, 1976). Recent attempts to coordinate user data through the auspices of the Eskimo Whaling Commission and agency data through NOAA efforts are in progress and may result in more accurate statistics in the future. Virtually all sources agree that whaling efforts (including the number of crews and individuals) are increasing over the last couple of decades (Marquette, 1977; Hughes, personal communication, 1978; informal discussions, 1979) for St. Lawrence Island and Wales (in this study area), and this increase may represent an expanding need for subsistence resources as a result of an inflationary cash economy and rapid population growth (U.S. Dept. of the Interior, 1977a and 1977b; Burgess, 1974; Ellanna and Roche, 1976) and an Eskimo cultural revitalization. Bowhead whales provide primarily food in the form of proteins and fats, foods that can be exchanged for mainland resources, and limited raw materials (i.e. baleen and whalebone) that can be used in either local technology or as a source of cash. In the opinion of local residents, bowhead whale cannot be adequately compensated for by any other food source including other kinds of whale (informal discussions, 1979), and whaling as an



activity is at the core of St. Lawrence Island culture (i.e. without whaling the culture would not survive) (see Worl Associates, 1978 for some arctic coast parallels).

For all of the communities in this grouping, remaining subsistence resources are also primarily from the sea. It is estimated that for St. Lawrence Island in excess of 98 percent of total subsistence resources are maritime in origin (Dept. of the Interior, 1977b, p. 159). In addition to walrus and whales already discussed, residents of these communities harvest and utilize three species of seals (bearded, ringed, and spotted; ribbon are rare in this area), polar bear, fish (saltwater, freshwater, and anadromous) and shellfish directly from the maritime environment. Seals are the third major source of biomass for St. Lawrence Island residents in good whaling years and the second for King Islanders and Little Diomeders as well as St. Lawrence Islanders in poor whaling years (Peterson, 1978; Bogojavlensky, 1960; Burgess, 1974; informal discussions, 1979). Wales residents reported reindeer to be their primary source of protein in Peterson's 1978 study, but this undoubtedly was a result of the season and short-term nature of this study (i.e. the survey was subsequent to an annual spring reindeer butchering). Field research by the author indicates a high priority placed on sea mammal hunting and that sea mammals have a greater role in the diet than indicated by Peterson (1978). King Islanders and Diomeders have been noted for

their skills at taking seals on foot at leads on moving ice during winter months (ringed seals being most abundant at this time). Both of these groups also actively hunt bearded seals during the spring on moving ice from boats and all seals available in open-water during the spring and fall from boats. St. Lawrence Island residents and Wales residents take seals on foot or by snowmachine at leads from shore-fast or stationary ice during the winter and from boats during spring, summer, and fall. King Island, Little Diomed, and Wales populations depend more heavily on mainland fishing and vegetation in the summer months than do St. Lawrence Island populations, which accounts for the negligible sealing during the summer of all but the St. Lawrence Islanders. All of these populations have virtually abandoned breathing hole hunting contemporarily possibly because it was not as important aboriginally due to the continual presence of moving ice and therefore open leads and because breathing hole hunting with rifles is not practical. Areas and species harvested vary widely dependent on ice conditions, geographic area, and other subsistence priorities and abundance.

To conserve on time and space and to facilitate the reader's ability to integrate the large amount of material presented on subsistence in this ecologically diverse study area, some generalizations regarding other species harvested and utilized by large sea mammal hunters will be made in the framework of a basic contrast between St. Lawrence Island

and the more northerly communities in this subgrouping. St. Lawrence Island is very large (110 miles long and averages 30 + miles wide) vis-a-vis other Bering Strait islands with a varied topography including mountains, lowlands, beaches, lakes, salmon-spawning streams, bird rookeries, lagoons, and diverse vegetation. Its geographic isolation from the Alaska mainland and present political isolation from nearby Siberia have encouraged island resource self-sufficiency. Even in the past the only critical species absent from the island was the caribou (as a source of hides more than food), and this deficit was met by Siberian trade. Today reindeer transplanted to St. Lawrence Island near the turn of the century and maintaining a relatively low but stabilizing population on available mosses and lichens provide a land mammal resource. Transplanted fox and naturally occurring fox have provided a source of cash through trapping. For subsistence purposes, then, St. Lawrence Island is today virtually self-contained, but the reliance on maritime resources is by far greater than any reliance on land resources (relative percentages are 98 percent and 2 percent respectively).

King Island and Little Diomedé are a dramatic contrast in size, topography, and isolation to St. Lawrence and have historically developed alliances with mainland populations in order to obtain access to fish, land mammals, and vegetation resources (Ray, 1975b). Wales is a mainland community but residents need to travel either up or down the

coast and inland to get the majority of non-sea mammal resources. Wales has possibly undergone some seasonal dietary shifts recently in utilizing a large percentage of reindeer in their diet with a concurrent decrease in sea mammal use (Peterson, 1978; informal discussions and fieldwork, 1978-1979). There is evidence that there has been a revitalized interest in sea mammal hunting in the last couple of years as indicated by events such as the construction of skinboats by King and St. Lawrence Islanders, the first successful bowhead whale hunt by Wales in ten years (spring, 1980), and, the purchase and utilization of boats and motors for hunting by Nome Eskimo residents. Since King Islanders now reside in Nome they have expanded their traditional area of mainland utilization along the northwestern Norton Sound coast and have increased the ratio of their dependency on mainland fauna and flora vis-a-vis sea mammal fauna -- the same is probably true of Diomedes residing in Teller. In addition, many King Islanders have reversed their residency on King Island from winter to spring and early summer with summer-long occupancy of Cape Woolley and several weeks' occupancy of King Island by several families and single individuals.

Based on this contrast, then, the remaining subsistence resources utilized can be briefly mentioned keeping in mind both the above comments regarding new areas utilized and techniques of utilization described for the Shishmaref, Brevig Mission, and Teller areas and emphasizing

variations from patterns already discussed.

St. Lawrence Island residents hunt migratory waterfowl in the spring when they are not whaling and walrus hunting, collect eggs from these fowl in early spring, seal hunt and fish by boat in the summer, net salmon in the streams and pick berries in the late summer and early fall, hunt seal by boats (primarily spotted seal) and walrus in the fall, and fish through the ice (for crab, sculpin, tomcod, etc.) and hunt seals at leads in addition to some trapping during the winter. Trips to the Penuk Islands (off Northeast Cape) are made in both fall and spring for walrus which have hauled out in that area and sea lions have been recorded as being hunted on the Penuk Islands if other sea mammal hunting has failed to supply a necessary winter supply of meat (Hughes, 1960; Burgess, 1974). Winter is probably the least active subsistence period, but if leads are accessible there is virtually no period during any yearly cycle that St. Lawrence Islanders fail to actively perform subsistence activities. All of the above mentioned hunting, fishing, and trapping endeavors are either near the island or onshore.

As already discussed King Islanders, Diomeders, and to a lesser degree, residents of Wales also focus most spring efforts on walrus

with bearded seal and migratory waterfowl being important secondary activities. By early July camps have been established away from Nome and along the mainland coast and rivers as bases of operation for egg gathering, intensive fishing for salmon, and berry and green gathering in addition to occasional visits to other communities by boat (Diomeders frequently visit Wales, for example). Summer is a time for "camping" and "going out in the country" for whatever reason. Fall involves rather intensive moose hunting efforts both inland and along the coasts and open water sea mammal hunting occurs when intervals between frequent storms permit. By late fall (October) Diomeders must return to the island for a period of isolation from the mainland until ice near the island is stationary and thick enough to provide a landing strip for small aircraft. In the winter of 1978-1979 Little Diomedede remained isolated from October until March because of ice conditions. Again, for all three of these communities there is virtually no period of time during a yearly cycle that at least some members of most families are not involved in some kind of subsistence activity. For those who hold full or part-time jobs, spring and summer are the preferred times for vacations at camps, weekend trips for camping, fishing, or hunting, or temporary job interruptions. Ironically, and of interest for purposes of this study, is the fact that these are also the times during which the majority of jobs in the study area are available.

The economic and related cultural significance of subsistence for this subregion requires some analysis, most of which again is qualitative in nature. There is no question that the populations of the islands are the most highly dependent on subsistence of any of the communities within the study area. Since the mid-1960s relocation of all King Islanders to Nome, their diet has altered to include more reindeer and commercial foods, but field research (Ellanna, 1969-1978) indicates that even the King Islanders rely on subsistence resources for 75 percent of their total protein and fat intake. Peterson's 1978 study of subsistence resources in bowhead whaling communities indicate that Gambell and Savoonga, by all indices measured, were more subsistence dependent than Barrow, Pt. Hope, Kivalina, Wainwright, and Kaktovik. This study, however, indicates that Wales is primarily dependent on reindeer and then fish in contrast to other "whaling communities" studied. Peterson's study contains some questionable data, however, as the research involved the use of lengthy formal questionnaires applied over a 35-45 minute interview period, primarily by outsiders to the community; the study was conducted during late March and early April when sea mammal resources are usually minimal; the structure of the questions require one respondent to answer questions about diet for an entire year and for all of the household members during that year; the questionnaire is structured along western concepts of dietary practices (i.e. three family meals a day, the quantification of the foods eaten in pounds, concepts about selecting

given meals by preference rather than resource availability, etc.); and the data do *not* correlate (*i.e. the parts do not add up to the whole--* Savoonga data indicate that 13.6 percent of the families claimed that reindeer was a primary or secondary food source, but reindeer harvest figures for that period also presented in the report make this claim nutritionally improbable).

An explanation for the high subsistence dependency of the island communities would include: (1) their more advantageous ecological position for subsistence hunting of animals with a large biomass; (2) the geographic isolation of these communities from the regional center of Nome making access to commercial goods more difficult and more costly and access to cash employment less likely (e.g. during the fall of 1978 and 1979 and the winter of 1978-1979 storms and ice conditions made the air transport of commercial goods to the islands sporadic and, in the case of Diomedes, impossible); (3) high population densities and large household sizes of island communities (Ellanna and Roche, 1976; Burgess, 1974); and (4) the greater continuity of traditional subsistence patterns and the importance of subsistence as a cultural core in these communities.

Although Wales is currently more subsistence dependent than the Peterson (1978) study indicates (and even the utilization of the semi-wild reindeer can be viewed as a functional subsistence correlate to



caribou hunting), there are explanations for shifts in Wales subsistence patterns that have particular relevancy for this study. As discussed in the historical section, Wales was the largest historic Eskimo village with a population approximating 500 and a viable economy based on large sea mammal hunting. Due to their mainland location and frequency of contact with Euroamericans, the population of Wales was more heavily decimated by disease than that of island communities (with the exception of St. Lawrence Island during the 1878-1880 period). Population declines of great magnitude have tremendous implications for hunters and gathers who, as in the case of the Eskimo, depend primarily on male adult hunters in necessarily good physical condition to supply the vast majority of food. Loss of hunters means not only fewer providers but, in the case of large sea mammal hunters, also the disruption of the skinboat crew as an economic and social unit. Loss of older males in great numbers also disrupts the continuity of subsistence knowledge through time. Wales, differing from St. Lawrence Island, did not recover from their population losses. Outmigration of large numbers of people born in Wales to Nome for education and/or cash employment played a large role in continued low population totals (Senungetuk, 1971; Ellanna, demographic research, 1979). In addition, however, the presence of a military facility near Wales (Tin City, now an Alascom communications site) since the 1950s had a great demographic impact in that the recruitment of child-bearing age females by military personnel at the site as wives and their in-

evitable settlement outside of Wales (and, in most cases, outside of Alaska) resulted in the inability of the Wales population to regenerate. Their skewed population profile vis-a-vis the rest of the Bering Strait area is clearly apparent in Ellanna and Roche (1976)--there are relatively few children, few child-bearing age women, and proportionately a larger adult unmarried male population. In addition, Tin City provided potential wage employment for a few males who would probably have been hunting if they didn't have jobs. All of these trends had implications for hunting potential and continuity. Recent demographic analyses of Wales (Ellanna, fieldwork, 1979) indicate that the trend towards out-migration is reversing and many young adult males with education and training are returning to Wales to participate in hunting. Harvest data of sea mammals by Wales residents suggests a corresponding increase in maritime hunting efforts and productivity over the last decade. Considerable effort has gone into building, refurbishing, and purchasing relatively large wooden, skin, or aluminum boats for hunting over the last two years (Ellanna, fieldwork, 1977-1979). The high price being paid for reindeer antler will undoubtedly have an effect on the amount of reindeer meat available for Wales residents in the future. All of these factors will undoubtedly interact to increase sea mammal hunting at Wales in forthcoming years.

To summarize this section on large sea mammal hunters, it should be reemphasized that subsistence for populations that practice large sea

mammal hunting cannot be solely measured by its economic importance. This is particularly relevant for the social system of large sea mammal hunters because of the social implications of skinboat (or boat) hunting crews and captaincy. Although not previously mentioned directly, the influence of boat captaincy and the relationship of "captain" to crew members have acted as a pattern for economic and social relationships within aspects of the interfacing cash economy. That is, the economic influence of boat captains was and is extended to interpersonal relationships in some aspects of a cash economy (i.e. their skill and abilities as captains provide the technology for the hunt, access to food sources, and ivory, etc.). On the other hand, patterns of sharing of subsistence resources have not generally applied to cash derived wealth in the sense that whereas boat captains will share meat, ivory, or other animal products and the cash-derived technology for the hunt, they will less willingly share their cash income per se (Eisler, 1978; Hughes, 1960; Bogojavlensky, 1969; Ellanna, fieldwork, 1969-1978). In valuative terms hunting of sea mammals means life to these populations -- they say it is the anticipation of hunting which provides many men with the desire to live (informal discussions, 1979); it is boats and captains that provide the mechanism for realizing this goal.

One thing white people don't understand is that we Eskimos can't grow anything. All we can do is hunt, hunt, hunt. (Gambell skinboat captain quoted in Hughes, 1969, p. 135)

The ocean is our garden, and if oil destroys this garden, we will have no way to live. (King Island women at an OCS public information meeting, January 1979)

To be able to hunt whale and walrus is to be an Eskimo. (Gambell resident, informal discussion, 1979)

This sentiment is expressed repeatedly by residents of these communities today. The most active social period involving singing, dancing, other ceremonialism associated with boat skinning, a successful hunt, or a successful season, and intensive emotional anticipation and empirical preparation is that time preceding, during, and immediately following large sea mammal hunting. Any concern with the economic importance of these resources cannot be viewed separate and apart from what most Euroamericans would consider a "non-economic" importance as they are contextually intertwined.

Norton Sound fishing and coastal and inland hunting pattern: There are no contemporary published ethnographic or subsistence studies for this area which includes all communities with subsistence patterns involving Norton Sound, its coastline, and adjacent land area and drainage systems (Solomon, Golovin, White Mountain, Council, Elim, Koyuk, Shaktoolik, Unalakleet, and, for a portion of the population, Nome). Therefore, data for this area have been compiled and extrapolated using a variety of indirect and direct sources including the following: (1) field based observations by the author over the past decade; (2) informal discussions and field based observations made in conjunction with this study contract; (3) a review of subsistence data compiled and mapped by Kawerak, Inc. personnel; (4) nineteenth century subsistence data compiled by Ray, 1975b; (5) Alaska Dept. of Fish and Game data from the Nome office and the "Norton Sound Proposed Lease Sale -- Winter" map (AEIDC, 1978); (6) archaeological data from Bockstoce, 1973 and Giddings,

1967; (7) subsistence-related references from other sources such as Ellanna and Roche, 1976; Hemming, Harrison, and Braund, 1978 and Heller and Scott, 1967; and (8) newspaper reports on village activities taken from The Bering Straights and The Nome Nugget during the period of this contract. Because of the lack of secondary literature on this area and contractual directions to rely on such non-existent literature, this section will, by necessity, have fewer literary citations, will rely more exclusively on field based observations, and will be less detailed than the previous two sections. These factors should not be interpreted as meaning or implying that subsistence has less relevancy in this subsection.

The single most apparent unifying factor of subsistence for this area is a lack of species specialization and the associated use of multiple and varied animal and plant resources (e.g. the utilization of any resource as it become available such as the atypical harvest of walrus in the upper parts of Norton Sound and Norton Bay during the late spring and early summer of 1979 -- informal discussions, Elm and Moses Point, 1979). Although subsistence practices are diverse, the majority of these activities are focused on the maritime environment of Norton Sound. Recently compiled but unpublished subsistence use area and species habitat maps of Norton Sound illustrate a continuum of overlapping subsistence use areas beginning just east of the Nome townsite (Nome River) to Point Romanof where the Yukon Delta proper subsistence use area begins (Kawerak, informal discussions, 1979-1980). This use area includes the wintertime dimension of extensive and usually stable shore-

fast ice that may extend and be traversed for distances as far as 20-30 miles from shore in subsistence pursuits. This same area is utilized intensively by means of boats during summer months and boat activity may occasionally extend beyond into mid-sound if resource harvest needs dictate. Because of the diversity of species and multiplicity of activities during the same season, this discussion will be more explicitly organized around species than the previous discussions with factors of seasonality also being considered.

Salmon are a critical resource to the residents of Norton Sound. For all but northwestern Norton Sound (which lacks king salmon in appreciable numbers during most years), salmon species of primary subsistence value include pink or humpback, dog or chum, and king or chinook with silver or coho playing a less important role--red or sockeye have begun to enter the sound in small numbers in recent years (Alaska Dept. of Fish and Game, 1978; informal discussions, Moses Point, 1979; Selkregg, 1976a). It is important to note that the methods, timing, and equipment for taking salmon as a subsistence resource coincides for these populations with contemporary commercial salmon fishing (the single most important resource of cash in this area). It is not uncommon for families at fish camps to participate in both subsistence and commercial fishing at the same site during the same week (days for subsistence and commercial fishing are regulated by the State Department of Fish and Game by day and hour and commercial fishing today is

regulated by Limited Entry Permit and subsistence fishing by Subsistence Permit). Salmon are taken during the summer months usually from early June through August (i.e. silvers from the end of June to August, dogs during the month of June, humpbacks mid-July until August, and kings in June). Variations in timing of one to two weeks may occur from one year to the next depending in part on ice and general climatic conditions, and since some species have relatively short runs, it is important for residents to be prepared and available to fish during peak availability periods. Salmon are taken in open water, from shore, and up rivers usually with set nets and wooden or aluminum boats (fish traps, fish wheels, and skinboats are not used today on Norton Sound). Beach seine nets, used in the past in this area, have been prohibited by Fish and Game regulations. Bockstoe (1973) has found archaeological evidence (net sinkers) for a long tradition of net fishing in northwestern Norton Sound. Total subsistence harvest figures for salmon in this subregion have only been recorded by Fish and Game, but these figures will not be utilized in this study due to the data problems previously discussed. Suffice it to say that salmon alone constitute 35-40 percent of the total diet of a large number of residents of Norton Sound varying by village (informal discussions with Kawerak, Inc. and at Elim and Moses Point, 1979-1980; Selkregg, 1976a). It is important to note that adult females play a major role in the subsistence salmon fishery in this area with considerable implications for the social division of labor that varies somewhat from that of Inupiat

groups to the north (Norton Sound residents are both Inupiat and Yuit). Because of the overall economic importance of this single genus of fish to residents of Norton Sound area, any disruption to either this resource or subsistence fishing patterns would have dramatic and deleterious effects on the populations in this area.

Another fishery resource of considerable subsistence importance is herring. Barton (1978) estimates that herring use as a subsistence resource is greater in Norton Sound than in Kotzebue Sound but somewhat less than it is in the Yukon-Kuskokwim Delta (p.54). Barton further suggests that subsistence use is influenced by yearly variations in herring abundance, village location in relationship to migration routes, availability of other subsistence species, and the degree to which residents in a community have access to cash employment (Barton, 1978, p.54). Within the last couple of years an Asian market for herring roe and herring has been expanding (due primarily to the 200-mile limit) and putting pressure on the resource as well as creating a conflict of priorities (i.e. whether an individual fisherman should spend the time fishing for herring to store as a subsistence resource as opposed to selling it to locally available buyers). Herring winter off Cape Darby and Rocky Point at the entrance to Golovin Bay and in the Bering Sea between the Yukon Delta and St. Lawrence Island and move to shallow areas on or near Norton Sound shorelines to spawn when water temperatures reach a particular level of warmth (usually early



June). Their availability and spawning sequence are closely related to ice conditions, and in some years and some locations herring may not be harvestable because of ice conditions or inclement weather (in normal discussions, Moses Point and Stebbins, 1979; Hemming, Harrison and Braund, 1978). Herring harvests for subsistence include techniques of both beach seining and gill netting from boats. Roe on kelp is also used as a subsistence resource but has been more important for subsistence in the past and has been utilized more widely as a commercial item in the last couple of years--a Board of Fisheries ruling in January 1980 made commercial harvest of roe on kelp illegal as of the 1980 season. Communities within this subregion utilizing herring for subsistence include Golovin, Elim, Moses Point (a summer residence area for Elim people), Shaktoolik, and Unalakleet (Hemming, Harrison and Braund, 1978, p.3). Stebbins and St. Michael, whose populations use herring in greater number than any of the other villages, are included in the next subsection of this study (i.e. "Yukon Delta fishing"). However, a fisherman from Elim reported that all of the families of that village catch subsistence herring (Hemming, Harrison and Braund, 1978, p.62). In the period 1975-1978 the following limited annual subsistence harvests are recorded for this subregion in Barton's (1978) finfish study: Golovin and Elim (combined average) 150 lbs., Shaktoolik and Unalakleet (combined average) 300 lbs.. Undoubtedly these figures may be conservative because of unreported harvests and difficult to interpret by village because of data lumping. Villagers report a

definite increase in herring populations over the last couple of years which they attribute to the cessation of foreign fishing within the 200-mile limit (informal discussions with Kawerak personnel and residents of Golovin, Elim, and Stebbins, 1979).

Other fish utilized in this subarea include crab (at the mouth of Golovin Bay), whitefish, grayling, arctic char, smelt, bourbot, tomcod, pike, sheefish, halibut, lamprey, suckers, blackfish, sticklebacks, chub, sculpin, and clams along the coast, up rivers, in shallow bays and in freshwater sloughs. Of the above all but halibut, pike, grayling, and bourbot are described as having relatively significant economic importance (Alaska Dept. of Fish and Game, 1978). Clams are obtained in the tidal flats of Norton Bay; in the Unalakleet River alone the majority of species listed above are available. In general, then, the drainages and coastal areas in the vicinity of all contemporary communities are important as sources of fish during all seasons, as ice fishing continues these activities throughout the winter months after freezeup occurs (informal discussions, Elim, Koyuk, White Mountain, and Unalakleet residents, 1979).

