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Under Four Flags: Recent Culture Change among the Eskimos¹

by Charles Campbell Hughes

INTRODUCTION

THE ESKIMO has been a stock figure in anthropology since its beginnings as a discipline in the last century. For many years, with some confidence, the scholar could make reference to this cultural group when discussing societies having a fairly simple social and political organization, living under severe environmental conditions and displaying to a high degree man's ingenuity in creating an orderly life for himself from any surroundings, and exemplifying a fairly low point on the scale of societal evolution so far as the course of man's socio-technological development is represented among "our primitive contemporaries." Thus, with good reason, one finds the Eskimos discussed in countless introductory and other textbooks in anthropology.

There is, however, good reason to believe that oversimplification and too hasty generalizing have occurred in regard to even some of the basic social features of this cultural group, despite the efforts of Weyer (1931) and Birket-Smith (1959) to document the variation that existed. Recent ethnographic work, particularly in Alaska, has indicated that regional diversity in matters of kinship, socioeconomic, and

ceremonial patterns was perhaps too quickly overlooked in the urge to comment on "the Eskimos." A more complex family structure and kinship system (in some cases unilineal descent patterns), widespread trading and partner relationships, more elaborate art style and ceremonial cycle, and more stable village core were cultural features characteristic of many Alaskan Eskimo groups tending not to be found in those regions to the east that had been most important in molding the prevailing image of the people known to even the scholarly world.

But if the—stereotypic—Eskimos of the "ethnographic present" bore only an approximate congruence to the diversity of reality, how much more skewed is this picture when held against the background of developments since the beginning of World War II throughout Eskimo territory, all the way from Angmagssalik, on the eastern coast of Greenland, to East Cape and Chaplino, on the eastern tip of Siberia. The world has come in upon this once isolated people and the character of the environment in which they live has markedly changed. The purpose of this paper is to indicate broadly some of the sociocultural as well as situational changes and continued trends in the Greenland, Canadian, Alaskan, and Siberian Eskimo populations over the last two decades. To set such a task is not to overlook changes in some areas of culture and in many groups prior to World War II such as in religion, or decline in legal autonomy and warfare, or cessation of infanticide. It is, rather, to highlight the prevalence and depth of other, more recent, types of changes in socioeconomic patterns, community social structure, and self-image.

Such a wide scope of interest has pitfalls, not the least of which is paucity and heterogeneity of available comparable data. Materials range from the relatively few technical studies done by anthropologists and other behavioral scientists to governmental reports in various fields and even, in some cases, useful articles or books in a semi-popular or popular vein. Files of government agencies, religious groups, and business

¹ The major preparation of this paper occurred while I was a 1961-62 Fellow at the Center for Advanced Study in the Behavioral Sciences, Stanford, California, supported by a Special Research Fellowship of the National Institutes of Health of the U.S. Department of Health, Education, and Welfare. To these institutions I wish to express my appreciation, as I do to my research assistant at the Center, Alain Dessaint. For reading the manuscript and offering numerous helpful suggestions, I am especially indebted to Dr. Margaret Lantis as well as to Dr. James W. VanStone, Dr. Diamond Jenness, and Victor F. Valentine for their comments. Robert Janke and Dennis P. Enberg drew the map which accompanies the article and I wish gratefully to acknowledge their contribution.

Born in 1929, CHARLES C. HUGHES obtained his A.B. in anthropology in 1951 at Harvard and his M.A. (1953) and Ph.D. at Cornell University (1957). His field work has included studies of community organization in Maritime Canada, socio-cultural change among the St. Lawrence Island, Alaska, Eskimos, and community integration and mental health among the Yoruba of Nigeria.

Since 1962 he has been Director of the African Studies Center, Michigan State University, having gone to this post from a year's fellowship at the Center for Advanced Study in the Behavioral Sciences, Stanford, California. Earlier positions had been Senior Research Associate, Department of Sociology and Anthropology, Cornell University; Associate Director, Cornell Program in Social Psychiatry; and Assistant Professor of Anthropology, Department of Psychiatry of the Cornell University Medical College. His publications include *An Eskimo Village in the Modern World* (1960); (senior author) *People of Cove and Woodlot: Communities from the Viewpoint of Social Psychiatry* (1960); (joint author) *Psychiatric Disorder Among the Yoruba* (1963); and various papers on sociocultural change and social psychiatry.

The present article, submitted to CURRENT ANTHROPOLOGY 18 iii 63, was sent for CA★ treatment to 48 scholars of whom the following responded with written comments: Kaj Birket-Smith, Edmund Carpenter, Norman A. Chance, Ronald Cohen, Stephen P. and Ethel Dunn, R. W. Dunning, I. S. Gurvich and L. A. Fineberg, John J. Honigmann, Heinz Israel, Helge Kleivan, George Nelleman and James W. VanStone. The comments written for publication are printed in full after the author's text and are followed by a reply from the author.

concerns, while containing much valuable specific material, have not been available. Another pitfall in the way of drawing an accurate general picture lies in the nature of the world we live in: the people are rapidly changing; the extent to which we know of this change increases from year to year as more studies are conducted, but there is the usual lag between a field study and its reporting. Diversity of language in which accounts are available can be a further difficulty. In this case, for example, I have not been able to read any Danish sources in the original.

Despite such obstacles to systematic comparative presentation and analysis, it has seemed worthwhile at this point in time to attempt an overview of what has happened to many Eskimos in today's world, both in order to bring up to date some salient aspects of the "ethnographic present" and to lay a groundwork for further research into commonalities and differences in change among Eskimo groups by conjoining in the same framework of discussion events in Danish Greenland, the Canadian north, American Alaska, and Soviet Siberia. If such an overview serves mainly to prompt corrections and supplementary comment from readers stimulated by inaccuracies or deficiencies, so much the better. As comprehensive a statement as possible is needed at this time.

A question of meaning arises from the outset. As appropriate to the incomplete nature of much of the material on which this overview is based, "culture" is used here in one of its many and oldest meanings—as "the way of life" of a people. There are simply too many gaps from one area or one source to another to attempt to apply a more restrictive conception, such as "system of value-orientations" or set of ideas which

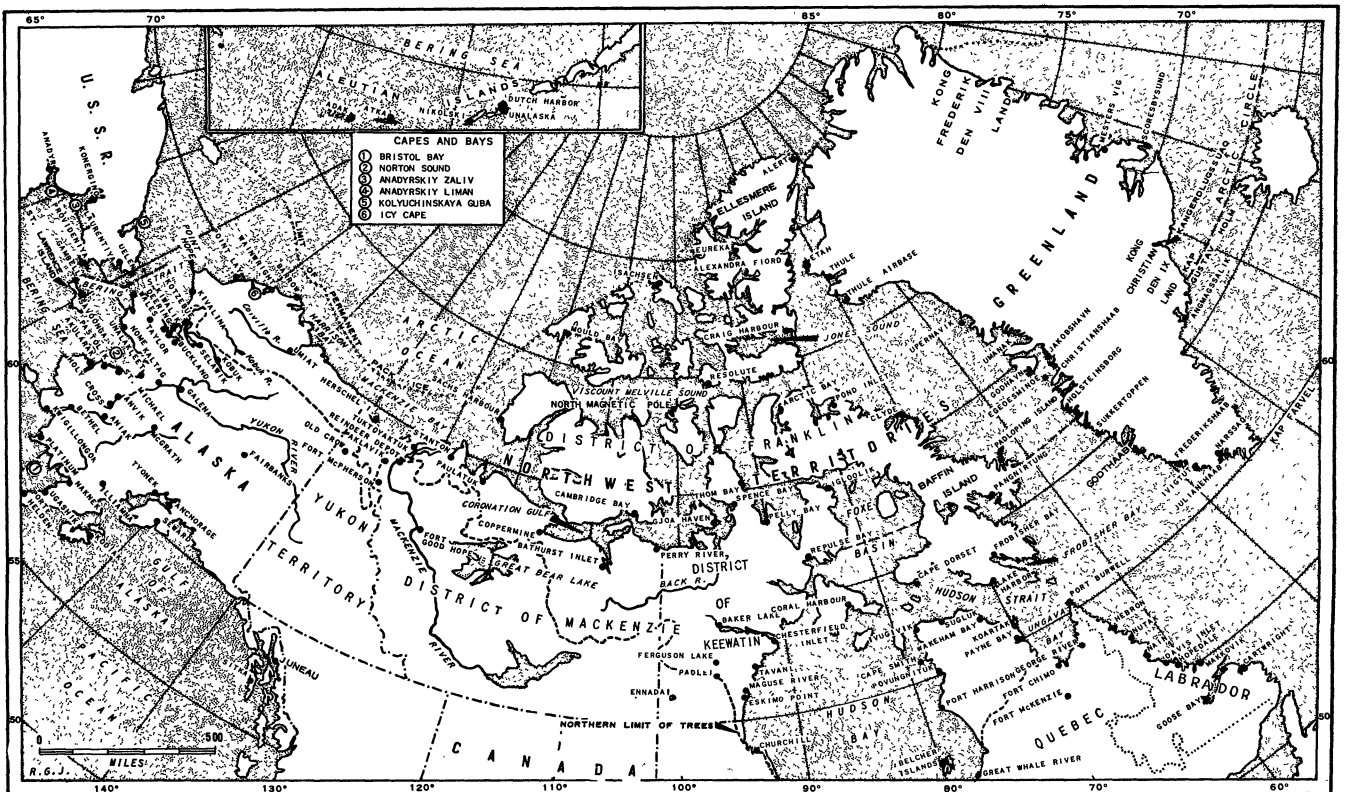
guides and provides a "blueprint" for behavior. Moreover, what we are seeing throughout the north is multiple shifts in a total way of life, shifts influenced by many factors, ecological and physiological as well as cultural and social. The implicit framework lying behind this review is, therefore, perhaps more appropriately labeled a "human relations" framework than one strictly of a "cultural," "social," or "social psychological," etc., nature.

I shall first discuss developments in Greenland, then Canada, Alaska, and finally Siberia, attempting throughout the discussion to lay out pertinent developments and some of the background factors involved in shifting a way of life over the past two decades. A concluding section will look somewhat more broadly at theoretical and conceptual considerations involved in studies of culture change, considerations which have been prompted by this review.

GREENLAND

INTRODUCTION

Relevant to the question of recent sociocultural change in Greenland, there is literature dealing mainly with broad institutional matters, such as the economic and legal systems, with comparatively little specific attention given to such topics as kinship, religion, or social organization (in the sense of the interlocking of institutions). Moreover, the sources tend to be synoptic general statements covering either a region or the entire island, rather than studies of specific villages or settlements examined in terms of the functional interplay of various sociocultural and ecological pro-



Major Eskimo and non-Eskimo Settlements in Greenland, Canada, Alaska, and Northeast Siberia. Adapted from *Arctic*, Vol. 7, 1954. Conic projection.

cesses. Particularly lacking seem to be kinship-centered studies or those in the framework of the community study, as well as investigations dealing in more than a superficial way with psychological and personality processes. Being unable to read the Danish language, however, I cannot be certain that there is nothing in the literature on these points. But if there is, it has not yet been annotated in the *Arctic Bibliography*. In brief, the main concern of relevant literature in English on Greenland of recent years treats economic, political, and legal changes in the lives of these approximately 32,000 inhabitants (Therkilsen 1961), especially as these changes have begun since the constitutional revisions of 1950. The most recent comprehensive articles in English that I can find are those of Therkilsen (1953, 1961) and Lloyd (1959).

HISTORICAL AND ECOLOGICAL SETTING FOR CONTEMPORARY CHANGES

To understand some of the changes after 1950, it is first necessary to recall briefly a bit of Greenland's long history of contact with European culture. Here I draw mainly from Birket-Smith's classic book on the Eskimos (1959) and to some extent on the series of articles on Greenland published by the Royal Danish Ministry for Foreign Affairs (Bure *ca.* 1956; rev. ed. 1961). Highly relevant also in this respect is the comprehensive and detailed discussion of economic aspects of the Greenland administration from its inception through the years of World War II presented by Sveistrup (1949).

The Eskimos of Greenland have the perhaps dubious distinction of being the first of the New World inhabitants to live alongside, trade and cohabit with, fight, and kill Europeans. These encounters occurred during the 400 or so years that Norse settlers lived on the southwestern shores of the island from the 11th to the 15th centuries, A.D. Remnants of that first phase of contact are now found only in archaeological artifacts, ruined house remains, and also, perhaps, in some genetic influence through interbreeding between the Norsemen and Eskimos. The settlements died off from lack of support from the home country, a changing ecological situation, and Eskimo raids. The unions between Eskimos and Europeans were, however, to foreshadow a social process that makes Greenland distinctive among Eskimo areas—the extent of racial mixture—and lies behind use of the term "Greenlander" rather than "Eskimo" in referring to its inhabitants.

The Greenland Eskimos were seen by several explorers of the 16th and 17th centuries who, in searching for the Northwest Passage to the Orient, ventured into the Labrador Sea and Davis Strait. In the 1600's and 1700's Dutch whalers as well as Portuguese and other fishermen had further contact with them (as they did with the Eskimos of Labrador), but no sustained relationships with Europeans again occurred until 1721, when the Danish missionary Hans Egede arrived with the task of ministering to any remaining Norse settlements. Discovering the destruction of the settlements and disappearance of the Norsemen, he turned his energies to changing the way of life of the Eskimos and establishing Danish

control and responsibility over the greater part of Greenland.

Except in the settlements at Thule in the northwest and Angmagssalik on the east coast of Greenland (special cases which will be discussed below), there ensued a number of developments over the next 200 years that helped bring about major shifts in the indigenous culture. Of underlying importance have been habitat changes, both those brought about by the incursions of white commerce, such as the decimation of the blubber whales by Europeans in the 1600's and especially the next two centuries (thus relegating the formerly prideful *umiak* to the position of woman's boat and having profound effects on the ritual cycle [cf. Birket-Smith 1924]), and those occurring irrespective of man's role in changing the face of the earth. An example of the latter are the oceanographic changes which, since about the second decade of this century, have resulted in the warming of the waters of the Labrador Sea so that seals and other maritime mammals do not frequent the coast of southwestern Greenland as much as they did in the past. At the same time as the seals have fled farther north, however, schools of cod and other types of fishes have begun to come into the coastal waters, thus providing the basis for a new subsistence and commercial industry. But not only has there been displacement of the usual habitat patterns of seals. There has also been an over-all decline in numbers of carcasses taken along the west coast of Greenland generally, and this is usually attributed to a smaller seal population, not to different or lessened hunting efforts. The same is true of the indigenous caribou population as well as walruses, although the latter were probably never so important along the southern part of the west coast of Greenland as they were in some other Eskimo areas (such as northwest Hudson Bay or the Bering Strait region).

The conversion of the Eskimos to Christianity was accomplished through the establishment of a series of missions and trading stations all along the coast. Their activities were characterized by the usual pattern of gradual success in winning converts, in displacing shamans and shamanistic practices by those of the Christian minister and medical practitioner, and in substituting ritual and integrative activities of the church for at least some aspects of life in the communal dwelling of the former small settlements. The missions also, as elsewhere, began the task of education and were so successful that by the 1860's regular publication of a periodical in the Greenlandic language began.

The establishment of missions was but one aspect of an over-all government program for protection and development of Eskimo life. Economic relations with the outside world also came under control of Danish authorities, with the government assuming a trade monopoly (after some years of permitting private traders) that lasted from 1774 until the early years of the 1950's (see Sveistrup 1949). The avowed purpose of such trade was to contribute to the costs of administration of the colony while providing the people with necessities at reasonable prices and controlling the types of outside goods offered them. This

could be accomplished through subsidies, price controls, adjustments to induce purchase of necessary products rather than luxuries, and banning export of subsistence items necessary to the Eskimo way of life, such as sealskins and blubber. In an effort to discourage gathering of the population around the trading centers, the government further decentralized these posts; but this resulted mainly in a more widespread exposure to Danish products (Christensen 1954). Through the trading posts, of course, the basic Eskimo way of life was increasingly affected by the introduction of a new material culture in tools, weapons, household supplies and food, and clothing. Thus skin tents have given way to canvas shelters, and oil lamps to primus stoves or kitchen ranges. Turf houses are being rapidly replaced by wooden ones, or at least structures lined with wood and fitted with windows. A range, couch, table, chair, chests, and cupboard are found in even the most primitive house. The winter diet is no longer dried fish or meat, since fresh fish and imports are available, and native foods are becoming delicacies in the larger settlements. In the more southerly regions skin clothing has been largely abandoned, due as much to lack of skins as to change in taste. Some people, however, still wear a birdskin parka covered with an outer cotton parka, and for hunting or sledding (in the north) trousers of sealskin, dogskin, or bear are worn. But home-made cotton clothes and leather or rubber footwear are common (Rosing 1956).

Developments in self-government and social welfare also occurred at an early date. In the 1860's there were set up representative councils on local, regional, and provincial bases. The local bodies consisted of the minister as chairman, trading post manager, district medical officer (if there was one), post assistant, and a number of elected Greenlanders. These boards were responsible for maintaining law and order, acting as leaders, administering relief, and making loans for housing, and their activities were financed by a tax on native products sold through the store. With some modification in structure and scope of activities, this same pattern of representative governing and planning bodies continued until the early 1950's. At that time a greater centralization of administration occurred throughout Greenland, with creation of one governing body (National Council) for the entire island and 13 local Municipal Councils. At the same time Greenland formally became a county of Denmark, represented in the Danish parliament by two local members.

RECENT DEVELOPMENT

ECONOMIC

The new political patterns were but part of a broad social, economic, and legal program of development for the island as a whole instituted following a Royal Commission study begun in 1948. Although specific lines of development coming from the Commission's findings do not represent a complete break with earlier attempts at developing the Greenlanders into an economically and politically self-sufficient people, nonetheless some new emphases have come to the fore. One example is the beginning of lifting the govern-

ment trade monopoly formerly held by the Royal Greenland Trading Company and the granting to private entrepreneurs of the right to sell what the market will bear (with, until recently apparently, the exception of alcohol and cigarettes). Further emphasis, as noted before, is being placed on development of the fishery to replace dependence on the seal. The principal catch is cod, although catfish, halibut, salmon, and prawns are also caught in lesser quantities. The Greenland shark is valuable for the oil from its liver and is increasingly hunted. The first fish landing station was established in central Greenland in 1910, and by 1956 there were some 80 landing depots where cod is washed, salted, packed, and shipped. Lines and hooks are still the principal implements (the currents, ice, and sea bed make employment of trawl and seine difficult), although in some places nets and traps have been used successfully (Therkilsen 1956). In the summer of 1948 the world's second largest prawn-shrimp beds were discovered in Disko Bay off Christianshab and Jakobshavn, and two quick-freezing and canning factories were erected nearby. On the other hand, mechanized commercial whaling (mainly for beluga and narwhal) is only minimally developed.

Intensive efforts at development of fishing are also part of the avowed government policy to concentrate population in larger settlements and retrain with new skills a population which in its ethos has always been oriented to the sea for sustenance. As Therkilsen notes (1956), the evolution of the Greenlanders is epitomized by their use of four different kinds of vessels: the kayak, the homemade dinghy, the small open motor boat (following World War II), and finally the small fishing cutters. By the summer of 1955 nearly 600 Greenlanders owned a motor boat, mostly the 24-foot dinghy, and purchase of mechanized equipment for fishing is now facilitated by government loan.

Other emphases in the new development plans are on agriculture and animal husbandry, although both of these are confronted with ecological as well as human relations problems. The ecological difficulties are centered in the short growing seasons for cattle and sheep fodder and the severe winter conditions, which make shelter necessary. Despite this, in the more southerly districts there is some cattle raising and considerably more success in sheep raising, there being some 21,000 sheep in West Greenland in 1955 (Birket-Smith 1959:227) under a program of economic encouragement and instruction sponsored by the government. In addition to cattle and sheep, domestic reindeer have recently been introduced into Greenland to supplement the meat supply and replace the almost extinct caribou (Therkilsen 1961).

The human relations problems encountered in shifting Greenland orientation to the care and sustained husbandry of animals rather than their hunting and slaughter can be imagined in the abstract and illustrated in the concrete by the experiences encountered in the introduction of reindeer herding to Alaskan coastal Eskimos to meet desperate food needs in the early decades of this century (see Lantis 1952a). It might be, however, that with sheepraising there are reasons for thinking that such a basic shift, in the context of evolving Greenlandic culture, may be a successful alternative. For one thing, the effect of generational replacement may operate: under an inten-

sive program of instruction in husbandry skills, the lack of a realistic hunting alternative, and the prestige value and economic return from sheepraising, the new husbandry complex may become securely rooted in Greenlander sentiments and values as well as economic structure.

A final area of development that has received new emphasis but is a continuation from the recent past is mining. For some years profitable extraction of cryolite at Ivigtut, coal in the northwest, and lead at Mesters Vig in Scoresby Land has occurred; and other minerals such as molybdenum, uranium, and thorium are being prospected. The difficulties of processing and transport pose major obstacles, however, to full-scale dependence on mining as a major industry for Greenland (Therkilsen 1953, 1956, 1961).

SETTLEMENT PATTERNS

As noted above, a deliberate aim of recent government policy has been to reorient the more southerly settlements to a commercial fishing economy and bring together the scattered population into larger communities of 3,000—4,000 inhabitants whose main economic base is fishing. There has, in fact, been an ever increasing tendency toward permanence of settlement and decrease in seasonal migrations, although this has happened less in the settlements farther north which are still chiefly dependent upon a sealing economy.

The main population centers, the colonies (of which there are about a dozen in West Greenland), are visited regularly by supply and passenger ships, vary in size from 100 to 2,000 people, and are the sites of administrative and social institutions. In addition to the colonies there are trading centers. They receive supplies from the colonies, are the centers for municipal activities, and have a church, school, and store. There are some 53 of these, varying in size from 40 to 300 inhabitants. Finally, 106 settlements have perhaps only a school, and must trade through a neighboring trading post. These latter communities vary in size from 3 to 300 inhabitants (Borum 1956).

A recent publication of the Greenland Department, however, indicates that the pattern of migration has been shifting lately. Instead of the principal influx of population being into the colonies or townships, now it is the trading stations that are growing most rapidly—still, however, at the expense of the smaller outlying settlements (Udvalget for Samfundsforskning I Grønland 1963a:90-91). Lantis has further indicated that there has been expansion up the fiords, even reoccupation of Norse farms abandoned for centuries (1963).

COMMUNITY LIFE

In these communities a full set of social, recreational, and welfare services exists. Old age assistance, for example, is available to all persons over 55 incapable of supporting themselves, and there is poor relief and orphan assistance (Birket-Smith 1959:229-30). A social security plan exists and loans are made for building houses. Medical facilities have existed for a long time to combat tuberculosis as well as other diseases, and considerable progress has been made through hospitals

and sanatoria, floating medical clinics, and training of Greenlanders themselves in hygienic and medical professions. Birket-Smith notes that "the country is divided into districts, each having a medical officer, a hospital-trained nurse and a hospital" (1959:230). As in other Eskimo areas until the recent decade, tuberculosis was extremely severe, with an estimated 36% of all deaths due to this disease in the late 1930's (Gilberg 1948).

Schooling has existed for a long time and it is claimed that everyone is literate in the Greenlandic language; in addition some 10-15% speak Danish (Borum 1956). Seven years of bilingual schooling is now required (1961), and further schooling is possible, even in Denmark, for those who can qualify and wish it (Therkilsen 1961). Until recently education was administered by the church (Church of Denmark), but under the constitutional revisions these two institutions have been separated.

Apparently an active associational life exists in the communities, with radios, movies, clubs, sports, study circles, and all the other social paraphernalia of the small town culture of North Europe or North America present in one form or another. At the same time it is admitted that there are problems of social control, and delinquency has increased in the larger towns, which has resulted in a program of penal control oriented to the Greenlanders' cultural background (Goldschmidt 1955-56; Lloyd 1959; Therkilsen 1953, 1961). In the smaller communities, such as Igdlorssuit on Umanak Fjord, in an attempt to forestall such developments the minister is instrumental in organizing recreation (which consists of such things as beauty contests, shooting, and kayak races). A forthcoming study of community life in this particular area may further elucidate the nature of community institutions in such outlying Greenland villages (Taylor 1961: 500).

MAINTENANCE OF TRADITION PATTERNS

Lest the extent of socioeconomic change be over-emphasized, it should be mentioned that in areas roughly north of Disko Bay (on the west coast) it is the intent of the government to continue supporting the older, sea mammal-based economy as long as possible. This decision is based both on the relative abundance of seals and other sea mammals and the absence of the large schools of commercial fishes found in the south. In some communities there is even formal instruction in kayaking and other skills associated with the hunting life, although it is felt by many observers that the prestige of the old way of life is decreasing anyway in the face of exposure to outside models, even in these areas (cf. Drever 1958). Such a contention is supported by recently reported studies on vocational aspiration undertaken by the Committee on Social Research in Greenland (Udvalget for Samfundsforskning I Grønland 1963b).

In the area mentioned—so-called "Arctic West Greenland" proper (Birket-Smith 1959:228)—the older hunting-based life is still practiced and supported as a conscious act of administrative policy in the absence of realistic economic alternatives. Birket-

Smith uses an example from this general area to illustrate one of his three basic types of traditional Eskimo subsistence adaptive patterns, the "Arctic coastal culture proper," in which there is alternation between winter ice hunting and open sea hunting of sea mammals, use of the dog sled, caribou hunting, and subsidiary fishing (1959:97). This is, in fact, and has been for some time the adaptive type characteristic of most Eskimo groups, although in recent years there have been radical changes in many places. Speaking of the seasonal round in Nordost Bay, in the District of Umanak (approximately 71° N.) on the west coast of Greenland, Birket-Smith notes that it can "be closely matched elsewhere in North Greenland, with the slight changes which local conditions, for instance the existence of current openings, must involve, especially on approaching sub-Arctic regions" (1959:98). Here there is hunting of ringed seals basking on the ice in the spring (from about April to June) using the dog sled, followed by hunting the same animals as well as beluga and narwhal at the ice edge and in cracks. Some families temporarily move close to the sealing grounds and live in tents during this hunting time, but their movements in the present day are much restricted compared to former seasonal patterns. With the disappearance of the sea ice later in the summer come the larger seals—the bladdernose and saddleback—and during July and August these are pursued by kayak until they thin out in September and October. Hunting of the beluga and narwhal then goes on until the ice comes once more. During the summer there is also some fishing, bird catching, and inland caribou hunting as subsidiary occupations.

With the coming of the winter ice shield once again, nets for seals are set under the smooth ice of the inner bay, and some kayak hunting continues as long as there is open water west of the settlement. Traditional breathing-hole hunting also continues. Finally, with the coming of thicker ice, fishing becomes the principal winter activity.

The same emphasis on a basically traditional seasonal round continues in the Thule District and the Angmagssalik District, although each of these has had a special history and deserves singling out for separate discussion: the Thule Eskimos because of their centuries-long isolation and then "discovery," and their more recent displacement by the building of the Thule Air Base by the United States Air Force; and the Angmagssalik by their similar isolation on the stern, ice-locked coast of east Greenland, their discovery by Europeans in 1884, description first by Holm and then by Thalbitzer, and subsequent "revitalization" through a broad program of development by the Danish government.

THE ANGMAGSSALIK ESKIMOS

The Eskimos now living along the inhospitable coast of east Greenland have had a dramatic history set in one of the most awesome natural settings of all human groups. On every side huge ice masses impede free surface access to the outside world except during a brief summer period when water navigation is possible. As on the west coast, the glacial covering prevents any communication overland to the other side of the island; and from the north, west, and south

the glacial ice hems in Sermilik Fiord, where the remnants of the Angmagssalik Eskimos were found by Gustav Holm in 1884. One hundred miles to the west of Sermilik Fiord, the glacial ice reaches heights of between 7,000 and 8,000 feet, while to the east there is the "storis," a great jumbled mass of polar drift ice coming down from the north and generally impassable along the coast except at Angmagssalik, where local currents and land forms result in the open water leads necessary for survival of sea mammals and polar bears (Birket-Smith 1959:98-99).