Small sea mammals (including beluga, bearded seal, spotted seal, and ringed seal) make up a substantial part of the subsistence base. Walrus haul out in small numbers at Cape Darby and Besboro Island during their migration and are hunted in the former location by residents of

Golovin, White Mountain, and Elim and in the latter location by residents of Shaktoolik (informal discussion, Kawerak, Inc., 1980). In unusual years (such as 1979) they may penetrate waters as shallow as Norton Bay in search of food, but such occasions are rare. In general, however, although walrus will be taken when available and accessible, the residents of Norton Sound are not large sea mammal specialists and focus their efforts on the more abundant and accessible smaller species. The most important species of seal for the majority of these communities is the bearded seal which is primarily hunted in the spring, and ringed and spotted seal which are hunted primarily in the fall but occasionally in the spring when available. Little effort is expended on hunting seal in the summer after fishing begins and winter seal harvest is also negligible. Seals are hunted by boat by all villages in the Norton Sound area including White Mountain residents (which Alaska Dept. of Fish and Game statistics indicate do not hunt seals--a case of recorded data not coinciding with actual practice) (informal discussions, Kawerak, Inc., and village residents, 1978-1980). Seal resources are equally as important as beluga in the diet of contemporary villages again varying by village. Based on total harvested resource poundage for Norton Sound suggested by Selkregg (1976a, p.199) and informant information on the relative importance of various species, it can be estimated that seals comprise 15-20 percent of the diet. Beluga, which are known to use Norton Bay as a calving area (informal discussion, Elim, 1979; Dames and Moore, 1979a), migrate into Norton

Sound in the spring (April - June) in close association with fish runs which are their major food. Some sources suggest that beluga actually winter in areas of the northern Bering Sea that have conditions of broken ice during winter months, although there is relatively little definitive information about beluga wintering activities. The residents of the Norton Sound area consider beluga to be an important subsistence resource and they are hunted in late spring and early summer by boat. Often a group of beluga traveling after fish near stream or river mouths or near entrances to sloughs will be driven into shallow water by resident hunters and dispatched (informal discussions, Elim, Moses Point, and Unalakleet, 1979). Beluga can be estimated to comprise 15-20 percent of the diet of Norton Sound populations varying, of course, by village and year. Residents explain the abundance of beluga in Norton Bay as being related to their access to food and safety from their primary predator, the killer whale (informal discussions, Elim, 1979).

Since an overall understanding of village economics is of importance to this study, a brief summary of major land mammal utilization is appropriate. Moose first occurred in this area in approximately the 1950s and residents were initially hesitant about hunting them (informal discussions, Elim, 1979). However, they quickly became recognized as a valuable protein food resource and are actively hunted today by residents of all villages. Because of hunting pressures on Seward

Peninsula moose near existing road systems and a longer open season in the Norton Sound area, many residents of Nome travel by snowmachine and/or vehicle (when the roads are open) to Solomon, Council, and White Mountain areas for hunting moose. Population growth in Nome would probably include an increase in moose harvests in this area, since about 47 percent of moose harvested in these game units are taken by Nome hunters (Dames and Moore, 1980a) and may decrease moose availability to the local population of Norton Sound. Caribou are virtually non-existent today in the vast majority of the study area. They are, however, located in the hills east of Seward Peninsula and range in the vicinity of Norton Sound from approximately the Shaktoolik area south to the highland areas adjacent to the Yukon Delta. The best access to caribou within this study area would be by the residents of the Koyuk, Shaktoolik, and Unalakleet areas (Selkregg, 1976a). Other land species may be hunted or trapped for pelts but are of less dietary importance. Terrestrial mammals jointly comprise approximately 15-20 percent of the total diet of this subregion varying by village and year.

The hunting of migratory waterfowl is perceived of as an important spring and fall activity contributing to total food resources as well as welcomed diversity. While Selkregg (1976a, p.199) indicates that the total poundage of fowl utilized is generally the lowest (approximately 5 percent of the total diet) relative to other animal and even

plant resources, it is important to reiterate that, like subsistence patterns previously mentioned, migratory waterfowl avail themselves in the spring when other resources are low and a change in diet is enthusiastically desired and nutritionally advantageous (Heller and Scott, 1967). The hunting of these birds is perceived to be concurrent with the arrival of spring and is anticipated with excitement, for it follows a long, somewhat confining winter. Because of the many areas of high and moderate waterfowl density in this subregion and the numerous rookeries and other nesting habitats that support large quantities and varying species of sea birds, the harvesting of this valuable resource is easily accomplished. Within this subregion critical migratory waterfowl habitats include (from northwest to southwest on Norton Sound): Cape Nome to Solomon and Bluff; Rocky Point and upper Golovin Bay to the confluence of the Niukluk and Fish rivers; between Cape Darby and Elim; Moses Point east to and including the lower drainage of the Kwik River; upper Norton Bay; lower Ungalik River drainage to an area south of Shaktoolik; and the mid-Unalakleet River drainage. Major sea bird rookeries include Cape Nome, Bluff, Rocky Point, Cape Darby, Cape Denbigh, and Besboro Island--any other cliff-like geographic feature may host minor colonies. Eggs and fledglings, in addition to adult birds, are utilized.

With the exception of the hunting of large terrestrial mammals and seals, there is less division of labor by sex and even age for

subsistence resource acquisition among these populations than among groups previously mentioned.

In an overall consideration of Norton Sound subsistence, the data present a picture of contemporary economic self sufficiency that emerges not only from ecological resource diversity but probably also from a historical (and prehistoric) isolation from extensive involvement in aboriginal trade routes and extensive contact with the Euroamerican traders that frequented Bering Strait communities. To the extent that subsistence patterned activities can be converted to presently necessary cash, commercial fishery phases of the overall fishery activity meet even this need. Indices of self sufficiency may include a firm estimate, based on local input, observation, and compiled data, that approximately 80-90 percent of today's diet is of local acquisition. . . Cash derived primarily from commercial fishing (to be discussed later in this chapter) is primarily reinvested in subsistence/commercial fishing technology and, very secondarily and after fishing needs are met, in modern paraphernalia that could more or less be classified for this study as "luxury" in nature (e.g. televisions, commercial foodstuffs, etc.). Of relevance for this study it should be noted that minimally 50 percent of this food supply comes from the sea with more probable estimates being 60-75 percent for the average family. For the most part, comments made about other groups in the study area regarding the intrinsic value of subsistence activities equally apply to this area -- that is, going fishing, moving family groups to camp, pursuing

the arrival of the first eider duck or' oldsquaw, stalking moose through the boreal forest, driving beluga up a river, testing out the ice for winter mobility and many other activities are a source of enjoyment and worth and reaffirm feelings of well-being and natural order for men and women and young and old alike.

Yukon Delta fishing and small sea mammal hunting pattern: Communities within this subsistence pattern include all contemporary villages on or near the coast of the Yukon portion of the Yukon-Kuskokwim Delta (hereafter referred to as the Yukon Delta). Although this area was not originally included in the baseline study, it was wisely added because of the proximity of the Yukon Delta to the southern extent of the Norton Basin. The communities considered here are rather arbitrarily defined as having geographic proximity to the Norton Basin or , functional social significance as regional or subregional centers to coastal Delta villages. These communities include St. Michael, Stebbins, Kotlik, Bill Moore's Slough, Hamilton, Emmonak, Alakanuk, and Sheldon Point with the subregional centers of Mountain Village and St. Marys and the regional center of Bethel being considered only when directly relevant to the study topics and concepts. This is the smallest geographic area of the study and probably the most linguistically, culturally, and ecologically homogeneous.

The communities of Stebbins and St. Michael are often included as part of Norton Sound and, in many respects, they participate to a greater



degree than Delta proper communities in Norton Sound subsistence patterns (they are also part of the Bering Straits Region). However, for these purposes they have been included with the Yukon Delta for the following reasons: (1) geographically they actually inhabit the northeastern border of this delta; (2) they make trips to Yukon Delta communities in both summer and winter for economic and social reasons including summer fishing at sites along the river mouths; (3) many inhabitants of these communities today have ancestral ties to areas along the Yukon-Kuskokwim Delta (e.g. some Stebbins residents say their families originated at Nelson Island--informal discussions, Stebbins, 1969); and (4) all of the communities in this group including Stebbins and St. Michael are specialists at fishing vis-a-vis any other subsistence activity.

Secondary sources of data for the contemporary period in this subregion are limited but not as much so as Norton Sound. For several years AVCP (Association of Village Council Presidents--a non-profit organization serving approximately the same area as the Calista Corporation), Yupitak Bista, and recently the environmental non-profit Nunam Kitlutsisti (all located in Bethel) have made attempts to gather subsistence data for their region (Association of Village Council Presidents, 1976; Davidson, 1974) and to increase public, state and federal awareness of subsistence needs and issues and, thereby, to influence governmental policy in decisions affecting subsistence. These data--both written

and orally transmitted--will be used for these purposes, but much of this effort is just getting started and attempts at quantification are hampered by villagers fear of data being used for regulatory purposes (AVCP, 1976). The author is only aware of one recent attempt to quantify subsistence efforts directly within this study area and that is an unpublished manuscript on Kotlik based on economic field research accomplished during 1976-1977 (Wolfe, 1977). However, Wolfe requests that no citations or quotations from this manuscript be used (probably in part because of the small sample of households studied) and this will be respected, although the overall contribution of these data will have some influence on the following presentation. Other contemporary references have been made in documents such as Alaska Geographic, 1979, Pennoyer, et al., 1965, and Selkregg, 1976b. Beyond these resources some work done further down the coast at Nunivak Island by Nowak (1975a, 1975b, 1975c, 1975d, and 1977) have theoretical significance to this subregion as well as to the study as a whole, and nineteenth century subsistence information compiled by Ray (1975b) and documented by Nelson (1899) can be extrapolated with caution into the present, keeping in mind known changes in the economic systems of the study population. All of the above will be evaluated and expanded upon based on field observations on the Lower Yukon unrelated to this study in the summer of 1978 and field research associated with this study at Stebbins, Emmonak, Mountain Village, and St. Marys in 1979.

For all of the communities at the mouths of the Yukon, and to a much lesser degree St. Michael and Stebbins, fishing for salmon and herring is a specialization that exceeds all other subsistence pursuits in economic importance and as a preferred activity. To be more specific, communities of the Yukon Delta proper rely primarily on king, chum, and silver salmon for both subsistence and as a source of cash through commercial fisheries, while residents of Stebbins and St. Michael commercial and subsistence fish for salmon in the vicinity of the Delta but specialize locally (i.e. in the vicinity of their villages) in subsistence herring fisheries in addition to a greater diversity of sea and land mammal utilization.

Of salmon species utilized on the Yukon Delta, chum are the most important subsistence fish and kings and silvers, while having subsistence value, are utilized in greater proportion for sale to non-local commercial buyers. The majority of salmon are taken by gill or set net while some individuals practice drift netting, and the purchase and maintenance of several nets per household is of central concern as is the building and maintenance of wooden boats (in Stebbins alone the author observed 45 functional boats during early June, 1979). While salmon as a resource has exhibited wide fluctuations in availability from one year to the next, the intensity of subsistence fisheries per capita has been relatively stable with the qualification that chum harvests (previously used as food for dogs) have declined in communities

that have replaced dog teams by snowmachines (Davidson, 1974; Penoyer, 1965; informal discussions, 1979). Correspondingly, snowmachines and outboard motors cost a relatively large sum of money and "eat" expensive petroleum products thereby accounting in part, for increases in commercial salmon fisheries. Salmon fishing on the Yukon Delta involves the seasonal movement of entire families to fish camps usually located at advantageous and family-related fishing sites within a radius of probably not more than 40-50 miles of their home villages (although exceptions to this certainly do occur). Salmon fishing generally commences with the first king run in June and continues through the summer until late August or early September. For the coastal villages of the Yukon Delta (excluding Stebbins and St. Michael) it can be roughly estimated from a variety of sources that salmon comprise approximately 30-40 percent of the total diet of these populations and provides minimally 70-85 percent of the total cash required for subsistence equipment (AVCP, 1976; Selkregg, 1976b; Alaska Geographic, 1976; Davidson, 1974; Alaska Dept. of Fish and Game, 1978; and informal discussions at Emmonak and Mountain Village, 1979). For Stebbins and St. Michael salmon provide considerably less of total dietary needs and available cash, but data are inadequate to estimate these percentages.

Herring are abundant in late spring and early summer in an area along the coast east of St. Michael, around Stuart Island, and southwest

along the coast to approximately Point Romanof (informal discussions, Stebbins and Kawerak personnel, 1979; Hemming, Harrison and Braund, 1978)

Both Stebbins and St. Michael have a long history of subsistence use of herring. St. Michael residents both catch herring and pick roe-on-kelp in St. Michael Bay, very close to their village. Stebbins people fish for herring and gather roe-on-kelp along the coast near Cape Stephens and on Stuart Island.

(Hemming, Harrison and Braund, 1978, p.59)

Herring availability in recent years have fluctuated dramatically from one year to another, but when available herring and roe (on kelp) are eagerly sought and dried as resource--especially at Stebbins. A conservative estimate of herring in the diet of St. Michael residents is 10 percent (Hemming, Harrison and Braund, 1978, p.59-60), but Stebbins useage is considerably greater. During informal discussions with Stebbins residents in early June, 1979, the importance of herring was continually reiterated and drying herring were evident throughout the community. In 1977 the commercial harvest of herring roe-on-kelp commenced and in early June, 1979, commercial buyers of this resource were in Stebbin's paying \$.60/lb. to local residents. According to the buyer 10 tons of roe-on-kelp had already been harvested by Stebbins residents commercially by 18 individuals with the appropriate permit, but the commercial harvest around Stuart Island has been eliminated by regulation for this next season. One of the most prominent topics of conversation during the

study visit was the presence of large non-local purse seiners from Petersburg, Unalaska, and other areas to the south taking herring in the vicinity of Stebbins and St. Michael, and residents were at best concerned and many angry at the massive and non-local, purse seining commercial harvest of an important subsistence resource. In January, 1980, the State Board of Fisheries made a decision to limit herring harvests to gill netting for one year after a substantial "battle" between mostly non-Native commercial fisherman -- both local (from Nome) and non-local -- and local subsistence and small-scale commercial fishermen. For subsistence and small-scale commercial purposes herring are taken by local residents in wooden skiffs (18-20' in length) using gill nets -- some beach seining is also practiced only for subsistence.

Other species of fish, in addition to salmon and herring, make up a majority of the diet of the people of the Yukon Delta proper and an appreciable amount for the residents of Stebbins and St. Michael. For the Yukon Delta the most important of these species include sheefish and several varieties of whitefish with smelt, blackfish, lingcod, pike and others making up the balance of the resource. These are harvested from late August to early spring in open water and through ice depending on the species and location of the community and fish sites. They are usually taken with nets in the river, sloughs, and small streams, but blackfish traps are also used as well as jigging through ice in Pastel Bay and along the Yukon channels.

Small sea mammals including bearded seal (mukluk in Yupik), spotted seal, ringed seal, beluga, and, occasionally walrus are of substantial importance to Stebbins and St. Michael and of secondary importance to the remaining villages of the Yukon Delta. Whereas Stebbins residents rely on all of these species for approximately 50 percent of their total food source, St. Michael demonstrates a dependency of approximately 30 percent. These communities hunt sea mammals by boat in the spring and fall going 7-8 miles offshore and around Stuart Island--in the winter there is broken ice around Stuart Island and seals are taken in this area. In contrast communities along the Yukon Delta proper hunt fewer quantities of sea mammals varying by village. Foreexample, whereas Kotlik ranges between 6 and 7 percent sea mammal dietary dependency, Emmonak and Alaskanuk use a substantially larger amount ranging from 10-25 percent (Alaskanuk takes more than Emmonak because of their geographic proximity to sea mammal concentrations) (AVCP, 1976; Alaska Geographic, 1979). Village residents as far upriver as Mountain Village use some sea mammal as available. In the Delta communities seal of all varieties including the bearded seal are harvested on the coast in fall and on the coast and the Yukon in spring when they are often observed following fish upriver. In the latter instance, as in the successful harvest of beluga upriver, the sea mammal is encountered sporadically and taken while primary efforts are being directed towards fishing. Although data are unclear and there is community variance, winter efforts to

harvest sea mammal occur but with less frequency and intensity than for all other groups discussed in this study. Nevertheless, sea mammal hunting is described as being economically important and highly valued as an activity by these Yukon dwelling populations.

Land mammals are of the greatest economic importance within this subregion to the residents of Stebbins and St. Michael with reindeer, caribou, and some moose comprising from 15-30 percent of the total diet. On the other hand, residents of villages on the Yukon Delta proper have to travel significant distances inland for large species (moose once available on the delta have virtually disappeared) but are able to harvest small species such as hare and beaver in areas adjacent to their villages. It may be of interest to note that because of the general wetness of the Delta making travel difficult in summer months except by boat, the majority of small land mammals are harvested in winter and early spring by snowmachine--an expensive enterprise for the total poundage of protein obtained but often a necessary endeavor because of deficient protein sources within the villages at this particular time of year (store inventory is usually also low by early spring). Fur-bearing land animals, often not considered edible, are trapped or shot for the sale of pelts, but trapping is not a major economic activity on the Yukon Delta at the present time.



Migratory waterfowl are in high density concentrations overall of this subregion. The marshy lowland delta provides an environment which favors seasoned nesting of migratory waterfowl. The Clarence Rhode National Wildlife Range begins within portions of the coastal Yukon Delta in the study area and extends southwest along the coast outside of the study area. The timing of migratory waterfowl arrival, the enthusiasm with which they are hunted, and the nutritional need and dietary variety they provide are all as relevant for these populations as for populations previously discussed. In these areas their dietary significance varies between 1-7 percent in most years (AVCP, 1976; Selkregg, 1976b; Alaska Geographic, 1979).

As with the other three subsistence patterns discussed in this study, subsistence resources and their successful harvest by local residents have enabled populations to maintain a balanced and successful relationship with their environment for many generations. As with all of the study area, some aspects of a market economy and modern technology now interface with subsistence in a comprehensive and relatively well integrated holistic economic system. It is important to note that limited attempts to assess the impact of cash income on subsistence indicate that cash availability tends to augment and encourage more intense subsistence efforts. This will be discussed in greater depth at a later point. The valuative or culturally relevant non-economic significance of subsistence has been vividly

described by a series of resident statements in Davidson (1974) -- a few of these follow:

To my way of thinking subsistence is living off the land . . . working together with my neighbors, side by side.

(p.25)

The only time I really feel I am myself is when I am hunting. Every year I must return to the tundra if only a few days. I have to do this.

(p.6)

This land I inherited from my father, the way and culture of Native life. I try to make a go of what my father has taught me. When I was a boy, my father used to take me out hunting, teaching me how to live off the land, and I expect my son and future generations to do likewise.

(Alaska Geographic, 1979, p.81)

The nature of rural sentiment about hunting, fishing, and gathering from the land is more overtly expressed with each passing year as greater and greater pressures from resource regulations, land and sea "ownership" confrontations, "outside" conservationists lobbies, economic inflation, and the realization of impending resource development that will affect sea, land, and resources emerge. This is the "stuff" of subsistence issues--the topic of the next section of this study.

#### Subsistence Issues.

The relevancy of briefly discussing major subsistence issues in this context is twofold: firstly, OCS exploration and development would

both entail a concentration of activity in portions of the maritime environment of the study area which is precisely that environment on which the vast majority of residents of the area depend economically and highly value; and secondly, OCS exploration and particularly development would inevitably and necessarily involve considerations of public opinion in the area as well as knowledge of the interface of the area's social, economic, and political factions with one another and with prominent forces (e.g. fish and game management agencies) external to the area. An examination of these issues, the "players" involved, and their potential resolution follows, but the reader should keep in mind that no attempt will be made here to explore this topic in great depth. The order in which issues are presented is not intended to imply priority (as assigning priorities in itself may be an issue), although note will be made of those issues that are gaining the most public attention recently. Data from this section have been compiled from informal discussions with a wide variety of residents of the study area in the past years, review of public media, attendance of meetings regarding such issues, discussions with Kawerak, Inc. and Nunam Kitlutsisti personnel (the organizations which have defined their functions as including a protection of subsistence life styles for their respective regions), and discussions with local Fish and Game personnel, particularly Dan Thomas of the newly formed Subsistence Section (in January, 1980).

(1) The issue of walrus management jurisdiction and quota systems has been an issue with substantial history (in excess of a decade) and high priority by populations that actively hunt walrus and depend on walrus for food and raw materials. Walrus management has changed hands from state to federal jurisdiction as a result of federal sea mammal legislation in 1972, returned to state jurisdiction in 1976 with an enforced quota system (by village), and returned to federal jurisdiction July 1, 1979. Native organizations favored the return to federal jurisdiction expressing the opinion that the state (through the Board of Game and the Dept. of Fish and Game) was more concerned with political pressures to allow sports hunting than with subsistence needs, was insensitive to the needs and cultural practices of walrus hunting communities, did not recognize the ability of hunting communities to enforce traditional rules regarding walrus hunting, and failed to recognize the legal rights awarded them regarding subsistence sea mammal hunting in the 1972 federal act. The state, of course, felt better qualified to manage this resource and objected to its return to federal management. Kawerak, Inc. used this issue to organize the Eskimo Walrus Commission (modeled after the Eskimo Whaling Commission) in 1978 with representatives from a wide area (including the Arctic Slope and Bethel) which was to function in matters concerning this

issue. Public opinion and recent Anchorage based media coverage that criticize present Eskimo hunting as "head hunting" for a valuable ivory "black market" and allege no subsistence need for walrus (Anchorage Times, Jan. 13, 1980) have met with bitter resentment on the part of Eskimos both locally and statewide and have stimulated what may become a forceful and unified reaction on the part of walrus hunting communities and the Eskimo Walrus Commission. The future resolution of this issue may be a long time coming.

(2) The International Whaling Commission's attempt to establish and regulate quotas on the taking of bowhead whale realistically affects only the communities of Gambell, Savoonga, and, to a lesser degree, Wales in the study area, although public interest in this issue is high. Worl Associates, 1978, should be referred to as a primary source for discussions of this issue.

(3) Herring fisheries in the study area and its regulation have been a priority issue in the last year. The 200-mile limit has played a large role in increasing the commercial market (mostly Asian) for herring and herring roe. This issue focuses around subsistence vs. commercial fisheries; small-scale, gill netting commercial fisheries vs. large-scale purse seining commercial fisheries; and local commercial fisheries vs. non-local (e.g.,

Petersburg, Kodiak, Bristol Bay, etc.) with the State Board of Fisheries and the State Dept. of Fish and Game functioning as managers and/or enforcers. Kawerak, Inc. and the newly formed Bering Sea Fisherman's Association are politically representing the protection of the herring resource from overfishing for the sake of subsistence users and small-scale localized, gill netting commercial fishing operations (often the subsistence fisherman is also the small-scale commercial fisherman but not exclusively so). Undoubtedly the Bering Sea Fisherman's Association perceives of its role as being political, communicative, and potentially at least partially managerial. Vocal opposition to Kawerak's proposed gill netting restrictions have come from local as well as from "outside" fishermen, as several commercial fishermen (mostly from Nome and non-Eskimo) feel financially unable to compete in a purse seining fishery. Temporary resolution emerged from a seemingly ambivalent State Board of Fisheries decision last week (January, 1980) -- after considerable pressure from all forces they made a decision to restrict the fishery to gill netting for one year as an experiment to establish whether a small commercial gill netting fishery can meet the 1,000 metric ton limit to make the commercial market feasible. Response from Nome-based fisherman supporting purse seining has not yet surfaced publically. Meanwhile additional restriction on the taking of roe-on-kelp in certain

areas will be implemented by the Dept. of Fish and Game this season. Some mostly older villagers perceive any commercial fisheries as potentially dangerous to the resource. To a lesser degree the matter of commercial vs. subsistence fishing for salmon is also an issue -- primarily an issue from the point-of-view of management. Commercial salmon fishing, being dependent on Limited Entry Permits, is somewhat of a different but related issue. Rights to Limited Entry Permits, maintaining permits through use and making proper renewal applications, and permit sale for large quantities of cash are all problems associated with this issue and matters having a considerable impact on rural Eskimo fishermen.

- (4) International migratory bird treaties with several countries, the first of which was made over fifty years ago, had made the hunting of migratory birds in the spring illegal, but as previously mentioned these regulations had generally been overlooked by enforcing agencies (i.e. U.S. Fish and Wildlife Service) for subsistence users. This has been an issue of concern for a long time and amendments to these treaties making subsistence hunting legal this spring have recently been enacted. Future legal status for this activity may involve bag limits that would effectually be more limiting than the past practice of overlooking the law. Undoubtedly bag limits would be

perceived of as another encroachment on subsistence by rural residents of the study area.

- (5) Crabbing by hand lines for local king and tanner crab through the ice in winter is perceived as an important subsistence resource for Eskimo people in Nome and many villages. In recent years small-scale commercial crabbing in both winter (using chain saws to cut holes in the ice, crab pots, and tripods and pulleys on a snowmachine) and summer (with boats and crab pots) have provided a cash source to local fishermen. In 1977 the area was opened to large commercial crab boats primarily from Kodiak and Unalaska in order to assess the potential for a commercial crab fishery in this area (according to State Dept. of Fish and Game). Local public opinion regarding the presence of the large crabbers was not particularly favorable for the first two years, but the issue escalated after the winter of 1978-79 when local subsistence and small-scale commercial crabbers were unable to locate any resource. Despite attempts by the State Dept. of Fish and Game to explain the "missing" resource as being the result of shifts in migratory patterns, lack of knowledge about crab population and ecology in this area, winter ice conditions, etc., local opinion of most Eskimos and many non-Eskimos explain the "missing" resource as resulting from the large-scale commercial crabbing effort and, ultimately from



what they perceive as the State Dept. of Fish and Game's support of large commercial fishing interests at the expense of local needs (both subsistence and local small-scale commercial fisheries). Kawerak's subsistence personnel consider this to be an important subsistence issue today. Because of the inability of the large crab boats to obtain the commercial harvest limit quickly this past summer (1979) despite an expanded fishing area, the commercial fishery effort was closed down early. A group of individuals representing Nome Business Owner's Association attempted to explore the potential of commercial crabbing for local residents by the use of helicopters dropping crab pots in open water during the winter of 1978-1979. This effort was costly and unsuccessful in locating crab and ultimately discontinued. The future resolution of this issue by the managers of this resource is open to speculation. This year (1980) local individual efforts by subsistence and local commercial fishermen to locate crab were not abundantly successful and came late in the season.

- (6) The imposition in 1979 of the Antiquities Act by the federal government had an effect on the study area primarily in the vicinity of Shishmaref which is totally surrounded by federal withdrawals at the present time. For rural villagers the concern with these monuments, wilderness areas, etc. is primarily based on the fear that restrictions on subsistence activities

that normally take place within these federal areas will occur. To go a step beyond this concern for subsistence, most village residents do not comprehend the processes by which the federal government "owns" and "controls" these lands and resources that have been used for centuries by their ancestors; they have, under the auspices of these processes, been asked for input to decisions yet feel powerless to control or significantly alter the decision-making processes. In the monument adjacent to Shishmaref subsistence "language" is included in the regulations, but there are some problems with resource utilization and the federal government can change subsistence regulations at any time that they deem it necessary. Concern with this issue is still very much a reality at the village level. In Nome opinions are much more variable which is an expression of Nome's population diversity. Data is not available to support the discussion of a majority view of this issue in Nome. While the federal control of these lands is objectionable to many individuals and organizations in Nome, the criteria for objection varies and is "subsistence" for only a portion of this population.

- (7) A major issue, which essentially relates to many of the above mentioned issues, is the process by which local people have input

into the State Board of Game and Board of Fisheries decisions. The mechanisms presently established for providing this input are Fish and Game Advisory Committees organized throughout the state. Up until recently the Norton Sound Advisory Committee was designated as representing all of the study area with the exception of the Yukon Delta (whose villages are represented on another committee). Approximately in late 1978 and early 1979, Kawerak initiated an effort to restructure this input process by encouraging the formation of additional committees with more rural village membership, as Kawerak perceived the Norton Sound Advisory Committee as being too strongly dominated by Nome members who did not adequately represent subsistence interests (the committees are composed of a minimum of 5 members and a maximum of 15). As a result of Kawerak's activities and resultant petitions, the study area was divided into three parts: a southern district including Stebbins, St. Michael, Unalakleet, and Shaktoolik; a St. Lawrence Island district based on land mass and reserve status including Gambell and Savoonga; and a northern district including all of the remaining villages in the study area including Nome; apparently the possibility of Elim (based on land mass) establishing a separate committee is still pending. Kawerak vehemently expresses the view that the villages should have proportionately more representation on the northern district committee with Nome having proportionately less represen-

tation (on the previous Norton Sound Committee, based on a 1979 member list, Nome had 7 out of 15 seats). The Dept. of Fish and Game and many Nome members maintain that they have no objection to greater representation if village members would attend but that these representatives often do not "show up" thereby making a quorum difficult to achieve at the approximately twice yearly meetings. Apparently as of the last meeting (January, 1980) this issue has still not been resolved to the satisfaction of those involved and additional questions regarding the appropriate procedure for election to the committees have been raised by Kawerak. The degree to which the Advisory Committees actually influence Game and Fish Board decisions is also questionable.

- (8) Current efforts by Kawerak to organize the majority of the study area into a Coastal Resource Service Area for the purpose of producing and implementing a coastal development plan or program have been largely stimulated by concerns for subsistence practices and marine resources in the face of the proposed Bering-Norton lease sale. In this respect potential OCS activity may currently be a critical factor in encouraging regional cohesion (excluding Nome), although many of the issues previously discussed in this section have also added impetus to this effort (e.g. the herring fisheries issue). The election for board members for this Coastal Resource Service Area (hereafter referred to as CRSA) were held at the end of January, 1980. The region of which the

Yukon Delta is a part held elections for their CRSA this past fall through the efforts of Nunam Kitlutsisti and are approximately one year further along in the process than is the Bering Strait area. It is of interest to note that the City Council of Nome rejected a proposal by Kawerak in 1979 to form a single CRSA, and therefore Nome has formed a separate unit with its own board and plan and recently negotiated a grant with Community and Regional Affairs for these purposes. It was definitely in part a conflict of priorities (i.e. development vs. subsistence) that prevented the formation of a unified regional (i.e. the villages and Nome) CRSA.

- (9) A subsistence related issue of rapidly escalating attention and priority is potential OCS exploration and development. Whereas approximately 18 months ago there was negligible local knowledge of and concern with OCS activities both within and without Alaska, today OCS is the frequent topic of individual discussions, group action, and media coverage -- rarely a day passes in Nome in which there is not some media presentation (radio, newsletter, or newspaper) regarding petroleum industry activities, oil spills and maritime pollution, lease sales, and North Slope Borough responses to the Beaufort situation. To subsistence users and non-user conservationists in both Nome and the villages, concerns with OCS focus around subsistence and/or the closely related issue of maritime environmental protection.

Again, as in the issue of the CRSA, the division between development and subsistence/conservationist factions has emerged.

#### THE CASH ECONOMY AND ECONOMIC DEVELOPMENT

This section will concentrate on segments of the cash economy which have influenced significantly the economic systems of villages within the study area. Much of Nome's present economy has been covered for purposes of OCS baseline information in Ender, Harrison, Braund, and Gorski (1980), so only aspects of Nome's economic system that are not accurately portrayed or are overlooked because of the kinds of data and methodology necessarily employed by the Policy Analyst researchers will be given some consideration in this study. For the most part, but certainly not exclusively so, the economic data relating to cash discussed herein is most relevantly applicable to Native residents of the study area. This focus emerges from the scope of work of this contract which specifically calls for information on village economic systems which are, without exception, systems that integrate cash with subsistence. Because of the ethnic, cultural, and demographic makeup of Nome (i.e. its substantial Eskimo population with recent or transient village ties and origins), the "village economic system complex" is carried into Nome, and it is this aspect of the Nome economy, both quantitatively and qualitatively, that require consideration here and in the following section which

deals with the interrelationships between subsistence and cash in these economic systems.

#### Commercial Fishing and Trapping.

As accurately pointed out in the Policy Analysts (Ender, Harrison, Braund, and Gorski, 1980) study of the socioeconomic conditions in Nome, commercial fishing plays a negligible role in the economy of the city of Nome at the present time (p.39). However, the statement in this same document that fishing in the Norton Sound area is “. . . small in comparison with other areas of the state . . .” may lead to misleading conclusions about the importance of this fishery to the study area. That is, a comparative statement of this kind made in the context of a study of this nature, fails to consider that the “importance” of an activity economically for a particular area must be measured in terms of the economic system of that particular area rather than relative to the economy of a different socioeconomic unit (e. g., the state). For a majority of the study area, with the exception of Nome, commercial fisheries is virtually the only source of cash for some families and the primary source for many others. The need for cash in the contemporary subsistence/cash economy of the rural villages has already been introduced in the subsistence section and will be explored in greater detail at a later point in this study, but it should be clearly understood that wage jobs available in

villages are exceedingly sparse.

An example of cash income derived from the commercial fisheries of salmon resources available within the study area (with the exception of the Yukon Delta) follows. It should be noted, however, that participation in commercial fishing for salmon depends upon possession of a Limited Entry Permit, and there are many people within the study area who would like to commercial fish but who, for one reason or another, did not qualify for a permit at the time the system commenced based on the criteria stipulated by the state or who have subsequently failed to retain their permits (informal discussions, Unalakleet, 1979; John Garrison, Sitnasuak Native Corporation, 1979). In addition, the intensity of the effort put into commercial fisheries is limited not only by the priorities that the fisherman puts on his time vis-a-vis the range of activities which he engages in and the adequacy of his fishing gear but also by the regulations of the State Dept. of Fish and Game on "open" versus "closed" periods for the commercial fishery--for example, Moses Point is frequently closed early because of Fish and Game's evaluation of low escapement of the salmon resource. Those that are involved in commercial fishing operate under the pressures of current marketing price fluctuations.

The following data were provided by Dan Thomas, Subsistence Section, State Dept. of Fish and Game, Nome from compiled departmental statistics for 1979:



Nome: 15 fishermen; total harvest value \$19,203; average harvest value per fisherman \$1,280.

**Golovin:** 21 fishermen; total harvest value \$122,003; average harvest value per fisherman \$5,810.

Moses Point: 41 fishermen; total harvest value \$150,131; average harvest value per fisherman \$3,662.

Norton Bay (Ungalik--all Koyuk residents with the exception of one fisherman from Moses Point): 22 fishermen; total harvest value \$75,755; average harvest value per fisherman \$3,351.

**Shaktoolik:** 29 fishermen; total harvest value \$119,291; average harvest value per fisherman \$3,941.

**Unalakleet:** 53 fishermen; total harvest value \$397,184; average harvest value per fisherman \$7,494.

Regional Totals 1979: 181 fishermen; total harvest value \$876,548; average harvest value per fisherman \$4,843.

Commercial fishing in the Stebbins/St. Michael area is not permitted by regulation since there are no major spawning streams in the area. Since it therefore becomes difficult or impossible to record escapement in this kind of area, the managerial agency prohibits any commercial fishery of salmon. There are approximately 6 residents of this area who fish commercially on the Yukon however,

Although the researcher does not have comparable data for the 1979 Yukon Delta salmon fishery, the 1979 price/pound/species has been applied to the average annual 1974-1977 harvest for some species taken commercially on the delta (Alaska Geographic, 1979) to generate total harvest value estimates for comparative purposes. However, these figures are probably high because of changes in price between 1977 and 1979 and they are not broken down by village or averaged for an individual fisherman because the total number of fishermen is unknown:

chum: 1974-1977 average annual commercial harvest 689,334 fish,  
total harvest value based on 1979 prices is approximately  
\$1,930,135.

king: 1974-1977 average annual commercial harvest 89,000 fish,  
total harvest value based on 1979 value is approximately  
\$2,447,500.

No late 1970s statistics for silvers and pinks from the Yukon portion of the Yukon-Kuskokwim Delta are available for this study at this time. It should be evident, however, that based on chum and king figures alone, commercial salmon fishing on the Yukon Delta is substantially more extensive than that of Norton Sound if such a comparison is even valid (the above figures are for the Delta from Mountain Village to the coast--the area in which 90 percent of the the Yukon commercial fisheries occur). It is also evident from first hand observations of villages on the Yukon Delta in the

summer of 1979 in association with this contract, that many more total people are involved in both commercial and subsistence salmon fisheries than is true of the rest of the study area. Nonetheless, if you consider that several large villages with substantial populations are included in these statistics (i.e. Emmonak has close to 500 residents, Mountain Village 500+, Kotlik nearly 300, etc.), the annual income per commercial fisherman, while undoubtedly higher than that of Norton Sound, is not outstanding relative to cash and time prerequisites of a salmon fishing economic base. An average annual cash income in 1976 (from all sources) of approximately \$5200 per household is suggested by unpublished research data for one Delta village--several of such households included nine members or more in this same study. It is important to remember the fact that the Yukon Delta has fewer other species on which to depend for either cash or subsistence and, correspondingly, is an environment in which large numbers of the migratory salmon are seasonally available.

Both on the Delta and in Norton Sound the fish taken for commercial purposes are marketed through most "outside" fish buyers that transport the salmon to processing facilities and/or markets. Another source of cash to residents of the Norton Sound and Yukon Delta areas is wage employment in local fish processing plants (i.e. at Golovin, Moses Point, Unalakleet, Emmonak, Mountain Village, etc.), most of which are owned and managed by local residents primarily in

the form of cooperatives and financed by CEDC (Community Enterprise Development Corporation). At peak seasons, however, there may not be enough local labor to meet the intensive and sporadic labor needs of these facilities, so often "outsiders" are also employed. In many cases the difficulties in recruiting this labor force relate to the fact that most residents would prefer to fish, both for commercial and subsistence purposes during the appropriate days, than work for a given hourly wage in a processing facility--some people manage to do all three activities at alternate periods (field observations and informal discussions, Emmonak, Mountain Village, Moses Point, and Unalakleet, May and June, 1979). During 1979 Japanese fish egg buyers were located in every local processing facility where they conducted their own salmon egg processing and crating for shipment. These egg buyers were, of course, an additional source of cash to the commercial fishing effort.

Lastly in regards to commercial salmon, an analysis of the importance of the subsistence fishery, the incomes derived from commercial fisheries, and the substantial costs entailed for having the gear necessary for doing both (i.e. boats, outboard motors, gasoline and oil, fish net of varying size mesh for different species) clearly indicates that in the vast majority of cases commercial fishing is an activity undertaken for purposes of supplementing subsistence rather than subsistence supplementing a commercial enterprise. For most

fishermen the cash obtained in a season would not even cover the cost of the initial purchase of gear and the life expectancy of such gear is low while its yearly depreciation and maintenance is proportionately high. The concern for the continued viability of the subsistence fishery is expressed in this quotation:

However many fear that the commercial fishery is a time bomb. Since subsistence use has the highest priority, as the human population grows -- and it has grown rapidly in recent years -- more and more salmon will be needed as food for local residents, leaving fewer and fewer salmon for selling.

(Alaska Geographic, 1979, p. 87)

Other commercial fisheries provide additional sources of cash to the study area varying in importance by community and season. Herring and herring roe as a commercial resource have just recently been revitalized, in large part as a result of the 200-mile limit and an expanding inflationary Asian market. The current problems associated with this fishery have already been explored. However, some mention should be made of the fact that it is this fishery that has most recently interested Nome and area residents in commercial fishing and inspired several Nome residents to plan for large-scale participation (i.e. purse seining) -- a level of operation that undoubtedly will not be realized this coming season due to regulatory restrictions on purse seining and the projected lack of a profitable market. Some Nome residents have already been engaging in small-scale commercial crabbing and, again, a few of the more business-oriented members of the community had hoped that a local commercial crab fishery could be established on a larger scale. This apparently depleted or migrated

resource, however, has made such economic schemes highly unlikely in the immediate future. Other plans for commercial fisheries and their economic impact on the area are really the topic of the non-OCS projections portion of this study.

A note regarding the economic importance from a cash perspective of trapping within the study area is included here, as like commercial fisheries trapping was and is a subsistence pursuit that has taken on some commercial relevance in more or less recent times. The importance of trapping in any specific portion of the area varies significantly from village to village and household to household. Department of Fish and Game statistics suggest that the Bering Strait-Norton Sound area as a whole is under utilized relative to trapping potential. The most recent available statistics regarding trapping in Game Management Unit 18 (which includes the Yukon Delta) and Game Management Unit 22 (which includes the remainder of the study area) for the period 1974-1976 provide the data base for the following conclusions although these statistics may be low (Alaska State Dept. of Fish and Game 1977 inventory statistics for forbearers) :

- (1) Participation in trapping for commercial purposes (which ultimately leads to cash, the majority of which is reinvested into subsistence technology and commercially purchased foods) is more intense in absolute harvest figures on the Yukon Delta

than in the remainder of the study area. This, however, has not been evaluated on a per capita basis.

Few trappers in Unit 22 depend on fur for a significant portion of their income. The majority of trapping in Unit 22 occurs as a recreational activity. (Alaska State Dept. of Fish and Game, Nome, informal interview)

Trapping is a major wintertime income source for delta residents. (Alaska Geographic, 1979, p.73)

- (2) This apparent disinterest in intensive trapping in the northern portions of the study area probably relates to many interconnected factors including varying cultural priorities regarding land use and resource use patterns, the requisite for spending long periods of time away from home in a successful and lucrative trapping enterprise, initial cash outlay for transportation (dog sled or snowmachine and fuel) and traps, alternate sources of cash income (e.g. ivory carving), the relatively low prices of pelts as opposed to the rigors of wintertime trapping, frequent thefts of traps in reasonably accessible areas such as near Nome, and a fluctuating fur market which cannot be locally controlled. St. Lawrence Island is somewhat of an anomaly in that fox trapping has continued to have significant cash value to residents who have naturally occurring Siberian species of arctic and red fox,

(3) Due to the lack of complete data on the number of trappers, the number of animals taken, and fur prices per species by year for a recent several year consecutive period from which cash averages per trapper could be derived, it is nearly impossible to quantify the economic importance of trapping in terms of dollars for any specific village in the study area. A recent unpublished study of one delta village in 1976-1977 suggests a cash income of slightly over \$2000 per household per year as an average of a very small sample of households in this community. Additional quantified data would be useful for future research.

#### Reindeer Herding.

Reindeer herding is an activity not traditional to the study area (the history of reindeer importation and industry development was described in detail in Chapter IV) that has been operative within portions of this area for approximately the past 88 years. Besides being of interest here because it is a source of cash to residents of this area, it acquires additional meaning through an understanding of the ways by which it has been integrated into the socio-economic systems of the villages of the Bering Strait/Norton Sound region. The best source of historical and contemporary information up until 1976 on Seward Peninsula reindeer herding/husbandry is



Stern, et al. (1977), and a quotation from this document provides a theme about which a brief analysis of its contemporary economic importance can focus:

"Making a living" in the villages on the Seward Peninsula is a combination of two economies: a subsistence economy which relies on the local environment, tradition, and technology . . . ; and a superimposed market economy with goods and services offered in terms of credit and payment, with wholesale and retail outlets. In reindeer herding, we find a merging of these two economies and their accompanying value systems.

(p.151)

At the present time (January, 1980) there are 13 viable reindeer herds within the study area--one each in Brevig Mission, Wales, Teller, Savoonga, Golovin, Koyuk, Shaktoolik, Unalakleet, and Stebbins and two each based out of Shishmaref and Nome. Of these herds all are individually owned with the exception of the Savoonga and Stebbins herds which are owned by their respective IRA (Indian Reorganization Act) organizations; these herds vary in number today from approximately 400-3,000 head (Dan Karmun, Director, Reindeer Contract, Kawerak, January, 1980). All of the herd owners, with the exception of four (who sell independently), market the velvet antler (highly prized by Koreans and other Asians) to buyers with whom they have contracts. The marketing of meat, which in recent years has been essentially local in the forms of payments in meat

for labor associated with herding assistance, sales direct to village residents, or sales to village stores, has recently been problematical and somewhat disrupted by the involvement of some herders in a financing arrangement with a "outside" non-Native businessman who offers cash advances to herd owners with the stipulation that he is to receive monopolistic buying privileges from all herd owners to whom he has paid an advance. Meat sold in this latter arrangement, which has posed some question of legality and ethics to members of the Reindeer Herder's Association, is marketed outside of the state. Local herders still express a priority for meeting domestic (i.e. village) needs for reindeer meat and hides in contrast to meeting any outside demands for these commodities. There is some herder concern with the effects of the velvet antler bar-vesting on female reproductive success, and the University of Alaska has been researching this question for the past three years without conclusive recommendations (Stern, 1977; Dan Karmun, 1930). The herders would probably limit the velvet antler sales if herd survival were in jeopardy despite the large amount of cash being paid for the velvet antler.

It would be extremely difficult to present, in this context, individual or averaged 1979 annual cash income accrued by herd owners within the study area, as herd size, herding methods, number of animals butchered, and marketing procedures are too variable by

herd owner and by year. Approaching this question from the marketing end, velvet antler sales have been really inflationary rising from \$1.00/lb in 1969 to \$3.50/lb in 1972 and \$5.58/lb in 1976 to between \$25 to \$35/lb in 1979. In contrast, Stern (1977) states that herders were getting \$ 85/lb for meat in 1976 and 1979 market value fluctuated (depending on buyer, location, and cost of marketing) between \$.85 to \$1.25/lb -- this is, rather interesting considering that retail sales per pound in Nome have risen from approximately \$1.89 to \$1.99/lb to \$2.29 to \$2.39/lb for non-stew cuts during this same period (Stern, et al., 1977; informal discussion, Alaska Commercial Co., 1980). Income from 1976 sales of meat and antler may be usefully extrapolated to 1979, however, if the increased price of antler were taken into account in addition to assuming the same proportion of antler to meat poundage and, increased cost inflation in arriving at the extrapolated figure (total revenues in the following include the value of home meat consumption). In 1976 for an individual with a herd size of 600, an annual butchering of 60 deer and marketing of 660 pounds of antler, an annual gross income (including the value of meat eaten at home) ranging between \$11,400 and \$21,801 was possible. The range of income depends on low and high market value of velvet antler. By way on contrast, during the same year an owner with a herd size of 2,400 who butchered 384 deer and sold, 2,016 pounds of antler could have made a gross income ranging from \$55,296 to \$87,068 (again with the range dependent upon low and high antler market value) (Stern,

et al., 1977, p.230). These, of course, are gross income figures, and to arrive at some idea of net income one would have to subtract wages paid for labor during summer and winter handling, food for workers, the purchase of one snowmachine, the purchase of gas and oil, snowmachine repair, air charter costs, labor for butchering (different than labor for handling), corral repair, cabin repair, charges by antler buyers for herding, labor, and shipping, and cabin and corral depreciation and investment amounting to a total of \$11',350 for a 600 herd/60 deer butchered example. This owner then nets only between \$50 to \$10,451 depending on a low or high antler market value received (Stern, et al., 1977, p.224). For the herd owner with a herd size of 2,400 and a marketing of 384 deer, net income ranges between \$22,434 to \$54,206 (this owner has butchered 16 percent of his herd, as opposed to the first owner who butchered only 10 percent) (Stern, et al., 1977, p. 226). Stern argues that for the majority of owners the net income is not as high as the maximum case example presented and that owners perceive their deer as a finite resource that has value as a source of meat and hides and, importantly, of both local and non-local prestige. The contemporary herder has, in a sense, an analog from Eskimo tradition in the umialik or skinboat captain--in fact, historically many umialiks did eventually get the herds.