The Angmagssalik Greenlanders have achieved some renown on another basis because of the use to which they were put in a widely read textbook to illustrate a highly anarchic, individualistic society (Mead 1937). There are good reasons for believing that this particular characterization of the group was grossly overdrawn (Hughes 1958a); but, even so, given the undoubtedly desperate economic and demographic situation in which the Angmagssalik Eskimos were found in the late 1800's, their revival is well worth mention as an apparently successful case of an early "development" program. Furthermore, in the publication referred to above, in which their case first appeared, the Angmagssalik are represented as an example of "the Eskimos of Greenland," with an implication that the "ethnographic present" is the chronological present, and further that in its social and cultural characteristics this group is typical of indigenous groups in Greenland. Since the chapter characterizing the Angmagssalik in the Mead volume has now been reprinted in two other compendia (Sanders *et al.* 1953; Becker 1956) and the entire 1937 book itself has been reprinted with only slight amendment (Beacon Press paperback), it is perhaps of increased importance to present a short sketch of the modern Angmagssalik Eskimos to help offset further "standardization of error." Although something of a special case, the Angmagssalik are more truly representative of "the Eskimos of Greenland" of today than the earlier picture of them presented by Mirsky in 1937 ever was.

Reports in English are scanty. The most recent that I can find is a report on investigations of tuberculosis (Helms 1957) and a more general article by Mikkelsen (1951). Stating that in 1948 there were about 1,500 Greenlanders of Eskimo descent living on the East coast, most of them at Angmagssalik, Mikkelsen notes the great rise in population over the last sixty or so years from the 413 inhabitants of the Angmagssalik area who were discovered by Holm in 1884. In even earlier times there had been a larger population on the east coast to the south of Angmagssalik, but by the 1880's this also had dwindled to a mere 135 people. The Angmagssalik themselves faced desperate economic conditions. Fishing had stopped a generation or so earlier. Seals were so scarce that inhabitants faced starvation nearly every winter, and infants and elderly people were frequently abandoned due to the food shortage. Death by starvation was not unusual and sometimes hunger forced the survivors to eat corpses. The demographic stability of the group was fragile. Each married woman averaged only 1.6 children (presumably living children, not live births), and suicides and manslaughter were said to be frequent.

It was into this situation that the Greenland administration stepped with a many sided effort to save the group, both physically and culturally. The district was sealed off from free access by outsiders; a permanent settlement was built in 1894 at Angmagssalik to gather together the 330 remaining inhabitants living in dispersed settlements; and a store, church, school, medical facilities, and administrative machinery were established. At first in the store nothing but articles absolutely necessary to Eskimo life were sold, such as iron tools, hunting utensils, guns and ammunition—no intoxicants, sugar, cereals, or textiles. The idea was that the Angmagssalik should live with only minimal change from the ways of the past but have the buffer of better equipment and outside resources to draw on. Some food was to be doled out through the store in case of hunting shortages. Further, as in other parts of the country, nothing essential to the Eskimo way of life was to be sold to the store for export, such as sealskins or blubber.

By 1916, however, restrictions on food sales through the store were relaxed (with the exception of those on sale of intoxicants), although supervision of the financial affairs of the people was continued. Thus dangerous overextension of credit was not allowed, and prices were adjusted to be low for necessities and high for luxury items. The economic exploitation of certain resources was also encouraged through use of the store as an instrument of economic inducement. The pursuit of the Greenland shark, for example, had always been disdained by male hunters as not a very worthy occupation. But since its liver oil is a valuable economic product, a way was found to persuade men to hunt the animal, first, by the benevolently coercive methods of raising the store sale price of the oil so much that men presumably could not afford not to hunt it; and, when this was not fully successful, by making the purchase of certain store items payable only with the coinage of shark livers. With these inducements shark hunting finally became firmly established as a major economic activity, and sales and export of the oil now contribute to the service tax on all items collected by the store to help support local development. Of other financial developments, a bank was established in 1938 in the community, partially in order to develop patterns of long-term thrift, but Mikkelsen indicates that this is a pattern and concept more difficult to get accepted.

Steps were taken immediately to improve the health of the Angmagssalik people, which, although undermined by nutritional and other types of disorders before contact with the outside, became even worse in the early years of the redevelopment because of exposure to tuberculosis and other diseases. Mikkelsen ventures the opinion that tuberculosis "seems to increase in direct proportion to the use of imported food-stuffs" (1951), undoubtedly a relevant factor through the gross upsetting of dietary balance. But unquestionably its prevalence is influenced also by physical, climatic, and sanitary conditions in the small, cramped houses that seem to be predictable features of an indigenous life everywhere in the north. Helms (1957) also comments in this vein. Nonetheless, public health and medical workers exist in the now several Angmagssalik settlements (native nurses and midwives) and at the central settlement in 1951 there

was an infirmary with a doctor, as well as a 40-bed hospital under construction at the time of Mikkelsen's writing.

The redispersal of the Angmagssalik population into smaller settlements became necessary because of the rise in population over the last 50 years induced by improvement in living standards and health facilities. Fertility had increased to 2.9 children (again, presumably living children) per married woman in 1944. But with the rise in population at Angmagssalik there also began an alarming decrease in the number of seals, caused both by the food demands of the local community as well as effects of mass commercial sealing in the North Atlantic. The response of the administration to the local problem was both to encourage decentralization of the population as well as to urge international control of commercial sealing. Actually the first steps along the former line had been taken in 1924, when emigrants went from Angmagssalik to Scoresby Sound, some 500 miles to the northeast. Then in 1938 another 150 left the settlement, in this case some going 250 miles northeast to Kangerdlugssuak, while others journeyed southward along the coast.

By 1951 there were 16 individual settlements along the east coast, with three principal population centers, Angmagssalik, Scoresby Sound, and Skjoldungen. The largest concentration was still at Angmagssalik, where "urban" attractions—stores, regular church services, better schools, recreational and medical facilities, wireless station, shipping activity, etc.—still held people fast and thereby overburdened the local game supply. The necessity to move to outlying productive game areas is recognized, but Mikkelsen notes that when such a move is made the Angmagssalik migrants want to have a store and school established in the small villages, developments which are usually neither demographically nor financially feasible. There is a continuing demand for goods from the outside world, while at the same time an intensive effort to exploit local resources of a hunting and trapping economy, and net income throughout the Angmagssalik group remains at about \$100 per capita per year.

The first regular school instruction began in 1906 and is now compulsory from ages 6 to 14. At first the teachers came from west Greenland, but in 1935 a local teachers' school was established in west Greenland, at which some young Angmagssalik people studied. By 1951 there were 9 schools, which were giving instruction in both the Danish and Greenlandic languages, and most people between the ages of 12 and 40 were literate. Training in craft skills necessary to both the existing economy and a transitional one appropriate to the north—such as blacksmithing, carpentry, motor mechanics—is available both in the settlement itself and in west Greenland.

Representation in local affairs is embodied in a council of elected men and women presided over by the manager of the settlement. In 1951 this council had the job of advising the Greenland Department concerning local affairs, and, in a broad sense, performing judicial, economic, and political functions—such as passing sentence on offenders to local law or making loans for economic improvement drawn from

the general improvement fund built up through taxation on products sold through the store and on wages of workers hired by the settlement. In addition to this social service, there is the welfare program represented in an old people's home and pension, care of orphans, and aid to the needy.

It is Mikkelsen's opinion, expressed in this non-technical article, that the people of Angmagssalik have adapted to the developmental steps and exposure to some aspects of Danish culture effectively and without "any psychological damage," as he puts it. If this is true, it may be as much a result of the extent of isolation as of relative satisfaction with the adaptive returns from subsistence efforts. Still, however, one may wonder about the effects of schooling on the younger generation, both that obtained locally and especially that acquired in west Greenland or Denmark. On the basis of experiences elsewhere (e.g., Alaska) it would seem unlikely that very many of such young people will long remain satisfied with the round of life in these outpost settlements. It would be very helpful to have studies done in this region focusing on the image of the outside world and the manner in which this fits into the personality and sentiment systems of the people of modern Angmagssalik, and how this is reflected in changing behavior patterns.

THE THULE ESKIMOS

In 1951 the Thule (or "Polar") Eskimos of the Hayes Peninsula in northwestern Greenland comprised about 300 people (Maurie 1954), who lived in several scattered villages from latitudes 76°-79° N. They are one of the best known of all Eskimo groups, having a distinction based on several features of their culture history. For one thing, they have left their stamp upon the traditional ethnographic literature as being the most northerly of recent Eskimo populations and the sole representative group of the "High Arctic Culture" in Birket-Smith's threefold classification of Eskimo economies. They had been isolated from all other human beings for several hundred years when discovered by the explorer Ross in 1818 and were startled at seeing the white men, for reputedly they thought themselves the only people on an earth that was bounded by winter ice, barren summer hills, and the life-giving sea. They were of great assistance in Peary's expeditions to the North Pole in the early 1900's. Near their village in 1910 was established the world's northernmost trading post under the management of Knud Rasmussen, profits from which helped finance the famous "Thule Expeditions" undertaken by Rasmussen, Freuchen, Birket-Smith, Mathiassen, and others in subsequent years, expeditions important in both a scholarly and popular way in disseminating knowledge of the Greenland and Canadian Eskimos. Finally, in more recent years the village of Thule has given its name to the U.S. Air Force base established in 1951. For reports of recent happenings, we have Maurie's studies of the group in the early 1950's, before the coming of the military base, and Fischer's brief and popular account of the resettled Thule people (1957).

In 1951 the Polar Eskimos were living scattered in some 10 small villages in the Thule district ranging

in size from the largest, Thule itself, with 37 inhabitants, to the small camp of Nunatarssuak, composed of only three people (Maurie 1952). Largely cut off from all except carefully channeled contact with Danish culture and hence the outside industrialized world, the Polar Eskimos lived the modern version of a primarily traditional culture: hunting of seals, walruses, some bears, belugas, and narwhals, and trapping of polar foxes for cash. This was done in an ecological setting where winter and the sea are the dominant features of the habitat, and where for the months of December and January darkness forces abandonment of hunting altogether. Because of the dominance of the winter ice, highly specialized techniques of ice hunting were developed in the old days, and until recent historic times the arts of kayak and umiak hunting on the open sea had been lost. Kayak hunting on the open waters of Inglefield Gulf and Wolstenholme Bay has since been restored, however, to supplement the round of subsistence techniques (the use of the kayak having been reintroduced to the Polar Eskimos, along with the bow, deer hunting, and salmon fishing, by 10 immigrants from Baffin Island during the 1860's).

In the early 1950's Thule was one of the most prosperous hunting communities. Game was still plentiful and cash was available through trading fox and sealskins, narwhal or walrus tusks, selling souvenirs, working for the Danish administration in one job or another, or unloading the supply ships that supported the three stores, four hostels, hospital, and several civil servants and their families in the district (Maurie 1955; Maurie *et al.* 1952). Their incomes, in fact, were reported to be much higher than those in Upernavik or Umanak to the south, communities which also followed a traditional hunting economy coupled with sale of commodities to the outside world (Maurie 1954). Unquestionably, much economic insecurity was allayed by the stabilization of price fluctuations in fox skins effected by the government trading monopoly (Maurie 1956*a*). Maurie notes, however, that at that time the cost of living was rising because of improved living standards and that each year the people were more dependent upon fox trapping. In addition to the modernization of hunting equipment (rifles, motor boats, etc.), there was increased consumption of Danish foods such as margarine, coffee, tea, tobacco; textiles were replacing sealskins and caribou hides; and wood, fuel oils, and coal were used instead of blubber (Maurie 1954)—in short, the usual type of imported material culture complex found elsewhere in Eskimo areas.

Similarities to other Eskimo areas can also be seen in the demographic and health picture: high fertility (crude birth rate of 173 per 1,000) and high infant and adult mortality (crude death rate of 27 per 1,000), with an average life expectancy of 28 years for males and 22 for females (Maurie *et al.* 1952). Accidents and tuberculosis were the chief causes of death, but even before the introduction of tuberculosis the demographic balance had always been precarious, leading in former days to such practices as wife-exchange, abandonment of the old, starvation of orphans, and female infanticide, practices which were given up with the advent of Christianization.

Despite their relative isolation and protected situa-

tion, some social and psychological changes had occurred up to 1950. Older methods of social control had fallen into disuse, and traditional leadership statuses had changed. An increasing secularization had occurred, with the forgetting of legends and beliefs and relative lack of interpenetration of Christianity with many aspects of daily life. Malaurie notes this shift in reference culture in the following terms:

Even if the society is able to retain its present economic prosperity it is, however, threatened from within its own structure. The school, the Church, European expeditions to the area, and the introduction of modern techniques have all created a state of latent traumatism within the group, and under these repeated shocks the archaic society has begun to disintegrate. The traditional frames are still in existence, but only because of the isolation and segregation which the Danish administration has maintained. Signs of disintegration are visible in the discredit and disappearance of the *angakoks* (shamans) and the decrease in respect paid to the most successful hunters. Instead the younger people now respect the man who is most Europeanized and has scholastic ability, a bank account or administrative responsibility. Individual hunting and trapping is replacing collective hunting and the spirit of solidarity once upheld by common interests is becoming dulled (1955:210).

In another article discussing changes in Thule (and by implication in other parts of Greenland), Malaurie remarks on one of the most portentous shifts, noting that even those Eskimos isolated from the air bases quickly discover that money and trade are of the greatest importance (1956*b*). During World War II the valuable strategic position of Greenland became very clear and in postwar years numerous defense installations were erected in several locations, some enlarging on or continuing airfields, weather stations, or other installations originally established during World War II.

But if the Thule Eskimos had begun to be basically changed by the segmental contact with the outside which they had known previously, they would have been much more overwhelmed had they remained in their home site with the great Thule Air Base located nearby. From March of 1950 to the summer of 1952 some 19,000 people passed through the Thule airport, many of them workers on the construction of the base (Malaurie 1956*a*). From the desolate country there soon rose a magnificent example of man's ability to manipulate his environment through applied technology, with not only the military establishment but all the necessary hostelry and social services required to support a mass of people living together, such as a radio tower higher than the Eiffel Tower, and the greatest distillery of sea water in the world. By 1952 some 5,000 men were stationed at the military establishment. While at first there had been some carefully regulated contact between them and the local Eskimos, soon the air base was put off limits.

Regardless of this, the total effect was one of extreme disruption of the previous ecological balance attained by the Thule Eskimos, both with relation to a subsistence hunting economy as well as one in which working for wages was the dominant desire. In 1954 there came a relocation of the Thule groups, in Malaurie's view for the following reasons:

... the Eskimos themselves, seized by an instinctive fear—and also because there was no work for them at the base and

because they could no longer carry on their ordinary occupations in the immediate neighborhood of Thule (the water was polluted by petrol, the seals migrated and there was noise and dust)—decided of their own accord to move 200 kilometres further north, to the old village of Kranak (1954:465).

Although fleeing the steamroller exposure to modern technological culture, the Thule Eskimos who went to Kranak (now called "Thule Village") were not able to escape the presence of the military completely, for they found a radar station located nearby. Fischer's (1957) is the most recent article I can find describing the current situation, and it gives only sketchy, journalistic details.

The move itself was planned by Danish authorities, who wanted to set up the traditional peat huts (with a few modernizations), in order better to preserve heat. The Eskimos themselves, however, insisted on painted wooden houses. There is little furniture in the houses, but the usual Danish domestic paraphernalia exists, along with the traditional sleeping bunk. Each family received a subsidy of free provisions worth \$2,000 in Danish Crowns in addition to the house. Other features of the material culture tend to be similar to the rest of north Greenland, with perhaps more use of skin clothing by both men and women. The price return from fox trapping is said to have been particularly good in 1957.

No contact apparently exists now with Thule itself, and at the time of Fischer's visit the Janus-like existence of the community was being maintained: in the foreground the hunting life, partially self-sufficient economic and social activities, and community feeling. But as a backdrop looms the recognition of, and selective contact with, the technologically advanced world, emphasized by the occasional overflight of jet airplanes (which must not fly under 3,300 meters). In the village itself are 11 Danish families, one of whom is the schoolteacher-minister, a modern Greenlander educated in Denmark. There is no compulsory education, but most children attend, some being boarding students living in a dormitory. Girls are taught national handicrafts and preparation of skins and furs. Boys are taught wood and walrus ivory carving in the school, as well as the subsistence tasks of shooting, hunting, and handling kayaks and motorboats. There are very few illiterates, and every family has a book of Psalms. A small wooden church has also been built, and in the religion great importance is attached to the external symbols and rituals of Christianity, with some adaptations appropriate to an Eskimo setting, such as the figure of Christ appearing Eskimo-like and wearing Eskimo clothing.

NEED FOR STUDIES

Although the main outlines of the economic and social development of Greenland in the last decade are fairly obvious—emphasis on retraining the population for a commercial fishing economy and exploration of other alternatives in this Arctic and Sub-Arctic environment—no detailed empirical studies of the social organization of these small towns exist, at least in English. In addition to the lack of "community

studies" as known in American anthropology, there has apparently been little attention recently given to some of the traditional anthropological questions. With the recent renewed interest, for example, in more sharply defining patterns of Eskimo kinship and group alignments, it would be helpful to have detailed studies of the extent of family definition and functioning in the Greenland setting, both in the more traditional, relatively unchanged communities (such as Angmagssalik and Kranak) and those which have borne the brunt of social and economic change. To what extent is there still—as one would expect—a functioning bilateral extended family? A concept of a bilateral kindred? And, if so, what are its empirical boundaries? Is there anywhere in Greenland a hint of unilineality in descent and in corporate group behavior, such as found in the far western Eskimo regions, among some of the similarly geographically stable Bering Sea coastal groups? A generation ago Birket-Smith denied the possibility (1924:141-42). What have been the changes and as well as stabilities in kinship terminologies? In marriage patterns? Most particularly, have any of the traditional sanctions and definitions of leadership been carried over to the modern setting? How widespread is and what are the effects of the perennial clash between leaders whose authority rests in intimate knowledge of land and sea and excellence in subsistence performance, as against those younger persons whose basis for leadership derives from education and attainment of a new set of abstract skills? What of the interpenetration of aboriginal religious beliefs with those of Christianity, and the extent to which modern ritual forms have replaced or been substituted for native ritual in the communities which have been Christianized for over two hundred years? Similarly of great value would be detailed studies of the psychological characteristics of the changing population—their perceptions of and reactions to the stresses involved in occupational readjustment, in values related to the image of the hunter as contrasted to the newer prestige symbols. (As noted above, the Committee on Social Research in Greenland has recently done some work along this line.) Some psychological testing was done by the Malaurie group (cf. Malaurie 1955), but to my knowledge there has been no study of the mental health of the Greenlanders. As noted earlier, the complex problem of a changing legal code has been examined by Goldschmidt both in terms of its judicial and sociological basis; this problem could also be the focus of fruitful psychological investigations. Problems of inter-group relations and the development of status and class differentials have been recently examined (Udvalget . . . 1963c:131-39). Some of these types of questions have been investigated in recent studies of Eskimo groups in Canada and Alaska, and more comparative materials would be valuable.

CANADA

INTRODUCTION

Of the perhaps most dramatic development in the last decade in the Canadian Arctic one author proudly remarks:

As one measure of the profound change wrought by the DEW Line, you may now fly completely across the North American Arctic without losing sight of the lights of a human habitation, and rarely being more than 25 miles from an airstrip (LaFay 1958:146).

He is referring to the Distant Early Warning Line of radar stations that stretches some 3,000 miles eastward from western Alaska to Baffin Island, roughly following the 68th parallel. While the coming of the DEW Line should not be overemphasized in its effects on many of the previously isolated Canadian Eskimo groups—for other changes have been occurring also—nonetheless this cogent illustration of the power of modern technology has already had and will continue to have long-range effects on community and cultural organization of Canadian and north Alaskan Eskimos.

For several reasons the impact will probably be more profound on Canadian Eskimos. The first is that by comparison with Alaska more groups are affected by the DEW Line. Second, again by contrast to Alaska, until recent years most of them had been more isolated from intensive and diversified contact with the outside world. Third, the more atomistic and ephemeral nature of community structure compared to the Alaskan coast (which had established, more stable villages) means that outside influences on social life may more quickly engulf and overwhelm original interaction patterns. A number of the larger communities in the Canadian Arctic are formed around the nucleus of a defense installation; and, since there are few inherited cultural guidelines for living in such a diversified community setting, many of the patterns emulated are those of the white world. For these reasons it is important to sketch in the development of DEW Line and other military installations and, where data allow, indicate some of their repercussions on indigenous life.

But the coming of military establishments is only one expression of a massive surge of contact between Eskimo groups and the socio-technological culture of the south. These take the form of mineral prospecting and mining, oil exploration, increased welfare, health, and educational activity, better resource harvesting through technical aid and development funds, relocation, and, at least in one area, building an entirely new town adapted to the needs of Arctic living. Although some of these developments have been in process for a generation, most of them have seriously begun only within the last decade. The long-range effects are not yet apparent, but it may prove fruitful to make a short-range assessment of some of their sociocultural and psychological implications for the Eskimo population. First, however, a brief backdrop is necessary.

THE CULTURAL BACKGROUND

It was mainly the Canadian groups who served as models for the prevailing picture of the Eskimos that pervades the anthropological literature as well as the cartoons of popular magazines: a people living (presumably year round) in snow houses (sometimes called "ice houses"), eating fish, swallowing raw meat, rubbing noses, swapping wives, leaving old people out on the ice, being childishly delighted with white man's

tools, having no "government" (and hence, according to some, no social order), always wandering. These traits compose the image often stimulated by the word "Eskimo." The more serious scholar would include in this list a bilateral form of social organization, absence of clans or lineages, loose locality groupings, widespread formal patterns of reciprocity and sharing of food, and an animistic religious system with the shaman as central power figure.

The intensive exploration of the Canadian Arctic during the last century, including several expeditions looking for Sir John Franklin, set the stage for popular knowledge of the Eskimos. More scholarly work began to appear in the 1870's and 1880's (e.g., Boas 1888), beginning a period of some 50 years during which the basic ethnographic knowledge of Canadian groups to the west of Labrador was laid down. Perhaps the cornerstone of ethnographic knowledge of the Central Eskimo groups was the series of publications from the Fifth Thule Expedition, with the works of Rasmussen, Birket-Smith, Mathiassen, and Freuchen in the decade following Jenness's classic monograph on the more western Copper Eskimos and the work of Stefansson in the MacKenzie area.

The extent of sociocultural diversity among Canadian Eskimo groups in former times has perhaps tended to be eclipsed by the prevailing power of the stereotypic image. Without overstating it, such diversity should be underscored, for it may be important in outlining or influencing alternative responses to the outside pressures and circumstances that have been coming to the fore over the last 20 years. The diversity consists in the adequacy and dependability of ecological situation and patterns of subsistence; size and nomadic habits of local groupings; and historical (situational) factors of contact with outsiders of particular types, e.g., missionaries, whalers, traders, or others.

With a couple of important exceptions, all the principal elements of pan-Eskimo culture were found in precontact Canada. The orientation to sea-mammal hunting, alternating (where conditions warranted) with inland caribou hunting; fishing as a seasonal pattern; collecting and gathering of various food items; migratory settlement patterns; ingenious technology; highly animistic, relatively unformalized religious institutions, with many taboos and ritual prescriptions and the shaman often the most important sociopolitical leader as well as religious figure; relatively "loose" social organization in the sense of few sharply specified behavior patterns or kinship-political social units; and the development of hunting and sharing partnerships of various types. There were, of course, local variations on these common elements, such as the greater focus of the Caribou Eskimos' economic life upon the migratory caribou herds in the Barren Grounds to the west of Hudson Bay, and the relatively poorer habitat situation of the Netsilik and other groups in the central archipelago, where the principal winter game animal was the seal, or the greater dependence upon fishing than upon hunting seals in the Mackenzie Delta.

The main exceptions to this as a general pattern lie in the area of social organization. In precontact times in Canada there never tended to be the permanent villages of the size and stability known on the Bering

Sea coast of Alaska or Siberia, for example, or found also, apparently, in western Greenland. In these latter areas seasonal migrations for fishing, caribou hunting, or pursuit of sea mammals occurred, but they did so with reference to a central village of considerable size which was a natural outgrowth of hunting possibilities in a particular locality. In Canada there was far less development of permanency in any one locality for a relatively large group of people ("large" in this case being a population of 100 persons or so). The "villages" that have developed in the Canadian area have been mainly stimulated by the building of a trading post, mission, or, more recently, defense or welfare installation as the core, around which the population has grown in a framework of ecological relationships different from the past. Another social institution lacking in Canada was the permanent men's or ceremonial houses such as those found in Alaska.

Nor, in Canada, were there found clear instances (although hints exist) of the unilinear descent groups that can be seen in some of the Bering coastal villages (both in Alaska and among the Siberian Eskimo). Bilateral descent, reflected in a loosely structured personal kindred, with an extended family as the core of the locality group, were the main features of traditional social structure among most Canadian Eskimos. Whether there might have been indications of unilineality in the Labrador communities of the past is unclear. The standard ethnographies on the Labrador Eskimos do not give the data on social organization necessary for evaluating the question (Balıkcı mss.).

The only area where the tendency to permanence of settlement might have been seen in precontact times was Labrador, and this deserves special mention in the context of discussing Canadian Eskimos because of its somewhat anomalous past and present situation. The Labrador Eskimos in ancient times were seminomadic, having both a coastal walrus, seal, and whale hunting culture and an inland caribou hunting season. With whale hunting, they were probably somewhat less nomadic than Canadian groups to the west and north. In any case, their houses were semi-subterranean, of turf and stone, which bespeaks a degree of permanency unknown in most of the rest of the Canadian Arctic in recent precontact times. Being on the sea, however, they were also highly vulnerable to the depredations of whalers and fishermen and became easy prey to disease, debauchery, and unprincipled traders (cf. Tanner 1944).

When in 1949 Newfoundland joined the Dominion of Canada, the Labrador Eskimos remained under the jurisdiction of the provincial government, a different administrative pattern from that for other Canadian Eskimo groups. The population had declined from about 3,000 in the middle of the 18th century, to 769 in the 1951 census. Despite the protective efforts of the Moravian missionaries, who established their mission and trading posts along the coast beginning in 1764 and attempted to institute a subsidized trading economy for the benefit of the Eskimos, the population declined through illness, and its subsistence base was undercut by the killing off of whales and caribou. What remains today is a people who, for almost 200 years, have tended to settle around the missions and

posts and been exposed to the material culture of the white world and to some of its harsh, disruptive effects. Currently their economy is unstable and mixed: native subsistence pursuits, welfare and wage labor (in mining or defense installations), and cod fishing (Birket-Smith 1959: 215-18; Balikci mss.). In the survey and bibliography edited by Fried (1955) there is a brief listing of demographic and socioeconomic data for the six remaining Eskimo communities of Labrador.

SOURCE MATERIAL

The nature of the source material available for examining sociocultural change and its attendant effects over the past decade in Canada is varied. Again a series of diverse articles appearing in both technical journals and popular magazines gives some help in pointing out general trends and possible relationships. But, in addition, there are popular books (e.g., Mowat's *People of the Deer*, Wyatt's *North of Sixty*, Harrington's *The Face of the Arctic*; or Wilkinson's *Land of the Long Day*); governmental reports; and several dissertations. Undoubtedly a rich source of data would be files of churches, private concerns, and other government agencies than those referred to here; but it was impossible to consult these.