Some concluding remarks regarding the overall socioeconomic importance of the reindeer herd owner and his stock may be usefully pre-

faced by the following quotation:

Reindeer provide a source of meat, by-products, income, and employment. Local markets for reindeer meat have been developed by the Native herders. There is currently no known alternative industry or activity that has been shown to be biologically compatible, economically feasible, or socially acceptable to replace or co-exist with reindeer herding. The presence of a reindeer herd or herds at a village means that there are employment opportunities which would probably not be available to the villagers. The herder serves to stimulate the village and regional economy with his herding operation by spending and investing his income in the village, and region. The reindeer industry provides private sector employment in a region of the United States where little non-public sector employment is available.

(Stern, et al., 1977, p.279) .

Although kin-based relations are still primary in Inupiat and Yuit communities today and to a degree the reindeer herd owner is in a position of dealing with both kinsmen and non-kinsmen in his herding operations, he/she functions in a role with definite economic value to other village residents. To the degree that traditional kinship based ties are functional in the herding model, kinsmen are usually the first called upon to help in herding activities and meat payments in exchange for this labor are usually more valuable than a fixed hourly wage. However, extended and non-kin are also employed. Those who receive a cash income get paid (in 1976) \$4-\$6.00/hour for about 12 days of annual employment--most get paid in a combination of cash and meat salary (Stern, et al., 1977, p.239). In regional perspective reindeer herding only provided 0.8 percent of

the total employment in 1976. In addition, however, herd owners also provide a relatively stable supply of a very nutritious protein source as well as raw materials in the form of hides and antler to village residents. They generally have more experience and sophistication in dealing with "outsiders" than the average village resident, which may or may not be perceived as a human asset to the village. They invest income into the local economy and generally prioritize local needs over "outside" interests that may be of more personal value. On the other hand, they tend to be better off than the average village resident therefore encouraging non-traditional social stratification as opposed to the degree of egalitarianism that may have existed traditionally (Pelto, 1973) and promoting, to some degree, the use of modern technology such as all terrain vehicles, new and deluxe model snowmachines, and aircraft including both airplane and helicopter. This past couple of years two herders in one village both separately invested in their own aircraft (field observations, 1979). Lastly, the herder, in most cases, finds himself or herself in a position to give up subsistence activities. On many occasions subsistence activities may be conducted concurrently with herding activities and sometimes they conflict with the necessary timing of either pursuit. Nevertheless, the continuation of these activities assists in assuring herd owner integration with community and continuity with the non-market aspects of the sociocultural system of which he or she is a part.

### Eskimo Art and Craft Production.

Cash income derived from the sale of arts and crafts--for the study area, particularly ivory carving and some skin sewing and doll making--is not reflected in standard economic income or employment statistics such as those utilized for Nome in Ender, Harrison, Braund, and Gorski (1980). While for cities the size of Nome these non-reported incomes may not make a statistically significant difference in overall cash income totals, it again is critical for achieving an accurate view of the economy to evaluate the importance of incomes for functional units (i.e. household and local families-- Burch, 1975). Therefore deriving "average incomes" for a city in which a large number of households or local families are heavily , reliant on this unrecorded source of income--namely arts and crafts production-- is misleading. For the villages in which fewer cash alternatives exist, these incomes are even more significant--hence the inclusion of this topic here.

While the economic significance of arts and craft production to the study area is indisputable, the quantification of this amount is somewhat more problematical. Some examples of both community and individual cash dependency on this domestic "industry" will be suggested, but it should be clearly understood that unless the variables of carver ability, market price and availability, raw material

availability, effort spent on carving in any particular season, household cash requirements, and attitude toward carving (i.e. if it is perceived as a full-time job or as a minor and sporadic supplement source or somewhere in between) must be considered in arriving at any specific conclusions.

In the study area as a whole, the communities and families most dependent on particularly ivory carving include Gambell, Savoonga, Diomede, King Islanders and St. Lawrence Islanders living in Nome, and some Diomeders living in Teller. Ivory carving is usually and traditionally an occupation of males, but in recent times females (usually a spouse) may assist a male carver or, more rarely (particularly if a female is widowed and must support a family), females, have become extraordinarily proficient carvers. Rough and unquantifiable estimates of the percentage of families in all villages of the study area to a greater or lesser degree dependent on carving based on field observations, informal discussions with community residents, and discussions with an Alaskan buyer who has purchased carvings from these communities for in excess of five years are as follows: Gambell and Savoonga 80-90%; Little Diomede, King Islanders in Nome, and Diomeders in Teller, 70-80%; Shishmaref 50-60%; and Wales 40-50%. Shishmaref residents, however, are the most specialized producers of skin clothing for extra-community use and antler dolls within the study area, both of which augment the



carving effort. Dolls and skin clothing are also an important source of cash to St. Lawrence, Diomedea, and King Island residents. Grass baskets are made by a few older women in the Stebbins/St. Michael area. Information on arts and crafts production on the Yukon Delta is unavailable. Other art such as print making, painting and drawing, mask making, woodworking, soapstone carving, etc. are additional sources of cash but probably not of major economic significance. All "traditional" arts and crafts are of very high sociocultural value. The sale of prehistoric or early historic artifacts of variable materials (the most valuable of which are made from fossil ivory) have become an important source of cash to residents of several communities that have access to archaeological sites. Archaeologists from various agencies have attempted to discourage these activities because they tend to destroy the prehistoric records of these populations. For an individual trying to support a large household with ever-increasing cash needs, this rationale has negligible relevance. In addition, exploitive artifact buyers, most of whom reside outside of Alaska, encourage this economically enticing activity with seemingly high prices. The prices paid to the village resident for an attractive artifact, however, are usually a small percentage of what that same artifact will get on an open market. The public often confuses the complex of events surrounding artifact sale with the sale of items carved in the village. These two forms of making cash should be considered

separately as they involve a very different complex of cultural values and perceptions that influence the economic system.

Lastly some estimates of annual carver incomes can be attempted in the context of the qualifications stated above and with the reminder that the majority of households may have only one adult carver on which to rely: a highly skilled carver considered by most buyers to be an "artist" as opposed to a "draftsperson", who carves regularly and consistently, can make a gross income in excess of \$25,000 but probably rarely as high as \$40,000 (this classification is extremely rare); a highly skilled carver who is not consistently productive will probably gross \$12,000-\$15,000 annually; a moderately skilled carver who works consistently may gross from \$10,000-\$12,000 annually; and a moderately skilled carver who works sporadically will produce a gross annual income of \$5,000-\$8,000. Poor carvers have little market access because of the competition and therefore have a negligible income from this source. It becomes apparent from the above figures that carving does not provide an extravagant income by urban standards nor is it overly abundant even for village standards, as the individual who consistently carves has less time to obtain subsistence food and therefore expends more cash on commercially available foodstuffs. The sale of raw or "green" ivory uncarved to non-Natives, presently illegal

and a recent focus of attack by the Anchorage Times (January, 1980), is not widely practiced due to the need for this ivory by domestic carvers. In fact, such an activity would be economically irrational because a walrus tusk yields considerably less per pound uncarved than it would efficiently utilized by the experienced and skilled carver. Local residents of walrus hunting and carving communities are highly sensitive to unfounded public allegations regarding misuse of ivory, and the Eskimo Walrus Commission is currently involved in attempts to correct misinformation as well as to internally regulate any potential misuse of this resource.

#### The Government Sector.

Directly and indirectly federal and state sources of cash to communities within the study area are of economic relevance, as they probably provide the vast majority of cash to rural communities.

Ender, Harrison, Braund, and Gorski (1980) describe both wage and public assistance information for the Nome census division, which is not exactly synonymous with the study area. Since the emphasis of their study was Nome, however, all detailed economic data are focused on Nome, and "Nome census division" statistics fail to provide an understanding of federal and state cash input into any particular community. Nome specific data have been extracted by Ender, et al., (1980). Of course, village economic systems are

part of the scope of this study rather than part of the Ender, et al., (1980) study and therefore are more appropriately considered here. It is not fruitful to use a statistical multivillage format for these purposes as such data give the reader negligible information relevant to community-level functioning economic systems. The approach in this study will be to compare governmentally-derived cash employment positions from four communities of varying size and then to suggest some very rough estimates of the annual salaries of these positions. The compilation of data on cash jobs available in the three communities is based primarily on field observations and may not be complete (since changes of the number and kinds of positions vary with funding and since some positions certainly may have been overlooked). Annual salaries are also strictly estimates based on average salary levels suggested by agencies and individuals in informal discussions. Of course, to compute this information for any specific community, the size of the community's population would have to be determined since most governmentally funded positions are tied closely to a proportionate ratio of service level to population level. Lastly, some of the positions may be funded by more than one source only part of which may be governmental in origin (e.g. revenue sharing funding to city governments)--no attempt will be made to separate out governmental portions of positions with multiple source funding.

Governmentally supported wage employment will be considered for the communities of Wales, Stebbins, Gambell, and Unalakleet (populations 117, 298, 367, and 601 respectively--El lanna and Roche, 1976). Non-permanent local (usually non-native) employees in governmentally funded jobs will not be included here, but they should be kept in mind as they are usually teachers with professional incomes much greater than their paraprofessional aides and they also spend some minimal portion of their income locally.

Wales positions (based on 1979 field data) include:

- 8 teacher aides or other employees (i.e., cook, librarian, janitor), REAA school (state funded with some Johnson O'Malley funding);
- 1 Adult Learning Center, CETA funds through Kawerak, Inc.;
- 2 health aides (1 regular, 1 alternate), the regular funded by Norton Sound Health Corporation and the alternate by NSHC substituting and the City Councils on weekends;
- 1 policeman, CETA funded through Kawerak, Inc.;
- 1 postmaster, U.S. Postal Service full-time (this same individual also works as an airline agent which in part is also federally subsidized);
- 1 mayor who is partly funded by the City Council but who also is the full-time ANICA (Alaska Native Industries Cooperative Association) store manager;
- 1 assistant ANICA store manager;
- 1 AVEC (Alaska Village Electric Cooperative) power plant operator, funding directly and indirectly federal;
- 1 IRA program director and president (Bureau of Indian Affairs);

- 1 magistrate, state funded;
- 1 PHS (Public Health Service) construction coordinator (seasonal and/or part-time);
- 1 Dept. of Fish and Game representative (seasonal --state funded);

0 National Guard at the present time;

Seasonal: PHS construction, ASHA construction, firefighting BLM (Bureau of Land Management); occasional funds which come from board participation and which involve some federal and state funding.

Stebbins positions (based on 1979 field data) included' :

- 3 non-teacher school employees (i.e. cook, janitor, maintenance), BIA;
- 6 teacher aides, BIA;
- 4 health aides (2 regular, 2 alternate);
- 1 ANICA store manager;
- 2 additional store employees;
- 1 city clerk;
- 1 Adult Learning Center;
- 1 airline representative (indirectly in part federally subsidized);
- 1 postmaster, full-time;
- 2 PHS employees (part-time);
- 1 policeman;

<sup>1</sup> Source of funding for remaining communities will not be repeated for similar positions.

- 1 AVEC power plant operator;
- 22 National Guard, part-time;
- Seasonal: firefighting (BLM), PHS and ASHA construction; board participation.

Gambell positions (based on 1979 field data and U.S. Dept. of the Interior, 1977a) included:

- 3 non-teacher BIA elementary positions (i.e. cook, janitor, maintenance);
- 11 BIA elementary aides;
- 6 REAA secondary school positions;
- 4 health aides (2 regular, 2 alternate);
- 1 AVEC power plant operator;
- 1 ANICA store manager;
- 3 ANICA store personnel;
- 1 policeman;
- 1 mayor;
- 1 city clerk;
- 1 airline representative (indirectly partly federally funded);
- 2 postal employees (1 postmaster, 1 part-time);
- 1 telephone "operator" (city);
- 1 National Guard (full-time);
- 45 National Guard (part-time);
- 2 Adult Learning Center;
- Seasonal: PHS and ASHA construction; school construction.

Unalakleet positions (based on 1979 field data) included:

- 11 elementary teacher aides, 81A;
  - 3 non-teacher BIA elementary positions (i.e. cook, janitor, maintenance);
  - 4 secondary school (REAA) employees;
  - 3 health aides (2 regular, 1 alternate);
  - 6 National Guard (part-time);
  - 2 postal employees (1 postmaster, 1 part-time);
  - 1 physician's assistant (may be non-permanent local);
  - 2 policemen;
  - 1 mayor;
  - 1 city clerk;
  - 1 Wien agent (in part indirectly federally subsidized);
  - 1 Munz agent (in part indirectly federally subsidized);
  - 1 magistrate and water commission (same individual holds both positions);
  - 1 Norton Sound Fisheries Cooperative supervisor (indirectly CEDC funded);
  - 2 Federal Aviation Agency (local);
  - 1 Alaska Commercial Store Manager (Community Enterprise Development Corporation funded);
  - 6 store personnel;
  - ? musk ox farm (state owned);
- Seasonal: 88 Norton Sound Fisheries Cooperative fish processors; firefighting; PHS, ASHA, and city construction.



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Unalakleet has considerably more opportunities for employment in the private sector (in addition to Native organizations which will be discussed in the next section) than any of the other three communities. These include Unalakleet Air Taxi with 6 employees, other stores such as the Unalakleet Furniture and Hardware store (number of employees unknown), local 1 y-owned Brown's Lodge (number of employees in addition to the owners unknown), a General Telephone Company employee, Covenant School employees, and a privately owned taxi service. In addition, Unalakleet has a much higher percentage of non-Native residents (12 non-permanent teachers either with the BIA or REAA school, a large number of FAA employees, etc. )--13% non-Eskimo (Ellanna and Roche, 1976). To an even greater degree because of Unalakleet's expanded services, probably a larger proportion of these incomes are spent locally.

At this point an attempt will be made to estimate annual income of most of the governmentally funded positions listed above. Perhaps it may be appropriate to mention at this point that income data from Ellanna and Roche (1976) have not been utilized because of their unreliability due to inconsistent reporting; reluctance to report these data to local village census aides, and a lack of comprehension on the part of respondents to questions regarding income. Non-teacher employees of REAA elementary schools such as Males make a gross annual income ranging from \$3,700-\$10,700 and averaging

about \$6,600 (the teachers average an annual --9 month--gross salary of \$25,000 in addition to other benefits such as low cost housing). REAA secondary employees make a range of \$6,000-\$10,000 annual gross income (also 9 month) and average \$8,000-\$10,000 depending on the community and type of positions (non-permanent teachers in one community range in salary from \$19,525-\$41,000 for a school year by comparison). BIA school elementary employees average \$10,000 annually with the exception of local maintenance men who are the most highly paid and, in one village, the maintenance man makes an income greater than any teacher. By way of contrast BIA elementary teacher salaries range from \$10,000-\$36,000 for an 12-month contract, but BIA teachers have much greater benefits such as housing, inexpensive food shipping costs, etc. than do REAA teachers. National Guard employees' salaries range between \$2,500-\$3,000 annually. Regular health aide annual salaries, recently raised by Norton Sound Health Corporation, range between \$16,000-\$22,000 annually for full-time work. Alternates are paid approximately \$15.00/day for weekend work by their respective city councils and \$40.00/day by NSHC for substituting for regular health aides during training or illness. Adult Learning Center employees and policemen are mostly paid through Kawerak (and Yupitak Bista on the Delta) CETA (Comprehensive Employment and Training Assistance) funds--these salaries range between \$6.50-\$7.50/hour for full-time employment. U.S. Postal Service employees are paid a salary of \$4.00-\$8.00/hour plus a large cost-

of-living allowance. City salaries vary but Stebbins city clerk has a monthly salary of \$1600 which may probably be considered average. It is suspected that AVEC and ANICA (manager) salaries average between \$1,500-\$2,000/month, but exact ranges were not available to the researcher at the present time. Seasonal jobs vary by source and season with construction workers probably making the most if projects are going on and fisheries cooperative workers making the least (depending on the success of the season).

Another source of cash to village communities comes in the form of public assistance, but these vary tremendously by year depending on who applies, other sources of income, and knowledge of and desire to receive public assistance (many people reject this as a source of income). State public assistance averages for the years 1970-1977 for our exemplary villages per case are as follows in Table XI. These figures were not statistically analyzed, but a superficial overview indicates a relatively stable but fluctuating case number per population (as the case number has slightly increased in more recent years, the population has also increased); a slight increase does not appear to be proportionate to cost-of-living increases; and years of abnormal fluctuations such as 1976 for Unalakleet (which may indicate a poor commercial fishing season). In any case, all of the above data do not substantiate a large cash income from governmental public assistance sources relative to the very inflationary economy and high transportation costs to these rural communities. The above data are compiled

TABLE XI

STATE PUBLIC ASSISTANCE FOR SELECTED VILLAGES, 1970-1977<sup>1</sup>

<u>Village</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	1976	1977
Wales	\$284/month 32 cases	\$94/month 72 cases	\$ 99/month 72 cases	\$101/month 72 cases	\$ 96/month 72 cases	\$100/month 84 cases	\$123/month 79 cases	\$189/month 72 cases
Stebbins	\$219/month 312 cases	\$203/month 348 cases	\$197/month 288 cases	\$192/month 420 cases	\$184/month 384 cases	\$216/month 432 cases	\$226/month 480 cases	\$229/month 492 cases
Gambell	\$167/month 480 cases	\$180/month 456 cases	no data available	\$178/month 444 cases	\$104/month 396 cases	\$128/month 420 cases	\$156/month 372 cases	\$171/month 492 cases
Unalakleet	\$157/month 348 cases	\$122/month "432" cases	\$142/month "408" cases	\$172/month 492 cases	\$174/month "456 cases	\$188/month 396 cases	\$202/month 1,884 cases	\$195/month 480 cases

<sup>1</sup> Compiled from State Dept. of Health and Social Services statistics.

<sup>2</sup> Average disbursement per/case for each year.

only for the month of October and therefore do not provide a good yearly average; they apparently also suffer from reporting inaccuracies, but these are the only data of this nature available (informal discussion, Gordon Harrison, 1979). Additional public assistance from Bureau of Indian Affairs and unemployment monies are negligible because the BIA has turned most financial public assistance over to the State and most village residents either do not qualify for unemployment or else do not pursue the bureaucratic hassle which has been necessary to obtain it through a Fairbanks office (most unemployment for the Nome Census Division goes to Nome as opposed to village residents).

It would be virtually impossible to determine accurately governmental cash flow to any particular village because of all the variables mentioned above. However, hypothetically such an annual estimate will be made for Gambell's local residents for the purposes of indicating the secondary reliance on cash of residents of these rural communities. Remember this is an imperfectly derived estimate and that there is virtually no private sector employment in Gambell with the exception of ivory carving and the Native corporation (seasonal wages cannot be included here):

average recent (1975-1977) public assistance	\$ 63,067/yr
BIA employees (elementary school) (14)	\$162,000/yr
REAA employees (6)	\$ 48,000/yr
health aides (2 regular, 2 alternate)	\$ 42,800/yr
AVEC (1)	\$ 20,400/yr
ANICA (4)	\$ 54,000/yr
policemen (1)	\$ 15,600/yr
mayor (1)	\$ 24,000/yr
city clerk (1)	\$ 15,600/yr
postal employees (2)	\$ 24,000/yr
airline agent	\$ 600/yr
telephone "operator" (1)	\$ 850/yr

National Guard (46)	\$150 ,000/yr
Adult Learning Center	\$28 ,800/yr
TOTAL :	\$703, 717

This total indicates an average annual gross income of \$9,537 for a family of 5 with net income about two-thirds less (5.17 is the average household size in Gambell). Native corporation employment at best might provide one minimal full time and one part-time salary to the community as a whole, in addition to the jobs described above. Remember, however, that in reality only a few families have access to cash jobs with proportionately higher annual incomes and some (the majority of) families have access only to cash from self employment and possibly minimal public assistance. The relationship of this cash to the inflated rural cash needs will be explored in a subsequent section. The hypothetical nature of this example should also be reiterated and clearly understood by the reader.

Native Organizations.

The role of non-profit corporations (i.e. Kawerak, Norton Sound Health Corporation, etc.) as recipients of federal and state funds which are then utilized to employ individuals in rural communities within the study area has already been discussed in the last section. In the process of administering these federal and state funds, the non-profits themselves employ a considerable number of preferably Native personnel. Within Nome in the summer, 1979, Kawerak, Inc. had approximately 38 full-time employees; Norton Sound Health Corporation 124 full-time and 4 part-time employees; and Nome

Eskimo Community 7 full-time and 2 part-time employees (this, is discussed by Ender, et al., 1980). In addition, however, the village profit and regional profit corporations, formed as a by product of ANCSA, have in themselves become community employees through the use of funds which were a part of the land settlement. Although these funds, too, have a federal origin, they differ from those discussed in the prior section because they were awarded as reimbursement for aboriginal land claims and they are finite in nature. The number of personnel employed by the village corporations has varied by village size, by year depending on the success of its ventures and the fiscal status of BSNC, and by the complexity of the particular organization (e.g. the directions these corporations have gone in terms of becoming profit-oriented entities). In general terms, however, the financial solvency of the regional corporations has influenced the economic well-being of the village corporations from 1972 to the present. Although no attempt will be made here to list the number of village corporation employees community by community, these can vary from 1 part-time employee to approximately 5 or 6 (e.g. Sitnasuak or King Island Native Corporation) depending on what business ventures they may be involved in.

The regional corporations commenced activity under ANCSA with relatively large staffs. However, during the intervening years ill-fated investments resulted in a deficit of several million dollars for Bering Straits Native Corporation. This economic fact in

addition to more conservative operational procedures have resulted in a currently small-scale Bering Straits organization with 5 full-time employees and part-time contractual technical assistance. Calista (of which the Yukon Delta is a part) and its subsidiary organizations employ a much larger number in Anchorage primarily (where their main office is located), but their financial condition has also had a fluctuating history with their most recent investment being the Anchorage Sheraton Hotel. Although Calista and subsidiary hire is also preferentially from the ranks of stockholders, they do employ "outsiders" if such expertise is not available from within their region.

Salaries paid by Native profit corporations, both village and regional, vary widely. Overall they tend to be greater than non-profit CETA salaries and correspond more closely to professional and technical salary levels paid throughout the state. In terms of total cash flow through employment, the profit corporations have less community economic impact than do the non-profit corporations and other governmental agencies. They are, however, perceived by village residents to be an important addition to the economic opportunities available locally and, more importantly, they are the first private sector source of employment to overtly and willingly demonstrate Native and local hiring preferences.