A notable feature of the data for Canadian Eskimo change as contrasted to that for Greenland is the number of studies which focus on particular communities and some of the ways in which outside technological and administrative developments have affected them. Most of the latter have been produced under the auspices of the program of research sponsored by the Northern Research and Coordination Center of the Canadian Department of Northern Affairs and National Resources. There have been studies dealing with, for example, Great Whale River (Honigmann 1951, 1952, 1960; Balikci 1959a, 1959b, 1960a; Johnson 1961); Belcher Islands (Des Goffe 1955); Port Harrison (Wilmot 1959, 1961); Povungnituk (Balikci 1959b; 1960a, 1962); Sugluk (Graburn 1960); Frobisher Bay (Yatsushiro mss., 1960, 1962); Lake Harbour (Graburn 1963); Eskimo Point (VanStone and Oswalt 1959, 1960a, 1960b; Oswalt 1961a); Baker Lake (Vallee 1962); Rankin Inlet (Dailey and Dailey 1961); Coral Harbour, Southampton Island (VanStone 1960; Brack 1960); Iglulik and surrounding settlements (Damas 1963); Pelly Bay (Balikci 1960a, 1960b, 1962); and the Aklavik-Inuvik communities of the MacKenzie Delta (Boek and Boek 1959; Ferguson 1961; Pritchard 1962; Clairmont 1962; Abrahamson 1963). Other studies are currently in the field stage (e.g., Honigmann at Frobisher Bay) and in the near future should contribute to a rich source of comparative data.

DEMOGRAPHIC FEATURES

The total population of the Canadian Eskimos in 1961 numbered approximately 11,835. This figure is based on estimates supplied by the Federal Department of Northern Affairs and National Resources. In terms of regional distribution, the Northwest Territories has the greatest bulk (7,977), which is expected in view

of its expanse, for it covers most of the country to the west of Hudson's Bay and all the islands to the north of the continent which are not part of Greenland. The extent of growth in the last decade can partially be judged by the fact that in the 1951 census there were 6,822 Eskimos in the Northwest Territories. Of these, 1,503 were in the District of MacKenzie (the farthest west of the districts), 3,194 in the District of Franklin (the Canadian Archipelago, including Peninsulas Boothia and Melville); and 2,125 in the District of Keewatin (the area comprising the northwestern shore of Hudson Bay and associated hinterland, exclusive of Boothia and Melville Peninsulas). In the Province of Quebec there are estimated to have been 2,531 in 1961. Another 25 live in the Yukon, 156 in Manitoba (in the town of Churchill), and the remainder (about 700-800) in Labrador.

The total number of Canadian Eskimos has obviously grown since 1951, whether or not the foregoing estimates are accurate in all respects. At least in part this growth has come about as the result of better medical attention and greater health and nutritional measures. The profile of fertility and mortality until recent years was similar to that of most "underdeveloped" regions: high fertility and high infant and adult death rates, with many diseases widely prevalent. Of these tuberculosis was the most serious. One report, for example, discussing health and mortality conditions in the late 1930's for the MacKenzie River District lists the following disorders as contributing most to the high death rate—tuberculosis, accident, pneumonia, infant death, influenza, and senility—with other deaths ascribable to typhoid, cancer and tumors, meningitis, heart conditions, bronchitis, puerperal fever, and suicide (Wherrett 1945). Another brief article notes that in the Ft. Chimo area in the three or four years after 1951 there were several severe epidemics which resulted in the death of 130 people out of a basic population of about 600. Of these, at Ft. Chimo alone 65 people died of measles in the winter of 1951-52, and 70 died of influenza the following winter around the southern part of Ungava Bay (Michie and Neil 1955). Simpson (1953) also reports on epidemics in the eastern Arctic for the year 1953, underlining the increase in susceptibility brought by the greatly increased contact with outsiders and the difficulty of effectively treating sickness in scattered camps.

While it is important to underscore morbidity factors, it is equally relevant to note that during the decade of the fifties in Canada, as in Greenland and Alaska, extensive health and medical measures have been instituted and diseases are being much better controlled—although, admittedly, much remains to be done. In a 1959 article L. H. Nicholson, commissioner of the R.C.M.P., reported that since 1949 seven nursing stations had been opened and six more were planned; that of 6,459 X-rays taken in 1957, only 197 active cases of tuberculosis had been discovered; and that the ratio of deaths to population from 1954-57 was less than half what it had been a decade earlier.

POPULATION MOVEMENT

The seemingly inexorable gathering of the Eskimo

population into more permanent villages and the attrition of outlying settlements has been going on to some extent for a generation but has become immensely accelerated since World War II. Several factors have contributed: better access to medical, mission, and trading services, as well as to a welfare resource when traditional food-gathering techniques fail. But World War II provided the key impetus: military construction. A number of small weather stations and air fields were built across the Canadian Arctic and at least one of these, Frobisher Bay, on Baffin Island, has continued as a major defense installation, providing some opportunities for wage employment as well as a source of other economic goods, such as military waste materials. In addition, it served as a refueling base for commercial polar flights between Europe and America in the pre-jet age. By 1958 a large Eskimo community had grown up on the outskirts of the air base and Canadian governmental administrative center (mainly by immigration—much of it from Lake Harbour; see Graburn 1963). Yatsushiro, who made several studies of the community, notes the astronomical rise in the native population: from 258 in 1956 to 497 in 1957, and 624 in 1958, an average increase of 183 per year. By 1959 it was over 700. Housing facilities to shelter so many people were inadequate. Yatsushiro remarks that during the summer of 1958 29% were living in government-owned houses, while 59% lived in tents, moving into wooden houses in the winter. Of the latter he notes that "although a few of the Eskimo huts are surprisingly substantial in construction, most are 'shacks' or hovels of the worst imaginable type," having poor insulation and being terribly overcrowded (Yatsushiro mss.). There had apparently been some improvement in the latter respect by the following summer (1962:23). Graburn (1963:20 ff.) has a succinct and useful analysis of the many factors entering into migration patterns between Lake Harbour and Frobisher Bay.

Several other major population centers have also grown over the last decade and a half. In 1961 the Mackenzie Delta area was estimated to have a population of 1,790 Eskimos; Eskimo Point, Churchill, Great Whale River, and other communities along the shores of Hudson Bay have similarly seen the influx of migrants. Although the populations involved are not large by outside standards (ranging from 100-300 in most cases), they are highly anomalous by traditional Central Eskimo standards, for the usual picture was that of small, evanescent communities composed of semi-nomadic bands (except possibly, as noted before, along the Labrador coast). There are still seasonally wandering bands which move about the hinterland oriented to a trading and administrative center. But what has changed is their relative dependence upon such centers and tendency to permanent settlement at that point in search of wage opportunities or welfare assistance. Wilmott (1961) speaks of the distinction now between "camp" and "settlement" Eskimos, and Vallee (1962) has a felicitous term for inhabitants of the new villages who are oriented to a fundamentally different way of life—*kabloonamiut* (translated as "people of the white man"). A generation ago such a distinction would have been impossible to make meaningfully on any large scale.

The principal reason for population dispersal in the

past was the limitation of game in a given local area. The same ecological imperative holds true in these new settlements, despite the greater reliance on imported food and a mixed wage and hunting economy. Government authorities recognize the problems involved in population concentration without an adequate local economic base and in some areas at least (e.g., Port Harrison) have forbidden a man to attempt permanent residence in the community without holding one of the few wage jobs available (Wilmott 1959, 1961). This is a general policy for all of the north on the part of government officials (Nicholson 1959), but appears difficult to effectuate.

Another functional effect of larger population concentration has been to increase, at least for a time, susceptibility to sickness through exposure to unfamiliar micro-organisms. This is especially exacerbated by increased transportation connections. But at the same time as public health dangers exist in concentration of population with—usually—inadequate housing, sewage facilities, garbage disposal, and water supply, there is also a better chance to extend efficient medical coverage. At least in one value framework it is more economical to construct hospital and medical facilities for larger population units than try to develop fully itinerant teams that would reach out into the hinterland to serve small encampments of only a few people each. The same consideration holds for schooling. The proper balance between these administrative desiderata and other goals—such as allowing continuation of traditional Eskimo patterns where possible—may be difficult to find.

In some of these centers also there is a commingling of formerly separated Eskimo groups (or "tribes" in the older usage), with a consequent greater social heterogeneity than was true of the past. This is occurring, for example, on Southampton Island (Van Stone 1960; Brack 1962) and at Pelly Bay (Balicki 1962), where not only is there a confrontation of different "tribes" but also of people belonging to different Christian denominations, which adds a new note of social differentiation. Great Whale River, Rankin Inlet, and undoubtedly also Frobisher Bay have similarly seen this, and Aklavik in part was originally formed of people of quite diverse backgrounds.

In general the problems of developing formal representative government in these new communities have apparently not been solved any better than they were in the precontact groups, despite the Canadian government's desire to increase local autonomy and self-government. Leadership, for so long provided by a strong-minded trader, missionary, or Royal Canadian Mounted Police constable, now has been challenged by the entrance of the Northern Service Officer and other representatives of government departments in the south, such as transportation, education, or the military services. At the same time as confusion exists in the formal channels of authority and hierarchy among government representatives (Wilkinson 1959: 28), there is equally a lack of cultural preparation and training on the part of the Eskimo for managing their affairs. Balicki has analyzed two situations in which representative self-government was attempted and

pointed out the main reasons for the relative success in the one case and failure in the other: in the latter, the imposition of an alien social form onto Eskimo social organization, and its failure to articulate with pre-existing lines of informal authority and perceived need (Balikci 1959). It should be noted, however, that new leaders (or, at least, spokesmen) are *ipso facto* arising among the Eskimos on the basis of contact skills and resources, such as language facility and wage work.

RELOCATION

While population concentration is occurring—thus helping deplete local game supplies—another government move has been that of moderate voluntary relocation of Eskimo families. Emigration has occurred both to southern Arctic centers such as Churchill, where in 1953 five families from Ft. Chimo took up employment as tinsmiths, carpenters, and electricians in a defense establishment (Nicholson 1959); and also to uninhabited or only sparsely inhabited game-rich areas to the north. Several such moves have taken place. In 1953 and then again in 1955, families from Port Harrison, on the eastern coast of Hudson Bay, and from Pond Inlet, on the eastern shore of Baffin Island, were taken north to Cornwallis Island, straddling the 75th latitude, where a permanent village of 57 people was formed (Resolute). With an economy based on hunting and trapping (bear, caribou, seals, white fox), the village is a base for supplies, medical attention, and administrative help. Contact with a local defense establishment is kept to a minimum by an R.C.M.P. officer acting under directives of the Department of Northern Affairs. Only occasionally do the Eskimos work as stevedores in unloading ships, as housebuilders, or as guides. Dependence upon the government is said to be minimal (Robitaille 1957).

On part of Ellesmere Island another community—Craig Harbour—was begun by 6 families from Port Harrison and Pond Inlet (Fryer 1954). The association of Pond Inlet families with those from the more southerly Port Harrison was intentional, since the Pond Inlet people are more familiar with the northerly type of habitat and subsistence economy. Most of the Port Harrison hunters, for example, had not even seen walruses or caribou, were unfamiliar with the cutting up of carcasses, and had to be taught by the Eskimos from Pond Inlet or by the R.C.M.P. As noted in the report on this move, in their original home the Harrison group was said to be a “depressed, lifeless group of individuals, who were looking for too many handouts from the white man. Since familiarizing the Eskimos with surrounding country and hunting conditions, they now have an eagerness to proceed to their new camp and look after themselves” (Fryer 1954:140). The new camp site referred to is on another part of Ellesmere Island, Grise Fjord, an area abundant in sea mammals but away from the caribou and musk ox feeding grounds.

In this planned move, one of the Eskimos was appointed trader and lent \$5,000 worth of trade goods, his activities being supervised by the R.C.M.P. at first. All Eskimos were given a substantial issue of government relief and enough supplies to carry them over until they could bring in items to trade. People from the Grise Fjord campsite return about once a

month to the original settlement to trade ivory carvings and fox skins, get medical supplies and welfare payments, and attend festivities. The R.C.M.P. report on this move continues: “The Port Harrison Eskimos . . . had to familiarize themselves with the different types of game and hunting methods. They had to become accustomed to the dark period, more mountainous country, different sled traveling conditions and for heating and cooking they had to depend solely on the blubber lamp instead of their woodburning stove. Relations between the Port Harrison and Pond Inlet natives are good” (Fryer 1954: 142). Jenness reports in 1961 that there were four of these relocation stations in the High Arctic, containing altogether about 220 people (1961:12).

This type of relocation, although not always a move to a subsistence economy, is continuing. In 1957-58 some 320 Eskimos from Eskimo Point and Chesterfield Inlet (on the west coast of Hudson Bay) moved to Rankin Inlet, where in 1959, 107 were working in the nickel mine in various capacities. It is reported that the mine has recently been closed.

Thus planned moves are being made in both directions—toward a continuation of traditional pattern of life with better technological equipment and the buffers of modern medicine and an emergency food resource; and toward an entirely new subsistence pattern based on wage work and the development of industrial activities in the north.

ECOLOGIC AND ECONOMIC FEATURES

MORE EFFICIENT SUBSISTENCE TECHNOLOGY

The power of firearms has done much to change the very nature of the habitat in which traditional Canadian Eskimo life was carried on. It has also had important effects on patterns of social relationships.

Prior to European contact (and in some cases this was relatively recent) the Eskimos relied on lances, harpoons, and bows and arrows for killing everything from the caribou to the musk ox, seal, walrus, beluga, and polar bear; with the acquisition of rifles they were able to extend their hunting capabilities widely and abandon a number of traditional techniques. The patient and long-drawn out stalking of caribou herds on the open tundra, for example, in order to get close enough for a kill with bow and arrow gave way to the rifle hunt from a greater distance with more assurance of success. But use of the rifle also increased the slaughter of game, particularly musk ox and caribou.

In sealing patterns, too, the rifle changed the approach. In more northerly areas the principal pattern of seal hunting had been the long wait with harpoon poised over a breathing hole, since success depended upon the quick thrust and fastening of a line into the animal. With the rifle, however, the pattern shifted to hunting along open lanes of water amidst ice floes, or to use of the camouflage screen on winter ice. With guns a skilled marksman could make a kill from a greater distance without the exhausting long wait in an unmoving position over the seal hole. Again, however, this newer hunting pattern has led to greater loss of carcasses, for many animals

either sink or float away before being snagged with a harpoon.

Rifle hunting thus greatly increases an individual hunter's adaptive capabilities and discourages functional dependence upon a number of the co-operative activities formerly found, as in the caribou drive or ambush at the water crossing, or the winter ice seal hole hunting patterns. In the former case the limited weapon power of the bow and arrow or lances required large numbers of people to share in the surrounding, driving, and killing of the caribou. In the winter seal hunting the likelihood of a seal's being harpooned (and distributed to the entire group through the operation of formal patterns of sharing) was greatly increased if all breathing holes within a given area were watched. Balikci (1962) has an extended account of this type of activity as an economic as well as social factor in the winter ice communities among the Netsilik.

Thus with the coming of the rifle there began a widespread tendency for individualization of hunting capabilities, with a consequent lessening of the need for co-operative in many of the traditional pursuits. But not all subsistence activities were affected in this manner. Hunting of the larger game animals such as walrus or whales still involves coordinate group activity, which in some areas has now been adapted to the use of more complex modern equipment, ranging from the outboard motor powered open boat to the "Peterhead" vessel (a decked diesel schooner 35-40 feet in length). The patterns of authority, division of labor, financing, and ownership involved in use of some of these new technological devices are different from anything previously seen in Canadian Eskimo culture and have become elaborated with the rising incomes of recent years in some areas in particular (e.g., Povungnituk, Iglulik).

Ecological and social effects of use of the rifle were not felt everywhere in Eskimo country at the same time. Some of the more isolated groups did not have access to the fox skins or trading posts necessary for purchasing guns until well into the 20th century. Balikci (1960a) has studied the progressive effects of change in this technological area among the Pelly Bay Netsilik Eskimos, the Povornitormiut, and Great Whale River Eskimos, noting that social patterns attendant upon changed hunting technology did not really begin to reach fruition until the 1920's among the Netsilik, following regular contact with the Repulse Bay trading post. At the same time, with guns, more caribou could be killed not only for human food but also dog food, and the size of dog teams (needed for trapping) grew.

THE FUR TRADE

Although several other animals are trapped for their fur, the Arctic fox (*Alopex lagopus*) has long been the most valuable. Originally a worthless scavenger in the eyes of the Eskimos, with the entry of white commercial interests into the northland, trapping of this animal became the axis on which much of Eskimo life revolved. The establishment of permanent Hudson's Bay Company trading posts in Eskimo territory beginning in the first years of this century greatly increased the dependence of Eskimos on the outside

world. It encouraged their use of imported foods, tools, and household and personal equipment; dependence on outside supply and administrative centers; concentration of population around trading posts; and commitment to a fluctuating, inconstant, and in recent years unrewarding economic base. Writing in the magazine of the Hudson's Bay Company, Jenness summarily says of this shift of Eskimo economy from subsistence production to exchange production:

The fur trade thus wrought a revolution in the lives of the Eskimos. In Canada it destroyed their economic independence, bound them hand and foot to a single commercial company whose shareholders expected quarterly dividends, whatever the state of the world's markets. Such a company could not afford to distinguish between necessities and luxuries, as did the Danish Government in Greenland; nor could it accept furs, and return goods, at market prices, like the Alaskan Bureau of Education, without reckoning top costs for handling and transportation, and a substantial margin to boot for risks and profit. As far as I could judge from my own experience, both the Hudson's Bay Company officially and its individual traders genuinely sought the welfare of their Eskimo clients; but they were forced to operate in a competitive world, and the Eskimos inevitably suffered (1954: 29-30).

In the same issue of *The Beaver*, in an article apparently intended as something of a rebuttal to certain of Jenness's contentions, a Hudson's Bay Company official also speaks of the fluctuating basis of the fur trade and the economic dependence of the Eskimo trappers on the trading post:

This is where the wise trader comes in—the post manager who knows that his post will be serving this selfsame Eskimo year in and year out—even through profitless periods of uncertain duration. Unfortunately, the white fox, on which both Eskimo and trader are so dependent, is subject to a natural cycle which every four years reaches its peak, then drops precipitously and remains nearer the low point than the high for the next three years. As if this were not bad enough, the situation is further aggravated by unpredictable fluctuations in price which vary with the whims of fashion. It can readily be seen, therefore, that when low prices coincide with low cycles, as not infrequently occurs, it provides a grave problem for both Eskimo and trader alike. It is for this reason that so often the native cannot pay for things he requires to tide him over until better times, and it is then that the trader advances him "debt," or credit—a debt he will pay when he is able . . . Small wonder, therefore, that the Eskimo is frequently unable to liquidate his obligations, with the result that his debts are cancelled so that he can start afresh. [N.B., footnote at this point: "This is one reason why small traders find it so difficult to operate in the Arctic, and why all who have tried have failed. They require so much capital to withstand the periodic losses, due to poor trapping seasons, or low market values, or the high cost of transport. Such a situation gives rise to the false impression that the HBC has been granted a monopoly of Arctic trade."] (Nichols 1954:38).

Another of the important structural effects of the involvement in the fur trade so far as traditional Eskimo social structure was concerned was again the enhancement of the autonomy of the individual hunter-trapper. The activity itself did not require corporate effort, although sometimes there were overtones of this nature associated with it, such as father-son partnerships in ownership of the trapline. But

even in such cases it was principally a parallel rather than collaborative division of labor. Further, the returns from the activity were usually not subject to the elaborate rules of sharing that were applied to game procured through group effort. The money or store goods obtained for fox pelts were distributed among the nuclear or extended family but not the entire group, depending on local patterns.

DEPLETION OF THE GAME RESOURCES

Unquestionably, the major ecological change affecting the stability of Eskimo culture in Canada in recent decades has been the depletion and in some cases the virtual disappearance of the caribou herds over the last 50 years. Although the decline began some years ago and the herds had been effectively eliminated in the Ungava Peninsula by the 1930's, most of the Canadian Eskimos dependent upon caribou were not seriously affected until after World War II, when the herds to the west of Hudson's Bay suffered catastrophic decline. Although some reports indicate that the trend toward decline may now be reversing itself (e.g., Sullivan 1961), for the native people dependent upon caribou it is unlikely that there ever can be a return to the *status quo ante*. "Time's arrow" will have had its irrevocable effect.

Everywhere these animals served as at least a seasonal food resource, being intercepted on their annual migrations and in precontact times killed in numbers with bows and arrows or lances when they bunched together at river crossings or in the narrow mouths of stone cairn ambushes. For some Eskimo groups, of course, caribou were the principal rather than a subsidiary source of food, heat, and light, bones for tools, and skins for clothing and housing. The tragic effects of an almost total dependence upon the caribou and the unexpected failure of the game supply within the last 15 years among the Caribou Eskimos has been vividly documented in the literature, an example being Harrington's photographic account of "Starvation Camp" among the Padleimiut (1952).

In 1907 E. T. Seton estimated that there were altogether 30,000,000 caribou in Canada. In Banfield's view (1956) this was an exaggeration; in any case, a more recent estimate placed the figure at 2½ million in 1938. By aerial surveys conducted in 1948-49, there were calculated to be 670,000 caribou from Hudson's Bay to the Mackenzie. By 1955 this figure had dropped to 277,000—a decrease of 60% in 6 years (Banfield 1956). While the decline was therefore dramatic in the western part of Canada, it was merely a delayed version of what had already occurred in the eastern Arctic. In the Ungava Peninsula, from an estimated 700,000 in traditional times, the herds had declined to only about 6,000 animals by 1955 (Balikci mss.: 10). So scarce have they become in that area that the Eskimos have virtually abandoned hunting them altogether.

Several factors are undoubtedly involved in decline of the herds—disease, food scarcity, weather conditions, animal predators—but certainly an important cause has been human predation in the form of excess slaughter. This also had happened in former times, when as many caribou as possible would be speared at crossing areas, often far more than could

be used. But with the introduction of the rifle even greater numbers of caribou could be killed with comparative ease, often so many that the population balance was lowered beyond a maintenance threshold through wastage and loss of carcasses. Banfield estimated, for example, that of the 670,000 animals believed to be found west of Hudson's Bay in 1948-49, the annual calf crop was 145,000. The total kill from the herds was 30,000 by the Eskimos, 50,000 by the Indians, 20,000 by other humans; 34,000 by wolves; and 34,000 by disease and accident, making a total annual loss of 178,000—33,000 animals in excess of replacement (Banfield 1956). Pruitt (1962), however, discounts the overriding importance of human predation and places greater emphasis on the gradual decline of spruce-lichen forests, the principal food source.

Some effects on human populations of loss of the caribou are obvious: increase in subsistence stress, famine and sickness, and greater dependence on imported foodstuffs, tools, and clothing to replace the skins and other useful material. Decline of the herds has also helped increase the need for welfare services to Eskimos and the tendency for concentration around commercial and administrative centers as one form of adjustment to the subsistence loss.

But some of the other effects are perhaps not so obvious in this ecological chain. With fewer caribou, trapping of foxes may also be detrimentally affected, for there is less meat for fox bait as well as for dog food. In addition, an over-all decline in the herds may upset the ecological balance of the fox population, which in part feeds upon carrion provided by caribou, sea mammal carcasses washed ashore, etc., thus further disrupting the stability of trapping, already affected by endogenous fertility cycles of the foxes.

There is, however, another, and far more disturbing, aspect of the "caribou crisis" that arises from causes which lie outside expected ecological cycles and inter-related natural systems. It is rooted, instead, in the political tensions of national states:

The new problem is that caribou (and reindeer) are "hot spots" in terms of contamination with radioactive material. This is true of not only Canadian caribou but also those in Alaska, northern Scandinavia and northern USSR. Strontium-90 and Cesium-137 appear to be the primary contaminants. The source of these radionuclides is undoubtedly atmospheric nuclear explosions . . .

Radioactive contamination of other northern mammals appears relatively low. Why are caribou and reindeer so high? Here is a neat demonstration of the interdependence of all living things. The answer can be deduced logically and, indeed, was ecologically obvious as far back as 1959. In that year E. Gorham reported in the *Canadian Journal of Botany* that lichens showed abnormally high radiation counts. Later work by a number of investigators has confirmed Gorham's findings. Moreover, the northern plants that rank next to lichens in intensity of radioactive contamination are sedges. What are the two most important caribou foods? Lichens and sedges! . . .

Since the caribou is the base of the food chain in the North, turning vegetation into a form that other animals, including man, can utilize, one would expect the entire food chain to be contaminated. Here we run into a paucity of data. What data have been gathered, however, indicate that the entire food chain (lichen/sedge-caribou-carnivore/man) is indeed contaminated. For example, what few data

have been gathered on man indicate that all people who eat much caribou or reindeer meat have higher whole-body radiation counts than people who do not eat caribou or reindeer (Pruitt 1962:24—25).

The implications of this development for the native peoples of the north are obvious.

There does not appear to be significant decline in sea mammal resources, except immediately around local areas where population pressure overtakes game distribution. Indeed, especially in the northern areas, it would seem that sea mammal resources could be even more heavily exploited than they are now—if the “human factors” (principally changed sentiments and values) did not prevent this (cf. Brack 1962). The same considerations hold for greater exploitation of fish resources. Snowden (1961) and Iglauer (1962; 1963), however, report on an apparently successful program of developing local exploitation of the Arctic char conducted by the Industrial Division of the Canadian Department of Northern Affairs and National Resources.

WAGE WORK AND MONEY INCOME

Although neither wage work nor handling money are new to the Canadian Eskimos, the extent to which both of these have become influential since the end of World War II is unprecedented and represents a critical point of change from the past.

L. H. Nicholson, commissioner of the R.C.M.P., estimated in 1959 that of all the Canadian Eskimo population there were approximately 3,000 male adults in the potential work force (1959). Of these, 150 were in the hospital, and 450 were wage workers. It is estimated, further, that 1,500 should be able to support themselves and their families from the land. Therefore, jobs are needed for another 900 of the remainder if balanced economic development is to occur in the Arctic. The 450 wage workers mentioned were distributed as follows: Churchill, 18; Rankin Inlet, 107; Frobisher Bay, 85; Mackenzie Delta, 75; and 165 in other locations (generally either as workers at R.C.M.P. or H.B.C. posts or on military installations). This assessment evidently does not count sporadic and seasonal wage labor, such as summer construction activity or unloading vessels. VanStone and Oswalt (1960) take issue with some aspects of this assessment of economic alternatives for the Eskimos in the Arctic, feeling that it may too rigidly presuppose certain lines of economic development to the exclusion of alternative approaches.

The first significant amount of wage labor for the Eskimos occurred during World War II, when some were hired as workers on construction of military airfields and other installations. Despite employment of Eskimos in various capacities in other types of industrial developments (e.g., the Rankin Inlet mine, or mines in Labrador and the Ungava Bay area), it is still military activities of the larger society that have provided most wage employment in postwar years. Without doubt the most portentous of these activities was construction of the Distant Early Warning radar line, which in the last eight years was established across the heart of what were then some of the most isolated Eskimo regions in upper Canada. Stretching from western Alaska to the eastern shores of Baffin

Island, the building of this electronic network was the occasion for massive display of the capabilities of industrial technology, for many stations were built under the most difficult weather and geographic conditions conceivable. As reported in two popular pieces on the subject (Morenus 1957; La Fay 1958), the D.E.W. Line was constructed at a cost of \$600,000,000 by combined construction crews of the United States and Canada to meet military defense needs of the two countries. Administratively the 3,000 mile radar network is divided into 6 sectors of roughly 500 miles each, each of which has a main station with all necessary technological and service facilities manned by 40 civilians and military personnel. Between the main stations and about 100 miles apart are auxiliary stations, each manned by about 20 technicians. Finally, between the auxiliary stations are “intermediate,” three-man posts. In all there are about 50 stations across the Alaskan and Canadian Arctic, which cut through the north Alaskan coastal Eskimo country, the Mackenzie Delta and Coppermine areas, the Bathurst Inlet area, upper Keewatin, Melville Peninsula, Prince Charles Island, and Baffin Island.