## INTERRELATIONSHIPS BETWEEN SUBSISTENCE AND CASH IN THE ECONOMY

The interrelationships between subsistence and cash have been explored throughout the entirety of the "economic systems" portion of this study. The title of this section reflects the view of this researcher that subsistence and cash at the community and, to a lesser degree, regional levels can not be realistically discussed as separate and distinct economic systems, as the subsistence and cash components mutually interact in a functionally symbiotic economic system today. This is not to suggest, however, that this interrelationship is static and that future economic shifts could not disrupt the presently viable balance. Although published research on this topic is not apparently available for this study, area (with the possible indirect contributions of Burgess, 1974), theoretical models and data derived from one unpublished study on the Yukon Delta, all bibliographic sources cited for Nowak, VanStone (1960), Oswalt (1979), Pelto (1973), and Davidson (cd.) (1974) will be utilized to draw the following conclusions:

- (1) The vast majority of information suggests that contemporary ly there is not an inverse relationship between participation in wage earning activities and subsistence reliance up to the point that the wage activity does not conflict with critical subsistence periods nor exclude subsistence activities by demanding all available time.

In fact, the relationship seems to be exactly the opposite-- that is, the best and most productive hunters and fishermen in small rural communities are those who have access to the cash necessary for procuring modern subsistence technology. To illustrate these cash-needs consider the 1979-1980 prices for such technology in the community of Gambell (approximations):

18' Lund aluminum boat	\$2100
50 horsepower Johnson outboard	\$2040
snowmachine	\$2800
wooden boat	\$ 900
rifles (1 308, 1 22 magnum, 1 shotgun)	\$650
ammunition/year	\$200
fuel/year	\$ 500
snowmachine and outboard maintenance/year	\$150
whalegun	\$400
whalegun "bombs" /year	\$ 125
CB radio	\$200

Of these expenses some are annual costs (noted above) and others are not. Snowmachine life expectancies average 2 years in this area, outboard motors 2.5 years, aluminum boats 2.5 years, wooden boats (without major repairs) 2 years, rifles (depending on caliber) between 4-10 years, CB's 3 years, and whaleguns 15 years. Adding all of this to maintenance costs for engines provides at least a rough estimate of the cash needs for subsistence and this amount is increasing dramatically monthly primarily due to rising fuel costs and therefore inflated transportation costs. No cash value has been assigned to skinboats and other locally produced items of technology because they involve mostly labor which has not been given a cash value for these purposes. Using these

approximations in contrast to a suggested wage cash income for Gambell presented in the last section, the inadequacy of this income becomes poignantly apparent. This model is not as relevant to subsistence users in Nome or smaller communities that work full-time jobs year-round, but even individuals who fit into this category rarely let work totally disrupt subsistence endeavors (i.e. they are carried on during weekends, vacations, and lengthy spring and summer evenings). As this is being written today (Sunday, January 20, 1980) in Nome, 40 individuals can be observed at one point in time on the eastern edge of the town's shore ice in  $-25^{\circ}\text{F}$  temperatures fishing for tomcod and crab.

- (2) Because heat and light (and in most cases) electricity are temporarily generated by imported fossil fuels in all communities of the study area, survival then requires additional cash for the purchase of fuel oil and the payment of electricity bills. As an example, fuel oil in Gambell today costs the average family in a "new" ASHA house approximately \$185/month for fuel and \$100/month for electricity. Even in Nome many Eskimo families have lost their equity in ASHA houses due to their inability to meet monthly utility costs (Bering Straights, December, 1979).

(3) The necessity for primarily males to periodically leave their home villages and family units for purposes of obtaining cash income has been suggested as an important contributing factor to family and village disorganization (VanStone, 1960; Hughes, 1960). However, current trends seem to indicate that even when cash jobs are available in regional centers such as Nome or Bethel or elsewhere in the state, there is a definite reluctance on the part of individuals to leave home villages for extended periods of time--usually only long enough to acquire immediate cash needs for subsistence expenditures. For example, Naylor and Gooding (1978) report that although a pipeline employee could make an average net income of \$575/week, only 9.5 percent of Bering Straits Native Corporation stockholders, held jobs on the trans-Alaska pipeline. Of all Natives hired on this gargantuan project, 51.5 worked for 8 weeks or less and 25 percent of the total Native hire worked for two weeks or less (p.14). Nome employment trends (also discussed by Ender, et al., 1980) illustrate a highly unstable work force including frequent voluntary and involuntary terminations, frequent horizontal rather than vertical job mobility, and CETA-eligible and Native preference positions that are difficult to fill on a permanent basis. For the most part, employee priorities of the vast majority of residents in the study area who even attempt to participate in wage labor do not include long-term,

year-round association with the same job (this statement applies to both non-Native and Native residents with the exception of professional positions).

(4) It is overwhelmingly apparent in both the sparse literature and field observations that products of individual wage labor (i.e. cash) are not distributed per se, although commodities or services it purchases may be exchanged between kinsmen, skinboat crew members, or through other inter- and intracommunity interpersonal exchange networks (usually also based on extended or fictional kinship) (VanStone, 1960; Hughes, 1960; Bogojavlensky, 1969; and others). The implications of this for the presently functioning subsistence/cash economy if wages were to become a more prevalent part of this economic system may be significant.

(5) Commitments to cash jobs represent a definite break with Inupiat and Yuit cultural traditions that may have a cumulative effect through time. Individuals making this commitment may, in some cases, find themselves isolated to a greater or lesser degree, formally or informally, from their small-scale community and its members. Extreme commitments in the form of business ownership patterns in Nome may be revealing -- out of a total of 128 licensed businesses in Nome in 1979, only 18 were Native owned (field data, 1979).

## ATTITUDES TOWARDS ECONOMIC DEVELOPMENT

This section could not be based on published secondary sources because none are available. Therefore in addition to opinions and attitudes reflected in the news media, views portrayed in this section of the study have been extracted from extensive community contact through the forms of informal discussions and meeting attendance, and field observations. During the course of the study period OCS public informational meetings were attended in Nome (City Hall 1), King Island Corporation hall also in Nome, Shishmaref, and Savoonga-- tapes from meetings in Norton Sound were also reviewed. In addition, attitudes towards OCS and other kinds of development were elicited and observed through informal discussions in the communities of Wales (at a meeting in which Little Diomedé, Brevig Mission, and Teller were represented by several individuals per community), Shishmaref, Gambell, Savoonga, Teller, Elim, Moses Point, Unalakleet, Stebbins, Emmonak, Mountain Village, and St. Marys. Also during the study period other meetings such as those of the Nome Business Owner's Association, City Council, Nome School Board, industry information, Eskimo Walrus Commission, OCSEAP User's Panel, and others have been monitored. Other relevant experience has included researcher participation as a humanist in the Management of Change OCS workshop

in Anchorage; a Kawerak-sponsored village spinoff of this meeting in Unalakleet, Gambell, Nome, and Teller; an Alaska Public Forum OCS informational project in Unalaska (actually held during the study period); and the organization and implementation of a subsistence panel at the 1978 meeting of the Alaskan Anthropological Association in Anchorage. Due to the nature of the methodology used to gather these data, quantification is not possible but the quality of the data is probably preferable to that which results from formal survey questionnaire.

Presently there is no major economic developmental activity in progress within the study area. Of equal importance, however, is the fact that the vast majority of non-transient residents have not experienced a period of intense economic development while residing in the study area (with the exception of those who experienced World War II in Nome. World War II was a period of substantial human influx to the area with economic implications but not really comparable to the conditions of the "gold rush" period. Individuals who are presently residents of both Nome and the villages who participated in oil-related activities on the "pipeline" and at Prudhoe Bay did so in

the capacity of migrant workers rather than as residents of the area being developed. Due to this lack of first-hand exposure to development, it is not unrealistic to describe prodevelopment, moderate, or anti-development views as being somewhat naive because of their lack of an experiential or empirical foundation. Present "economic development" involves several very diverse activities. Tourism is important economically but has declined in recent years due to a combination of Alaska Airline's route loss to Nome and Kotzebue in the early 1970's and generally increasing costs and an inflationary economy throughout the country. Gold dredge placer operations, which were closed down from 1962-1975 after being the major economic activity in Nome for decades, have resumed under the auspices of Alaska Gold (a subsidiary of UV industries until this year). They employed approximately 160 workers during the summer of 1979, but 100 of these were imported from outside the region and less than a dozen were from villages (informal discussion, Robert Baldwin, 1979). Commercial fisheries have not been significant for Nome residents but have been extremely important as a source of cash for Elim/Moses Point, Golovin, Unalakleet, and the Yukon Delta. The governmental sector, which can hardly be termed "economic development" in the sense that we are discussing it here is an important and expanding source of jobs for the study area. Transportation is economically significant in the sense that Nome has the only paved and frequently served jet strip in the study area and also is the base of operations for several "bush" air carriers. Unalakleet, on the other hand, has an unpaved, infrequently served small jet runway while St. Marys has a paved but also less frequently served jet-accommodating runway. In addition, Nome has



the only lighterage service north of the Yukon Delta. Nome's transportation role, however, is limited by shallow water depths, a virtually non-existent boat harbor and frequently occurring poor weather conditions which makes air travel unreliable at times. The economic conditions of Nome today are discussed in Ender, et al., (1980) in greater detail.

Attitudes towards economic development will be grouped on the basis of four major opinion clusters which seem to emerge from the data. These clusters or groupings are somewhat artificial constructs utilized for purposes of organizing and presenting these data and certainly all individuals do not neatly fit into any category and some may lie in between aptitudinally. These groupings are: (1) the rural, village-based, subsistence dependent, traditionally-oriented resident (primarily Inupiat or Yuit); (2) the rural, village-based but acculturated and more formally educated resident (primarily Inupiat and Yuit)--usually middlemen in communication between Natives and non-Natives; (3) urban-oriented business owners, prospective entrepreneurs, and active participants in this segment of the economic system (primarily non-Native); and (4) "conservationists", usually from places of origin outside of the study area, usually residents of communities like Nome rather than smaller villages (primarily non-Native).

Category (1) includes the majority of the study area's population, mostly Inupiat and Yuit, and primarily residing in villages. However, for multiple reasons (mainly access to medical care or schools), some of these people move to communities such as Nome usually for temporary periods of time. Individuals in this group have relatively little cash income vis-a-vis cash requirements and are heavily dependent on subsistence for satisfying economic needs. They tend to feel most comfortable in kin-based groups and small communities and, if formally educated, have received this education at the village level. They tend to value what they consider to be "traditional" Eskimo culture, the environment, and the fauna and flora that inhabit this environment. They are generally not widely traveled nor have they experienced prolonged dealings with non-Natives with the exception of teachers and preachers with whom their relationships may be formal. Priorities of this cluster include maintaining the status quo of village life within the constraints of Euroamerican culture which have already been integrated into their lives. They don't fully understand what OCS is or how it may affect their lives, but to the degree that they do comprehend the concept of drilling for oil and gas on the ocean floor, they adamantly oppose such endeavors because they are convinced that such "unnatural" activity will unquestionably bring about harm to the marine environment and its animal life on which they so intimately rely. Based on past experiences with "outsiders" they

generally are pessimistic about being able to alter the course of future events regarding any kind of development and frequently express this feeling of helplessness by not availing themselves of purported opportunities for input (i.e. public meetings). Verbal and somewhat militant advocates of this group's views are, interestingly, not the majority of this group itself, but rather organizations such as Kawerak, Inc., Nunam Kitlutsisti, the Eskimo Walrus Commission, and the Eskimo Whaling Commission that may have a few representatives on boards that come from within this cluster.

Category (2) includes again primarily village residents but also a lesser number of quasi-urban dwellers, both of which are primarily Inupiat and Yuit. They tend to be the younger, more formally educated, and more acculturated of the rural Native residents. They have had more extensive and intensive dealings with non-Natives, have a better control of verbal and written English, have fewer perceived ties with "Eskimo tradition", and often represent their home community on boards, councils, committees, etc. in dealings with non-Native individuals and agencies. While members of this group share many of the same values regarding the environment, animals, and their lifestyles with members of the previous group, they believe that there is a necessity for some planned economic development that incorporates their home villages due to cash requisites of modern life and that such development under tight

control can coexist with "traditional" culture as practiced in villages today. Current officers of Bering Straits Native Corporation, and Calista Corporation, with their mandate to make profits for their stockholders, are advocates of this position. Individuals who rely heavily on commercial fisheries tend to promote a similar view whether the development is fisheries or oil, although they exhibit an adamant concern for the welfare of commercial fisheries over an interest in oil, and if oil development would be potentially dangerous to salmon or herring they would oppose it probably more openly and publically than would group (1).

Group (3) is composed of the majority of the vocal non-Native minority of Nome including present business owners, prospective entrepreneurs, miners, and others who value participation in this segment of the study area's economy. This segment is not limited to non-Natives, however, as some "town Natives" (i.e. those Natives who have had a long-standing participation in a western economy and urban life usually as a result of having one non-Native parent (or grandparent) are also included in this group. Members of this cluster tend to wield the greatest degree of economic and political power in the study area through control of governing or decision-making bodies (i.e. the City Council, the Nome School Board, the Business Owner's Association, the Chamber of Commerce, and others) or by holding local political positions (i.e. mayor, city manager,

city clerk, etc.), although the balance of power may be presently undergoing some unquantifiable shifts as a direct or indirect result of ANCSA organizations. This group unquestionably favors any kind of economic development that will improve prospects for local commerce, and presently members of this cluster perceive oil as being the most lucrative alternative. They would not, however, discourage other kinds of development such as mineral exploration, commercial fishing, tourism (e.g. Iditarod Race promotion), or developing the transportation industry (e.g. the current "push" for constructing a deep-water port). The majority of this group sincerely believe that economic development, increased cash flow, and more jobs will improve life for everyone in the area, although the well-being of the villages is not a priority vis-a-vis the welfare of Nome. Members of this group generally perceive that any problems inherent in, for example, oil development would be more than adequately compensated for by revenues and fringe benefits received from such development. Representatives of this opinion cluster also tend to view increased federal constraints on economic development in the area as being unreasonable, undemocratic, and lacking in rationale--most recently the imposition of the Antiquities Act to form national monuments, wild and scenic rivers, etc. This group is relatively mobile within and without Alaska and consider themselves to be more or less sophisticated in national affairs. This group will continue to do everything possible to

encourage the exploration and development of petroleum in the Bering-Norton Lease Sale Area.

Lastly, cluster (4) is a minority opinion locally represented, for the most part, by non-Natives that are usually if not exclusively of non-local origin. This group holds views and values that are perceived of as being congruent with the views and values nationwide of individuals and groups that label themselves as being "conservationist." In this view the protection of the environment--both physical and biotic--are placed above the interests of human groups or rather are seen as in the ultimate interest of all human groups. While the more moderate members of this group would not oppose subsistence pursuits that didn't harm the physical environment and its biotic communities, less moderate views would adamantly oppose even subsistence hunting irregardless of whether or not its economic and cultural importance could be adequately demonstrated. This cluster opposes any economic developmental enterprise that significantly alters the natural environment including mining, commercial fishing, extension of transportation corridors, and, mostly, the exploration and development of oil particularly in off-shore locations. Members of this group are firmly convinced that industry technology and methods can not satisfactorily guarantee full environmental protection and that any risk is too great--that is, that no amount of money can compensate for environmental

destruction. Such individuals are suspect that claims by industry that "what is good for the nation is good for you" are really self-serving propaganda to make the rich richer at the expense of all. More moderate members of this cluster in recent years have joined forces with subsistence advocates to fight OCS development nationwide--the degree to which this recent trend is observable locally is not clear. Representatives of this view are publically verbal but not organized on the local level at the present time.

#### Social Systems

This major but brief section on social organization or functioning social systems has relevancy to potential OCS exploration and development in the study area, because any major economic change will inevitably bring about social changes due to the integrated operation of all sociocultural systems (Harris, 1975; Pelto and Pelto, 1979; Pelto, 1973; Berreman, 1954; Hughes, 1960 and others). In addition, social systems in the study area have retained considerable traditional Inupiat and Yuit ties and differ significantly from western models thereby necessitating this explanation in overview for purposes of allowing knowledgeable decision-making to occur.

## FAMILY, HOUSEHOLD, AND KINSHIP

From contemporary western or Euroamerican cultural contexts emerges the view that the "family" and the "household" are mostly synonymous, so that when an adult individual is questioned about his or her "family," the response will usually refer to group of people including a married couple and their children residing in a particular structure or "home." More extended references to "family" usually have to be qualified (i.e. your mother, your brother, etc.) and will involve people living in numerous "homes" or households often extended over a wide geographic area. Family unit structure from the contemporary western economy which stresses personal mobility, individual as opposed to familial endeavors, obligations restricted to a nuclear family unit (with even those seriously being questioned today), and emphasis on extrafamilial social bonds and interaction (e.g. coworkers, neighbors, special interest organization, etc.). This kind of family and household model is definitely not applicable to the majority of communities or even to segments of the Nome community within the study area today despite pressures for these communities to reorganize and adopt a western model. Within any community of the study area including a large portion of Nome, the concept of "family" transcends multiple generations, includes collateral relatives, includes even fictive (i.e. non-biological or marital) kin, transcends even communities, and transcends residen-



tial units (Burch, 1975; Bogojavlensky, 1969; Hughes, 1960 and 1974; and Heinrich, 1972). It may be of interest to note that through the misguided and uninformed efforts of federal and state housing authorities, modern housing for rural areas has been modeled around the nuclear family unit. Even this imposed structure has, for the most part, failed to disrupt functioning family units that today have adapted by multiple households actually sharing meals and some household chores within a single structure (usually the residence of an older family member), children and adults sleeping at will in any of the family's households, and perceptions of more than one household as being "home." The households enumerated in Ellanna and Roche, 1976 in reality represent housing units and not functional family units for all of the study area with the exception of most of the non-Native segments of Nome's population and village teacher and preacher households (even with this qualification the relatively high density of "households" vis-a-vis urban "households" should be noted in Ellanna and Roche, 1976, p.9). Lastly, it is important to understand that family "heads" are, today, still mostly older experienced individuals whose leadership encompasses several households-- male leadership tends to predominate overtly although the role of older females is unquestionably covertly of substantial influence.

As with most aboriginal hunters/gathers/fishers worldwide, kinship affiliation is the primary governing or defining force of social interrelationships for all of the Inupiat and Yuit peoples of the study area today. Kinship, although based on a biological model, is in no way restricted to individuals who can readily trace genealogical links to one another. A kinship system in Inupiat and Yuit societies is a means of classifying individuals that are perceived to be related to one another through links based on biology, social parenthood, adoption, marriage, etc. over vertical expanses of time and horizontal or collateral affiliation. For every class of kinsmen as defined in Inupiat and Yuit culture (i.e. elder brother, younger brother, grandparents or great aunts and uncles of the grandparents generation, parallel cousins who are like siblings or cross cousins who are like "cousins" in a western sense, etc.), there is a very well-defined and rigid code for interpersonal behavior (Burch, 1975). For example, the relationship between adult older brothers and younger brothers is one of respect and interdependence, but an open exhibition of affection or even casual socialization may be considered inappropriate (Burch, 1975). Not only have behavioral restrictions and expectations between relatives persisted to the present time, but a non-flexible order of loyalties continues to prioritize relationships by kinship roles rather than personal preferences more common in western societies. Such loyalties involve a complex

network of reciprocal obligations that result in a very temporarily viable system of social and economic interdependence. Inupiat and Yuit individuals and families that are unable to demonstrate a kinship bond based on concrete genealogical links will tend to refer to distant or unrelated individuals or families with whom they socialize by the term "cousin" (the closest English translation of some terms that enable kinship extension). Recently the researcher was present at a jury selection proceeding in Nome at which the judge was attempting to discern relationships between prospective jurors and the plaintiff and defendant. When questioned as to relationships many prospective Inupiat jurors referred to themselves as "cousins" of the defendant, but when asked about the genealogical links that made them "cousins," explanations were, confused (as perceived by the non-Native judge) and spanned several generations and far distant collaterality. Of importance here, however, is the fact that relationships with most non-Natives that have neither married or been adopted into this kinship network do not have priority and involve an almost totally different set of rules. Both the primacy of kinship among Inupiat and Yuit residents of the study area and the rules by which non-Native non-kinmen interface with these residents have significant implications for social contact that may result from OCS exploration and development.

## THE COMMUNITY

As societies become larger and more complex there is a greater degree of specialization and segregation between social and political systems. Hence "political systems" are discussed separately in this study for Nome and inter- and intraregional organizations. However, in small-scale kinship-based societies, a category to which the villages of the study area still conform in most respects, such specialization is minimal and therefore a discussion of community social systems will by necessity include some consideration of village politics or the allocation of power at the village level.

Due to the basic continuity of traditional sociopolitical systems into present day village life, the reader should reconsider the description of these systems presented in Chapter III of this study. Namely, community sociopolitical organization was based on a system of the umealiq (skinboat "captain"), skinboat crew membership, kazgis (mens' houses), multiple crew or kin-based factions, consensus decisions, elder respect, and a relatively fundamentally egalitarian and non-authoritarian social order (not without individual stratification, however). This traditionally based system has superficially been transformed by an overlay of western sociopolitical institutions such as IRA (Indian Reorgani-

locally important because they have more formal education, possibly more wealth, and the ability to deal effectively with non-Natives, but who are definitely not perceived as "leaders" by community residents. That is, the ability to act as an intermediary with the non-Eskimo world and its agents, or to be a "cultural broker", and the ability to amass wealth if you fail to share (i.e. "to be stingy") are not qualities one would find in a socially accepted and respected community-level leader. Authoritarian attitudes and behavior are still definitely abhorrent to village residents and considered to definitely be a behavioral transgression which minimally will evoke ostracism and ridicule and in very extreme cases may initiate more overt or even violent acts towards an individual attempting to exert such authority (hence the difficulty in recruiting and retaining "functional" village policemen). Community leaders today are multiple (within the same village) and still closely associated with both kinship affiliations and subsistence knowledge and skills, and must represent the needs and priorities of the village majority (i.e. the welfare of the group).

As a summary, then, an attempt will be made to "paint" a composite picture of villages within the study area excluding Nome. Villages vary in size from White Mountain's population of 111 to Unalakleet's population of 601 (Ellanna and Roche, 1976) and generally (but not exclusively) the complexity of the western institutional overlay

and presence of modern technology will have some direct correlation with size. They are composed of households containing both nuclear and small extended family units (household density is greater for all villages than it is for the national average), but these households work together along kinship lines to provide for the social and economic well-being primarily of a "family" (which is larger than a household) and secondarily of the community. Interpersonal interaction, and internal social control and decision-making depend heavily on community consensus, community values and norms, and informal mechanisms such as gossip and ridicule. External means of social control are called upon in cases of extreme or persistent antisocial behavior. Individuals are first members of households and families and, second, members of community organizations (both traditional and non-traditional). Members of virtually all Inupiat and Yuit families participate in subsistence pursuits with possibly one or more members involved in working for wages usually seasonally. Non-Eskimo households are usually those of teachers, preachers, occasionally researchers or agency employees, and, again rarely, households based on mixed marriages (one spouse being local, the other being non-Native). Although traditional leadership roles are extremely important, younger individuals with more formal education may be the ones who first encounter "outside" visitors to the community, but most of these lack the ability or motivation to singlehandedly make decisions for the community as a whole and

will usually call "council" or "community" meetings for important issues as well as disseminating information by word-of-mouth (informal channels). Many non-Natives who go to villages may attempt to bypass altogether the local leadership and deal directly with resident non-Natives (primarily teachers, missionaries, or, in a few cases, local entrepreneurs)--this kind of procedure may be locally resented. Most individuals who participate on regional or statewide boards, councils, etc. do so on more than one of these bodies and possibly on as many as three or four--these individuals may be older leaders but, because of the fact that English is usually necessary, they are usually individuals with some formal education and/or sophistication with the "outside" world. Communication between board members and the community regarding board-related issues may be informal or, in some cases, relatively deficient (partly because such individuals often become "burned out" or confused by the multiplicity of issues potentially impinging upon the community or they find it difficult to translate such issues into a local perspective). Villages are constantly bombarded by agency representatives ostensibly providing information, soliciting "local input," or making commitments for future action. As a whole village residents do not receive or comprehend this information because of the way in which it is presented (although Native corporations are making some improvements in this process) and may question the credibility of both the

agencies intentions or commitments (Eisler, 1969)--this often results in community apathy in meeting with agency representatives or in taking decisive action. Most village residents perceive of their identity as being local (village-based), consider the quality of life in the village to be preferable to life "outside" (with the exception of some younger adults who often want the chance to experience life "outside"), and definitely perceive life in the villages as unique and distinct from life "outside" in either Alaskan urban areas or outside of the state. The King Island community in Nome is similar, in most respects, to the community profile portrayed above.

#### FORMAL HUMAN DELIVERY SYSTEMS

The term "formal" is used in this section title to distinguish western institutional social or human services from the traditional and on-going kin-based systems of economic sharing, transmission of knowledge (education), and curing within the study area. For purposes of this study, Ender, Harrison, Braund, and Gorski (1980) have outlined the human or social service delivery systems which originate in Nome as the regions' center for the Bering Strait area. Bethel and, to a secondary degree, Mountain Village service the Yukon Delta portion of the study area and are not included in the Ender, et al. study. A repetition of the description of these systems (namely education, health, and housing) presented by Ender and associates is unnecessary. However, Ender and associates do



zation Act) councils; city councils and city officials; village (ANCSA corporations; National Guard; participation in school, health REAA, reindeer herding, regional profit corporation, regional non-profit corporation, cooperative (e.g. AVEC), coastal resource service area (CRSAs), Eskimo Walrus Commission, Eskimo Whaling Commission, Bering Sea Fisherman's Association, and other boards; church membership; and other village level non-traditional social institutions (Stern, 1977; Hughes, 1966; field observations 1968-1980). This veneer of western institutions, however, has failed to fundamentally change the nature of the traditional system. In large sea mammal hunting communities the boat "captain" who can retain crew loyalties, who continues to be a good hunter, and who has the cash to meet the demands of modern subsistence hunting tends to wield considerable influence today and may also have a formal position of quasi-authority in one or more of these basically foreign local institutions (Worl Associates, 1978). In fishing communities such as Emmonak younger "leaders" with formal education tend to rely heavily on the advice and guidance of elder descendants of some of the older, more powerful individuals (informal discussions, Emmonak, 1979). In some cases younger "leaders" in all communities who do continue to hunt and/or fish have become "new umealiqs" by their abilities to gain and retain group loyalties and to amass and redistribute "wealth" in a western sense. There are, however, some individuals who perceive themselves to be

not adequately make the point that since all of these systems originating in Nome service the rural communities of the region, any deficiencies, disruptions, or stress on the existing systems would immediately and directly impact the level of formal human services available to village residents--that is, the village perspective is not portrayed in the Ender document, and it is this perspective which will be examined in this study.

#### Educational Delivery.

Nome historically had one of the earliest and certainly the most elaborate educational systems within the study area (with the exception of St. Marys on the Yukon Delta). As a basically non- , Eskimo community at the time of its origin, Nome had a segregated school system until the 1950s despite its Eskimo majority after the termination of the "Gold Rush" (Ellanna, 1972). Even up until the early 1970s Nome continued to be the center for rural or "bush" student secondary education in the area through the auspices of the William E. Beltz Regional High School. Just prior to the termination of this program Nome Public Schools, in desperate need for a new and expanded facility, moved secondary students into the Beltz complex in a consolidated program which failed to survive a second year. Nome School District ended up with the facilities use and rural students-began attending high school in home

villages or villages within a close proximity of their own community with the exception of those that continued to go to boarding schools at Sitka or outside of Alaska or to boarding homes in urban areas of Alaska. The Bering Strait REAA (Rural Education Attendance Area) was established to assume responsibility for "state-operated" elementary schools and newly built village high schools (some villages such as Wales still do not have secondary programs). Interestingly some communities like Unalakleet, Gambell, and Savoonga felt the REAA was not fully working in their interests and opted to retain BIA jurisdiction over the elementary programs. Some communities also felt that the REAA's were not developing "good educational programs and taking into account local input" and opted to continue sending some of the secondary students to boarding schools. Ironically one of these villages was Emmonak from which the first class action suit against the state for implementing small village high schools had emerged (informal discussion, Emmonak, 1979). Much of the disillusionment, with the REAAs, focused on superintendent or teacher/community conflict (Barnhardt, et al., 1979; Cline, 1974). At least one boarding home program was set up in a village (i.e. at Shishmaref for Brevig Mission, Wales, and Diomedes students) resulting in a rather traumatic adjustment for both boarding families in Shishmaref and many of the students. Meanwhile 1975 saw the opening of the first community college in this region -- Northwest Community College in Nome -- which grew rapidly

in some respects but suffered problems in both its relationship to Nome and the villages, in part because of the staffing and funding inadequacies for delivering village programs and also in part due to increasingly poor relationships between the initial president and the majority of the Nome community. Simultaneously Kawerak became deeply committed to adult basic education and learning centers in both Nome and the villages, while the X-Ceed program for rural teacher training continued to operate independently through the Center for Cross-Cultural Studies at the University of Alaska, Fairbanks and bilingual education through the Alaska Native Language Center. This brief and general picture of education within the study area sets the scene for contemporary education today. It may be informative to note that a minimum of six different agencies or organizations, none of which are administered any more locally than Nome, and all having policy and funding decisions being made in even more distant communities (e.g. Juneau, Fairbanks) are involved in education in the study area (not to mention private church-operated boarding schools such as Covenant High in Unalakleet and St. Marys at St. Marys or Andreafsky). From this portrayal of the present educational systems, major educational issues of relevance to this study will be briefly discussed:

- (1) Multiple agency involvement in the educational systems of the study area in addition to some levels of continual conflict between leadership and policies of these agencies

decreases the effectiveness of these systems to deliver their educational products.

- (2) One major arena of conflict has been between Nome Public Schools and agencies that deliver education to the region as a whole. The Nome School Board has basically been controlled by non-Natives and a fewer number of long-time Nome (versus village) Natives with perspectives that are decidedly different from those of rural areas. Over a period of the last five years conflicts have included both occupancy, control, and ownership of the currently State-owned (JOM built) Nome-Beltz complex which has been, in the past, jointly operated by Nome Public Schools and Kawerak and which has been a battleground for control and ownership between Nome Public Schools and the Bering Strait REAA during the last year. Such disputes have included: disagreements between the Nome School Board and the Beltz Regional Advisory School Board (now defunct) during consolidation regarding rural representation on the joint board; disputes between Nome Public Schools and Northwest Community College regarding the academic acceptability of NWCC credit as applicable to both high school students and faculty of the high school; Nome Public Schools formal support of and articulation with the community college in general (an interrelationship which is currently on the upswing); control and operation of the Northwest Regional Resource Center (which has since been dissolved -- a dispute in which the REAA and even the BIA also became

involved); present internal (Nome Public School) disputes over the use of JOM funds (specifically earmarked for Native students) and pressures to comply with federally-mandated bilingual education programs for students who are not monolingual in English or who do not come from English-speaking households; reluctance on the part of Nome Public Schools to accommodate any village students ostensibly because of funding and staffing restrictions; internal conflict within the Nome Public School district regarding educational philosophies and teacher/administrator qualifications as applicable to the needs of a predominantly Eskimo student body that is basically directed by a non-Eskimo group of professionals; and others too numerous to relate for these purposes.

- (3) Kawerak has become actively involved in adult education, the establishment of village learning centers, the boarding home program (in 1975-76), and postsecondary education in conjunction with NWCC. In the process of achieving these goals Kawerak has, by necessity, been forced to compete for funds with other regional and national educational organizations and these interests have inspired an escalating interest in BIA educational functions; Kawerak and NWCC have also had major disagreements in the past over joint postsecondary and adult educational endeavors-- this relationship is also presently improving.

- (4) Due to problems seemingly inherent in small village high school programs (as described by Barnhardt, et al., 1979), the level of education presently offered will affect the success rates of graduates of these programs who attempt college or technical higher education. These facts have direct relevancy for employability within the area if economic development would involve local hire.
- (5) The educational profile of villages of the Bering Strait region for 1975 analyzed by Ellanna and Roche, 1976, suggests some of the following conclusions: (a) using Brevig Mission as an example and correlating educational achievement data with age/sex distribution, there were a total of 38 adult individuals at this time who had not completed high school or 66 percent of the total population (p.21); (b) the majority of the adult population over the age of 21 in the small communities of this area have not graduated from high school or its equivalent--even Nome is not outstanding in this regard vis-a-vis "national averages" (p.37); and (c) standard U.S. average age/grade level criteria are not applicable to this area--individuals are generally older than this "average age" (p.37). Although these facts indicate dim prospects for wide-spread employability of locals in well paying professional or technical jobs, the educational level is on the rise. However, more importantly,

formal education, while certainly of significance in the value systems of rural people, is not always a priority relative to other activities such as subsistence and its value may be negligible when weighed against the liabilities to village cohesion, family stability, cultural continuity, and concepts of self worth that may be damaged directly or indirectly by the formal educational process.

#### Health Delivery.

The accessibility by rural people in the study area to adequate health care is of very high priority. In fact, it could possibly be said that modern health care may be perceived as the (or at least one of the) most desirable elements of western culture by rural Native people of the state as a whole. For the villages in the study area, Nome and more remote Kotzebue (or Bethel for the Yukon Delta) have been the only accessible communities that have modern health care facilities and personnel (with the exception of Anchorage which takes referrals). Physicians and modest care facilities were first provided in Nome during the "Gold Rush" with the first hospital being provided by the Methodist and Catholic churches in Nome (only the Methodist hospital continued into the recent period) (Richardson, et al., 1979; Renner, 1979). On the Yukon-Kuskokwim Delta health care was sporadically provided by Moravian missionaries in the 1890s,



a governmental facility at Akiak in 1916 with an additional facility at Mountain Village in 1931, and a "new" facility at Bethel in 1940 (Bantz, et al., 1979). Today health care for rural villages in the study area include (for the Bering Straits Region) the Norton Sound Health Corporation hospital facility, hospital and corporation staff in Nome, and community health aides in villages (at least one, and more in larger communities); and Public Health Nurses employed by the State in Nome with one responsible for village travel and a physicians assistant in Unalakleet. For residents of the Yukon Delta, health care includes the Bethel Service Unit of the Alaska Area Native Health Service with a hospital in Bethel, State Public Health Nurses, community health aides, and the Yukon-Kuskokwim Health Corporation (Bantz, et al., 1979). The Norton Sound Health Corporation and Yukon-Kuskokwim Health Corporation are Native-operated health organizations formed in 1970 and 1969 respectively for the purposes of health care planning and the gradual assumption of direct health care services from the federal government for residents of their respective regions. Today the majority of funding for these services comes from Indian Health Services (federal) sources, although the Norton Sound Regional Hospital has the ability to generate non-federal revenue through the treatment of patients who do not receive ANS (Alaska Native Services) benefits or who do but have alternative medical benefits such as insurance through an employer. Both corporations have worked diligently to upgrade and train

community health aides, since it is only these aides, assisted by radio instructions from a physician in Nome or Bethel, who are available on the local scene to make decisions regarding potential treatment of a person who becomes ill in a village and who can administer at least the initial stages of this treatment even if the patient is later evacuated by air transport. In addition, the corporations have actively elicited local input into prioritizing health care needs and solving problems (through boards), encouraged preventative health care and in general increased medical awareness among the regional populations, actively sought additional funds to expand and improve health care programs, and have attempted to administer modern health care in a culturally sensitive context (i.e. they are working to increase personnel awareness of the implications of administering western health care to someone from a non-western cultural orientation, although they have a ways to go in this regard).

Of relevancy to this study is the fact that while Ender et al., (1980) adequately describes the health care delivery structure of Nome and the region, they do not make the very important points that: (1) the majority of the Norton Sound Health Corporations' overall efforts and funds go towards treating residents of rural villages rather than of Nome; (2) that village health care delivery is more difficult and expensive due to geographic isolation and climatic conditions; and (3) that because of these factors the system is already overstressed

both in terms of personnel, funds, and, to a lesser degree, facilities and equipment. Only limited and emergency surgery capabilities now exist at the NSHC hospital (the situation is not the same at Bethel). Revenues received from servicing private patients in Nome are certainly not adequate to keep the facility" and its services operative nor are they proportional to the total costs of operation (Richardson, et al., 1979; informal discussions Bill Dann and Cheryl Richardson, 1979).

A large percentage of total health care problems in villages and Nome are accidents directly or indirectly related to alcohol and drug abuse or mental health problems-- these will be discussed in the final section of this chapter. It should be pointed out, however, that the current overall health status, longevity, and nutrition in villages that do not have access to adequate subsistence foods (Heller and Scott, 1967; Draper, 1978) are certainly lower than "national averages" and also lower than those of urban areas in Alaska. The implication of these factors for looking at the impact of western culture (e.g. high carbohydrate commercial foods, alcohol, economic stress, etc.) on rural villages as well as the rural demands put on the health care delivery system (e.g. the availability of physicians to adequately complete village visitations) have direct relevancy to potential OCS activity within the study area.

## Housing.

This section will consider housing both within the villages and Nome. Ender, Harrison, Braund, and Gorski (1980) describe aspects of Nome housing including number of houses, the basic condition of Nome housing, the availability of different categories of housing, location of housing within the Nome area, and density of households. There are some additional factors of Nome housing which should be considered here:

- (1) There is definite housing stratification based on ethnic group membership in Nome that is common knowledge among residents and certainly obvious to anyone doing fieldwork in that community. Although some single non-Native individuals occupy very substandard housing and some of the more affluent Native families (primarily business owners and employees in professional or paraprofessional full-time jobs) occupy above average housing, the most common pattern in Nome is for Native families (particularly those of recent or transient village origin) to occupy almost solely government low income housing or privately owned, small, usually cold, and haphazardly constructed and maintained houses. Even the federal and state subsidized low income housing is in short supply. There were 60 qualified families on the waiting list in fall, 1979

(Charles Nelson, informal discussion, 1979) and these houses could hardly be described as meeting levels of "national" acceptability due to frequently disrupted utilities, occasional gaps in houses which result from frost heave, the inability to adequately regulate heat in houses where oil cooking stoves are also heating stoves, and general design and construction inappropriate for climatic and social conditions of the area. There are, of course, exceptions to these generalizations, but the pattern is clearly established.

(2) Nome landlords have historically regulated rent rates by what the market will bear--that is, during periods of seasonal or annual economic activities that result in an increase in housing demands, rental rates rapidly inflate to whatever the market will bear without control. These conditions adversely affect every renter but especially those on low, limited, or irregular cash incomes.

(3) The city of Nome is reluctant to see additional governmentally-funded housing constructed in Nome, as the city must provide services to these units but are unable to tax them (informal discussions, Bering Straits Housing Authority, 1979).

- (4) Governmental rental subsidies for low income families renting privately owned dwellings can not be implemented, because governmental subsidies can only be paid on rents considered "reasonable" by governmental standards and rental rates in Nome do not meet this criteria (i.e. are not considered "reasonable") (informal discussion, Bering Straits Housing Authority, 1979).
- (5) Based on the raw data compiled for every Nome household in 1975 (Ellanna and Roche, 1976), household densities of 2.9 for whites and 4.5 for Natives suggested by Ender, et al., (1980) are probably low. Ellanna and Roche (1976) compiled an overall Nome household density of 4.12 (including Native and non-Native). If approximately 36 percent of the population has a household density of 2.9 as suggested by the Ender study, it is not statistically possible for the 64 percent Native population to have a household density of 4.5 given the overall Nome density of 4.12. In addition, a random survey of the 1975 raw census data on 50 Native households provides a Native household density of 6.6 in Nome (Ellanna, field data, 1975).
- (6) Some of the low-income HUD housing in Nome, almost exclusively Native occupied, was in the process of being purchased by occupants. However, due to escalating utility costs, the low and

sporadic cash incomes of occupants, and requirements by HUD that purchasers be able to pay for all utilities, buyers who couldn't afford to pay utilities lost all equity and reverted back to a renter status in houses which they may have occupied for as long as seven years (The Bering Straights, fall 1979 issues and radio station KNOM).

Some comments may be in order regarding village housing, as the situation in these communities differs from Nome in many respects:

- (1) There is less incidence of housing stratification at the village level, but that which occurs is much more obvious. Historically in villages without electrical power, running water, and sewage systems, non-Native teachers have resided in relatively modern frame dwellings with all of the above mentioned amenities provided at government expense. In many cases missionary facilities were comparable. Where located in villages, other federal employees such as FAA (Federal Aviation Agency) and Weather Bureau personnel, reside in what could be termed segregated enclaves with comfortable living conditions and houses that seem to have emerged from "anytown, U.S.A." Although most villages are presently in the process of obtaining (or have already obtained) electricity, common community water systems built by PHS are the rule, and some communities like Shishmaref are still gathering rainwater and ice because of

the apparent absence of suitable and unpolluted water sources. Sewage hookups are a newly constructed and poorly functioning novelty even for much of Nome, and only a couple of communities within the study area have prospects for sewage systems in the near future because of the costs involved in designing, constructing, and maintaining such systems in coastal communities with permafrost conditions (informal discussions, PHS, 1979). Because of the existence of such functioning systems in selected sites (e.g. school complexes, military complexes, FAA complexes, the business districts of Nome, etc.), the rationale for not providing these services to villagers because of "environmental limitations" may lack credibility. Houses in villages range from teacher housing described above, to older, and smaller but more durable frame housing of villagers--the "old houses," to new ASHA houses that provide some additional living space but are not well engineered or designed for the coastal subarctic, are expensive to heat and light, and are certainly less durable.

- (2) In the past there has been a lack of available housing for "outsiders" in a village, as large family units occupied all livable dwellings. For villages that have been provided with new housing units, however, some of the older houses have become extensions of a single household, especially for young



unmarried males or newly married couples. In a few other cases families have maintained such older houses for purposes of rental to "outsiders" such as REAA teachers, Fish and Game personnel, temporary researchers, etc. It might be of value to note that rental to "outsiders" may be influenced by the perception of such individuals by the community--an "outsider" deemed to be an undesirable candidate for community membership may find him- or herself without a place to rent. Whereas one may think that increased housing should be substantially reducing household density at the village level, recent declines in infant mortality, increased birth rates, and increased longevity are factors that are countering the "advantages" of new housing in terms of overall household density. Recent trends towards return immigration of persons who have spent time living outside of the village must also be considered.

- (3) The construction of new village houses is generally applauded by village residents although older people frequently compare new houses unfavorably to the old. For some, new houses are seen as a source of cash employment through construction possibly as important as the houses themselves. For others the prestige associated with owning a new and western-modeled house may outweigh the structural and functional disadvantages of the

new houses. The use of aboriginal house forms--sod, bone, and/or walrus hide--have virtually been abandoned today.

### Political Systems

A study of "political systems" by anthropologists generally includes an analysis of those segments of a social system that provide for the management and control of public policy and decisions and the regulation of behavior or social control--that is social power. Anthropologists with an orientation towards cultural ecology analyze these processes in an attempt to explain what groups and/or individuals are able to be in the positions of controlling or managing the social system of which they are a part, and it is revealing to note in such an analyses that a pattern emerges in which it is usually those who control access to, means of production of, and the allocation of necessary resources that tend to gain and maintain social power (Harris, 1968 and 1975; Pelto and Pelto, 1979, and others). It is within the context of such a model or theoretical orientation that some facets of the political systems of the study area relevant to OCS will be examined. The emphasis will be those of the Bering Straits Region since it encompasses the vast majority of the study area. However, some developments are parallel in the Calista Region keeping in mind that Bethel, its regional center, has had a very different history as a missionary rather than mining settlement and is

composed of an even larger percentage of Yuit as opposed to non-Eskimo people.

#### THE POLITICS OF NOME AS A REGIONAL CENTER

In Chapter IV this study explored the history of the area and demonstrated how Nome emerged out of the "gold rush" as a non-Native economically and politically dominated regional center. At that time the major resource was, of course, gold and some additional minerals (not to mention the support services to a substantial population). Post-"gold rush" events included the establishment of a much smaller and more stable community that relied extensively on governmental allocations, especially as Nome increasingly began to service the rural villages in the Bering Strait-Norton Sound area that were becoming more sedentary and, in some cases, larger and more concentrated as a result of trade, schools, churches, etc. The impact of World War II activities was to generally intensify the course of events that were already in progress. Since the end of World War II Nome had maintained a relatively stable but certainly not a flourishing economy composed of the following: numerous small businesses owned primarily but not exclusively by non-Native residents with a considerable turnover of businesses that have failed to survive the rather limited market other areas of the private sector which were either owned and/or controlled by "outside" interests such as the Alaska Gold operation,

Crowley Maritime Corporation operating the lighterage service, Wein Airlines and Alaska Tour and Marketing owning and managing the tourist facilities and major transportation system, RCA and later Alascom operating the communications system, etc.; and, most important economically, the governmental sector from which the majority of cash, jobs, and services were available. Competition for governmental funds, jobs, and services became more complex as a result of the passage of ANCSA in 1971, since ANCSA created, for the first time, Native organizations who were to emerge into the arena of economic competition, human service delivery systems, and political competition. Meanwhile the majority of village residents within the study area were, for the most part, continuing a basically functional combination of subsistence with a minor cash base when and where it became available and fundamentally were only indirectly involved in regional politics through their membership and representation in the relatively new Native organizations and the potential of land control through ANCSA. Sitnasuak, Nome's village corporation, was an outstanding exception in that it became a very active part of the Nome business community in a relatively short time and controlled most of the non-privately owned lands adjacent to Nome. Within the past two years the residents of Nome (and to a much lesser degree the residents of the region) have become cognizant of prospects for what some consider a major economic "boom" -- offshore petroleum development. Other forms of economic development such as commercial fisheries, a fluorescence of tourism, expanded port facilities functions,

mineral development, and others also hold contemporary promise and again involve resource control. However, to Nome residents interested in economic development, oil potential has the greatest promise and currently is the focus of interest. Nome today can probably best be described as a regional center with multiple economic and hence political factions in which the villages and Nome-based Natives play both a direct and indirect role through their membership in BSNC, Kawerak, and Sitnasuak and through ANCSA land rights. As a result, Nome clearly lacks a single dominant politicoeconomic body. Thus, factionalism exists not only between ethnic groups (i.e. Native and non-Native) but also between special interest groups in which ethnic origins have negligible influence and, lastly, between Native groups and individuals whose priorities focus on subsistence and the environment and other Native groups and individuals whose priorities are basically integration into and success in western economic development. Simplistic descriptions of Nome's politics as being Native versus non-Native (Hippier, 1970b and Alaska Consultants, 1968) are, at best, misleading and analytically naive. To illustrate the dynamics of this politicoeconomic factionalism, some examples of conflict issues will be discussed below:

(1) The City of Nome's efforts to obtain the Beltz complex have met with resistance from the Bering Strait REAA -- an issue already discussed in the section on education but an issue with considerable political overtones. Not previously

mentioned, however, was the fact that the title to this complex was to be turned over to Nome in January, 1980, BSREAA's legal opposition resulted in delaying the final transfer of title (KNOM, January, 1980).