Following a year's pilot project on Barter Island, Alaska, construction of the D.E.W. Line itself began in the spring of 1955 and was formally completed in 1957. During the first summer of activity 200,000 tons of equipment and supplies were landed by water, land, and air transport in one of the greatest supply operations ever seen. During the construction period some 9,000 persons were moved in and out of the working zone—a population of outsiders equal to that of the entire Canadian Eskimo population at that time. One may suggest for the Eskimos the effects of this vast array of workers in underscoring outside reference images and standards will be irreversible.

It was an established policy of the Canadian government that the sites disrupt Eskimo life as little as possible and be located out in the hinterland away from settlements. Some Eskimos, however, did work in various jobs—with the permission of the Department of Northern Affairs—and the sites still provide a few maintenance jobs in various localities. In addition, the annual supply operations give work in stevedoring, lightering operations, and similar activities.

Perhaps the biggest effect of the D.E.W. Line activity, however, was not so much in the actual jobs it gave as in the illustration it provided of the scope and capabilities of the technological culture of the outside world, and the measure of its control over the environment demonstrated by weather-indifferent housing, military facilities, and defense activities. In addition, the inevitable detritus and waste of such a large-scale operation as this provided much material useful to the Eskimo—wood, for example, which until now had been an exceedingly scarce and valuable item for groups living along the northern shores of Keewatin. From the dumps have grown shanty towns that now spot the Arctic, many of which contribute to the continuing public health problems of living in a harsh environment. A few years ago one writer described the Eskimo settlement at Frobisher Bay—a prime example—in the following unflattering terms:

This was Cambridge Bay all over again, only far worse because older and larger and more highly developed. Enormous sheds and buildings sprawled everywhere, divided by regular streets of graded gravel. Trucks and jeeps buzzed about, and everywhere were U.S. military uniforms. Over the Camp Headquarters flew the Stars and Stripes and the Canadian Air Force standard, and across the road, over the Mounted Police barracks, flew the Union Jack. The camp was a typical American war-time military camp, complete with PX, Air Force Post Office, and the various messes.

But before we came to the camp confines we had to pass through the Eskimo villages, beyond which a large yellow sign-board announced firmly "OFF LIMITS." Seldom have I seen such a shambles. Dirty, ramshackle, insanitary hutments and hovels, built out of old planking and scraps of wood, full of holes repaired roughly if at all with tar-paper or strips of nailed canvas, squatted in a sea of mud between vast piles of garbage—bits of old clothing, mounds of tin cans, rusty stoves and bedsteads, rotting mattresses, filthy rags, worn-out boots, bones, and offal. A few mangy dogs scrounged around; the place must be a prolific breeding ground for the more unpleasant human internal parasites . . .

The least that could have been done was to bull-doze it flat and to bury it decently beneath clean earth, and let the natives return to their normal clean tents or igloos over the hill by the Hudson's Bay post or wherever they originally came from. Frobisher Bay is a large area, including the two wide peninsulas over 100 miles long on either side of it, and contains only 298 natives, who were normally scattered happily at great intervals around its shores, seldom congregating together except on special occasions (Wyatt 1958: 209—210).

In a more recent article Yatsushiro (1962) notes the rise in population to about 700 Eskimos (living alongside an equally large number of whites) and discusses his conclusions based on two summers' study of problems of adjustment:

Summarizing the more significant results . . . [a] majority of the people . . . expressed general satisfaction with their jobs, their treatment at work, the amount of their pay, and the length of their work day calculated in hours. Also a large majority agreed that the Eskimos in Frobisher Bay were leading a better life now than 20 years ago. The improvement in Eskimo life was attributed to: (a) the sizable earnings realized from wage work that enable the Eskimos to purchase a wide variety of Western goods; and (b) the various forms of government assistance rendered the Eskimos in the field of health, education, housing, and general welfare. One of the few negative replies to the same questions reveals such a profound assessment of the situation that it deserves to be quoted:

"Only the appearance [of Eskimo life today] is better, but the Eskimos' minds are not better. The way they think is not as good as before. For example, stealing is becoming prevalent. And women are getting worse; they become tired of their husbands more easily. Separations did not occur as frequently in the past. They occur more frequently today because there are too many Eskimo here in Frobisher Bay. It is also due to the presence of white men. Some Eskimo women even prefer white men to Eskimo men!" (1962:20)

At the same time, Yatsushiro notes, most of the Eskimos would still like to hunt as they have done traditionally, and find considerable difficulty reconciling regulated working hours with an urge to get out on the tundra or sea. By 1959 there were about 100 Eskimo workers at the base engaged in diverse occupations, and the average monthly earnings were slightly over \$300—a return sufficient to increase tensions arising from the incompatibility of the two

ways of life. There are, further, signs of social and psychological disturbances of a profound type that may be associated with such a situation of dissonant goals.

The problems of inadequate housing in these wage centers are well recognized by officials and in some areas attempts have been made to provide proper structures. At Frobisher Bay, for example, 141 houses were built by the government which rent for a modest price; at Churchill there are houses for workers; and at Rankin Inlet the mine provided housing for workers at a small rent. For a time experiments elsewhere in the Arctic were conducted to develop an adequate, inexpensive house adapted to needs of the north, using both imported materials, such as styrofoam (at Cape Dorset), or wood and corrugated aluminum (at Povungnituk), which could also be heated by blubber lamps (Nicholson 1959). But these experiments now have mostly been abandoned.

The most ambitious development along this line, however, involves not just the construction of new houses, but the relocation of an entire community: Aklavik (Inuvik), on the Mackenzie Delta. For a number of reasons having to do mainly with geological and physiographic factors, in the middle 1950's the Canadian Government began construction of an entirely new, planned town which would be a show-piece, as it were, for the Canadian north, incorporating the most recent engineering developments to master the unique problems of community services in the north. Further discussion of this particular project is found below.

Wages have not provided the only form of cash income. During the last 10 years there has been a great spurt in production and sale of Canadian Eskimo arts and crafts, particularly stone and ivory carving. Building on an older economic pattern, this activity was started in the early 1950's through outside stimulation of the soapstone carvers of Port Harrison and Povungnituk, on eastern Hudson's Bay (Swinton 1958). Now a supervised program is found in many other places, such as Cape Dorset. Something of the magnitude of this as an extra form of income can be seen in the fact that in 1950 some \$3,000 worth of carving was purchased from the Port Harrison, Povungnituk, and Cape Smith areas, and "today more than thirty times this amount is brought out annually and carving has become a major source for many Eskimos and for entire regions, particularly Povungnituk and Port Harrison" (Swinton 1958). Swinton goes on to discuss the development and meaning of the new artistic productions of the Eskimos and notes that, as of the time of publication of his article, most of the stone carvings produced for sale come from the Belcher Islands, Port Harrison, Povungnituk, Ivuyivik, Sugluk, Payne Bay, Lake Harbour, Cape Dorset, Repulse Bay, Arctic Bay, Pond Inlet, and Craig Harbour.

At the same time as noting the increase in income from carving, it is important to observe that carving often takes time away from hunting and thus further increases dependence on imported food, clothing, and utensils. Graburn (1960), writing of Sugluk, also says that, despite earning most of their cash income from carving, many carvers are dissatisfied in being tied down so monotonously to one activity.

Additional sources of money income that have appeared in the last two decades are welfare assistance and, especially, the monthly family allowance, which has become a stipend that people depend upon as a regular, if small, source of cash.

As an example of a community affected by pervasive contact with new wage opportunities (and also illustrating some of the functionally intertwined other problems found elsewhere in the Arctic), events in Great Whale River may be cited. As noted before, this community has been studied by Honigmann (1951, 1952, 1960), and more recently by Balicki (1959a) and Johnson (1961). The Great Whale River area, having a total Eskimo population of 400 in 1961, has been in contact with the outside world for a couple of hundred years, but prior to World War II was, like so many communities, based on a hunting and trapping economy with administrative leadership provided by the R.C.M.P., trader, and missionary. Then in 1955 an entirely new phase of intensive sociocultural contact began with government radar defense construction and arrival of hundreds of outside workers. The problems and adjustments created by this new situation epitomize many trends seen elsewhere. The following résumé is taken from Balicki (1959a) and describes the situation as of 1957.

In 1955 and 1956 Eskimos from widely surrounding areas came for employment, about 300 in all. At first all the men were hired (as laborers, mechanic's helpers, carpenters, cooks, stevedores, workers on ships, paper layers, etc.) at wages about one half those of the white workers. Their supervisors considered them excellent workers despite their being less efficient than the whites. But the supervisors also considered them dirty, lacking initiative and the ability to make quick decisions, and subject to frequent absenteeism. The latter happened especially in the winter, when at times as many as a third of the Eskimos were not at work, particularly the least acculturated ones. This was due mainly to poor health, fatigue with the new working conditions, need to perform traditional domestic duties, and desire to hunt. Some of the supervisors, however, began to take an interest in teaching the Eskimos various new skills, for example, the English language, their performance improved. On the whole, however, Eskimo workers disliked rapid, rhythmic, routine and monotonous work (especially stevedoring and shoveling), and excessive hours. They disliked working inside buildings, which they considered degrading, and greatly preferred working on upkeep of boats and other things connected with navigation. They complained of multiple bosses and contradictory orders. Traditional hostility to the Indians in the community (a large group of Crees) was expressed, and neither group could get along with the other. (This continues into the present; cf. Johnson 1961.) The irregularity of employment, breaking of promises, and other features led to discouragement and complaints about wasted time, and to the belief that the whites were unstable, difficult people to satisfy, each one being his own boss. The visits of outsiders to Eskimo tents, motivated by curiosity, were disliked and sometimes feared, although the visits sometimes resulted in sale of tourist art-craft items. Patterns of social interaction also had other forms. Eskimo children began begging from visitors; the Eskimo adults and

young people sometimes frequented the movies and bar and ate in the dining hall, although not usually associating with the whites. Some white men had affairs with Eskimo women; and regular prostitution developed in addition to simple promiscuity.

By the summer of 1956 a reduction of work opportunities and voluntary quitting led to two or three groups moving to another area to return to a more traditional subsistence pattern. This created a socio-economic continuum in the native population from the full-time hunter to the full-time wage earner. The wage earners express contempt for traditional Eskimo ways, calling them dirty and inferior. Wage work, on the other hand, is felt to be a badge of prestige, and work clothes and identification badges are worn proudly in imitation of the white workers wherever possible. In his relations with the white workers the Eskimo worker is said to be obsequious and submissive, but (Balicki thought) to show some latent hostility. Attitudes of acquisitiveness and of getting something out of the whites are much more prevalent among the working group than among the hunters. The acquisitiveness is expressed most overtly in material goods: floored tent, often with wooden walls and a change in shape; possession of dishes and kitchen utensils, radios, bicycles; and the traits of cleanliness and orderliness along with imported clothes and food. (The term used by Vallee to describe similar sentiments and behavior at Baker Lake—*kabloon-amiut*—would seem especially apt here also. In addition, the resemblances to a "caste" distinction within the Eskimo group itself, as well as between the Eskimos and whites, is reminiscent of other recently developed communities in the north. Cf. Vallee 1962; Wilmott 1961; Dailey and Dailey 1961; Udvalget, 1963c).

Despite the relative wealth of the workers, it must still be noted that the poor living quarters and the poor diet—along with the coming of many new white men—led to poor health: facial and body sores, chest abscesses, eczema, colds, bronchitis, pleurisy, measles, as well as (in 1957) the omnipresent tuberculosis. Having lost most of their indigenous medical lore, the Eskimos (in 1957, at any rate) view illness fatalistically and make use of the infirmary only as a last resort.

In contrast to the workers, the hunters consider their way of life best, calling the workers poor hunters incapable of supporting themselves and refusing to share their goods, whose women no longer chew skins, etc.—in other words, people who are no better than Indians. The hunters are seldom obsequious to whites. Some are willing to work in the summer to earn enough for ammunition, but they use far less imported clothing and food. Membership in these groups of hunters and workers generally follows former group lines and loyalties to erstwhile headmen. Another factor influencing group membership is that people who were more likely to suffer famine and subsistence worries in the past now tend to become wage earners rather than remain solely hunters (underscoring the importance of stressful factors as a background to change).

The concentration of population around Great

Whale River itself has overtaxed local game resources; and, lacking proper boats, the Eskimos are not able to journey to the nearby seal-rich areas in the Belcher Islands. The costs of ammunition and gasoline add other hindrances, and the noise of ships and airplanes keeps many sea mammals, fish, and birds away from the immediate local area.

Divisions between the hunters and workers are further exacerbated by certain practices connected with hunting. The workers rarely lend their equipment to hunters, and it is difficult for the hunting specialists to organize effective expeditions because of lack of equipment. Yet at the same time sharing patterns are drastically changing, with workers expecting that any game killed will be shared according to traditional rules (i.e., they will usually get a share by being a resident of the community); but not being willing to share equally their own chief subsistence returns, i.e., money. Thus the "sharing" that occurs is, in fact, a unilateral giving, which the hunters resent. This asymmetry in commodity exchange is seen also in other areas in the Labrador Peninsula, returns from sale of fox pelts, for example, tending to be individually owned (Balicki mss.). Everywhere the introduction of money as a repository of economic wealth seems to have created the need for a new formulation of exchange and reciprocity patterns at the group level.

With their wages, the workers have come to depend more and more on the trading post, buying many luxuries and clothing. In this situation the role of the trader has also undergone a change. He has become increasingly a temporary resident who has little contact with the Eskimos outside the store and now, by contrast with his many different functions in the past, is considered more simply as a "storekeeper." He is really no longer very important as a source of employment. But more than this, his functions as informational leader and adviser, to the extent that these were manifested by the particular incumbent, have been taken over by the Northern Service Officer of the Department of Northern Affairs and National Resources, who is the liaison between the Eskimo community and the white workers and the government. It is the latter official who takes care of job openings and hirings, keeping of salaries, taxes, distribution of relief, and so forth. He is informed of all group movements, acts as a clearing house for steatite sculptures, distributes mail, informs the government of Eskimo problems—in short, has a conglomeration of duties. In this shift of center of power there is confusion as to areas of authority and role interrelationship among the representatives of the several government agencies operating on the local scene, a situation found apparently in many areas (Wilkinson 1959:28).

SOCIOPOLITICAL ASPECTS AND ACTIVITIES

Something of the diversified role of the Hudson's Bay Company in Eskimo territory over the last half century until recently has already been suggested. Aside from the government, as represented principally by the Royal Canadian Mounted Police, the only other agency of outside influence operating permanently in the local scene were the missions. Again the missions—Moravian in Labrador, Anglican and

Roman Catholic in the other parts of Canada—had many activities, administering not only to presumed spiritual needs of the Eskimos, but also giving educational instruction and offering medical aid. In addition, the Moravian missionaries in Labrador, through control of the trading posts, attempted to supervise the rational economic transition of their people into the orbit of the larger world in a manner similar to what was happening in Greenland (Birket-Smith 1959:215-18). Some aspects of the story of Anglican and Roman Catholic missionary activity in Eskimo areas are briefly related in the Winter, 1954, issue of *The Beaver* magazine.

But again, while the missionaries for over a half century attempted to carry out their religious activities, instruct the young, apply medical assistance, and, where they could do so, stabilize the economic situation by giving emergency assistance or developing local industry (e.g., soapstone carving in the eastern Arctic), the principal push so far as outside guidance and assistance is concerned has taken place since the end of World War II. This has occurred principally through the activities of the Canadian government, particularly its Department of Northern Affairs and National Resources, which has responsibility for the Eskimos of the Canadian north.

Although it had acquired formal control over the northland shortly after confederation in 1867, the Canadian government did not seriously move into the Arctic until 1903, when it began to establish "permanent stations for the collection of customs, the administration of justice and the enforcement of law as in other parts of the country" (Lesage 1955:3). These posts were manned principally by North West Mounted Police personnel. Not until after World War I was there much further movement of government into the north, when the number of posts was increased and annual patrols and supply trips were begun. At this time administration of northern affairs was the responsibility of the Department of the Interior, on whose behalf the (now) Royal Canadian Mounted Police worked. Another development during this time was assigning of government doctors to several of the mission hospitals. But it was really the advent of World War II and the intensive penetration of the Arctic attendant upon and following that which brought about wide-ranging government activities and plans in health, education, economic development, and resettlement that has been the story of the past decade in the Canadian north.

One of the principal forms of government assistance has been through direct cash outlay. The family allowance, instituted in 1944, pays from \$6 to \$10 for each qualified child in a family. In addition there is old age and indigent support. In view of the highly fluctuating fox fur market the importance of this dependable form of cash income cannot be underestimated. From 1945 to 1951 government aid to the Eskimos amounted to \$1,687,000, which included \$405,000 in relief payments (Polar Record 1954). In the Canadian eastern Arctic during this period 53% of total income came from such aid, and in the western areas, 25%. Only in the Aklavik area (Mackenzie delta), where furs other than foxes were plentiful, was the economy not seriously disrupted by the unreliable fox fur market.

Once again it should be noted that the receipt of such monetary payments encourages the Eskimos to settle near the posts and administrative centers which handle it. Honigmann (1951) provides an instance of the way one attempt at alleviating Eskimo dependence on such "welfare" handouts backfired. In 1959 at Great Whale River, in an effort to encourage self-sufficiency, the Eskimos were given ammunition in place of the (then) usual food subsidy for the family allowance. The Eskimos, however, were considerably distressed at this, apparently feeling that food in the hand is more trustworthy than the vicissitudes of hunting.

It was also not until after World War II that the government began to establish schools throughout the north to replace or supplement the mission schools which had provided all education up to that point (Polar Record 1954). The decade of the 1950's witnessed the building of a number of schools in the larger population centers—both day and boarding schools—as well as opening higher education facilities in the south to Eskimo young people. In 1959 it was reported that of the Eskimo population, not including the Mackenzie delta, there were 1,900 children from 6 to 16 years old. Of these some 860 were registered in the 20 schools then operating. Furthermore, for the following two years the building of 20 classrooms in 12 new schools was planned. In the preceding five years, 299 students had received vocational or high school training, with 52 persons attending, during that year (Nicholson 1959). Since only about 5% of Eskimo adults at that time could read, write, or do simple arithmetic, the stage is now set for seeing a massive ideological and sociocultural change in the coming generation.

In addition to education, medical activity has been stepped up in the form of more regular examinations and prompter treatment of illnesses, particularly tuberculosis, and establishment of nursing stations and hospitals in the north.

But development activity is not limited to medicine and education. Along with husbanding traditional sources of food—the sea and land mammals—steps are being taken to develop new industries in the north to obviate emigration southward. Referring to the moderately successful sheep-raising activities in southwestern Greenland, Findlay (1957) reports the beginning of an experiment in sheep raising near Ft. Chimo (southern end of Ungava Bay), in an attempt to supplement the Eskimos' almost total reliance on government relief and intermittent wage labor. This program, however, fell prey to "hungry sled dogs of the Eskimos" (Jenness 1961:9). Possibilities of domesticating the musk ox and introduction of the yak into the Arctic have also been studied; and the attempts to develop herding of reindeer as a more reliable source of meat than the wandering caribou has been attempted but "has not been an unqualified success" (Nicholson 1959:22), for some of the same reasons as reindeer herding failed in Alaska. Now in the Mackenzie delta, for a time the most promising of the areas where introduced, there is only one reindeer herd, now being managed by a private individual under a contractual arrangement with the Department of Northern Affairs and National Resources. That herd does, however, provide some 70,000 pounds of

meat per year for the local population (Nicholson 1959).

More recently the Mackenzie delta has been the site of perhaps the most dramatic government effort at development in the Arctic. The town of Aklavik was established in the early years of this century on the delta of the Mackenzie River, being for a number of years a commercial and administrative center for the entire northwest region. Altogether the local population—composed of Eskimos, Indians, and whites—numbered about 1,200 people in 1959. In an era which anticipates major economic, social, and administrative developments in the region, the physical location of Aklavik and its layout leaves much to be desired. It is affected by permafrost and subsoil problems which cause sinking of buildings, drainage difficulties, and other problems. Thinking in terms of expansion of facilities, in the early 1950's the Canadian government began to construct a planned community some miles to the east on the Mackenzie delta, a community which would provide a better base for both the northern settlers and those whites with commercial or other concerns in the region. Costing \$50,000,000 the new community was laid out in zones with proper housing and public health measures and even a central heating system—a challenge to the capabilities of technology in creating an amenable environment under severe Arctic conditions (see Pritchard 1962).

By 1959, however, only about $\frac{1}{3}$ of the people of Aklavik (including only 29% of the Eskimos) had moved to the new site. This apparent lack of acceptance caused sufficient concern to the Department of Northern Affairs that a special study was undertaken to determine the factors of resistance (Boek and Boek, 1959). These were of several types, but may be summarized by noting that while the engineering problems were given careful thought in the proposed resettlement, a number of human relations factors were not, especially those centering on felt needs and perceptions of the people concerned, economic activities oriented to the local area, ethnic sentiments and the need for acceptance, and attitudes toward perceived overbearing governmental manipulation. In 1961, however, Aklavik had a population of 599, compared to its 1,445 in 1956; Inuvik in 1961 had a population of 1,248 (Valentine 1963). It would appear, therefore, that in time Aklavik will be the loser.

Recent years have also seen much activity of the Department of Northern Affairs in exploring other economic possibilities for Arctic peoples. The most familiar form is the already mentioned development of indigenous arts and crafts for export and encouragement of local co-operatives to handle this work. These include not only stone and ivory carving, but also skin sewing, model and doll making, etc. A recent publication of the Industrial Division, Northern Administration Branch of the Department (1962), lists the following areas as being places where "fine crafts are made": Port Burwell, George River, Fort Chimo, Sugluk, Port Harrison, and Great Whale River, on the Ungava Peninsula; Coral Harbour, Southampton Island; Rankin Inlet, in Keewatin; Holman Island

CHANGES IN BASIC SOCIOECONOMIC UNITS

and Inuvik, in the District of Mackenzie. A recent article by Iglauer (1963) informally discusses the successes and problems in the development of cooperatives among the Eskimo groups.

But the encouragement of the Department is not limited to traditional crafts. Commercial exploitation of fish and game and better resource harvesting are central goals of surveys and projects now being carried out by the Industrial Division, Northern Administration Branch of the Department (e.g., Abrahamson 1963). The export of frozen Arctic char, for example, a salmon-like fish found in many Arctic rivers, has been started in the George River area of Ungava Bay and an Eskimo co-operative formed to market the fish. This development was reported in a recent popular article in the *New Yorker* magazine (April 21, 1962), and earlier by Snowden (1961). The canning of fish for local use as well as export is suggested in some areas, as is introduction of caribou where not now found; or even the development of unfamiliar activities, such as horticulture or production and export of specialty foods (e.g., seal liver), of further development of tourism (Brack 1962). In addition, both technological and cultural considerations relevant to more efficient harvesting and use of currently hunted game animals such as seals and walrus are suggested. The beginnings of a rational game management and use program, as part of an over-all economic adjustment of northern populations to their home locale, are found in such survey reports. But the difficulties and problems are not simple, and some are beyond the control of even the most astute administrator or economic planner. A good summary of these intertwined factors is pointed out in an economic survey report on Southampton Island. Discussing the problems involved in fox trapping, the report states at one point:

The number of foxes taken by a trapper is a function of many factors, apart from the size of the fox population. A tight interplay of forces prevails which is worth emphasizing. To be a good trapper a man must have traps, a strong well-fed dog team, a good komatick and its supporting equipment, rifle and ammunition. He must have food for his dogs, himself and his family while he is out on his trapline. The trapper needs mobility in the wintertime but to achieve it, he must have mobility in the summertime (boats, fuel, etc.) to catch marine mammals. The availability of dog food is very much a function of the previous summer's marine mammal harvest, particularly the walrus catch, and this in turn is a function of the trapper's credit standing in the store since the walrus hunt requires engine fuel, oil, and ammunition. But his credit standing in the store is itself determined to some extent by the trader's estimation of the man as a trapper and hunter, plus the amount of credit he derived from the previous winter's trapping. Thus the success of a trapping season is determined by much more than the trapping activity itself, although this alone calls for a high degree of ability on the part of the trapper. He must be competent to live in the field in a harsh environment, know the country over which he traps or be capable of learning about it very quickly; he must understand the fox, know where the denning areas are, and spend long periods away from home. In short, he must be a hard working intelligent person. Unfortunately, all his resourcefulness may be of no avail in a poor fox year, and in a good year there is no certainty that his pile of pelts will bring him a commensurately large income (Brack 1962:36).

Traditionally, the nuclear family was residentially as well as socioeconomically imbedded in the bilateral extended family. Although there are only a few social anthropological studies tracing changes in leadership patterns, family, band, and community structure, many of the trends discussed in these (cf. work of Balicki, Damas, Oswalt, VanStone, Graburn, Vallee, Dailey, Wilmott) are undoubtedly also found in most other areas in the Canadian north.

Except perhaps for the Iglulik Eskimos studied by Damas, the outstanding trend in family composition as a basic social and economic unit is the growing independence of the nuclear family both as a production and consumption unit, although somewhat less so with respect to the latter. The influence of the rifle, the trapline, net, and other technological importations in increasing the adaptive capability of the individual hunter has contributed greatly to the decline in economic reliance of a man on his brothers and father. It was these relatives who traditionally formed the core of the residential kindred or "*restricted ilagüt*," as Balicki puts it (1962). These groups, although still commonly the local residence group, are now much less often the interdependent, corporate production units that performed most subsistence activities found in the past. The rifle made individual caribou and seal hunting possible; nets undercut the need for coordinated group fishing at stone weirs; and trapping gave the opportunity for independent acquisition of cash income.

Not all sense of corporateness is lost, however, for widespread distribution of the animal products of the hunt still occurs among the larger extended kin group. In times of scarcity, as in the past, the distribution patterns may extend to the entire community, although this is highly unusual in the normal course of events, especially in those "amalgamated" communities composed basically of several discrete local bands, such as Port Harrison or Sugluk. In these situations the sense of group identification has apparently not yet developed to the point of reciprocal exchange of animal products through the community at large.

But with involvement in a money economy, a new economic factor has entered the picture which tends to be treated very differently from traditional products. In a number of places money is not shared or distributed beyond the immediate nuclear family. It is evaluated in a different framework; and, through its inherently transcendental character, further increases the independence of the nuclear family. This is true, apparently, in all places noted except among the Igluligmiut, where, according to Damas, the nuclear family is still firmly enconced in extended family interactional and economic patterns. There the extended family tends still to be the principal residential unit as well as the minimal distribution unit of not only animal products but also money (Damas 1963:180-81).

Some countertrends to this picture of nuclear family independence should be noted. The most important is the development of new forms of social organization

in some areas, centering around the acquisition and operation of a motorized whaleboat or Peterhead craft. This new form of technology has made possible co-operative hunting patterns traditionally unknown in certain groups, such as open-water summer hunting of walruses and seals among the Iglulik and Netsilik Eskimos. Drawing upon the increased purchasing power created by fox trapping, nuclear family heads now can contribute toward the purchase and maintenance of larger boats and serve as crew members. Usually the core of the crew consists of brothers from the same residential band, with the father or oldest brother the acknowledged leader. Sometimes, however, outsiders are taken into the group. At times, also, the boat is not purchased and owned co-operatively but rather is the property of a single man who then hires crew members. In any case, in this situation the otherwise automizing effects of fox trapping have contributed toward the development of new social forms or strengthening of older structures that were passing into disuse. In this way under some circumstances traditional structures, such as the localized kindred, are being supported through having some aspects of their co-operative subsistence production centered around a new object. Balicki (1959*b*) discusses a case of this occurring in Povungnituk, where each member of the various local bands contributed a portion of earnings from soapstone carving toward acquisition and maintenance of a large hunting boat owned collectively by each band. Graburn (1960) also notes that, in the now "mixed" community of Sugluk, one of the main integrating features of each individual band is corporate ownership of a Peterhead boat. In other communities, of course, this is not the picture (e.g., Great Whale River, Eskimo Point), where wages or relief provide cash income and the corporate hunting activity that would reinforce traditional structures is diminishing.

Of particular interest is the combination of ecological and cultural-contact factors in channeling social influences among the Igluligmiut, as described by Damas. For several hundred years this area was deficient in wood (no major rivers from the interior empty into the sea), and there were consequently no materials for the large boats needed for summer hunting of walrus in open water. But during the 1930's, with money from wages and trapping, wooden whaleboats began to be purchased and used to harvest the plentiful walrus herds in the summer. Consequently, large meat caches were accumulated and, with this, more permanent settlements throughout the year. In addition, the boat crew clearly emerged, composed of a core of siblings in a newly defined corporate activity and with a new authority structure. As Damas indicates, the Iglulik Eskimos appear to have reached an optimum balance a generation ago in terms of better exploitation of the natural game resources of an area following acquisition of a more powerful technology, a development further underscored by events of the last two decades (Damas 1963:24-33).

LOCALIZING OF EXTENDED KINDRED AND DEVELOPMENT OF NEW SOCIAL FORMS

Along with the changes in economic activities of the kindred grouping has grown the tendency, noted

before, toward permanence of settlement throughout the year in one or more localities, even though there are still seasonal hunting or fishing trips to outlying camps. The tendency is widespread, although there are voluntary exceptions (such as Lake Harbour [Graburn 1963]) and administrative orders against it in some places, such as Port Harrison. Now within most of these larger, more permanent settlements, members of bands or localized kindreds tend to live together, thereby creating the basis for one type of segmentation of the over-all community (e.g., Sugluk, Povungnituk). Moreover, in some places (such as Eskimo Point) religious differences may underscore what were originally differences in geographic or "tribal" origin.

Balicki discusses some of the intertwined factors among the Pelly Bay Eskimos involved in localizing the dispersed, extended personal kindred as a residential unit, and changes in its composition under the new conditions:

When elderly persons were asked about the extension of their kinship in traditional times, at a period when these informants were young boys, they listed mostly consanguine secondary, tertiary and still more distantly related people.

In their present kindred these same informants tend to include today a growing number of affinals, primary relatives of the wife and of the descendants' mates. A number of first and second cousins of deceased parents are also listed. The presence today of an increased number of affinals may be explained in two ways. First it indicates a trend proper to the developmental cycle of the extended *ilagiit* itself, characterized by a gradual disappearance of the consanguines of the ascending generations, the extension of the circle of relatives among the lower generations and the growing importance of affinals with whom the informant increasingly interacts, collaborates and associates. Second it may be indicative of a change in the local settlement patterns. The establishment of a mission with a trading store has acted as a powerful attractive force for the Eskimos, isolating them from their neighbours. Since most Pelly Bay Eskimos, now reside together for a great part of the year and they tend increasingly to marry among themselves, they have new opportunities for interaction and association with their affinals; hence the growing importance of the latter as part of one's kindred. The relative stabilization of the Pelly Bay Eskimos may thus be considered as indicative of a trend towards increased coresidentiality of the kindred, essentially for the younger people. Older Pelly Bay Eskimos today easily trace all over the Netsilik area distant relatives with whom they have been associated in the past. For many boys and girls, however, most of the near and more distant relatives they have known are at Pelly Bay. Numerous distantly related people, however, of whom they have only heard, live outside Pelly Bay. This tendency towards coresidentiality of the kindred is related to the trend towards group endogamy. It is too early for its effect to be clearly perceived yet. For the contemporary period it is safer to conclude that the kindred, despite some recent and limited evidence to the contrary, is still not a coresidentiality grouping... Considering that these are loose and overlapping units, no extended *ilagiit* headman can possibly exist. This is as true today as it was in the past. The same can be said in regard to the kindred as a possible economic unit. The fact that the extended *ilagiit* is not a discrete social unit makes it impossible for any collaborative patterns at the kindred level to emerge. Further the kindred is certainly not a religious unit (1962:111-113).

Balicki is pointing to trends which may, with time, culminate in the congruence within one permanent settlement of what had formerly been the loose, extended "personal kindred" of an individual, which did not have—nor could it have—any local base; and the more immediate circle of bilateral relatives that composed the local group and had social and economic interdependencies. Rules of band exogamy supported the perpetuation of the extended kindred; economic interdependence and social support underlay the restricted kindred. Now, with more permanent year-round settlement of many of these formerly independent bands, there is a coming together into the same social arena of both types of relatives, and marriage and residence patterns are in process of redefinition. It is difficult, in fact, to generalize about marriage rules, for a number of patterns seem to be found and these are based both on traditional considerations, such as consanguineal proximity (e.g., prohibitions on marrying a "close" relative) or band affiliation, as well as new factors, such as religious denomination. Another feature is that in some places the presence of white men has so disrupted relationships between the Eskimo young men and women that it almost becomes an academic parody to speak of "marriage rules." Eskimo young women have become unwilling to marry Eskimo men and constitute a "social problem" by their promiscuous sexual behavior (e.g., Sugluk).

What is emerging in some areas is a social unit with characteristics of the "deme," in Murdock's usage (1949:62-63), that is, a group of people characterized by coresidentiality, endogamy (sometimes now on a religious basis), bilateral descent, with a general feeling that they are all related somehow but an inability to trace segmentalizing genealogical relations. This is not fully developed anywhere, but the germs of it are found in several communities which are characterized by fairly stable year-round residence, together with band exogamy but settlement endogamy.

For the full development of the deme, however, there must be a "we-feeling" among all participants in the community. This may not develop for some time in communities composed of groups of immigrants from widely different Eskimo "tribes," such as Coral Harbour, or Great Whale River. In these situations there is, instead, a situation of community segmentation, and/or—especially with white people in the community—a caste structure for the community as a whole, with little in-group feeling among the Eskimos. Wilmott (1961), Vallee (1962), Dailey and Dailey (1961) particularly comment on this feature.

Another potential development arising from the conjunction of these local bands on a more or less permanent basis is the foreshadowing of a lineage structure. Given the focus around a corporate economic activity, such as the operation of a Peterhead boat requiring several men as crew, exogamy with reference to the local group, virilocal and common residence of a group in a particular neighborhood of the community, it is possible that with time there might develop patterns of pronounced affiliation with the father's group, sustained not only by sentiments of loyalty and familiarity but also by inheritance of property and joint subsistence tasks, strong enough to maintain separable group structures. This is spe-

culated, of course, and most likely the current subsistence patterns which could lead to this will be changed before they could help stabilize such types of kinship sentiments. The possibility does, however, conform to a number of the conditions hypothesized by Murdock as lying behind the development of patrilineality, conditions implied but not explored by Mauss in his reference to clans among the Eskimos when he discussed the effects of seasonality on forms of social life (1906:93-95, 104-16):

Patrilocal residence seems to be promoted by any change in culture or the conditions of life which significantly enhances the status, importance, and influence of men in relation to the opposite sex. Particularly influential is any modification in the basic economy whereby masculine activities in the sex division of labor come to yield the principal means of subsistence . . . (Murdock 1949:206).

Unilocal residence does not produce lineages or sibs directly. It merely favors the development of extended families and exogamous demes with their characteristic unilinear alignment of kinsmen, and either of these in turn may lead to the recognition of non-localized kin groups. What matrilocal or patrilocal residence accomplishes is to assemble in spatial proximity to one another a group of unilinearly related kinsmen of the same sex, together with their spouses. Local conditions may or may not favor the development of the particular kinds of social bonds between the members of such a group that would constitute them into an extended family or localized kin group. If such bonds are formed, and extended families or other residential kin groups make their appearance, the society is exceedingly likely to develop unilinear descent in due time (1949:210).

Some of the conditions that now prevail, for example in Povungnituk, appear to be similar to those found in western Alaska and which might have lain behind the formation of patrilineal attitudes and practices among the St. Lawrence Island Eskimos (cf. Hughes 1958*b*; 1960). Graburn presents the same type of speculation in regard to Sugluk but draws a more cautious inference:

. . . the conditions of culture contact at Sugluk have, if anything, worked to enhance the importance of kinship and the Band. Before the contact period, the Eskimos generally lived in such small groups that interaction with anyone was possible, yet now in a larger group, face-to-face interaction has to be much more selective. Of the methods of selection, kinship now forms the basis for contemporary behavior (1960:269*a*).

And in another place,

The principles of generation and bilaterality are two of the bases on which the Eskimo extended family is founded. The former is found to be diminishing to some extent, and it is said that circumstances of continued residence in one place might sooner or later lead to the loss of the latter and the appearance of "lineages" as at some places in Alaska, though I see no signs of it as yet (1960:241).

Whether, in fact, tendencies toward unilineality do develop will be open to historical determination. As noted above, however, very likely the tendency to assumption of more wage labor and decline in corporate subsistence activities based upon kinship ties, confusion in marriage rules, decline in importance of the extended family, and neolocal residence upon marriage (often with geographic dispersion of relatives) will blunt the trends that may be developing in this direction.

The traditional basis of leadership was subsistence success and general good sense. These qualities continue for band and extended family groupings, although they are in competition with other criteria (such as education and knowledge of English language) and to some extent have been adapted to new content. An example of the latter is skill in management and maintenance of the large hunting boat among those groups which formerly did not possess this equipment. Often one man is both the owner of the boat and executive head of the group, directing activities of the hunt, distribution of goods, and settling internal disputes. In other places "ownership" is dispersed among several members of the extended family, and the oldest capable hunter is the leader, whose basis is prestige, respect, and the sanction of age. He is the "issumataq" among the Igluligmiut—"the one who thinks." In substance, this is the basic criterion of traditional Eskimo leadership, which, although changed in content and scope of activity, is still the core of the informal social organization of many bands and corporate workgroups.

But with the gathering together of formerly dispersed bands into a single community, problems of creating social order and control have emerged against the background of a lack of structural forms in Eskimo society for handling such unfamiliar relationships outside the traditional kinship networks. With the coming in of outside legal authority and sanctions (R.C.M.P.), blood vengeance is no longer an acceptable method of social control. Further, with multiple segments comprising a community, each with inward loyalties, the coercive power of gossip and ostracism often no longer works too effectively. In effect, only rarely has there arisen a functionally effective basis for and expression of village integration based on indigenous patterns. Lake Harbour is anomalous in this respect. In that small, shrinking community the leaders of the seven constituent bands form an effective informal governing body (Graburn 1963). In most places integration is only minimally or not at all developed at the level of the settlement or village, and nowhere is there a fully effective village council on an elective basis.

In this situation typically the trader, missionary, R.C.M.P., or, more recently, Northern Service officer or other representative of the white world, has assumed control and leadership functions. But his authority comes not just from his filling a power vacuum in the absence of traditional structural forms. An important basis of his leadership lies in the fact that he has *power*—access and control—with respect to many of the processes of importance to the community and its individual members in relating to the new environment. His basis of power is not subsistence or activity prestige; rather, *access* and *informational* prestige. To him has been delegated from the outside culture the power of refusal or facilitation of credit, hospitalization, local medical help, relief payments in money or goods, trips outside for education or help of other types, of punishment, spiritual salvation—in other words, of most of the range of needs in the new pattern of life that is developing.

Some of these contact agents have guarded their

perquisites jealously. Others have attempted to stimulate local self-government and instruct Eskimos in some of the complexities of self-decision and application of those decisions (cf., for example, Balicki 1959). But in general the picture is one of little success in the development of local leadership and representative self-government. This is a function of both the lack of concepts and of the lack of authority to implement decisions. But it is also due to the change in magnitude of the problems which self-government has to handle, requiring an over-all co-ordinated and many-faceted approach to problems of habitat as well as human relations in these newly emerged communities living in a very different psychosocial environment from that of a generation ago.

ALASKA

INTRODUCTION

In some respects traditional, precontact Alaskan Eskimo culture was never so well publicized ethnographically as that of central Canada, although a few monumental ethnographic compendia were produced by Russian missionaries and explorers, such as Petroff, Veniaminov, and Zagoskin; and by American naturalists and others during the 19th century. But these works do not seem to have had the same impact on the field of anthropology as did the ethnographic materials from Canada and Greenland. For central Canada there were the volumes of Boas, Turner, Jenness and the Fifth Thule Expedition to give baseline pictures of some of the aboriginal groups, especially of the intellectual and material culture. These works, with their dramatic portrayal of a simple, resolute people living under stark and almost unimaginable climatic conditions, appear to have largely captured the field so far as a cultural image of the Eskimos was concerned. Another factor contributing to the relative paucity of material on precontact cultures was that the coastal communities were contacted fairly early in the history of ethnography as a discipline and some major events occurred before adequate studies could be made. The advent of intensive commercial whaling in the north Bering Sea area in the years after 1848 brought an annual invasion of outsiders, some of whom lived the year round in whaling stations established in coastal villages. With the whalers and other outsiders came also disease, debauchery, and depletion of some vital game supplies, so that in some cases severe cultural shocks had occurred before groups could be studied. The major contemporaneous ethnographic works on these coastal cultures in the last years of the 19th century are Nelson's *The Eskimo about Bering Strait*, Murdoch's *Ethnological Results of the Point Barrow Expedition*, and Ray's *Ethnographic Sketch of the Natives of Point Barrow*. Curtis' memorably illustrated work of the late 1920's can also be mentioned (1930). Lamentably, although they stand as indispensable contributions to the study of Alaskan Eskimo culture, none of these works is as replete with data on

social organization as on material and ideational culture. Birket-Smith's retrospective ethnography of the Chugach Eskimos (1953) is much better in this respect.

Aside from shorter, specialized studies, these sources were, however, about the only ones extant describing life of the Alaskan Eskimos in any detail until the middle 1930's and 1940's. Hrdlicka's work in the 1920's contains only passing references to ethnographic or social anthropological concerns. At that time archaeological monographs by various people yielded as by-products some valuable descriptions of modern life (e.g., Collins, Geist and Rainey, Ford). There was also the survey of education by Anderson and Eells (1935), which has some helpful ethnographic information. But the first serious attempt at studying the social and cultural life of a modern group was the work of Lantis, who did field work in the Aleutian Islands in the 1930's and whose monograph on the social culture of Nunivak Island, published in 1946, set the background for numerous subsequent publications filling out both the synchronic and diachronic picture of Nunivak culture (e.g., 1953, 1959, 1961). Giddings (1952*a*) and Rainey (1947) give some glimpses of modern communities during the 1930's and 1940's. Finally, after the war, especially in the 1950's, several studies focusing on specific communities were conducted, beginning the task of filling in serious gaps not only in the Alaskan literature but Eskimo ethnology at large. These included further work by Lantis on Nunivak Island, Spencer at Barrow (1959); Hughes on St. Lawrence Island (1960); VanStone at Point Hope (1962); Oswalt at Naspaskiak (1961*b*); Milan at Wainwright (1958); and Chance at Barter Island (1960). Other studies have been made by Hastings at Barrow, Saario at Kivalina, and Befu at Kodiak (1961). The studies undertaken by Foote (1961) and his colleagues on problems of human geography in the Point Hope area are especially helpful. There are studies dealing with other relevant topics, such as the reindeer problem (e.g., Lantis 1952*a*), or carving and carvers (Ray 1962). Ray (1958; Ray *et al.* 1962) has made special studies concerned with problems of education and changing values in several different areas; Chance (1962), Chance and Foster (1962), J. Hughes (1960), and Murphy and Hughes (mss.) have discussions of mental health problems in a changing cultural context. Oswalt's article dealing with guiding culture change among the Kuskokwim Eskimos (1961*b*) is based upon extensive experience and contains much practical knowledge of contemporary conditions. Lantis's earlier article (1952*b*) discussing the changes and prospects for the Alaskan Eskimos in the immediate post World War II situation remains an invaluable benchmark. An extraordinarily useful document is Jenness's recent scholarly and humane review of the role of the U.S. government in the lives of the Alaskan Eskimos since the purchase of Alaska by the United States in 1867, particularly in view of his detailed discussions of the problems and developments in education, health, and economics (Jenness 1962).

Some social anthropological work has been done on the modern Aleuts, particularly by Laughlin and his associates, along with physical anthropological and archeological studies. Berreman has studied the village

of Nikolski (1954, 1955) from the point of view of technological change and village integration and has recently completed a follow-up study of changes over the past decade. Not by reason of irrelevance but, rather, lack of data, further detailed discussion of the Aleuts is omitted hereafter.

DISTINCTIVE CULTURAL FEATURES

There were several features of traditional Alaskan Eskimo culture that stand out particularly as contrasting with that of Canada. The first was the presence of the *kashgee* (or "kazigi," or "karigi"—known dialectically by several terms), the ceremonial, work, and recreational house found in most villages. Some of the larger communities had several such structures, which served as a basis for segmenting the population and, at times, as the site for ceremonies which somewhat helped integrate the village as a whole and create or maintain amicable ties with neighboring villages. Commonly this was a "men's" house, where, in some of the more southerly villages, a teenage boy would join his father and spend most of his time working, receiving tutelage, discussing hunting, even eating and sleeping. Women were allowed inside for the performance of major ceremonials, although they did not normally spend much time there.

The more elaborate public ceremonial cycle of the Alaskan coastal Eskimos also greatly contrasts with that of most groups to the east in being more regularized and requiring a greater outlay of goods for performance. There were both "social" ceremonials (e.g., the Messenger Feast), and the more religious ritual occasions, oriented to ensuring or thanking the spirits for good hunting (e.g., the Spring Whaling Ceremony). Lantis (1947) has made an extensive and systematic study of this ceremonialism. These group rituals were held in addition to practice of the usual religious customs involved in shamanism and individual hunting prayers, rites, wearing of amulets, etc. They were centered on the principal sources of food and had multiple involvements with the social structural and prestige systems of the society.

Another distinctive aspect of Alaskan cultures was the greater elaboration in art and proliferation in art styles compared to the east.

A final feature is that of the probable greater permanence and corporateness of the extended family unit throughout more of the year by contrast with the shifting and somewhat evanescent bands of the Central Canadian region. Especially in those areas where co-operative hunting activity from a large open boat was required—as for walruses and whales—the core of the hunting crew was usually (though not necessarily) drawn from a male sibling group. Even where walrus and whale hunting was not found, however, the extended family group with bilateral extensions was the basic unit of society, and in most communities there was no superordinate village structure based on kinship or political criteria.

To say that bilateral extension of kinship affiliation was the norm, however, obscures the presence of what is perhaps the most interesting feature of some Alaskan groups marking them off from the pattern found elsewhere: existence of numerous patrilineal

features and in some instances corporate kin groups. A full-fledged example of this was found on St. Lawrence Island (Hughes 1958*b*, 1960), and other indications are pointed out by Lantis (1946:239) and Giddings (1952). In addition, unilineality appears to have been a feature of the Yuit living on the Siberian shore before the intensive social change of modern times (Levin and Potov 1956 or Hughes translation 1963; Fineberg 1955; Menovshchikov 1962; or Sergeev 1962), indicating that the unilineality in Alaskan groups appears not to be adventitious. Birket-Smith (1959:141 ff.) has a brief discussion of unilineality among the west Alaskan and Pacific Eskimos and the Aleuts, but it is not elaborated nor are its contrasts to other Eskimo groups sharply drawn. He also refers to indications of a moiety pattern among some groups. Judging by an earlier discussion of unilineality among the Eskimos (1924:141-42), however, he would ascribe the presence of these phenomena to cultural borrowing from the Northwest coast, and not to ecological and structural features endogenous to he would ascribe the presence of these phenomena to

BACKGROUND

The Aleuts were the first of Eskimo-speaking groups to be in close contact with Europeans. Russian fur traders began "island-hopping" eastward along the Aleutians in the middle of the 18th century and in their wake left a decimated people. The Eskimos farther north were relatively unaffected by Europeans until the middle of the 19th century (although there was some Russian influence on the Yukon and Kuskokwim), when commercial whaling activity brought an annual visitation by whaling crews (VanStone 1958*a*). From that time on, for more than a generation, life in the coastal villages of the Bering and Beaufort Seas was disrupted by lawless sailors, the disorganizing effects of whiskey, introduction of many diseases to which Eskimos had no immunity, and diminution of game supplies through excessive kills. The United States government attempted to regulate and control such outside contact with the natives through its revenue cutters, but these were only partially successful.

The decline in subsistence base—killing off of whales, walrus, seals—prompted a restitutive action by Dr. Sheldon Jackson, a Presbyterian missionary who became General Agent for Education. In the 1890's he began a program of importation of reindeer from Asia, at first with Chuckchi and then later Lapp herders, to instruct Alaskan Eskimos in methods of herding. The purpose was to provide a stable resource base to replace the declining sea mammals and caribou. As it turned out, this notable effort, although successful in its early years, has proven to be a failure in the long run (Lantis 1950, 1952*a*; Jenness 1962).

A number of missions (often with a school) were established in the 1890's, particularly in the easily reached coastal villages. These included not only Protestant and Catholic, but also, in the southwestern villages, Moravian in addition to the pre-existing Russian Orthodox groups. The government itself established schools widely over the next two genera-

tions, taking most of the instructional matters out of the hands of the missions and making them the responsibility of the Bureau of Education. Jenness contends that by "1914 . . . every Eskimo village of more than 100 persons contained a Bureau of Education school and a white school-teacher, sometimes also a white fur-trader and a white missionary" (1962:13).

The economic history of Alaskan Eskimos can be summarized by noting the movement from primarily subsistence hunting, fishing, and collecting to an increasing involvement with a money economy and production for sale. First the latter was concerned with baleen, ivory, and some sea mammal skin products. Then, when these articles began to decline around the turn of the century, income came largely from fox pelts, sale of which reached its zenith in the late 1920's. In the 1930's and especially following World War II this source of cash also began to taper off markedly, until now it is only a secondary form of cash income for most groups. In some areas, however, trapping and sale of skins other than fox still provides one of the regular sources of income—muskrat and mink, for example, in Naspakiak and other villages of the Kuskokwim Delta (Oswalt 1961*b*). Nowhere, however, did there develop a secure, dependable economic base free from the threat of sudden disappearance coming from either a change in Cold War policies, ecological cycles, or whims of fashion (Jenness 1962). Moreover, this had been the picture for more than a generation.

Up to the time of World War II, the main effects of the preceding half-century of sustained contact between Alaskan Eskimos and outsiders had been the development of mixed subsistence and production-for-sale economies in a number of places, with the traditional hunting ethos still clearly dominant; the failure of the reindeer herds as a subsidiary food resource, which added a measure of uncertainty and stress to the always potentially unreliable sea mammal hunt; gradual decline in fox trapping returns; relatively little intensive contact (for most places) with outsiders beyond the usual trading post, school, mission, and perhaps a nursing station in the village or neighboring villages; and, finally, widespread prevalence of diseases, particularly tuberculosis, with inadequate budgetary facilities and personnel to care for curative health needs, much less preventive ones. The demographic picture was the usual one: very high fertility but correlatively high infant and adult mortality (cf. Alaska Health Survey Team 1954; Alter 1957; Jenness 1962).

With the coming of World War II many aspects of the picture changed. The most important development was much increased contact with a larger variety of people from the outside world. Included in this was military service of Eskimos. There were also opportunities for wage employment and other forms of cash income; increased subsistence worries through the virtually complete disappearance of the last remaining community reindeer herds and probable decline in sea mammal kill; and intensification of both worries over disease and of government activities to do something about the alarming health picture.

DEMOGRAPHIC FEATURES

POPULATION

At present, according to a Bureau of Indian Affairs estimate, the Eskimos number about 23,000 people. With the approximately 5,700 Aleuts, this makes a combined total of about 29,000 for this linguistic and cultural group (Department of the Interior 1961). Another recent estimate is somewhat lower—18,000 Eskimos and 4,000 Aleuts (Public Health Reports 1960:881). The bulk of the Aleuts live on the Alaska Peninsula and Aleutian Islands, while most of the Eskimos are found in the delta region of the Yukon and Kuskokwim rivers and along the Bering Sea coast. Increasingly, however, considerable numbers of Eskimos and Aleuts are moving into the urban areas of Alaska.

Some have gone even farther afield, taking jobs in the "southern forty-eight" (as the pre-Alaskan and pre-Hawaiian statehood United States is often called by residents of the forty-ninth). This has occurred under the aegis of relocation programs of the Bureau of Indian Affairs. To my knowledge no general study has been made of problems of adaptation in these radically different conditions, but cases of both success and failure have been noted anecdotally. Between 1958 and the middle of 1962, altogether some 459 Eskimos and 107 Aleuts had made the move southward. They had gone to California, Colorado, Illinois, Missouri, New York, Ohio, Texas, and Washington. From those who had originally relocated, 70 Eskimos and 21 Aleuts returned to Alaska within a year of their departure—the most common reason being difficulties in adapting to city life (Bureau of Indian Affairs 1962).

One major difference from Canada is at once apparent: in Alaska there has been little attempt to relocate Eskimos in an environment reminiscent of their traditional situation. Most likely this is because so few really good hunting sites remain untouched in the Alaskan area where such an experiment would be feasible.

RESIDENTIAL CONCENTRATION

Once again, as in other Eskimo areas, one of the clearest developments in the post World War II period among the Alaskan Eskimos is the tendency toward consolidation of the outlying, smaller communities and seminomadic bands into larger settlements, both Eskimo and mixed Eskimo and white. Until the war the Eskimos were scattered in 200 or more small settlements, of which only 20 villages had more than 200 inhabitants in 1940 (Lantis 1952b: 38). During the war many Eskimos went for jobs to urban centers—Fairbanks, Nome, Anchorage, or others—or military construction sites; and this trend has continued, both for job seeking and other reasons, such as health care (Jenness 1962:39-41). Now the total number of settlements has decreased, and there has been an increase in population of many though not all of the remaining ones.

Here it may be noted, once again, that by contrast to the Canadian picture generally, in Alaska the residential concentration of Eskimo populations into

larger and fewer settlements is only a matter of degree and not so much one of kind. In the several stable, year-round permanent coastal villages there was always more of a core of permanently settled extended families. From these villages, small groups seasonally ranged over a given territory, always, however, being oriented to a given place as their permanent home. Since World War II many of these "pseudopods" have tended to drop off entirely and become concentrated in the permanent villages. This is true now also in the Kuskokwim and Yukon drainage areas, where the level of village permanence was probably lower in general until fairly recently (cf. Oswalt 1961b).