- (2) Ender et al. (1980) discusses the city's desire to annex a 38-mile segment of the coastline including Cape Nome and west of Sledge Island and some distance inland. A previous attempt to annex failed. As Ender, et al. points out, annexation is a key OCS-related issue as well as being resisted with even threats of closure by Alaska Gold (public media, informal discussion, Alaska Gold, 1979). Sitnasuak (the Nome Village corporation), the major land owner through ANCSA of all lands adjacent to the present city of Nome, is vehemently opposed to annexation and have planned to fight such annexation efforts legally (informal discussions, Sitnasuak personnel, 1979). Of particular interest here is the fact that Cape Nome, because of water depths, has been identified by Dames and Moore (1980b) as the most likely site for industry facilities. If Cape Nome remains in its current state -- that is, undeveloped -- it is presently exempt from taxation under ANCSA mandates. If, however, Sitnasuak were in fact to make some of this area

available to industry--a decision that would take some of the OCS "action" away from Nome but also a **decision** which may **not** be popular with the majority of Sitnasuak stockholders--the city would be able to tax it only if annexation were successful. The issue is not even this simple, as Kawerak and the City of Nome's present efforts to organize a coastal resource service area (to be discussed below) may have some implications for this issue. Bering Straits Native Corporation's priority to protect subsistence (informal interviews, Richard Atuk and Tom Frank, 1979) and legal authority under ANCSA over land use planning decisions made by village corporations within their region will undoubtedly make this issue more complex and likely to end up in litigation. Finally, as of the writing of this document Sitnasuak has not yet received conveyance to their ANCSA land.

- (3) OCS has become a major political issue because it involves a very lucrative resource--petroleum--that occurs in an environment--the sea--that is highly valued by the majority of the region's residents. Nome-based political factions are representative of the entire continuum of opinion and action regarding this issue. The majority of regional opinion as represented by organizations based in Nome view oil development as potentially disruptive to the maritime environment and cultural systems tied to this environment. A generalization of

"majority opinion, " however, does not elucidate the wide range of views actually focussed on this issue. At one end of the spectrum is the opinion that there would be no or minimal disruption and that any disruption no matter how intense would be offset by the economic advantages of petroleum development. Representatives of this perspective include most members of the Nome Business Owner's Association, the mayor and other city officials, and the preponderance of city council members. The priority of this group is the well-being of the cash economy in Nome. At the other end of the spectrum would be the conviction that oil exploration and development will involve some environmental and sociocultural disruption and that any disruption even in the seemingly most negligible degree is not worth any financial benefits. This opinion is not held by any organized group in Nome but is most closely represented by Kawerak. The vast majority of individuals in villages express this feeling as do some "conservationist"-oriented individuals in Nome. Closely related to this view, however, is the opinion that whereas no industry activities in the offshore area would be the most desirable alternative, no group or individual effort will be able to curb "national interests" and industry power therefore creating a "situation in which tightly controlled and delayed development are the second best and most realistic alternative Kawerak, BSNC (with its present policies), Nunam Kitlutsisti,



the Eskimo Walrus Commission, the Eskimo Whaling Commission, and the Bering Sea Fisherman Association represent such a view. They have expressed these views to the Department of the Interior in formal letters requesting lease sale delay from at least two to five years or "... until adequate marine mammal and fisheries studies can be done and the local communities can conduct coastal zone management planning" (letter from George Walters and Richard Atuk, BSNC, to Frank Gregg, BLM, Department of the Interior, in support of Kawerak's position, October 16, 1979). Besides formally stating positions in such letters, conducting meetings with village residents regarding OCS, meeting with industry representatives, providing support to village governments in responding to industry requests, and initiating sea mammal and fisheries research, Kawerak and Nunam Kitlutsisti have been active in organizing coastal resource service areas. Nunam Kitlutsisti completed their elections in early fall, 1979 and Kawerak's elections were completed in early spring, 1980 for purposes of bringing about coastal zone planning. Although Kawerak suggested to the Nome City Council that the region and city form a single resource service area, this invitation was voted down by the council and they opted to form their own body under provisions of state law allowing municipalities to form separate planning areas (the city has not yet held an election). Because membership in a coastal resource service

area is determined by voter registration, the Native Land owners of areas outside of Nome (i.e., Sitnasuak and King Island Native Corporations) are included within the potential Nome community resource service area and may not have a vote on the regional body. The following quotation exemplifies attitudes presently operative towards regional cooperation in planning for coastal management:

Oil potential in the Norton [sic] has stirred anxieties of things to come. Some have visions of getting rich quick during a boom. Others will accept the inevitable change reluctantly but will only sit back and watch everything take place around them. Some say that will be their time to leave.

Right now is the time planning is beginning to get under way for whatever may happen here. One person has been busy trying to stir up these anxieties with interesting results: he no longer has his job.

John King, who had been planner for the city for a month, called a meeting with Sitnasuak Native Corporation last Friday evening without informing his supervisor, City Manager Andy Edge, or many other people on the City Council.

"It was an unauthorized meeting," commented councilman Rosemary Phillips who attended the meeting. King had some rather biting remarks about the City Council, and, in fact, a negative attitude about the City Manager form of government for Nome. City Manager Andy Edge called King "an agitator. A well trained agitator." Even though Edge said he was willing to work with him. The City Council, however, gave their unanimous decision to Edge to let him go. Edge said he was let go because of "incompatibility with management." (The Bering Straights, September 14, 1979)

The article goes on to describe how King felt that there was a need for unified planning but that none was taking place. The

City Manager responded, in the article by stating that the city was ". . . not at odds with other groups in town" (e.g. Kawerak) but had decided to go ahead with a coastal management area of their own rather than have to await what he considers to be a delay of 4 to 6 months for the region to elect a planning board. According to this stance, the City Council may apparently act as a interim planning body for a municipally organized coastal management area. The City Council has since continued to devote time at their meetings to such planning efforts--primarily obtaining funds and planning for a port facility and the annexation process. However, some business owner's in town view the rate of progress of the council as being "too slow" and has been described by some in public discussion as functioning like "a sewing circle." Obviously such critiques, although not quantifiable, focus on some dissension or, at best, disagreement between members of the pro-development faction as to the speed and efficiency of the city's planning effort. Each week brings about new developments in these efforts at both the municipal and regional levels.

- (4) Another source of political factionalism within basically Nome's resident population has been the recent conflict between at least a majority of the Nome Ministerial Association

and those supportive of their views and the Nome Business Owner's Association and the City Council and those supportive of their views regarding the "wet-dry" issue and taxation of church properties respectively.

The "wet-dry" issue was the focal point of public opinion in the summer of 1978 and still evokes emotional responses on the part of Nome's population. The issue evoked out of public discussions by Nome ministers, social/mental health agencies, and others that alcohol abuse was Nome's most predominant social and psychological pathology. The solution to this problem, as perceived by a segment of the population and promoted by the Nome Ministerial Association, was petitioning for putting the "wet-dry" issue on a ballot to be voted upon by the general public (using Bethel's situation as a model). At that time (and today) all communities in the Bering Straits Region were "dry" with the exception of Nome. Petitions were met with counter petitions, the coverage by public media and public emotion were at a high, and this issue stimulated the formation of the Nome Business Owner's Association from the Nome Bar Owner's Association (both NBOA), as the natural concern of lost revenues and a major economic base by the bar owners in a "dry" town became a concern of the larger business owner's community and city government. The Nome Business Owner's Association

today overlaps with the Chamber of Commerce but became a more action-oriented organization. The end result was a late August, 1978 vote in which going "dry" was substantially defeated. Proponents of the "dry" view felt that a late summer vote was not representative of Nome's public views because of the presence in town of transients who would favor drinking and the absence from town (in camps, etc.) of residents who may favor the "dry" perspective. In any case, whenever the vote was held village views that opposed or supported the fact that most village liquor was (and is) obtained in Nome could not be represented in a municipal voting issue. Hence the situation remained much the same with promises on the part of bar owners that they would abide by state statutes prohibiting the sale of alcohol to an intoxicated person and by other means of internal regulation. The city also contributed by ensuring the public that enforcement of state statutes regarding alcohol sale and consumption would be more rigorously pursued.

More recently the church and city have been involved in another conflict regarding the taxation of church properties that were not directly the church itself (e.g. radio station facilities, rectories, etc.). While the city perceives this as a necessary measure to increase tax revenues to provide for essential public services, some members of the community perceive a

relationship between the "wet-dry" issue and this new taxation. Specific church groups are taking this issue to court.

- (5) Another issue surfaced recently when CEDC (Community Enterprise Development Corporation) purchased Northern Commercial Company stores in several communities including Nome. This was Nome's largest store and since purchase has been substantially expanded in both size and diversity of stock. This purchase has stimulated considerable local discussion and media coverage relating to what is perceived of as the government competing in business for profit with the private sector. There have been other similar concerns by private business owners expressed more overtly during the past few years such as the large number of CETA positions at salaries higher than many paid by the private sector which compete for the available labor force. The Native non-profits such as Kawerak and Norton Sound Health Corporation have the majority of these positions, although the City of Nome, Nome Community Center, the Women's Shelter, and other community organizations have also had access to CETA monies as well. Other attempts by the federal or state governments to provide housing, means of transportation (e.g., agency-owned aircraft), or any other kind of goods or services that compete with those locally available meet with similar concern and/or resentment, CEDC support of Native-owned

fisheries cooperatives and stores outside of Nome would also fall into this category. This issue defines a situation in which local business owners and those sympathetic to their views and philosophies are politically in opposition to governmental inroads into private enterprise as they are in opposition to governmental controls of private enterprise. Most of these individuals, however, are in favor of receiving governmental funds that may provide a boost to the local economy such as funding for a port facility, Department of Transportation construction projects that provide local positions (which are not competitive for locally available labor at the same level as are CETA jobs), governmental support of alternative energy development, support for development of a local (i.e. Nome) commercial fisheries, etc.

There are, of course, many other issues of political relevance to Nome, but those discussed above should be sufficient to define some of the major factions and their philosophies in Nome and the region. It may be significant to note that only a small segment of Nome's total population is politically active as evidenced by low voter turnout, a seemingly low interest in running for public office (e.g. only 16 individuals filed for 7 vacant positions in the fall 1979 municipal elections--The Bering Straights, September 14, 1979), and a generally low level of public awareness of the directions and

actions of the present city government or even the Bering Straits Regional Corporation or other profit corporate bodies. Some of this political inactivity of Nome and the region as a whole can be explained by the following factors: (1) the concepts of modern western politics are relatively new to the majority of the city and region's Iñupiat and Yuit population; (2) cultural and linguistic differences make the communication and understanding of these political processes and concepts difficult; (3) in the past the mostly non-Native dominated political systems of Nome, the region, the state, and the nation have not been perceived by most village residents (or Nome residents from village communities) as having much relevance to their lives which are oriented mostly around informal local control of the sea and land and their resources; and (4) even if relevancy were identified and understanding facilitated, most rural people would not perceive of themselves as having the opportunity to significantly influence political processes above the local level and probably not even at the local level in Nome.

Contemporarily issues like OCS have direct social, economic, and, hence, political relevance to the Iñupiat and Yuit majority of the regions population as well as to non-Natives who are in the area specifically because it is what it is--that is, basically undeveloped and very rural. In addition, for the first time the Native population has available to it the potential for participating in the political arena and gaining political power--that is, corporate bodies,



more sophisticated leadership in a western sense, land, access to the legal system, and a potential for funds. It will be interesting but perplexing to project the dynamics of future political processes in this area given the new variables of resource allocation and control discussed above.

#### REGIONAL GOVERNMENTAL SYSTEMS

There is no "regional" governmental system for the entire study area, as this area transects all previously existing organizational entities. The Yukon Delta is a part of a region that is separate and distinct from that of Bering Strait and Norton Sound. These separate regions and their governance will be briefly discussed here.

As previously mentioned the Yukon Delta is a part of the Calista Region with Bethel the primary regional quasi-urban center (although Calista has its main offices in Anchorage). Economically and politically the region is generally structured around traditional cultural, linguistic, and ecological similarities, although intraregional variation in all of these dimensions certainly did exist in the past and do so today. To the extent that there is a "regional" governance, it would come from the non-profits that service the same region (i.e. AVCP, the REAA, the Yukon-Kuskokwim Health Corporation, Nunam Kitlutsisti, and Yupiktak Bista) and the profit corporation, Calista.

As informal discussions in Emmonak, Mountain Village, St. Marys, and Kotlik (1979) indicated, to some degree not all residents feel that they are fully informed about or participate in regional political decisions of these bodies, although geographic distance, cultural differences, and communication barriers may play a significant role in disrupting a sense of political unity. It should be emphasized, however, that the regional unity of this area is considerably greater than that of the remainder of the study area. As previously mentioned Nunam Kitlutsisti has organized the region into a coastal resource service area under the Coastal Zone Management Act with their election being successfully held in September, 1979. Nunam Kitlutsisti is in favor of postponing any coastal development including and particularly OCS, until the region has had time to complete a coastal development plan through the auspices of this newly formed organization and its board.

This degree of regional unity does not exist for the remainder of the study area. As previously described the area from Stebbins to Shishmaref is a part of the Bering Straits Region including the segment of the Nome population enrolled in the Nome village corporation, Sitnasuak, and other villages within the region. The non-Native population is, of course, not participant to membership in these ANCSA-created organizations and is concentrated in Nome. In a holistic sense, then, there is no regional governance, although because

of its population size and the relatively greater participation of non-Natives and "town" Natives in political processes, Nome has tended to dominate the direction of "regional" politics. As previously mentioned, Kawerak has organized the formation of a coastal resource service area for all of the Bering Straits Region with the exception of Sitnasuak and King Island Native Corporation stockholders whose voter registration is within Nome. Nome, as also previously discussed, is in the process of forming a separate planning area that may or may not articulate with the regional planning entity. The future of both organizations are presently conjectural, but based on the divergence of goals, philosophies, priorities, and history it is not likely at the present time to expect regional unity in coastal planning efforts.

Since the passage of ANCSA the regional profit corporations have provided governance in the sense of carrying out the mandates of ANCSA -- namely their responsibility for reviewing the financial plans and land decisions of their respective village corporations. In addition they have responsibility for regional lands, identification of resource potential within the region, technical assistance to village corporations, and articulation with BLM for assuring that the provisions of ANCSA are carried out (land conveyance, 14h1 selections, easements, dispersal of ANCSA funds, OCS public information,

and numerous other functions) (Price, 1975). In the sense that economic success underlies political success, Bering Straits and, to a much lesser extent, Calista have suffered political impotence and impaired public respect as a result of financial loss. Despite these difficulties the regional corporations are striving to regain lost ground in the face of prophecies of eventual doom and suggestions of the negative effects that were products of ANCSA (Davis, 1979b). There are, however, problems inherent in the governance of village corporations by regional corporations as indicated in the following quotation:

Obviously, village-region relations require maintaining a delicate balance between the autonomy of the villages and the responsibilities demanded of the Regional Corporations, between the traditional modes of power allocation and conflict resolution and the modern requirements of corporate ownership and management, and between the expectations implied by ANCSA that the Native people will move into the "American mainstream" and the deeply felt cultural identity of individuals who live on, and whose ancestors "belonged to," the land for centuries.

(Davis, 1979b)

In a sense OCS will provide the first major issue that will clearly bring to the surface differences in village resident and regional corporation priorities on which decisions regarding the sea, land, and resources will be based. Will the Native regional corporations make decisions that will threaten the traditional values and lifestyles of village residents or will they be perceived as conservative by

village corporation personnel who are more developmentally oriented? Again such questions belong more appropriately to a future impacts projection, but Bering Straits and Calista Regional Corporations have already been affiliated with both perspectives depending upon the source of the perception (informal discussions throughout the study area and study period, 1978-1980).

#### THE ESKIMO WALRUS AND WHALING COMMISSIONS

Both the Eskimo Walrus and Eskimo Whaling Commissions are specialized organizations which have been functioning in recent years to protect Native subsistence hunting of the Pacific walrus and bowhead whale respectively -- an advocacy role. They have mandates to accomplish, this task by providing information to the federal and state agencies concerned with these species and to bodies like the International Whaling Commission who have attempted to place either a moratorium or quota on Native subsistence killing of the bowhead and by gathering and documenting biological information about these species. In addition they are striving to act as internal regulatory agencies to ensure non-wasteful hunting of these species. While the Eskimo Whaling Commission has its antecedent in traditional Whaling Captain Associations, the Eskimo Walrus Commission is a newly formed organization (1978). Both have relevancy to the study area.

The Eskimo Whaling Commission, which was politically activated primarily by the North Slope Borough, has representation from only Gambell, Savoonga, and Wales within this study area. Although St. Lawrence Island residents, as previously described, are heavily dependent on the bowhead for food, highly value whaling culturally, and focus many of their social institutions around whaling, they do belong to a different linguistic and cultural group in which the whaling patterns vary from those of the Inupiat to the north. In part as a result of these differences, there is some St. Lawrence Island community feeling that the Eskimo Whaling Commission is dominated to some extent by "outsiders" (i.e. Inupiat) (informal discussions, Gambell and Savoonga, 1979). Nonetheless, EWC members from Gambell, Savoonga, and Wales participate actively in the Commission and residents and representatives contribute to its ever-increasing data base. The Eskimo Whaling Commission has been studied in some depth by Rosita Worl and is comprehensively described as a political entity in another OCS document (Worl Associates, 1978), and readers are advised to refer to this document for a much more complete discussion of this organization.

The organization of the Eskimo Walrus Commission was initiated by Kawerak in 1978 largely in response to the return of walrus management to the state and the state's subsequent imposition of what the Eskimo feel are inadequate quotas to fulfill needs as well as quotas

that were uncalled for because of recent walrus population levels. As has been clearly described in the section of this document which deals with subsistence, walrus as a resource are important to a larger number of communities within this study area than are bowhead, so it is not surprising that the organization of this commission emerged from the Bering Straits Region. As with the Eskimo Whaling Commission, however, the Eskimo Walrus Commission was formed on the well-founded assumption that Inupiat and Yuit peoples, who have experienced generations of intimate knowledge of these species in question, should be consulted for their extensive knowledge and data on this species and should be a party to any decisions made regarding their management. It is also asserted by these organizations that traditional forms of internal control regarding the hunting of these animals has proven effective through time and can continue to function more effectively than external systems of control such as quotas. The purpose of the EWC, as stated in their by-laws, Article I, is quoted as follows:

. . . 1) to assist the agency or agencies managing walrus in developing a plan for management of the walrus; 2) to encourage self-regulation of walrus hunting by the people who use and need walrus the most; 3) to respond to negative publicity about the problems of waste of walrus and the danger of hunting to the walrus population; 4) to investigate ways of assuring complete utilization of walrus, including marketing of ivory, considerations of storage alternatives, and possible increased utilization of walrus meat, blubber and other parts; and 5) to represent the walrus-hunting villages in reviewing other changes which might affect walrus, including CZM and OCS development and clam harvesting.

(Eskimo Walrus Commission, 1978)

The Eskimo Walrus Commission was instrumental in bringing about the return of walrus management to federal control in 1979 through their support of the Togiak suit and based on their position that state management and the quota system were illegal because they violated subsistence hunting rights granted to Alaska Natives in the 1972 Marine Mammal Protection Act. The Eskimo Walrus Commission in addition has taken (and will continue to take) formal stances in opposition to other developments that may indiscriminately directly or indirectly affect the walrus habitat (e.g. commercial clamming, bottom fishing, OCS development, etc.). Communities within the study area having representation on the Walrus Commission include Savoonga, Gambell, Diomedes, Wales, Shishmaref, Nome, King Island and two members from AVCP in the Bethel area (in addition one representative each from the Arctic Slope, NANA, and Bristol Bay native corporations are included) (Alaska Federation of Natives, Inc., 1979). This commission may be perceived as another indicator of the growing interest and confidence by Inupiat and Yuit peoples in their abilities to work effectively within the political systems in western or non-Eskimo society.

#### BERING SEA FISHERMEN'S ASSOCIATION

The Bering Sea Fishermen's Association is a newly formed organization (October, 1979) encompassing a large geographic area from the



Pribilof Islands to Kotzebue. Kawerak played a role in its formation. The main goals of the organization include the development of a local commercial fisheries that will in no way endanger the currently important and viable subsistence fisheries and to act as a protector of both local and commercial subsistence fisheries from external potential disruptions or dangers. The involvement of this organization in limiting herring fisheries in Norton Sound to gill netting for a one year period has already been discussed. At the time of their initial formation this group called for a 5-year delay in the Bering-Norton OCS lease sale to allow for coastal zone management plans to be developed by the coastal resource service area boards and to allow for local participation in the call for nominations and planning for OCS development. It is expected that this organization will continue to play an increasingly more overt political role in fisheries related decisions and development but will maintain their role as being the advocate of local commercial and subsistence fisheries.

#### NON-REGIONAL GOVERNMENTAL INFLUENCE

It is not in the scope of this study to discuss state and federal organizations and their political roles within the study area in

any detail. However, the role of federal and state governmental agencies economically and politically have been explored throughout this document in appropriate topical contexts. In an overall perspective, some summary comments can be made:

- (1) Due to geographic and communication isolation of the study area, there is a relatively low level of interest in and awareness of national and, to a lesser degree, state politics except in cases in which a political decision made outside of the area has dramatic and more or less immediate consequences for activities that have a high priority for the local populace (e.g., banning harvests of seals, the formation of the Bering Strait Land Bridge and other national monuments in 1979, etc.).
  
- (2) Although both federal and state governments are perceived of as frequently making untutored decisions that have negative impacts on local affairs and residents, Native residents tend to perceive federal agencies as acting more in their interests and being more amenable to political influence than they do the state (specifically in regards to hunting regulations). This perception may be based on the longstanding trust relationship between the Native peoples of Alaska and the federal government, the fact that considerable revenue from the federal government continues to operate Native population services, and the fact that the state is frequently perceived of as being

supportative of special interest groups whose goals and values are contradictory to those of Native peoples.

- (3) Because of the social, economic, and political realities of rural Alaska (e.g. ethnic makeup, land, resources, etc.), federal and state governments will undoubtedly continue to play a significant role in the affairs of the study area. To the degree that governmental agencies sincerely attempt to become aware of and consider seriously local needs, priorities, and cultural differences, relationships between federal and state governmental systems and local interests may have potential for improving qualitatively.

#### Interethnic Attitudes and Relationships

It is inevitable that OCS exploration and potential development will bring an increased number of non-Natives to the study area--the quantity of that number and its significance will be discussed in the impacts chapters of this study. However, a projection of such impacts is heavily dependent upon an understanding of interethnic attitudes and relationships that exist today. Lastly, it should be recognized that local Inupiat and Yuit populations perceive of OCS and "industry" as being basically non-Native in origin and interests and that the majority of benefits which may accrue from OCS activity will

not be available to Natives, particularly rural village residents. Ender, et al. (1980) essentially concurs with this perception by suggesting that the majority of possible jobs that OCS activities could make available would, because of education and technical job requirements, be more readily filled by non-Natives. In addition, businesses that may benefit indirectly from OCS activities are predominantly owned by non-Natives and possible economic inflation would most severely affect village or Nome residents on limited or fixed cash incomes or with little potential of employability.