In one instance the increase in residential concentration was truly dramatic. Barrow village, which now has a native population of about 1,000 is some four to five times its size in the early 1940's. The principal reason for this growth has been the lure of jobs offered by military construction and, especially during the late 1940's, the U.S. Navy's petroleum drilling activities. Spencer (1959) comments on this, putting it in the context of population shifts on the Arctic slope as a whole:

Throughout the 20th century, it would appear that the coastal villages have held their own in terms of population. This is true, however, only in a superficial sense. The establishment of coastal villages as administrative centers has affected the resettlement of inland Eskimo with the result that the nuunamiut have virtually ceased to exist. Many have now chosen to live on the coast in the four whaling villages of Barrow, Wainwright, Point Lay, and Point Hope, or they have elected to settle on the coast farther to the south, such as at Kivalina, on the Noatak River, or a Kotzebue at Hotham Inlet. Thus, if the coastal population has remained stable, it has been at the expense of the marked decrease of inland groups. The situation at Barrow village is further anomalous, the population here having swelled out of all proportion in the period of 1946—1953, a result of the employment opportunities offered by the naval installation on the petroleum reserve of northern Alaska. Census returns will vary with the year; in the most recent period, Barrow population has averaged about 1,500, while the other towns have fewer inhabitants. According to the count of the Alaska Native Service . . . Wainwright, in the most recent period, has had 180 inhabitants, Point Lay 90, and Point Hope 240. All intermediate settlements were abandoned in the period after 1900, the last family resident at nuwuk having moved to Barrow village in 1942. Other coastal settlements had disappeared somewhat earlier (1959:19).

Thus concentration of population in northern Alaska, while having begun some decades prior to the 1940's, was further greatly increased in the last 15 years by the impetus of military activity along the Alaskan coast (e.g., Foote 1961; Chance 1960). This reason, along with the others mentioned by Spencer—larger villages as locations of schools, churches, medical facilities—also tended to operate farther south along the coast, as well as inland in many areas of Eskimo settlement. It was similarly a major factor in the grouping of formerly outlying settlements on St. Lawrence Island into the two remaining stable, permanent villages, Gambell and Savoonga. Again, however, the change did not begin with World War II, but was greatly accelerated and consolidated by it.

The most comprehensive statement of health and health-related mortality problems of the Eskimos up through the early 1950's is contained in the report of the Alaska Health Survey Team. As bluntly stated there:

The indigenous peoples of Native Alaska are the victims of sickness, crippling conditions and premature death to a degree exceeded in very few parts of the world. Among them, health problems are nearly out of hand (from Hughes 1960:75).

The report goes on to indicate that most of the illnesses are accounted for by "acute communicable diseases, acute upper respiratory infections, accidents, tuberculosis, gastro-enteritis and gastro-intestinal symptoms, inflammatory diseases of the eye, and diseases of the ear and mastoid" (Hughes 1960:83). Some of its relevant conclusions are the following, which outline the nature of a severe demographic and social crisis in the early 1950's (in the discussion there is no essential difference between statements applicable to the Eskimos-Aleuts and the Indians of Alaska):

Differences in morbidity are consistent with the differences in mortality between Alaska natives and the population of the States, pointing out clearly that the natives have many more health problems than do the people of the States; that they are problems which affect principally the children and young adults. . . .

These findings clearly indicate that natives utilize available medical facilities to a greater extent than does a metropolitan population—due in part to a higher sickness rate. These natives are not the strong, healthy specimens that we usually associate with primitive peoples. On the contrary, they have considerable sickness, and except for accidents and acute upper respiratory infections, about which we know little in terms of effective control, the bulk of the higher sickness is a consequence of the high incidence of those diseases which we do know how to control. The fact that the rate is high for such diseases reflects the great need for increased public health efforts in applying the knowledge we now possess. . . .

Although much of the data on Alaska's health conditions are fragmentary and incomplete, they are sufficient to reveal a situation which is grim and which does not redound to the prestige of public health in this country.

In the scattered small villages of the Territory, we find that children and young adults are subject to a high rate of disability and mortality from infectious diseases, some of which is due to lack of immunological resistance, but much of it is the consequence of inadequate health service, compounded by ignorance and poverty and all their effects (quoted in Hughes 1960:83—84).

How greatly the picture has changed in the last ten years is documented in a timely summary (Public Health Reports 1960), as well as in the series of technical publications emanating from the Arctic Health Research Center, of the United States Public Health Service in Anchorage, Alaska. Jenness (1962) also discusses recent developments as well as the historical background for health services. Of particular importance have been gains in the control of communicable and infectious diseases. The steps taken to lower incidence and prevalence of tuberculosis, for

example, illustrate the extent to which giving communities an adequate health base has become a major focus of governmental effort:

In 1950, the tuberculosis death rate among Alaskan Eskimos and Indians was still an appalling 654.9 per 100,000. But between 1950 and 1957 a remarkable change occurred, and by 1957 the tuberculosis mortality rate among natives had been reduced to 116.2 per 100,000. . . . Provisional rates for 1959 show a further reduction to 53.8 per 100,000 in the native population.

The story behind this dramatic reduction in tuberculosis deaths began in 1946, during a special session of the Territorial Legislature, called by the Governor at the behest of the Territorial department of health and the board of health. There were, at that time, 4,000 known active cases of tuberculosis in Alaska, with about 75 hospital beds available for tuberculosis patients in the entire Territory.

Beginning with this special session, in the next few years Alaska's Legislature appropriated more funds per capita for tuberculosis control than any State legislature in the Nation. . . .

In spite of the tremendous gains in the past 14 years, tuberculosis is still a major health problem demanding continued effort and vigilance. During 1959, there were 356 newly reported active and probably active cases, representing a rate of 178.0 cases per 100,000 total population. As in past years, the preponderance of these cases (766.6 per 100,000) was found in the native population.

Although the methods employed in the 1950-57 Alaska campaign against tuberculosis were the same procedures used elsewhere, that is, casefinding, hospitalization, chemotherapy, rehabilitation, education, and followup, their application in Alaska demanded drastic modification and ingenuity.

Generally in the 48 States, the highest incidence of tuberculosis has been found in urban areas. In Alaska, the highest incidence occurs in the small Eskimo, Indian, and Aleut villages, particularly those located in the Kuskokwim and Yukon River deltas. As in urban slum areas in continental United States, the economic status in these villages is marginal, many of the homes are crowded and poorly ventilated, and most of them lack sanitary facilities. Nutrition is poor and resistance to disease is generally low (Public Health Reports 1960:895).

That much still remains to be done, however, in control of tuberculosis in the native populations is documented in the most recent Tuberculosis Report of the Alaska Department of Health and Welfare (1962).

As a final index of the extent to which the morbidity and mortality outlook has changed over the past decade for Alaskan Eskimos, one can refer to decline in death rate. While in 1950 the death rate from all causes for the native population in Alaska (including therefore the Indians) was 1,693.2 per 100,000 population, by 1958 this figure had dropped to 1,036.8. During the same period the infant mortality for the native population declined from 95.3 (per 1,000 live births) to 70.0 (Public Health Reports 1960:893).

Some of the ways in which these health and demographic factors may function in the context of cultural change have been suggested elsewhere (e.g., Hughes 1960; VanStone 1962).

MORE EFFICIENT SUBSISTENCE TECHNOLOGY

Metal tools and superior technological equipment were introduced among Alaskan Eskimos long before many of the Canadian Eskimos, especially in the Northwest Territories, obtained firearms, knives, imported fishing gear, and other equipment useful in a fishing and hunting economy. First it was Russian traders working among the Aleuts and later farther north along the Bering coast; and then, during the middle of the 19th century, whaling ships that traded firearms and metal tools for baleen, oil, and walrus ivory.

Many of the same effects as in Canada accrued from introduction of the rifle. The individual hunter's adaptive capabilities were widened, more seals, walruses, and caribou were killed, and more sea mammal carcasses lost to the currents. But there was an important difference. Because of unstable ice conditions, there was never, anywhere along the northern coast of Alaska, the large winter settlement out on the ocean ice in which organized and cooperative hunting of seals at their breathing holes occurred, as happened among the Central Eskimos. The loss of this latter hunting pattern and its replacement by open-water hunting of seals from the ice edge has been mentioned for the Canadian scene. The types of winter seal hunting which did occur in Alaska—that of the individual hunter standing over a breathing hole with harpoon, or employing a net at the hole—were, however, similarly undercut by introduction of the rifle, so that here also open-lane hunting became the predominant type of winter sea mammal hunting. Thus there was little essential change in the human relations patterns involved in winter hunting—only in the type of equipment employed.

The same is true regarding the boat crew, which is undoubtedly an ancient social form along the north Bering Sea coast and among the island groups where whaling and walrus hunting was done. Introduction of the rifle merely gave a pre-existing economic unit greater effectiveness in the hunting of seals and walruses and, with equipment adopted from white crews, in whaling as well. The latter consisted primarily of the combined darting gun and steel-headed harpoon, a device which, when thrown into the body of the whale, is so triggered that a bomb explodes after the harpoon head is lodged in the flesh. Other items adopted from the white whalers were the wooden whaleboat, shoulder gun, manila rope, cutting tools, and, in the 1920's, the motor for the whaleboat or umiak. Here again the changes in equipment were those of content, not of basic pattern, and they tended to make the crews more effective in hunting both whales and walruses (as well as seals). The same is true of kayak hunting: addition of the rifle did not change the basic pattern or purpose of the activity.

As in Canada, formerly there was more or less regular hunting of caribou by some inland-dwelling groups and, seasonally, by coastal groups. Before adoption of the rifle, for the same reasons as in Canada these hunts usually took the form of a communal activity—drives and surrounds, etc.—and again

one of the principal effects of rifle power was to release the hunter from close dependence on the migration routes of the caribou and corporate hunting activity. Even with the adoption of rifle hunting, however, Spencer (1959) mentions the continuance of joint hunting by groups of men who also hunt together in other contexts, such as the whaling crew. In hunting the few other large land mammals also, such as mountain sheep and moose, the hunter's technical efficiency was greatly improved, but in this there never had been corporate hunting as such.

In the southwestern part of Alaska, where for inland groups the dominant subsistence pattern was fishing, the introduction of the fish wheel by whites in the latter part of the 19th century was another technically more efficient device that replaced traditional patterns. In the middle reaches of the Kuskokwim River its adoption increased the catch of salmon and thus stabilized the subsistence economy to a certain degree (Oswalt 1961:70). Overuse of this device elsewhere in Alaska, however, especially by commercial interests, has apparently contributed to diminishing of the fish supply, especially salmon.

Depletion of other types of game resource occurred early in the history of sustained contact between Alaskan Eskimos and the white men, and it was not entirely due to the Eskimos' own over-use of an advanced technology adopted from the whites. As noted before, toward the end of the last century the situation of many coastal groups was critical, for in addition to the native hunting there had been heavy commercial killing of whales and walruses (see Jenness 1962:11-12). As a result many villages suffered starvation and famine. It was against this background that Sheldon Jackson urged introduction of domestic reindeer from Asia to buttress the economies and provide a partial replacement. Some aspects of the problem resolved themselves, however, with the decline in commercial whaling in the Arctic because of development of industrial substitutes for baleen, and use of petroleum rather than whale oil (VanStone 1959). With that, the ecological balance had a chance to right itself, at least partially, and provided a familiar although declining resource base in whales, walruses, seals, and caribou for the next halfcentury. During this time, the principal effects of the introduction of the rifle and metal technology were to provide the Alaskan Eskimos with improved means of resource harvesting in a situation that was socioculturally relatively stable.

THE FUR TRADE

As mentioned, the fur trade (for sea otter particularly) was the unfortunate impetus for Russian settlement and exploitation of the Aleutian Islands during the 18th century. The story of the decimation of the Aleuts by the first Russian fur traders and the effects on them of inadvertent involvement surpasses anything that can be said about the unfortunate results of the Canadian Eskimos being drawn into a market economy by inducements of the Hudson's Bay Company (cf. Berreman 1955; Birket-Smith 1959:218-19). Trade of the sea otter pelt declined in the last century through the extinction of the animal in northern waters, and the Aleuts turned to other in-

come pursuits, such as fox trapping and seasonal labor.

Although other skins are sold on the market—such as mink and muskrat, which are important cash-bringing pelts in southwestern Alaska (Oswalt 1961)—the principal fur-bearer still trapped in the Alaskan Arctic as well as in Canada is the fox. During the 1920's trappers in some villages could make up to \$8,000 a year from fox trapping alone (e.g., Spencer 1959:361; Hughes 1960:14). Gradually, however, the price declined through the 1930's, rising once again briefly during the war years, and since then falling to such a point that trapping has tended to become an unreliable and often unproductive source of income. As in Canada, the unpredictable fluctuations in market demand, coupled with the natural cycles in the animal population itself, create a situation in which the trapper soon becomes dismayed at the seeming fickleness of the trader or store manager.

By and large, however, the Alaskan Eskimos who did and do fox trapping are not so much tied to this as a principal subsistence activity as were the Canadian groups. For one thing, there was never the over-all monopolistic control over the fur trade found in Canada. Also, they have had a relatively richer game supply to exploit, as well, in recent years, as wage work in various capacities. In addition, however, the government early attempted to develop economic self-sufficiency and a full return by establishment of co-operatives in native villages working through a central purchasing and marketing agency to handle furs and handicrafts (Jenness 1962:16-17, 33-35).

DEPLETION OF GAME RESOURCES

There were comparably fewer Alaskan Eskimos than Canadian dependent upon the caribou herds in the past. These groups were found primarily in the Brooks Range and the Kobuk-Noatak River regions. But today all such groups have disappeared except for two small bands still inhabiting these areas, at least until the last few years (Spencer 1959:14).

In recent times there has not been the catastrophic decline in herds characteristic of the Canadian scene; in fact, the herds have returned (e.g., see Foote 1961). As put by Spencer, there has been a drop in the inland *Eskimo* populations, and this mainly for sociocultural reasons:

There appears to be no evidence that the caribou herds are disappearing. Indeed, the killirmiut indicate that the herds today are larger than they were a quarter of a century and more ago. In fact, hunting by the Eskimo, with the disappearance of the inland bands, is not nearly so intensive as it was formerly. There is always the threat to the herds brought on by wolves and other predators, but this, as may be anticipated, seems cyclical. The introduction of reindeer blood lines, as the result of the failure of the reindeer industry in northern Alaska, appears not to have modified the caribou population.

More significant is the disappearance of the inland Eskimo. This has come about, not, as has been suggested by some, because of decimation of the caribou herds; but rather because the peoples of the coast discontinued the patterns of trade on which the nuunamiut [i.e., inland peoples] so vitally depended. Once this took place, the inland Eskimo were forced to come to the coast and to revise their mode of life (1959:28).

The trade to which Spencer refers was that mainly of sea mammal oil by the coastal groups in exchange for caribou hides from the inland peoples (along with less important subsistence items). With the introduction of imported textile goods, however, the need of coastal people for caribou hides sharply declined and, inexorably, most inland people were drawn to the coast for this as well as other reasons (1959:359). Another factor undercutting the need of the coastal people to turn to inland groups for caribou hides was the possession of their own reindeer herds for a number of years in the early part of this century, which provided the skins necessary for winter clothing and bedding. Foote (1961) discusses at some length relations between coastal and inland peoples in both traditional times and the present day.

The same symbiotic trading relationship existed in prereindeer times between the St. Lawrence Island Eskimos and those on the opposite Siberian shore. Reindeer hides from Siberia were exchanged for sea mammal products (principally walrus skins) and wood, which the Yukon River disgorged in quantity along the north shore of St. Lawrence Island and which the Siberian groups lacked. One of the factors undercutting this trade also was introduction of domesticated reindeer onto the island itself.

In terms of its long-range effects on continuance of a subsistence ecological balance, undoubtedly the failure of the introduced reindeer herds among the Alaskan Eskimos is more important than any depletion in the wild caribou herds. For a time these herds provided a stable supply of meat and skins, one not subject to the apparent whimsy of nature (see Jenness 1962:35-37). Now only a few villages have reindeer and the major herd is that of Nunivak Island, which exports meat for sale to other Alaskan communities. Nunivak Island also is the site of another experiment in regeneration of a subsistence economy, for it has a herd of musk ox, introduced in the 1930's in an attempt to see whether this animal can thrive in Alaska; and, if it does, whether it could be introduced elsewhere as a buffer to poor hunting. Without question one of the factors contributing to the success of the reindeer herd on Nunivak, and possibly also to that of the musk ox, is Nunivak's insularity, which effectively separates the animals from the seasonal migrations of the mainland caribou herds that elsewhere attracted many of the domestic reindeer and contributed to the decline in herds. Also absent are great numbers of wolves and other predators. The same conditions prevailed on St. Lawrence Island and, for some thirty years, the large herd (numbering several thousand animals) was a stable resource. But in part this was its undoing, for a principal factor in its decline was that without close herding it grew too large and overgrazed its forage—which apparently happened in the loss of other herds as well.

Through the 1930's, although the reindeer herds were declining and the basic failure was evident, there were still enough reindeer to constitute a source of meat and skins. But the middle and late 1940's saw the general decline in number of animals (Lantis 1952a; Jenness 1962:43-44). The herd on St. Lawrence Island, for example, was estimated to number about

2,500 in 1946, and by 1955 had dropped to only some 80-100 animals, which, due to the small numbers, were no longer even hunted.

There is also evident decline in the populations of whales and walruses. In the years since World War II fewer Bowhead or baleen whales have been killed annually, and often several years will pass in a coastal village with no large whale being caught, with a consequent decline in human and dog food, and fox bait.

Fay has extensively studied the Pacific walrus and feels that there is no question of its over-all population decline. He also points out the further obstacles put in the way of an adequate kill by airplane or ship noises, petroleum-oil fumes, electric lights of villages, and the like. As noted elsewhere:

Regarding the question of actual decrease in the over-all Pacific walrus population, Fay points out that there has been considerable decline in the number of animals both since the time of first contact with Europeans and in more recent years. Estimates of the total population place it at 200,000 animals in the seventeenth and eighteenth centuries and at some 40,000 to 45,000 animals at the present time . . . During the period of greatest commercial exploitation by the white world (1860-1900), the over-all population was dangerously decimated, and it reached a very low point in the 1920's. Yet since that time the 'population has been either stationary or slowly decreasing.' . . . And what is more, with a walrus population of the size it presently is, wide fluctuations in number of animals harvested in any given place are likely to occur from one year to the next (Hughes 1960:143).

Thus, in any particular village, instability in fluctuations in walrus kill will be the most important manifestation of this over-all ecological development and will contribute to subsistence stresses at the same time when other occupational alternatives are being presented in this day of developed transportation facilities.

One of the traditional difficulties put in the way of success in walrus hunting is poor weather. Other factors, however, which contribute to decline in reliability of the walrus kill lie in the wastage induced by technological developments and highly inefficient use of animal products.

Another important factor in the decline of the walrus herds has been wastage in the hunt. This comes about through loss of those animals which are killed but then sink or float away unretrieved [i.e., by harpoon line] or through the taking of animals mainly to get their tusks while the carcass is discarded. The latter occurs in some of the other Alaskan coastal villages, but not on St. Lawrence Island, where it is strongly condemned. Fay estimates on the basis of one study that only about half the animals wounded are ultimately secured and butchered . . . A third form of wastage occurs during the latter part of the spring hunt, when much less of the carcass is saved for use than is true earlier in the season . . . (Hughes 1960:142-143).

There has apparently been no significant over-all decline in numbers of seals caught over the recent fifteen to twenty year period, although annual fluctuations in any given village do, of course, occur. There has, however, been clear decline in the salmon runs in recent years (Jenness 1962:44-45), and decrease in beluga in the East Bering Sea, and in polar bears (due to sport hunting).

WAGE WORK AND MONEY INCOME

Earning and handling money is nothing new to the Alaskan Eskimos; they have been at it for at least half a century. Moreover, some of them have been accustomed, during a lifetime, to handling large amounts (as during the peak markets in fox furs of the 1920's and to some extent even earlier, during the time of whalebone hunting, when use of money came in to supplement the barter system).

But there is no question that the great spurt in daily use of, acquaintance with, and dependence upon money began with World War II. And with this there also began a change in dominant activity through which money was acquired. Formerly obtained through sale of pelts or crafts, now increasingly it is derived from wages, salaries, or welfare and aid payments. In regard to the later, only since World War II have many Eskimos become aware of their eligibility to obtain support for dependent children, old age incapacitation, or disability. With the advent of wage labor, there has also come unemployment compensation as a form of income. In addition, there is the relatively small increment received from membership in the National Guard units scattered in coastal villages. Unloading supply vessels also provides work for men in the coastal communities, and there is some regular summer employment in canneries in southwestern Alaska. Maintenance jobs in weather stations or Federal Aviation Agency sites also provide income. In addition, possibilities of summer employment in non-military construction in the large towns of the north Bering coastal area also draw men from scattered villages. Employment as guides for white hunters is beginning. In southerly regions fishing for salmon or herring may be the dominant income activity, as in southern Greenland (e.g., Befu 1961, describing the village of Old Harbor, Kodiak Island).

In the meantime the traditional means of earning money continue—sale of fox and other pelts, ivory carvings, skin sewing—as well as collecting bounties on eagles, wolves, and, occasionally, hair seals (Lantis 1952b). In recent years, sale of crafts, indeed, increased so much that a fairly large-scale production and marketing organization grew up in Nome to handle these goods—the Nome Skin Sewers, Inc. In 1945 this organization sold \$35,504 worth of clothing, with a roughly comparable amount sold the following year (Lantis 1952b). The Bureau of Indian Affairs has encouraged other programs of a similar nature which, although they do not solve the basic problem of economic insecurity for the Eskimo villages, undoubtedly do contribute helpfully (see Jenness 1962:46-47).

This increase in amount of money coming into the village from wage work has appeared since the war all over Alaska, not just in those places dependent upon nearby military construction. In a few villages a relatively successful mixed economy is achieved. In Point Hope, for example, VanStone reports that "in 1946 the total wages earned by the villages, which would include those employed in the village at year-round jobs, was \$3,545. In 1955, the figure was \$53,841" (1961:142). A similar picture is found in Gambell (Hughes 1960:198 ff.). But there, as in some other areas, income was highly irregular,

deriving mainly from intermittent construction work. Within the space of three years the total village income of Gambell almost tripled, going from slightly over \$26,000 to \$66,000 (Hughes 1960:207-08). This, however, was followed by sharp decline and very lean years, resulting in a keen sense of frustrated expectations.

The most dramatic intrusion of money in the form of wages has been, as in Canada, that associated with the large-scale military projects. The U.S. Navy's petroleum installations at Point Barrow have been mentioned. Since this has had considerable cultural influence on the entire north coast of Alaska and illustrates many of the problems and effects of such employment, it will be mentioned at length:

The possibilities of Eskimo labor at the... Base were considered in 1946. There was no question as to the desirability of obtaining Eskimo labor, but the factor of the health problem was seriously to be considered. The high rate of tuberculosis among the residents of the Barrow community created several serious administrative questions. There was no question that the inhabitants of Barrow would be able to assume tasks requiring a high degree of manual skill. This was proved by the fact that such organizations as did operate at Barrow and which did hire native labor had obtained markedly satisfactory results. The manual skill and dexterity of the Eskimo are too well known to require further comment here and the Eskimo, as an ethnic group, have been able to transfer skills drawn from the aboriginal setting to modern technology with ease. Many Barrow residents had gone southward to Fairbanks and other points during the war years and had learned various skilled trades, while the few jobs that did exist in Barrow, such as with the Native Service School and Hospital, the Wien Airlines, Alaska Communication System, and the like, were successfully held by native laborers. The community council did appeal to Arcon [i.e., Arctic Contractors, the private concern which handled the drilling operations] for employment. With A.N.S. selection and aid, Barrow residents were chosen to work at the naval installation, were examined for tuberculosis, and hired.

Commander Roberts, late of the Barrow area, comments that 35 Eskimos were at first taken on as laborers in July 1946....

Later this number was increased to 80, among whom were several women, employed as seamstresses. From 1946 to 1952, the number of Eskimo employed at the... Base has averaged between 75 and 80, the work being in large measure seasonal and with seasonal layoffs. The health problem, sanitation, and the like have been considered by the naval and Arctic Contractors officials, and attempts have been made to remedy the situation from time to time. The fact that the Eskimo, not only those from Barrow, but those who have come from other settlements, such as Wainwright, Point Lay, etc., to take advantage of the employment opportunities, are paid at the prevailing Alaska wage indicates that a new source for money has been found. The dissemination of cash throughout the Barrow community has made for a series of recent changes in material adjustment. It has meant that a situation comparable to that enjoyed by the community during the fur boom has been recreated.

The fact that the Barrow residents [who] are employed at the naval installation work mostly a 63-hour week, with time and one-half for overtime over 40 hours, and that they are paid standard skilled and semiskilled wages, accounts for the rise of a new cash economy. This is correlated with the decline in the native arts and crafts and the development of new services, such as motion-picture theaters, the coffee

shops, stores and other luxuries. Since the community has a population of 1,050 and since as much as one-tenth of this population is employed for at least part of the year, the force of the new economy is at once apparent. Virtually every family profits either directly or because of the dissemination of cash by wage-earning residents (Spencer 1959: 362-363).

As Spencer notes later (1959:358), the Navy has since closed its petroleum operations. He does not feel, however, that this will seriously disorganize the community, although it will create some hardships.

An example of the manner in which the D.E.W. Line construction and maintenance has affected a group of north Alaskan Eskimos is given by Chance (1960), who studied the small, recently formed village of Kaktovik, on Barter Island. In this village of 100 people, following the extensive employment during construction of the radar line, in the summer of 1958 still "approximately 75 per cent of the men in the village were earning salaries of six hundred dollars a month. For most of these men this was a full-time, relatively permanent occupation" (1960: 1029). Chance goes on to indicate his feeling that such stability of income is an important factor in the apparent integration of the community.

Such increase in income is turned mainly toward purchase of material goods from the white world (e.g., Dale 1953:170). Traditional Alaskan Eskimo material culture has shown the effects of such trade contacts for a hundred years. Weapons and tools were the first items obtained, and then there quickly followed clothing, food, and various household items, including the house structure itself. Now there are few "aboriginal" houses remaining, and the common structure is that built of imported or scrap lumber. In some places this is a makeshift building, utilizing discarded materials, and it is now usually heated by stoves (instead of blubber lamps) burning coal, fuel oil, or wood. As noted before, most of these houses create serious public health problems (Alter 1957:112), a matter to which health authorities are turning attention in the form of trying to develop more effective, climatically adapted houses for native peoples (see Public Health Reports 1960:905 ff.). Increasingly, especially during the 1950's, material culture is therefore being made over largely to be an imitation of that of white Alaskans.

Perhaps the principal vestige of aboriginal patterns remaining is the relatively large amount of sea mammal and caribou meat still eaten along with imported foods. For many people this is perhaps more by necessity than by taste, for the younger generation is increasingly turning to a changed diet. One of the by-products of this altered diet, as in so many other areas of the world, is imbalance and undermining of over-all health status. As pointed out in dietary studies undertaken in Alaska, the transitional diet, which fails to achieve the nutritional balance of either the traditional Eskimo way or that of the white world, creates a lowered resistance to tuberculosis and other diseases as well as widespread dental caries (Haldeman 1951; Scott 1957; Mann, Scott, and Heller 1960). Only the rare group, such as those at Anaktuvuk Pass, still subsists mainly on an aboriginal, high

protein diet (Ingstad 1954); whether, however, that group still does may be open to question now, given the extent of contact in the last decade.

SOCIOPOLITICAL ASPECTS AND ACTIVITIES

As in Canada, there were missionaries and some governmental agencies operating in Alaskan Eskimo villages for many years prior to World War II. In Alaska, however, the difference between intensity of contact with outside agencies before and after the war was much less than in Canada. As noted above, Christian missions were first established in southwestern Alaska and the Aleutians by the Russians, thus beginning one line of acculturative influences. With the purchase of Alaska in 1867 by the United States, establishment of other types of mission churches in most of the major coastal and some inland villages followed during the next half century. The missionaries tended to be all-purpose men: preacher, teacher, healer, and (often not too well accepted) community leader. The schools soon became formally separate and were placed under the aegis of the Bureau of Education, U.S. Department of the Interior. With that, one aspect of the role of many missionaries was curtailed and another and somewhat different type of white man came into the villages. These two, missionary and teacher, with occasionally a trader and a nurse, were the principal contact agents in many outlying Eskimo villages prior to World War II. A fuller discussion of these developments is contained in Jenness (1962:18-31).

As in so many parts of the world, World War II represented a Rubicon with the past. For many Alaskan Eskimos the war had an intimate, personal meaning through their service in the "tundra army," the Alaska Territorial Guard. This was a voluntary militia begun in 1941 on St. Lawrence Island which quickly spread all over the territory. Of the then estimated 20,000 Eskimos, Aleuts, and Indians, "the total number actually involved as active members was about 2,700—a lack of accurate records prevents a thorough tabulation. Nearly every mature native man from Egegik to Point Barrow joined the ATG" (Blakeney 1952:9). Other Eskimos served in the armed forces; and, since World War II, belonging to the local National Guard units is popular with the young men.

Self-government in the form of a village council began in some villages during the 1920's and 1930's, the movement initiated by the missionary or teacher (Jenness 1962:22). In the late 1930's some of the existing councils were formally reconstituted under the Indian Reorganization Act as the communities themselves incorporated, and by 1949 some 32 villages had thus organized themselves for representative self-government (Lantis 1952*b*). These were not, in all cases, fully effective institutions for dealing with the many types of problems facing the community, although they had a wide-sweeping scope of authority (e.g., Oswalt 1961*b*, 1961*c*; Hughes 1960; VanStone 1962; Spencer 1959). But they represented an attempt on the part of the government to implant regulative institutions of the larger culture both as a bridge toward transition into that culture and as a retaining

wall for maintaining community and cultural integrity during the process. In 1962 each Eskimo village (of the 100 or so Eskimo and Aleut communities out of the 155 native villages or areas) was said to have a council (Bureau of Indian Affairs 1962); these were not all organized on a formal basis, however. Only about half were organized under provisions of the Indian Reorganization Act (House Report 1953: 1400-1405).

Although the institutional form has not changed since the war, the problems they have to face are more numerous as well as different. With much more contact with outside agents, there are more basic economic quandaries to solve, conflicts between young and old, and often delinquency and breakdown in aboriginal methods of social control. Without effective local enforcement powers, the councils have an increasingly difficult role in maintaining social order.

Since the end of World War II there has been considerable governmental activity directed toward economic stabilization and rehabilitation of Eskimo communities, although in Jenness's view hardly enough (1962:42-48, 56-59). One of the first expressions of this was the formation of the Alaska Native Industries Cooperative Association which, as mentioned above, was begun shortly after the war at the stimulation of the Alaska Native Service. A territory-wide consumer co-operative marketing and purchasing organization, its purpose was to bring the benefits of lower costs and better management to the native peoples of Alaska. In 1947, 20 Eskimo and 7 Aleut-Indian stores belonged to the organization (Lantis 1952*b*:40), and at the present time the membership figure stands at 32 for Eskimo and Aleut villages (Bureau of Indian Affairs 1963).

Another area in which government activity has increased since the war is that of welfare and emergency support. First the Territorial and now the State department of welfare attempts to alleviate cases of economic or other hardship, in many cases caused by hospitalization of the able-bodied male or the mother of the family. This latter type of problem has considerably declined, however, since 1955, when the intensive program aimed at controlling tuberculosis was instituted on a vast scale by the U.S. Public Health Service. One result of such welfare aid has been to increase the "social utility" of old age and the feeling of independence created in elderly people by receipt of welfare support. It may also influence marriage patterns—widows having less need to remarry to find support for their children, for example. In any case, such income has become an important factor in helping stabilize the economic situation in many areas, and dependence upon it has greatly increased since the war.

As noted before, housing is one of the key problems to Eskimo life in the modern world. After World War II the Alaska Housing Authority began to grant loans for rebuilding Eskimo dwellings more in line with climatic and health needs. By 1949 it had granted 42 such loans (of up to \$500 for a six-year period) at Hooper Bay, and in 1950, 6 villages on the Bering sea got 91 new homes, with 79 others being improved (Lantis 1952*b*). This program was discontinued, however, in 1952 (Jenness 1962). With the influx of population at Barrow, many new houses

were constructed under an A.N.S. housing program. Jenness, as do so many people, underscores the inter-related aspects of housing and other features of the total life situation, saying that "a cohesive force... similarly binds together Eskimo housing, Eskimo diet, and Eskimo health, and links all three with Eskimo incomes. For it is the excessive lowness of these incomes, more than ignorance or any other factor, that produces today's inadequate diet and miserable housing; and the latter in turn are the principal causes of the prevailing malnutrition and ill-health" (1962:56).

The increased activity of federal, territorial (and later state) agencies in developing public health programs that reach into local villages, administer to ailments, attempt prevention through changing circumstances and behavior patterns, and often take villagers away for long periods of hospitalization and convalescence, has been mentioned above. Suffice it to report here that this activity on such a widespread basis is a development primarily of the last decade, particularly since 1955, when the U.S. public health service took over responsibility for Eskimo health. Some of its long-range demographic implications cannot be clearly outlined yet, but certainly the restructuring of expectations around the possibility of longevity and release from a heavy burden of sickness will have profound effects on individual and social life in these communities.

In 1948 there were 55 Alaska Native Service or territorial schools serving Eskimo communities—in addition to two high schools, one in southeastern Alaska, Mt. Edgecumbe, and one on the Seward Peninsula (since closed down). At the present time education of the Eskimos has partially been turned over to the State of Alaska. About 100 Eskimo communities have schools and teachers, some operated under the State Department of Education, but most of them still under the jurisdiction of the Federal Government (Bureau of Indian Affairs 1962). Despite the frequent interruption in schooling occasioned by hunting, fishing, or trapping activities of their families, there is no question of the desire on the part of Eskimo children to receive an education. Ray's recent study (1958) reports on educational aspirations of these young people, whose objectives clearly reflect an economic slant: an education is desired which will insure an immediate and continued employment, relatively high income, personal prestige, and preferably a job in their own communities—a combination of wants difficult to fulfill. There is also an insistent demand for a higher level of education (at least some high school is the minimum demand), and dissatisfaction with the lack of realistic chances for high school education (the Mt. Edgecumbe high school is considered badly located, since it is many hundreds of miles away in southeastern Alaska). Other comments on Ray's studies of education among the Eskimos are found in Jenness (1962), along with Jenness' own discussion of the manner in which schools fitted into maintaining a racial-ethnic segregation of Eskimos, and the shifts in educational philosophy pertaining to the purpose of educating the Eskimo child.

In most Eskimo communities the school serves many functions. It is a hostel for visitors, a community center, often a meeting hall, recreational area, political

forum, and medical clinic. In addition, the program of school lunches for children is an invaluable adjunct to public health programs. The teacher himself is, often inadvertently, a community leader, although his effectiveness varies from one place to another.

SOCIAL ORGANIZATIONAL FEATURES

BASIC SOCIOECONOMIC UNITS

In his definitive study of the north Alaskan Eskimos, Spencer lays great stress on the stability of the bilateral extended family grouping, both in past times and under modern conditions of change. In his view this is the cornerstone of the village social system, the principal locus for economic, social, and leadership functions. Spencer's summary of the importance of this kinship form is worth presenting in order to bring out some of the patterns he outlines as true of the Arctic slope, as well as the contrasts he presents with some features in other places in Alaska:

In virtually every respect the aboriginal family structure carries through into the present. However much the inroads of modern living have disrupted other aspects of the cultures of the north Alaskan slope, the system of mutual aid, of social control, and of reciprocal obligation inherent in the family remains paramount. Many features have, it is true, fallen into disuse. The charms and amulets which might pass through a family line are of course no longer used, at least overtly, and the collective responsibility with its implications of blood feud which underlay so much of what may be called law is likewise gone. Individualization, so characteristic of western culture, is beginning to make its imprint on the Eskimo family institution. Social controls today still rest in the family. There has been no adequate development, among the native population at least, of political institutions, with the result that there is essential lack of interest in the attempts of the Alaska Native Service to effect community organization. So long as the family continues to provide the social cornerstone, no need is felt for institutional surrogates.

There are those who have claimed that Eskimo society is communalistic. To some extent this is true, if the extended family is regarded as the communal or collective element. Any other non-familial forms of either sharing or cooperation were... strictly patterned and somewhat limited. Neither the maritime community nor the nomadic band were permanent units; they depended for their existence on the kinship section which lived together, worked together, and moved together forming a collective entity, but there were recognized ties of kinship that went far beyond the local situation. Aboriginally, along the whole Arctic coast of Alaska, from Point Hope to Barter Island and Herschel Island, there were the intertwined threads of recognized kinship.

Here was neither a formalized clan type of society nor a recognition of a unilineal descent. This meant, and means, that there was a recognition of bilineal kinship and that in the individual, membership in two different lineages was possible. Sexual relations with those who were designated by a kinship term were rigorously tabooed. Not that the prohibition was enforced in any tangible way, and there were exceptions. But such deviations were few and bore the brunt of unfavorable public opinion. A basic principle of social organization of the cultures in question was to extend, either through the blood tie or through an acceptable substitute for it, the sphere of kinship. It was between such

related individuals that the strong bond of cooperation lay. One might argue that cousin marriage was defined as incestuous because it hindered the development of the patterned cooperative institutions, or at least prevented new ones from coming into being. Because of bilateral descent, the individual could count on a wide circle of kin, reckoning both his father's and his mother's kin grouping as his own. Such recognition was extended to the kin of his grandparents as well, although the tie became quite tenuous when pushed further back. Each individual, therefore, had kinship ties with several different groupings. He belonged to the circle in which he happened to be and his economic contributions related to it. His other kindred, however, likewise had a claim on him and he on them. The ultimate definition of kinship lay first in the designation of kin by specific kinship terms, and second, in the obligations incumbent on the individual to succor his kin and to assume responsibility for their actions. Kinship was and is a reality; it was a practical matter in that the blood tie was known and recognized. The individual thus belonged to a nuclear family and then to an extended kin grouping or at least to groupings which reached a point of convergence in himself. And beyond this lay the realm of quasi-kinship, the formalized extensions of the cooperative tie to nonkin (Spencer 1959:62-63).

In this northern area, therefore, the extended family, although not necessarily still the residential unit in all cases, continues to be the basic social and to some extent economic unit. The same picture holds for St. Lawrence Island, where these extended families themselves are merged into larger lineage or clan groupings which function as political and economic corporate groups (Hughes 1960). But apparently a somewhat different situation prevails in other villages, where the bilateral extended family has suffered attrition over the past generation and is being further subjected to shrinkage by extensive penetration from the outside world. This is obviously a situation of relative, not absolute, loss of function by the extended bilateral family. Furthermore, in some places the process has been going on for quite a while, although intensified since the war. VanStone notes for Point Hope, for example:

The extended family group, which was once the basis of Point Hope social structure, has long since been replaced by relatively small conjugal units, usually composed of a man, his wife, their children, and perhaps one or two dependent relatives. There are, at present, no more than six true extended families in the village. Rainey has pointed out that once open feuds disappeared, the need for the powerful combined families that once characterized Point Hope social structure was no longer urgent. . . . When young couples are able to afford to build their own house, they may choose to construct it in close proximity to the home of the older relatives with whom they once lived; thus, certain areas of the village are associated with expanded families. Men related by blood, or marriage, tend to hunt together and will help each other when hunting conditions have been bad. The sharing of equipment among related peoples is also prevalent. Apparently the existing system of small conjugal families occupying their own dwellings has been in existence for a long time. In 1940, Rainey was unable to get much information, even from the oldest people, about the old, extended family groups (1961:95).

VanStone has indicated that, as elsewhere, the major bases of organization for extended families in the past were mutual protection of members and economic interdependence. With introduction of the legal system of the United States, the need for protec-

tion declined, and with fox trapping, use of the rifle and other modern subsistence equipment, the need for economic interdependence as a production corporate unit has also somewhat declined (although still found to some extent in the boat crew). Increase in opportunities for wage employment further strategically undercuts the extension of kinship relations. VanStone himself notes this trend when he says:

The strength of family attachments becomes weakened when one member works for cash outside the village. A married man will usually send money earned in this way to his wife and children, but an unmarried man often does not feel obligated to turn even a small portion of his wages over to his family (1961:162).

This small nuclear family (with some co-operative extensions such as in the boat crew) is also said to be the basic social unit in Wainwright (Milan 1958) and in Napaskiak (Oswalt 1961*b*). The shrinking in size of the functional family unit undoubtedly is the general trend in most villages, given the decline in economic interdependence occasioned by the coming of wages, welfare funds, and auxiliary food resources in time of need. Oswalt well states the matter, bringing in the several other factors in the situation that tend to concentrate the population and make it ever more independent of an unyielding tie to a subsistence economy:

In order to understand the current situation, it may be helpful to consider the shift in settlement pattern that has occurred in the past 20 years and the resulting effect upon family life.

The present means of exploiting the environment at Napaskiak permits little accumulation of surplus goods; local resources are meager, and the population was scattered in aboriginal times. The introduction of Western ideas has not increased the area's productivity, but it has modified the economy and the social system. The area of Napaskiak is still an extremely marginal region of the world, and local products are utilized to a maximum. There has been a shift in the productive unit. At the time of historic contact and until about 20 years ago, the people spent most of the year at their tundra trapping camps and river fish camps, but very little time in the permanent village.

The extended family units living [in] the camps were separated, and each could exploit the surrounding area to its own advantage. With the coming of a village school, the people were forced to live in the village most of the year so that their children could attend classes. This meant that the extended family could no longer exploit its tundra camping area as a unit, and fish camps were dropped almost completely. The men have tended more and more to go to camp alone when they go at all. The extended family began to break up, due in part to the difficulty of any large unit with many nonproductive members being sustained on the products available *near* the village and in part to the independence of the subsistence economy afforded the aged (who usually headed extended families) by Old Age Assistance grants from the government. The trend is clearly toward smaller nuclear family units.

Under circumstances in which the nuclear family is the primary subsistence and residence unit, husband and wife ties become stronger and father-son ties, which were formerly strong, become weak. The nuclear family of each household becomes self-sufficient, and this is modified only by close kinship ties, particularly between brothers (1961*b*:126).

MARRIAGE PATTERNS

It is impossible to make systematic statements regard-

ing many aspects of recent changes in marriage patterns because the ethnographic background is not known for most of the Alaskan groups. There would appear to have been diversity, however, in choice of partner—with preferred choice in some areas and wide latitude in others. On St. Lawrence Island, for example, there was no preferred partner, while VanStone indicates a pattern of cousin preference at Point Hope and notes how this has changed as a result of demographic factors:

The Point Hope social system is further characterized by preferred parallel- or cross-cousin marriage, bilateral descent, and bilocal residence. The preference for cousin-marriage, stronger formerly than it is today, is largely defeated by the relatively small number of marriageable women in the village. As mentioned before, a man does well to find a wife at all, let alone one who has the preferable relationship to him (1961:94).

One might expect this trait to be fairly widely shared along the north Alaskan coast, but Spencer says of the Barrow Eskimos:

The family groupings to which the individual belonged were ideally exogamous. It is evident that a goal in marriage was to extend as far as possible the bonds of mutual aid and cooperation. For this reason, marriage between cousins was not desirable and similarly, there was no levirate or sororate. Cousin marriage is reported as occurring in a few instances; here, however, even the second collateral degree was held improper, such marriages occurring only between relatives of the third collateral degree. But even such marriages were frowned on. It was felt that marriage between blood kin, however remote the tie, produced inferior offspring, individuals who were "not quite human." This seems to be an aboriginal concept and not derived from Euro-American contact (1959:75).

Of the other reliable sources for modern Eskimos, Oswalt reports that the only serious limitation on marriage in Napaskiak is that one must not marry a close relative; this would mean no one closer than a first cousin (1961b:79). A similar restriction prevails in Gambell, St. Lawrence Island, where this restriction is itself lodged within the context of a clan system. Of Nunivak Island in past days, Lantis reports still another rule:

So far as kinship was concerned, the only marriages absolutely forbidden, aside from the usual parent-child and brother-sister ones, were marriages between *any people in uncle-niece or aunt-nephew relationship*. For example, a man could not espouse his brother's or his sister's daughter. He could, however, marry a parallel cousin's daughter even though, according to Nunivak terminology, he did call that cousin his brother or sister. A person could marry his serious partner or joking partner or a cross-cousin or a parallel cousin, although people were quite dubious about this last one (1946:233-23).

It seems clear from the scattered data available that much work remains in filling basic gaps before an adequate distributional picture of traditional marriage patterns—as well as cousin terms—can be drawn. What seems to have been happening in the recent twenty years or so, however, is that, regardless of former patterns, in most villages there is a strong tendency toward individual choice of spouse outside certain forbidden degrees of close relationship (which in most cases would probably be the nuclear family).

This individual desire is no doubt still greatly influenced by opinions of family members; but with the increased emigration of young people for work or schooling, it becomes, as VanStone notes, more and more difficult to find an eligible spouse if restrictions are too severe.

The same picture of change and flux in pattern is presented by residence following marriage. Traditionally, this could be any of the several possibilities: bilocal, neolocal, uxorilocal, virilocal, or even uxori-virilocal. Especially in those groups, such as Barrow, having a well developed bilateral extended family system, any of the first four alternatives could have prevailed. As Spencer indicates,

There was no formality regarding residence requirements. Patrilocal or matrilocality, or separate residence, in fact, depended wholly on expediency. The kinship terminology reflects no bifurcation of paternal and maternal kin. There is, however, some slight evidence that the patrilineal bond was considered somewhat more important (1959:74).

Among the St. Lawrence Islanders, the fifth alternative was clearly the pattern until fairly recently when it has begun to undergo change to that of neolocal residence (Hughes 1960); moreover, Birket-Smith (1959:141) suggests this was found also among the Aleuts.

With the boundaries of villages being somewhat amorphous and permeable, it becomes a bit difficult to fix definite rules of exogamy or endogamy. In the past, however, there appeared to be a general tendency toward village endogamy, at least in the larger communities. With much more travel and exposure to the outside now, however, this pattern is breaking down. For one thing, a significant number of Eskimo girls have married white men, and in most cases then moved to the larger cities of Alaska or other states.

Most of the smaller villages on the mainland may still, however, be called, again in Murdock's term, "demes," although some traces of unilineality on a patrilineal basis can be found. VanStone's description of the situation at Point Hope is probably generalizable to most mainland villages:

Point Hope is a community which is characterized for the most part by village endogamy, and as a result, is not segmented by unilinear consanguineal groupings of kinsmen. Because of the fact that local endogamy is prevalent, the inhabitants are necessarily related to one another through intermarriage, though they are not always able to trace the exact kinship connections. Within the community, the only social structuring is into families, and except for family ties, the strongest sense of identification is with the community as a whole. Murdock refers to this type of grouping as a "deme . . ." (VanStone 1961:95).

As has been noted elsewhere, however (Lantis 1946; Hughes 1959; Giddings 1952a), there are definite signs of unilineality among other groups farther south in Alaska, and further investigation may reveal indications of unilinear trends more widespread than thought before.

On the other hand, even the characteristics of a deme are rapidly being lost in a large, "cosmopolitan," heterogeneous Eskimo community such as Kotzebue, which since the war has attracted many people in the

hope of jobs. In such a place, however, there are fragmentary group structures and the nuclear and in some cases the extended family is still strong (Parker 1962). But there is little overriding sense, or symbols, of cohesion of the Eskimo group as such.

Even the whaling crew, one of the key institutions in the coastal communities north of Norton Sound, is no longer necessarily composed of relatives, although in the past this was usually the case (Spencer 1959; VanStone 1961). As indicated elsewhere, on St. Lawrence Island the tendency for crews to be made up of patrilineally related kinsmen is still very strong, an expression of the prevailing clan organization. Now, however, in Barrow, Point Hope, Wainwright—and therefore probably the other communities north of Bering Strait—members of crews are “hired” by unwritten contract to serve for the hunting season, and they may change affiliation at will. Economic rationalization has therefore begun to strike into the heart of formerly the most important corporate group among these coastal peoples (although this apparently has been going on for quite awhile in Barrow, at least).

There has also been a decline in the number and variety of partnerships formerly so characteristic of much of the mainland Alaskan Eskimo culture. The most important type of these was based upon trade (as between coastal and inland groups, for example), but also included exchange of wives and were functionally of great importance in extending outward to non-kin the bonds of mutual help and support characteristic of kinsmen and thus providing a means of wider social integration and stability through multiple segmental relationships. These fictive kinship relations have tended to diminish. VanStone, for example, notes that the type of partnership which included exchange of wives and economic reciprocity and mutual aid has pretty much died out in Point Hope (1961:86-87).

One of the most significant integrative institutions in practically all Alaskan Eskimo villages—the men’s house—has disappeared, its demise hastened by the disruptions caused in the traditional seasonal round by World War II, although the trends had begun prior to that. As noted before, these were ceremonial, recreational, work, and often sleeping and eating houses for men. Along the north coast, they served as the identifying locus for the whaling crews hunting under the captains, the *umealik*, in the Barrow dialect. Spencer discusses at some length the multifold functions of the *karigi* in the traditional culture and indicates that now only vestiges of these remain in the performance of aspects of traditional ceremonials at Christmas time (1959:181 ff.). Now the church, the school, the coffee house, and movie have effectively fractionated the integrative locus which was the *karigi*.

While the general trend is therefore toward disappearance of this institution, it is not completed. VanStone notes that in Point Hope there still are two of these dance and club houses—there called *Qalegi*—and that they are important in the context of the spring whaling ceremony that is still held (and blessed by the missionary) (1961:81 ff.). In southwestern Alaska the situation is a bit obscure, but it probably resembles that found in Napaskiak, where,

following the destruction by fire of the *kashgee* in 1950, the structure was not rebuilt, and some of its functions are continued by the sweat bath. Certainly many more of its functions have been lost, as elsewhere in Alaska, to the church, the school, the movie, the store.

In Alaskan groups, leadership was always based, as elsewhere among the Eskimos, on the combination of hunting prestige, wealth, respect, and fear. The whaling captain and the shaman were the traditional leaders. But for many years prior to World War II these two had to contend with the missionary, teacher, or trader. With the coming of the war, however, a whole set of new influences entered the picture, foremost of which was education and the ability to handle the English language in dealings with the many outsiders who came. At the same time, in coastal communities where whaling and walrus hunting is still an important subsistence activity, the prestige of the whaling captain remains; in this northern environment it does not so easily retreat before industrialized civilization. In other communities, however, the general picture is that of indigenous leadership being continually reduced due to reduction in size of the functioning family units, which, as work groups, are becoming more and more individualistic. VanStone’s appraisal of the situation in Point Hope could probably be extended widely to many other communities. Much of it tends to be applicable to Gambell:

The decline and virtual disappearance of the large extended families at Point Hope has, more than anything else, served to reduce the importance of the family head in the village social structure. In spite of this, leadership patterns do not seem to have undergone as great a change as might be expected. The most important men in the village are still the good hunters and whaling captains. If these individuals also happen to be strongly associated with the Church, it does them no harm. However, being strongly associated with the church is not enough in itself to insure a position of leadership. The most obvious village leader is the council president, and in more recent years, the tendency has been to elect an individual who speaks good English and is an adequate spokesman for the village in contacts with the outside world. The less obvious aspects of leadership are seen in day-to-day activities, and under these circumstances, the successful hunters and whaling captains function as leaders. If these individuals are also well-adjusted to a money economy, it will enhance their position in the eyes of the villagers and their prestige will be increased correspondingly. Although leadership qualities remain much the same as in the past, the individuals who possess them are no longer the heads of large extended families, and their influence is thus correspondingly decreased (1961:157).

In many communities also there are other introduced institutions which, in varying degrees, serve leadership and co-ordinating functions. These range from the artificially imposed “chief” in Napaskiak (appointed by the Russian Orthodox missionary) to the voluntary religious, social, and educational organizations, such as men’s Brotherhood or women’s Sisterhood. The importance of the other types of new leaders should also be underscored, such as the lay preachers, ministers, National Guard sergeants, bosses of work crews, sanitation and health aides, and store managers. Knowledge of the types of people who serve leadership functions during transitional phases is especially important, of course, for such problems as applied

and community development activities. In this connection as well, in addition to the earlier article by Lantis (1952*b*), many insightful and useful considerations affecting the course of guided culture change are contained in the monograph by Jenness already referred to frequently (1962), and that by Oswalt (1961*c*).

SIBERIA

INTRODUCTION

In recent years there has been little published in the English language concerning the 1,000 or so Asiatic Eskimos (*Yuit*) living in several villages scattered along the Chukchi Peninsula on the easternmost tip of Siberia. For earlier times there are sections of the Jesup North Pacific Expedition reports, as well as other, subsequent publications of Bogoras and others. Birket-Smith's revision of his standard work (1959) has some information on the Asiatic Eskimos living in the Soviet Union, both for aboriginal and modern times, but does not go into any great detail. Kolarz (1954) and Armstrong (1958) contain broadly historical and economic discussions of the spread of Soviet influence into the northeastern regions of Siberia, with some specific references to the Eskimos. As might be expected, most of the relevant literature on recent cultural change in the Chukchi Peninsula is to be found in Soviet sources, and at this time few translations exist. Of the Soviet works, those appearing to be most useful in regard to discussion of current socioeconomic patterns (because they are the most sharply focussed on changes among the Eskimos) have been Smoliak's discussion, "Materialy k kharakteristike sotsialisticheskoi kul'tury i byta korennogo naseleniia Chukotskogo raiona" ("Materials on the characteristics of socialist culture and life of the native population of the Chukotski district") (1957); Levin and Potov's chapter on the Eskimos contained in the compendium *Narody Sibirii* ("Peoples of Siberia") (1956); and brief sections of Voblov's discussion of Asiatic Eskimo ceremonialism (1952).

Articles by Sergeev (1962) and Menovshchikov (1962) dealing with the kinship system of the Asiatic Eskimos also have some mention of contemporary patterns, as does work by Fainberg (1955), although they deal principally with the question of the aboriginal social structure. Other relevant literature exists in the vast production of Soviet scholars concerned with different aspects of the life of native peoples of the north. One example is the formidable work by Sergeev, *Nekapitalisticheskii put' razvitiia malykh narodov Severa* ("Noncapitalistic development of the small peoples of the north") (1955), which, at scattered points throughout its length, considers the past history and current development of the Chukotski Eskimos as part of the larger picture of change among the aboriginal peoples of the Soviet north. Unfortunately there has not been time, during the preparation of materials for this review, to disengage all such relevant references from their Russian language context; and publication schedules and a laborious level of language competence have conspired to

prevent anything more than a cursory review of this work at this time. Unavailability of the books has prevented my reviewing two other obviously relevant sources recently drawn to my attention: Menovshchikov's *Eskimosy* ("The Eskimos") (1959) and *30 Let Chukotskogo Nacional'nogo Okrugā* ("Thirty Years of the Chukotka National District") (1960). But it is hoped that for the major concerns of this survey—i.e., recent cultural developments affecting social and socioeconomic organization—the principal sources upon which the discussion is based do represent an accepted Soviet formulation of main outlines of development. It seems reasonable to assume such to be the case, given the publication auspices (i.e., Academy of Sciences of the U.S.S.R.).

Highly useful, recent non-Soviet reviews of the Soviet literature as it pertains to questions of ethnographic problems and studies of culture change in the U.S.S.R. are those of Vucinich (1960) and Dunn and Dunn (1962). These latter articles also discuss some of the ideological premises underlying such studies which may influence interpretation of data by Soviet as against some non-Soviet scholars.

The population being referred to in this discussion of the "Asiatic Eskimos" living in Siberia is about 1,100 people. The 1926 census listed 1,292, and the most recent census (conducted in 1959) gives a population total of 1,100 (Armstrong 1962:177). With the introduction of health measures and some stabilization of the economy in the years between 1926 and 1959, one would expect an increase in total population; so the difference between the two figures may be due to emigration, changed interpretation of nationality, or both. Armstrong (1962:173) comments on shifts in interpretation of ethnic identity as probable causes of some of the demographic anomalies found in other sections of the census, so this may hold as well for figures pertaining to the Eskimos.