#### REGIONAL AND COMMUNITY ETHNIC COMPOSITIONS

The villages within the study area, their population totals, and their ethnic composition have already been described in Chapter I with compiled data available in Tables I and II of this same chapter. The reader should be advised to review these data before proceeding through this section on interethnic relationships. However, in brief, overview, it should be remembered that all of the functioning communities of the study area are almost exclusively Inupiat or Yuit (ranging from 100-87 percent) with the exception of Nome that had a 1975 ratio of 60.6 percent Eskimo to 37.5 percent Caucasian with the remaining 1.9 percent classified as others (Vietnamese, Indian, Negro, etc.) (Ellanna and Roche, 1976). More recent ethnic distribution data are not available, but it should be pointed out that the

Ellanna and Roche data were gathered in the mid-winter months and the total number of non-Natives increases in the summer months. Although not documented, economic trends that have increased Native hire and a decrease in construction and governmental jobs (Ender, et al., 1980) which are usually filled by non-Natives have probably increased the Native over non-Native ratio during the intervening five year period. The non-Natives in villages are almost exclusively teachers and missionaries with a few inmarrying non-Native spouses, while Nome's non-Native population is much more diverse.

#### SOURCES AND DIVERSITY OF INTERETHNIC CONTACT AND CONFLICT

At the village level sources of contact between Inupiat and Yuit populations and resident non-Natives are relatively infrequent, although the frequency of transient contacts seems to have been continually on the upswing as is clear from a decade of field observations (Ellanna, 1968-1979), informal discussions with residents of study area villages (1978-1980), discussions with and observation of agencies, and a limited number of references in other sources such as Davis (1969), Baring-Gould and Bennett (1976), Jones (1972), and others. Resident non-Natives in villages are primarily teachers at either only the elementary level or also at recently formed rural small high school levels. School staffing may vary from as low as one or two teachers to one per grade level or more. **Although**

profiles of teacher origins, attitudes, and motivation for coming to schools in rural areas have not been documented for this area, field experience indicates that a large number of village teachers are either from outside of Alaska or have been in Alaska for a short duration (i.e. often lacking local and/or cross-cultural experience), Motivations for teaching in Alaska include the following: a sincere interest in the area and its Native populations -- some of which may be romantic or idealistic *in* nature and requiring readjustment if successful adaptation is to be achieved; a preconceived idea that "bush" teachers may make good money -- some of these teachers subsequently develop views of intense interest, dedication, and longevity in the school system and others decidedly dislike their positions and lifestyles and leave occasionally without completing an entire academic year; and the inability to find jobs in the very competitive "outside" teaching job market -- again some of these find their job immensely satisfying and stay at least until they find themselves "burned out" by the stress of teaching in rural schools, while others take the first available offer outside of the state or in urban areas of Alaska. Attitudes of village teachers towards village residents vary too widely to permit any gross generalizations. However, it is probably not unfair to say that most are not prepared to teach in cross-cultural circumstances and/or have little or no orientation about the communities in which they go to teach. Turnover rates are very high in part because of personal decisions and in part because

of agency policies to rotate teachers--a factor which does not provide for educational continuity from a student or community perspective. Teachers are usually segregated physically (by residence and its facilities) from the community and tend more often than not to retain some degree of social segregation from the community in part related to their residential segregation, in part because of their role segregation (i.e., white teachers being perceived as separate, "outsiders," and more or less authoritarian), in part because transient "whites" use teachers as a point of contact in the village setting, and for some because of their covert or overt attitudes of superiority towards villagers. Certainly there are individual exceptions to all of these models, but the models have a definite validity and reality which cannot be ignored. As teachers of a fundamentally non-Native formal enculturative system they can not avoid acting as agents of cultural change (Jones, 1972).

Preachers or missionaries at the village level represent, by the nature of their occupations, spokespersons of ideological systems that are certainly not "traditional" but that have had greater or lesser periods of contact with village residents. The fact that contemporary missionaries tend to represent "middle-American" views is indisputable, but the individual means by which missionaries transmit their views vary widely. Some are relatively accepting, learn local languages, and use a "soft sell" approach to their

ideological system by community involvement. Others are more condemning of village social norms and mores and tend to remain more isolated from community residents. Some range in between these two extremes.

Transient non-Natives in villages include a wide spectrum of individuals with a wide diversity of interests. These include: representatives of governmental organizations already discussed, who tend to remain for as brief a time as possible; temporary and usually seasonal employees of construction companies, canneries, fish buyers, ivory buyers, etc.; and short-term visitors who come to villages as tourists, to attend local carnivals, to visit friends who reside in the villages, to observe birds, to produce films, to get evidence to support antisubsistence efforts (the latter group is not welcomed in any community), and for many other reasons.

In Nome the characteristics of some categories of non-Natives tend to be similar, but the ratio of residents to transients is certainly greater. Economic opportunities for cash employment with the governmental and private sectors are certainly more abundant. There is more intermarriage in Nome and resident families composed of both a Native and non-Native spouse are more frequent in Nome than the villages. Additional types of governmental personnel



in more authoritarian positions reside in Nome such as State Troopers, City Police, U.S. Fish and Wildlife Service and State Fish and Game regulatory personnel, school district superintendents, social services, directors, etc. There is, however, a non-Native group that is central to Nome's social system that is not, except for a couple of individual cases, located in villages--namely the descendants of long-standing Nome families that originally came to the area for mineral exploration or related support business opportunities. This segment of Nome's population may be most accurately represented as perceiving of themselves as "original residents" as separate from "newcomer" whites as are Native populations. While maintaining economic and political dominance over Natives for eighty Years and often having goals that are inconsistent with Native goals and priorities, in a sense that they have developed a degree of familiarity with and tolerance of regional Natives that is less apparent among the majority of more temporary or recent non-Native residents and transients. In a sense this group shares a perception of common history with Natives who have spent time in Nome.

A consideration of interethnic conflict within the study area must be mentioned here, as it has considerable relevance for the social implications of OCS activity. Two preliminary statements are in order, however, First, as Jones (1972) so aptly points out, published research data on interethnic relations within Alaska's

multiethnic communities are virtually nonexistent for most of the state including the study area. Individuals who are both residents and professionals in the field of social or psychological services have opinions regarding this topic, but no data base has, to date, been compiled. Interestingly it may be research focused on developmental impacts such as Baring-Gould and Bennett (1976) and the OCS socioeconomic studies program that may, in fact, pioneer this kind of research for many areas of the state. Second, in a very relative and general sense, Nome residents and residents of all the communities of the study area exhibit surprisingly little overt racial (or ethnic-based) conflict or open animosity considering the facts that: (1) especially Nome has been a community in which there has been in excess of several generations of minority non-Native economic and political domination over a majority Inupiat and Yuit community; (2) the study area as a whole has had a relatively intense and lengthy period of contact between Native peoples and transitory non-Natives, some of which could not be termed "amicable" (Ray, 1975b; Thornton, 1931; Senungetuk, 1971; Beechey, 1831; Bogojavlensky, 1969; and others); and (3) there continues to be a relatively large transitory non-Native population that seasonally comes into the area usually for some purpose of economic gain and rarely prepared with much knowledge about the ongoing sociocultural systems of the communities in Nome or the area as a whole. This is not intended to imply that interethnic hostility is not a reality, but only that it is not

extreme at least in terms of overt expression and certainly not at the level suggested by Hippi er (1970b). It is also probably accurate and appropriate to add that the vast majority of incidence of overt hostility occur for both non-Natives and Natives under conditions in which one or both parties may be under the influence of alcohol -- that is, a time when normally operative social and individual behavioral constraints may be rendered temporarily inoperative. Based on discussions with personnel from the Nome office of State Social Services, Norton Sound Health Corporation Family Services, and other individuals who work in related fields (e.g. counseling) and on personal and professional experiences in the area over a long period of time, there is evidence to suggest that covert interethnic hostilities quantitatively and qualitatively exceed those that are , overt and that the culturally proscribed or individually selected mechanisms of suppressing such hostilities may be, in part, explanatory of other manifestations of individual or group maladjustment. However, again this is a topic on which additional research far beyond the purview of this study needs to be compiled. In addition, all of those who work in areas of social and mental health suspect that an increase in the number of non-Native individuals to the area, especially if the influx may be rapid and/or intense, would certainly exacerbate the situation described above.

In summary, however, it may be useful to suggest some pivotal issues or behavioral complexes that may be more provocative of interethnic conflict:

- (1) The propensity for human groups to stereotype the behavior, norms, and cultural values of other groups and to then evaluate these stereotypes by their own cultural standards--ethnocentrism--is a human universal and is always potentially a source of either covert or overt interethnic hostility. For the most part this author would agree that Jones' (1972) suggestions that non-natives in an Aleut community tend to stereotype and then evaluate Native behavior to a greater degree than Natives do non-Natives may have some applicability to the study area. That is, it is not uncommon to hear some non-Natives discuss or make "off-hand" remarks about their opinion that large numbers of Natives drink too much, fail to embrace the "Protestant work ethic" (i.e. prefer to work short term jobs, frequently quit or fail to "show up" regularly, have no plans for the future, etc.), have their priorities "confused" (i.e. may value hunting more than a job), fail to properly embrace formal education, and others. On the other hand, whereas "whites" are sometimes overtly criticized as "talking too much," "being stingy," "not keeping promises," "being too hard on their children," "trying to play boss," and others, as a whole Native people of the study area tend not to openly

carry on such critiques but rather seem to evaluate non-Natives more on the basis of individual qualities rather than group stereotypes. However, there may be a "hidden agenda" of Native stereotyping that is not as apparent nor at least as verbalized-- this area is conjectural. There is no question, however, that verbal negative stereotyping by any group fails and will continue to fail to produce amicable interethnic relations--even non-verbal critiques are picked up quite readily and may have the same ultimate effect. . . .

(2) Competition for natural resources (especially marine resources) will continue to play an increasingly important role in potential interethnic hostility.

(3) In the same view as (2), competition over locally available wage employment is another area over which interethnic hostility has emerged. Closely related to this is a relatively recently emergent fear of Native economic power which has emerged primarily through land control and Native politically active corporations. Such fear is encouraging interethnic hostility.

(4) The continuing practice of primarily non-Natives serving in authoritarian positions-- a practice with considerable historic precedent-- tends to set the scene for at least covert

hostility. This hostility is related both to traditional Inupiat and Yuit views of authority and power as well as an increasing awareness of a more universal perspective on western dominance of "minorities" and concepts of self determination and local regulation. A large part of teacher/student conflict within area-wide schools may relate to this point (Smith, 1976; Wilson, 1958; Ellanna, 1972).

- (5) Lastly, social stratification, which is part and parcel of western economic systems, is affecting the more traditional organizational patterns of Eskimo society creating a situation in which intraethnic hostility may coexist with inter-ethnic hostility--that is, the more socially mobile Natives with more "money wealth" may create a new source of conflict.

#### Indicators of Response to Change

This final section of the baseline will briefly explore potential indicators of response to change, both negative and positive. Published literature in this area is, again, exceedingly sparse. Awareness of these indicators is important in evaluating potential OCS sociocultural impact even if such indicators can not be precisely measured quantitatively in the baseline--hopefully an educated qualitative overview will aid in this endeavor.

## NEGATIVE INDICES

The assumption in this section is that some forms of behavior which tend to result in the death or the mental or physical incapacitation of members of a social group or other forms of behavior which disrupt social order or the cohesiveness of key social units (e.g., the family) may be considered dysfunctional in the sense of contributing to the viability and overall adaptive functioning of the society.

That is, although behavioral norms may differ from society to society and labeling them "good" or "bad" by a single set of standards may not be appropriate in cross-cultural perspective, it is possible to look at a society and to make some meaningful statements about non-adaptive or disruptive behavioral patterns occurring within that society. It is within the framework of this perspective that "negative indices" of individual and social adaptation for the study area will be examined in overview.

There has recently been an increasing interest in trying to quantify, analyze, and increase public awareness of individual and community mental health problems and their physical ramifications in rural Alaska. A recent (1979) study by Robert Kraus and Patricia Buffler completed for the Alaska Federation of Natives dealing with socio-cultural stress and the Alaska Native through the analysis of psychiatric illness and alcohol abuse is a case in point. The problem

with such efforts is that there is no homogeneous data base in either time or space (across the state) on which to base conclusions. Data which are available usually come from either federal or state agencies that may organize such data by differential criteria, utilize different methods for data gathering, and fail to have the same quality of data for all years over a long enough time span to allow interpretation. In addition, regional and/or federal local human service delivery system data may not be available (Kraus and Buffler, 1979). Lastly, many and probably the majority of cases of socially disruptive behavior in small rural communities never get recorded in any agencies' statistics.

For the study area specifically there was virtually no published data on this topic with the exception of an alcohol study by Dennis Kelso (1979) commissioned by Norton Sound Health Corporation. This study in conjunction with a review of newspapers from October 1978 to January 1980, informal discussions with social service and counseling personnel in Nome, and discussion with area residents form the core of this discussion. There will be no attempt to repeat statistics such as arrest records provided by Ender et al. (1980) for Nome, since this study will attempt to explain some of the content of dysfunctional behavior not revealed in data such as arrest statistics. Also this study is not considering only Nome, although eliminating Nome from consideration in this discussion would provide



a very distorted view of the area.

Kraus and Buffler (1979) arrive at some conclusions about Alaska Native mental health that have relevancy to this study both because this area is primarily Native and because Kelso (1979) suggests similar conclusions based on Bering Strait/Norton Sound data:

Although the information presented in this report is uneven in quality, incomplete, and drawn only from those health care systems available to Natives which are Statewide in scope, the picture which emerges is clear, ominous, and urgent. Within the various facilities of the Indian Health Services, the number of individuals treated both as inpatients and as outpatients for mental illness and drug and alcohol abuse rises year by year. Currently over 1/4 of the Native population is treated in a hospital facility for non-fatal accidents and injuries each year and many of the accidents are alcohol related. Suicide and suicide attempts are common; the rates for each of these behaviors far exceed recorded rates for other American Native and non-Native groups. . . . Alaska Native rates of violent death are cause for profound concern. For each category of violent death--suicide, homicide, accidents, and alcohol-related--rates for Alaska Natives are higher than rates for non-Natives, American Indians, and the U.S. (all races). Furthermore, these rates are rising. . . . Alcohol abuse, for example, cuts across all the categories covered above. It complicates and exacerbates most mental illnesses in Natives. A majority of the morbidity and mortality due to violence is alcohol-related. In addition, alcohol abuse produces a host of problems related to family disruption, child abuse, spouse abuse, physical illness, and behavioral and social deviance which defy precise enumeration. . . .

(pp.53-55)

If you consider the above factors in the study area context, the results are interesting and probably indicative of sociocultural stress and societal dysfunction. In Kelso's research, he attempted to compile Nome resident attitudes about alcohol consumption. Some of these attitudes or views include the following: (1) that Nome is considered the "watering hole" of the area--that is, since all other communities are legally "dry" (including Bethel), Nome provides the majority of alcohol to surrounding communities and supports 11 retail liquor outlets; (2) some residents of Nome and surrounding communities view the image of Nome as a "drinking place" with pride; (3) alcohol abuse is viewed as an important "problem" by residents of Nome, but such abuse is perceived of as an individual rather than community problem to be dealt with in its extreme antisocial forms with law enforcement officers and legal statutes; and (4) alcohol abuse is perceived of as "an Eskimo problem" (Kelso doesn't state who holds this perception) associated with cultural factors and that virtually nothing can be done about this problem (Kelso, 1979).

In reality alcohol abuse does occur and is a major factor in accidental deaths, suicides, homicides, other health problems, and arrests area-wide with Nome outstanding in having the greatest incidence of such problems but with a couple of communities like Teller/Brevig Mission (connected by road to Nome seasonally and a short distance away) and St. Michael having problems that involve agencies

substantially higher than those of most villages (Kelso, 1979).

Alcohol **abuse** is not restricted in any way to Native residents and many non-Natives have problems with alcohol use, but on a per capita basis Eskimo residents of the region have greater representation numerically in all kinds of statistics. Explanation for this include the facts that village residents tend to drink in Nome more than in home communities; they tend more frequently to be in situations such as boating or **snowmachining** in which alcohol could **inhibit** judgement and reactions resulting in injury or death; and they are more likely to be the subject of law enforcement action because many are from out of town and therefore more visibly drink in **public** bars, because they may not be in the company of others who may be able to "take them home before they get into trouble," and, it is suggested by some residents, may occasionally be the subject of unconscious or conscious discriminatory law enforcement procedures,

This entire topic is very sensitive if dealt with in any kind of ethnic context, as Native residents do not like to be stereotyped as excessive drinkers by non-Natives. Nonetheless, since Native **sociocultural** systems **are the focus of this** research, it is important to point out that many non-Natives (including transients) 'are alcohol-abusers, almost **everyone** agrees that there are problems associated with alcohol in the area which focus on Nome because of alcohol availability, many non-Native residents and transients actively do participate in stereotyping Natives as the alcohol-abusers, and unquestionably people (the majority of

whom are Eskimo) are dying from alcohol-related accidents and suicides (particularly males in the age group 25-44 and 15-24 respectively) (Kelso, 1979). In addition, as with the state as a whole there is a correlation between the incidence of alcohol abuse and the occurrence of domestic violence or disorder and family disintegration, but a correlation alone does not explain causal relationships. Kelso (1979) sees the "causes" of alcohol abuse to be too complex to consider in that particular study, and alcohol abuse is explained by some professionals as being symptomatic of other individual and/or social problems, by others as "the major problem" itself, and by yet others as an adaptation for the relief and expression of sociocultural stress. Some social services personnel in Nome attribute the majority of psychosocial disorders in the study area to the rapidity of cultural change facing Inupiat and Yuit peoples, to the economic gap between the "haves" and the "have nets" in the area's economic scene, and to the historically-based political and economic dominance of the Eskimo majority by a non-Native minority (informal discussions, State Dept. of Social Services and Norton Sound Family Services; Kraus and Buffler, 1979). Other professionals see mental illness in the area as having little culture-specific relevance-- that is, that psychological disorders exist in the study area that are similar to those that exist "outside." All agree, however, that the existing systems available to deal with community and related individual mental health problems

are already overtaxed (both in terms of funds and personnel) and that the influx of a large number of "outsiders" would intensify presently-existing problems and may disrupt the positive aspects of interethnic balance which are currently functioning in the area and Nome. Lastly, all agree that during seasons and in communities in which people are able to "get out in the country" and become involved in subsistence pursuits, all forms of dysfunctional psychosocial behavior decline. The incidence of almost all "negative indices" of community adjustment and "communal mental health" is less in villages than in Nome whether these indices be assault, homicides, suicides, divorce, child and spouse abuse, or others. That is not to say, however, that there are no occurrences of such behavior at the village level, but it is appreciably less even correcting for population differences. Village-level problems may also be on the increase, and, of course, the mobility of village people to Nome and even Anchorage or Fairbanks is relatively great, especially for males. The implications of increased contact with "outsiders" for both small communities and Nome in relationship to individual and social mental health require serious consideration in future planning.

#### POSITIVE INDICES

It has recently been suggested by anthropologists such as Lantis (1973) and Burch (1978) that in search of a more satisfying and less

frustrating life style that Alaska Natives as a whole or in specific regions have, for the past decade or so, initiated what Lantis terms a "nativistic movement" and what Burch terms a "cultural revitalization." Lantis defines such a movement as "any conscious, organized attempt on the part of a society's members to revive or perpetuate selected aspects of the culture" (1973, p.116) while Burch (1978) suggests that the Iñupiat of northwestern Alaska are seeking to construct, in an organized manner, a more satisfying culture that includes elements of both the past and the present. Without involving readers of this study in any theoretical discussions of anthropological analyses of such processes, it may be useful to mention a few details of evidence for such movements that may be interpreted as "positive indices" of change or adaptation, on the part of Iñupiat and Yuit populations of the study area. However, it is important to emphasize that such movements usually arise out of sociocultural situations of stress during which the equilibrium of the social system is disrupted by major ecological changes, epidemic diseases, social and cultural subordination by another group, or other equally destructive forces. It might be noted that the Native people of the study area have gone through all of the above stresses and more.

"Nativistic" and "culturally revivalistic" directions taken by Iñupiat and Yuit populations in approximately the last decade

include the following:

- (1) Despite its many problems and western model, ANCSA did provide the basis for increased Native economic and political power which has been comprehensively described for this area. This has implications for a decrease in subordination of Native residents and has provided potentially powerful organizations with which Native people can identify (to the degree that they do identify with these organizations). For many this has meant an improved social identity in the sense that being "Native" had some advantages as perceived by the non-Native population. Kawerak's recent economic recovery and efforts to strengthen village ties and Norton Sound Health Corporation's expansion into previously federally-provided services have undoubtedly helped in this regard as have BSNC's present operation which has been economically more stable and generally supportive of village priorities. Success of these organizations if related to constituent values may combat feelings of apathy and frustration in regards to changing the course of impending events. The key here will be, of course, to what degree shareholders are able to feel identification with these organizations.

- (2) The integration into the formal school system of bilingual and bicultural programs and the use of local teacher aides and other local village resources are not only a "reviving" of past cultural knowledge but also represent to Natives a recognition on the part of western educators that there are aspects of their traditional culture worthy of transmission within this "new" and essentially foreign system. Although most people are aware that these additions to the school system have not exclusively resulted from enlightened educators (although in many cases this has been the case) but have been required by law, the overall results appear to be positive in terms of improving self-identity (Chance, 1965; Spindler, 1977) and decreasing feelings of inferiority which have long been covertly instilled by formal educational systems -- this area has a long way to go, however.
- (3) Contemporary pan-Native movements and organizations suggest that beginnings of a concept of Alaska Native identity, but interethnic differences remain viable and frequently result in a lack of unity in Native versus non-Native issues. However, relatively unified stances on issues such as ANCSA, attempts to repeal a prohibition on the spring hunting of migratory waterfowl, the return of walrus management to the federal government, and subsistence issues in general are positive examples. In January 1980 a media attack on



northwestern Eskimo walrus hunting by the Anchorage Times stimulated calls of support to Kawerak from Native organizations statewide. Certainly statewide Native communications is decidedly stronger than ever before in Alaska history.

- (4) Lastly, although complete demographic data are not available to verify this claim, based on extensive demographic data on Wales, Savoonga, Gambell, and King Island (Ellanna, 1969-1979), trends towards village outmigration--a negative index in terms of rural community survival--have begun to reverse themselves for these communities. Reasons for this apparent reverse trend undoubtedly vary from disillusionment with "outside" opportunities, a revitalized interest in "living off the land," cash demands necessary for urban survival that are not as severe in villages, a scarcity of urban employment, kinship ties and obligations, and a tendency to marry back into one's own group. Ongoing plans for some King Island families to move to Cape Woolley and a recently publicized (January, 1980) intention of a group of Teller people to return to Marys Igloo and Kawerak are examples of this reverse trend. Additional demographic work is necessary to document the accuracy and general applicability of this hypothesis, however.

In summary, the very fact that Nome's population is relatively tolerant of a wide diversity of lifestyles (a characteristic which Kelso, 1979, perceives as encouraging alcohol abuse), ethnic affiliations, and interests may also be perceived as a positively adaptive characteristic. That is, despite the area's economic and political inequities described in this study and the potential for conflict between primarily rural Native interests and urban, developmentally-oriented primarily non-Native (but partially Native) interests, in many respects the town and the region exhibit at least an overt degree of mutual tolerance and flexibility that is extraordinary considering regional diversity in nearly all sociocultural respects.

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