But the Eskimos of the Soviet Union have a cultural interest far beyond their relatively meager demographic contribution to the Eskimo population (constituting only about 1/50th or so of the total group). They represent a fourth instance of the effects of varying national jurisdictional policies on a basically similar ethnic group, which, if comprehensive parallel data were available, would provide the framework for a worthwhile comparative study of the differential effects of development programs. With reference to another and more specialized topic—Eskimo social organization—they are also of considerable importance; for apparently there were fully developed clans or unilineal corporate groups among them until recent times, groups which still may be important in structuring some aspects of social and economic life today (Sergeev 1962; Menovshchikov 1962; Fainberg 1955). The structural parallels between the Chukotski Eskimos and those on St. Lawrence Island, Alaska, in the matter of patrilineal clans are striking (cf. Hughes 1958*b*).

Due to the paucity of data in English concerning the Soviet Eskimos, some of the basic material will be set forth here. This will first be done in connection with description of the traditional and changing form of social organization.

Patrilineal clans were the principal feature of the traditional social organization, just as on St. Lawrence Island. In the survey volume of Siberian peoples published in 1956 by the Academy of Sciences of the Soviet Union (Levin and Potov 1956), the chapter on the Eskimos discusses some aspects of corporate, named, unilinear descent groups among the Chukotski Eskimos. An important theme throughout the discussion is the tracing of social evolution from matriarchy to patriarchy and the search for vestiges of purported earlier stages of evolution, in line with an orthodox Marxian (from Morgan) theoretical formulation. Relevant passages are the following.

Eskimo social structure of the past has been inadequately studied. Existing on this question are fragmentary data in the form of various interpretations by different explorers. Ethnographic and folklore data testify that in their own social development the Eskimos went through an era of matrilineality, survivals of which were preserved up until the 20th century. Observers have noted the important role of women in Eskimo social life, especially in religious ceremonies.

The most important institution of the kinship system of the Eskimos—exogamy—is not recorded, although vestiges of the past existence of exogamous norms are seen in various terms for designating relationship to the father's as against the mother's side, in particular those for uncles on the maternal as contrasted to the paternal side. Thus, maternal "uncle" was called *an'ak'*, and paternal uncle was *atata* (in the Unazik [Chaplino] dialect).

A survival of a kinship name has, apparently, for a long time been preserved in the common name by which one group of families distinguished itself from other families, calling themselves by the common name Nynlyuvak, Lyakag'mit, Pagag'mit, and others; in Cape Sireneki, Sig'inig'mit, Silyakag'mit, and others; in Cape Naukan—Mamrokh'pag'mit, Sitkomag'mit, Tugrag'mit, Imtug'mit, and others. Evidence of the former kinship organization is the prevailing form of marriage—that of a period of groom work for the fiancée, the same as with the Chukchi. All this allows one to make the assumption that the Eskimos also went through their own developmental stage of matrilineal kinship organization.

By the beginning of the 20th century patriarchal attitudes predominated—inheritance from father to son, reckoning of kinship from the father, patrilocal marriage. Clear traces of matrilineal kinship and evolving patriarchal attitudes testify that the Eskimos, apparently, were found in a transitional step of development from matrilineality to patrilineality. That process by reason of a series of conditions was not brought to completion, and the process of moulding patrilineality is collapsing.

In the region of economic attitudes vestiges of a primitive communal system are seen in the "baidara artel" (co-operative work group) (*an'yam ima*, i.e., "the contents of the baidara"). The Eskimo boat crew was organized on the same principle as that of the Chukchis. Members of the artel were often very closely related to the owner of the boat—his brothers, sons, or nephews. The master of the boat was the hunter who had built it with the help of his own family or had received it by inheritance. In accordance with tradition, in the old days each boat crew (all together) occupied the same ningloo with a common hearth, but each family had a private sleeping platform. At the end of the 19th century the separate families composing the baidara artel had already become isolated from the others. Each such family conducted its own economy individually and united only for the hunt (Hughes translation 1963a).

Of particular interest in this passage are the references to the possibility of exogamy (with an implied bifurcate collateral terminology—which in the examples given is identical to the terminology on St. Lawrence Island; see Hughes 1960:230-231); the distinctive naming of family groups; the "inheritance from father to son reckoning of kinship from the father; patrilocal marriage;" the organization of the boat crew along patrilineal kinship lines; the erstwhile common residence of all boat crew members and their families in the same large house. Although the latter of itself would not necessarily constitute an aspect of unilineality, along with the other items in the "syndrome" it becomes highly relevant. It is also striking in its resemblance to the residence patterns existing among the Angmassalik Eskimos when discovered by Holm. There, too, in a group which, with the Yuit, sets the outermost boundaries for the Eskimos as a cultural population, the "community" was comprised of a single large dwelling inhabited by several extended families each with its own living area within the larger structure (e.g., see Hughes 1958a).

In recent years other material has appeared in Soviet sources bearing on this important question of the existence of clan groups among the Eskimos, particularly the Chukotski Eskimos. In 1955 Fainberg published an article which attempted to order the diverse and heterogeneous materials bearing on Eskimo kinship structure within the Marxist framework of societal evolution (1955), with an emphasis upon sequential stages of organization from matriarchy to patriarchy, use of cultural practices as indicators of past stages of development (e.g., matrilocal residence, female figures in mythology, etc.), and an immanent and universal schema of development that inexorably transcends situational determinants or influences. Two more recent articles focus specifically upon the Chukotski Eskimos but speak in a similar vein; the English summary to Sergeev's discussion "Perezhitki otsovskogo roda u Aziatskikh Eskimosov" ("Vestiges of Patrilineal Kinship Among the Asiatic Eskimos") (1962) states that:

In the early 20th century the Siberian Eskimos still retained some remnants of the primitive—communal, patriarchal—clan relationships.

The existence of the patriarchal clan among the Siberian Eskimos in the recent past is borne out by the following: kinship was traced on the paternal side; inheritance was purely patrilineal; at the head of a clan was a tribal elder; every clan had its own precisely delimited territory.

The basic production unit—the whale boat team—was formed on the basis of patriarchal-clan relations.

Every clan had its own fire, special celebrations, clan legends and burial places. Exogamy was strictly observed.

And similarly Menovshchikov's 1962 article "O Perezhitochnykh iavleniakh rodovoi organizatsii u Aziatskikh Eskimosov" ("Concerning Vestigial Traces of Clanship Organization among the Asiatic Eskimos"); the English summary in this case notes that:

Discussed in the article are elements of clan structure among the Siberian Eskimos. The questions of the earliest type of social structure of Eskimo society are expounded on the basis of concrete material, collected by the author in Eskimo settlements on the Chukotsky Peninsula in the past 20 years. Cited in the article is new data on the existence

among the Siberian Eskimos, up to the 1940's of the carry-overs of the exogamic unilinear clan; the existence of clan plots within a settlement; the preservation of the ancient names of every clan (their etymology is adduced); marriages among the representatives of different clan groups only; the differentiation of cousins on the father's and mother's side; collective work in building dwellings and hunting large sea mammals; the performance of communal-clan rites exclusively by the members of a given clan; the survivals of group marriage, etc.

The author notes that the likeness between the elements of social structure of Eskimo society on St. Lawrence Island (after C. Hughes) and on the Asian coast is to be explained by the ethnic unity of these territorially isolated groups of Eskimos, between which close economic, cultural and kinship relations existed up to the 1920's.

The similar elements of clan structure on St. Lawrence Island referred to in the above passage are discussed in Hughes (1960:246-268). As noted there, the resemblances of the St. Lawrence pattern to those found in Chukotski may be due not only to cultural relations between the two groups, but also to evolutionary and functional factors that seem to account for clan development of St. Lawrence Island regardless of possible historical models derived from other groups. As implied above, Fainberg's formulation (1955) would place the developments on both St. Lawrence Island and Chukotski (and, indeed, among all Eskimos) within the same necessary sequential and universal evolutionary framework.

MODERN SOCIAL, ECONOMIC, AND POLITICAL DEVELOPMENTS

Armstrong (1958) and Kolarz (1954) contain some discussion of the historical background of Tsarist and Soviet Russian expansion into the Chukotka area where the Asiatic Eskimos live. Kolarz notes the long period of comparative neglect of this region by the Tsarist government and the concomitant florescence of American influence, which began in the middle of the 19th century and extended through the 1920's. This influence stemmed primarily from commercial activities: first the presence of whaling ships in the North Bering Sea and Chukchi Sea, and then the entrepreneurs interested in foxes and other furs. Indigenous trade relations had long flourished between the natives of Siberia and those of the New World, and this pattern continued with the growth of American hegemony in the region. At one point, in fact, in the early years of this century, there were about 200 Americans settled more or less permanently in Chukotka; and, until countered by determined policies on the part of the Soviet government, the dominant economic and political influences in Chukotka came from Alaska (Kolarz 1954:89-91).

The same author comments on the continuance of some types of contact—e.g., visiting on both the Alaskan and Siberian shores—until as recent a time as 1944, and discusses the intensive efforts at collectivization and integration of the Eskimos and Chukchis into the national state. Included in such efforts are programs directed at elimination of shamans and their social and economic powers; organization of "brigades" and collective work groups in reindeer herding, fishing, and hunting activities, as well as in

other production, such as skin sewing; establishment of schools and centers for technical and political instruction; adult literacy campaigns and selective reinforcement of artistic patterns of the indigenous culture (so that it will be "national in form but socialist in content," to quote Vucinich 1960:873); improvement in sanitation and health facilities in all villages; and development of local political groups.

A more comprehensive picture of the above development is given in greater depth in Smoliak's (1957) article on social and economic developments in this region; the abstract from the *Arctic Bibliography* notes, for example, that

Collectivization of Chukotka 1928-1952 completed with the creation of 18 kolkhozes. Present-day economy based primarily on reindeer herding and sea mammal hunting is illustrated by a detailed account of a Chukchi kolkhoz near Lorino, and a Chukchi-Eskimo collective farm near Chaplino. Reindeer herding, summer and winter pastures and camps, herding routes, food supplies for herders, draught reindeer and dogs are described. Trade, shops, fairs and feasts, production of fur, leather, bone goods are noted. Fishing, whaling, hunting of sea and land fur-bearing animals. Main income sources and payments in cash and kind to kolkhoz members are analyzed. Housing, furnishings, schooling, technical training, hospitals, recreational activities.

A longer excerpt from the Smoliak article, which describes the activities of the Eskimo-Chukchi collective, will be useful in illustrating the wide range of community activities brought under the collective organizational scheme. This particular collective, located at Chaplino, is of special ethnological and comparative interest in that it is on the Siberian shore closest to Gambell, St. Lawrence Island, Alaska, and has many cultural and historical connections with the latter village:

The Chaplino Eskimo-Chukchi collective "Novaya Zhizn" is a fishing artel, one of the oldest in the region (formed in 1930). It was originally a production artel specializing in sea mammal hunting and fox trapping. The maritime hunting gave to the inhabitants basic nourishment, was the source of monetary profit, and provided food for the sled dogs. Reindeer in insignificant numbers were privately owned. In 1948 the comradeship came under the organizational regulations of a fishing artel. In that year in the collective there were 919 reindeer in the communal herd and 565 in private use. Reindeer herding, however, took up too much of the working force and did not give significant profits. This was accounted for in the first place by the lack of experience in reindeer herding and management of the collective economy. The maritime hunting gave more than half of the monetary income. Profits from transportation also significantly exceeded profits from reindeer herding.

In 1950 to the collective "Novaya Zhizn" was joined the nearby industrial artel "Sovietskii Put," in which were numbered 18 Chukchi and Eskimo economic units (87 men).

Into the collective went more than 50 able-bodied men. Both of the parts of the economy were separately rather weak in both their organization and their economic attitudes. Monetary income of both in 1948 did not exceed 50,000 rubles in total.

Utterly different opportunities for the development of the economy were created after the consolidation of these collectives. Special attention was turned to the development of reindeer herding as the most stable branch of the economy under conditions of the North. In 1948 in the collec-

tive, as has been said, there were 919 reindeer, and in 1953, 2306. Correspondingly profits from reindeer herding grew. In 1948 they did not form even 1/10th of the total profits of the collective, but in 1953 reindeer herding gave 1/3 of the profits and in income almost equalled that from the hunting of sea mammals.

It is interesting that the number of workers engaged in reindeer herding had significantly declined by comparison with 1948. This is explained by the better organization of work, and also by the use of specialist reindeer herders, the latter trained in the district special school and helping in the rationalization of the economy. The reindeer livestock are divided into two herds, which are cared for by two reindeer herding brigades; a third brigade pastures the herd of reindeer which is privately owned and numbers nearly 500 head. The best brigade is that of the experienced herder Tynairgin.

The reindeer are pastured in lands lying near the coast, between the basin of the Kurupk River and the lands of the Lorino collective, adjoining the Mechigmenskoi inlet. This place has the advantage that the herd is able to pasture not far from the sea coast. Here the herders can get vital subsidiary food, by hunting the maritime mammals.

In the winter time a few members of the herding brigade are occupied also in fox trapping, for which they have an adequate number of traps

The sea mammal hunting is the main branch of the economy in the collective "Novaya Zhizn." Now this hunting gives the collective a bit more profit than the reindeer herding, but is extraordinarily labor-consuming. In 1954 in it were engaged 43 men, working in 9 hunting brigades.

The collective has a few large baidaras and whaleboats, but on the whole is furnished with motorized whaleboats by the Ploverski MES [motorized hunting station]. From it they receive arms, ammunition, and fuel, as well as maintenance for the whaleboats and motors. The brigade's hunting of sea mammals in the motorized whaleboats takes place in the freezing water. In the winter time the hunters individually hunt seals and mukluk seals, for hours waiting along the water's edge until the animal's head appears. (In Bering Strait the north or south wind breaks up the ice in the winter and sets it in movement; this is favorable for sea mammal hunting.) Once the seal is shot, it is then snagged with the help of a seal hook (consisting of a long line to which is tied a wooden block filled with nails). They also catch seals with nets made of thin ropes, placing them at the breathing holes in the ice or along the water's edge.

Of each individual seal caught by a collective member only 30% of the kill is given to the collective; the remaining 70% is considered as the private concern of the family of the hunter, in addition to the normal distribution received for his working day.

The best time for hunting is May and the beginning of June, when the ice goes from the south to the north with walruses and mukluk seals lying on it.

The collective "Novaya Zhizn" is found in the southern part of the region; here spring hunting of walruses begins earlier than in the other collectives. In the beginning of May there are days when the kill from one day is 10-15 walruses. During that time the northern collectives of the region (the villages of Seshan, Enurmino) are still continuing the winter hunting of seals. In the beginning of June the walruses are near the coast of Naukan, Uelen, and only at the beginning of July are they near the coasts of the northern villages. This is the reason that the northern collectives each year in the spring send expeditions of sea mammal hunting brigades to the southern coasts of the region, which select the most propitious places for hunting (near the villages of Naukan, Lorino, Yadogai, and others).

At the beginning of 1953, upon receiving new inboard motors for its whaleboats, the Ploverski MES assigned them

to the collectives it services ("Novaya Zarya," at the village of Yandrakinot; "Udarnik," at the village of Sirenik; "Novaya Zhizn," at Chaplino; "Edinstvo," at Nunlingran; and "Mayak Severa," at Enmelen.) The MES supplied the collectives also with seiners during the whale-hunting time. Thus, in 1953 to the collectives "Novaya Zhizn" and "Novaya Zarya" were assigned the seiner "Shmidt" for duty in the region of Lorino to hunt whales.

In June to July of 1954 the hunters of Chaplino together with members of the collective "Udarnik" and "Novaya Zarya" on the schooner of the Ploverski MES, "Belek," went to hunt walrus in the far northern waters (of north Vankarema). After a short period of hunting they delivered to the shore nearly 300 walruses. In August of the same year the schooner went on another trip.

Into the northern waters, in the region of Wrangell Island, there went another schooner, belonging to the Mechigmenski MES—"Akiva," which served the northern collectives ("Chegitun," "Seshan," "Neshkan," "Bpered," "Stalinski put"). Up to July the schooner had already caught 220 walruses.

In the past the Chukchi had available only skin baidaras, requiring the difficult work of rowing. Now only in the far northern collectives of the region do they make use of skin boats, using also however the outboard motor. The use of the new mechanical means of transport is an index of significant improvements in the sea mammal hunting.

In the sea mammal hunting of the Chukchi a great place is occupied by the hunting of walruses. The hunting of walruses on the hauling up areas has a special importance. Namely, that during this time there is conducted a systematic and planned hunt. The animals are killed in strictly regulated numbers, which is especially important for the conservation of wildlife.

In the Chukotski region at the present time there are two very important large hauling up areas—Inchounski and Rudderski. The first is used by the collectives "Geroi truda," "Chetpokairtin," and others. In the Inchounski area, lying to the north, the walruses haul up at the end of August. At the Rudderski area the walruses haul up at the end of July. To this place there come the hunters from the collectives "Udarnik," "Edinstvo," "Novaya Zhizn," "Mayak Severa," in one or two brigades from each collective.

The Ploverski MES sends out at this time a few cutters, which carry the dead animals to the butchering areas and then take the prepared animal products to the collectives.

All the hauling up areas found in the region, which are only a few, are protected by the local government and by the collective members themselves. The territories where the walruses lie are maintained in cleanliness, and upon completion of the hunt all traces of it are obliterated. During the time of the walrus haul-up, boats going past here muffle or shut off their motors. The walruses are not killed with firearms, and also forbidden is any hunting near this hauling-up area, so that the noise will not frighten the animals. The walruses always are killed only with lances.

The organization of the hunt on the hauling-up area is as follows. On the appointed day the hunting brigades from the various collectives gather altogether and in whaleboats with muffled motors, using paddles, go to the hauling-up area. During that time absolute quiet is kept, and no one smokes, because the smell of tobacco smoke might scare off the animals. Drawing near to the hauling-up area, the hunters with lances stab those walruses which are sleeping along the shore in the water. It is very important to kill the animals at once, because only to wound them is very dangerous. For this reason they try to spear the walrus directly in the heart or liver. Then the hunters go up on the shore and at a signal, given by one of the hunters, all at the same time begin to stab the walruses with lances. The wounded animals bellow, a few try to slip down to the water, all this occurring in a very small section of the hauling-up area. On either side the animals lie quietly. Having killed an assigned number of walruses, the hunters stop the slaughter.

Two sorts of steel lances are used during the hunt on the hauling-up area: the first (*poigyn*), long, with an absolutely flat sheet in the form of a thin blade and a wooden shaft 4–4.5 meters. The second (*kenumen*) is small, to which sheet iron in the form of a blade is fixed into a thick, long (85 cm.) iron core. On one end, in a pivotal fashion, is attached a blade, and on the other, is attached a long and very narrow socket, into which is placed a wooden shaft (5 meters long). With this lance the Chukchi spear the walrus sleeping in the water, having sailed inaudibly up to them in the whaleboat.

In the spring and autumn the walrus are killed on the ice. In addition, they are killed all during the summer in the open water, although in significantly fewer numbers than on the ice or on the hauling-up areas. For the killing of walrus on the ice and in the water various modern systems of firearms are used. In addition, all during every hunt they use the harpoon of a rotary-head type—*mukken*—with a copper or bone socket and steel head. Animals wounded with firearms are harpooned, and to the harpoon, on a long line, are tied floats made from a whole seal skin (*pychpych*), which do not allow the animal to get away.

In 1953 in the collective "Novaya Zhizn" there were 191 walrus killed.

Income from sea mammal hunting rises from one year to the next. In 1948 profits from it in the two collectives "Novaya Zhizn" and "Sovietski put" comprised in total less than 20,000 rubles, and in 1953 in the combined collective this hunt gave 170,334 rubles of profit. It is necessary to say that in 1953 the collective "Novaya Zhizn," in terms of sea mammal hunting, was not far from being in first place in the region. In 1954 the organization of work in the collective was improved, and into the collective came a number of progressives. The best brigades in the sea mammal hunt are the brigades which are led by Utataun and Selyak. For overfulfilling their plan for the first half-year the collective received the challenge banner Krasnoe Znamya of the district committee KPSS and the district executive committee. By August 1954 the collective had already fulfilled its yearly plan in terms of the catch of sea mammals and then went on to continue the hunt.

The third branch of the economy in terms of its importance in the collective "Novaya Zhizn" is the production of handicrafts. Here there are formed two sewing brigades, combining in all nearly 30 women. They prepare various furs and skin products—boots, pants, caps, mittens, which find wide sale in the collective's market.

In the summer time the women are also occupied in the collective in the collecting of wild products . . . and in the catching of fish. They take part in the sea mammal hunt. Two women's brigades, for example, process along the shore the game delivered up to them by the hunters.

The male hunters in the winter time occupy themselves with the hunting of seals, but nearly half of all the hunters go out for fox trapping. They trap the male and female fox, ermine, hares, wolf, and female bear. Usually from Chaplino there go out on fox trapping four brigades of from 4–6 men in one brigade. They hunt on O. Arakamchechen, on that section known as Seimok and in other places, where there are hunter's cabins. The male and female foxes, and wolves are caught with traps. Each hunter has an individual plan for the catching of foxes, a stipulated catch of not more than 4 furs per year. In other animals they hunt less.

In 1953 products of the fur trade gave to the collective nearly 25,000 rubles in profit.

Fishing is extraordinarily weakly developed in the collective, despite the fact that the waters near Chaplino have fish in sufficient numbers. The catching of fish in the collective occupied about 5–7 men; in the year they caught 20–25 tons of fish. The objects of the fishing are salmon and navaga. The latter they often catch with a thrown net on a rope; the salmon, however, with a seine and a stationary net. The stationary net everywhere in Chukotka has an

identical construction. It is pushed out from the sea shore or the shore of the lagoon with the help of a long pole. A pole is passed through a loop at the upper corner of the outer edge of the net, which in this fashion is then thrown out into the water, and to the lower corner of that area is fastened a large weight. The length of the net is usually 10–15 m., the same as the length of the pole, which is formed from various pieces of wood. This method of catching salmon is known not only in the Chukchi region, but widely spread over the Anadyr region. In addition, this method is used in Kamchatka, Okhotsk coast, and in Sakhalin.

Fishing gave to the collective in 1953 altogether only 2,779 rubles in profit. This was by far less than that received from the winter dog sledding transportation, and the summer whaleboating cartage. All the collective in 1953 received monetary income of 444,217 rubles (Smoliak 1957: 13–17. Hughes translation).

A second, and somewhat more general, statement is an over-all description of the life of the modern Asiatic Eskimos, taken from Levin and Potov (1956):

The most prominent Eskimo settlements are the villages of Naukan, Chaplino, Sireniki; the westernmost Eskimo settlement is Uel'kal'.

At the present time the Eskimos are living mixed among or in the close vicinity of the coastal Chukchis, but in the above mentioned villages they predominate.

Most Eskimo adults in these settlements speak the Chukchi language along with their native tongue . . .

The historical evolution of the cultural and economic community of the Eskimos and Maritime Chukchis called for a single path of socialist reconstruction of their economy and way of life. Following the final establishing of Soviet administration on the Chukotski coast (1923) among the coastal settlements, there began the work of cultural building and reconstruction of the economy of the coastal Chukchis and Eskimos.

The first legislative measures of Soviet administration were directed toward the protection of the settlements from the arbitrary traders, and the liquidation of cultural backwardness. In 1925 the first schools were opened. Large-scale cultural and sanitation work among the Eskimos was conducted by the Chukotski culture-station, organized in 1928 on the coast at Lawrence Bay. In that same year there began a cooperative, which organized trade, seasonal hunting by groups of hunters, and women's sewing arts. These seasonal hunts for maritime animals by cooperating hunters were the forerunners of the future collectives (*kolkhozes*). The first Eskimo collective, "Novaya Zhizn," was organized in 1931 at Cape-Chaplino; the same year there sprang up the collectives "Leninskii Put'" (Cape Naukan) and "Udarnik" at Cape Sireniki.

With the organizing of the Chukotski National District in 1930 the Eskimos together with the Chukchis began to take a direct part in State government. In 1932 in the first District Congress of the Chukotski National District, to the staff of the District Executive Committee from the very first there were elected Eskimo deputies.

Through the years of Soviet control of Chukotski coast there have come great changes in the economy and way of life of the Eskimos. The reconstruction of the economy, as with the Maritime Chukchis, has been based on the earlier patterns of hunting sea mammals. By the middle of 1938, 95% of the Eskimo economy had been collectivized.

Great help to the *kolkhozes* is rendered by the government motor-hunting stations, which provide the *kolkhozes* with improved hunting weapons, transport, ammunition, and subsidiary materials. The motorized-hunting stations train cadres of skilled hunters from among the local *kolkhoz* members.

The technical equipment has many times over increased the productivity of the hunt. Thus, for example, earlier, in order to get to the shore a whale that had been killed far out on the water required 2-3 days (of paddling) by baidara. Now however with the help of motor transport only 3-4 hours is needed for this. The development of technical hunting equipment and a new work organization permits, along with sea hunting, the development of fishing, fur hunting (especially on Wrangell Island), and reindeer herding. In the maritime collectives there have appeared new occupations: processing of the products of the sea hunt (rendering oil and sewing clothing from skins of sea mammals and from reindeer fur). The women's sewing brigades for each collective make from sealskins, waterproof boots, and pants which are in demand not only in the reindeer collectives, but also beyond the limits of the Chukotski National District. At the present time the Eskimos of the southern villages of Uel'kal', Sireniki, and Chaplino, are cooperating with the territorially nearest reindeer herding Chukchis, creating a mixed hunting-reindeer economy. Thus, for example, into the Sireniki Eskimo collective, "Udarnik," over recent years have contributed the small reindeer economies of the Chukchis of the Kurupkanski tundra. The collective receives from the government extensive areas of forest land for herding reindeer. In them were organized some reindeer herder brigades, directed by experienced herder-Chukchis. As a result of the efficient herding organization and constant veterinary supervision, the collective's herd over several years has almost doubled, and in 1954 there were already nearly 10,000 head of reindeer in it. Many of the reindeer are the personal property of members of the collective. The first experiments in the transition to a diversified economy have already given tangible results: the collectives' revenues from reindeer herding have risen (which the Eskimos did not have at all before) and from the mechanized hunting of sea mammals, in relation to which the welfare of the collectives grew. The public funds of the collectives of the Chukotski region—mainly settled by Eskimos—in 1954, by comparison with 1940, had grown more than four times and personal income of collective members from public work in the same period had increased three times over.

The Soviet system ensures the betterment of the material condition of life for the Eskimos and the liquidation of their cultural backwardness.

In the territory of Eskimo and Chukchi settlement at the present time there is widespread construction of houses proceeding apace. In all the larger coastal settlements there is occurring building of a type of wooden house designed for one family. Many Eskimo families have already moved from their *yarangas* into the well-lighted and comfortable new houses.

Cultural development has especially intensively developed since the beginning of the 1930's. By 1937 all children of school age were already fully enrolled in instruction, and the liquidation of illiteracy among adults had successfully taken place. At the present time a universal seven year education has been accomplished. Instruction in Eskimo schools is carried on in the first two grades in the Eskimo language, and then later in Russian. The Eskimo young people study in the higher educational institutions—in the Khabarovski medical and pedagogical institutes, in the Chukotski medical and pedagogical colleges, and even in the A.I. Gertsen Pedagogical Institute in Leningrad.

At the present time in the A. I. Gertsen Pedagogical Institute there are Eskimos studying who completed high school training in their native land . . .

Within the boundaries of the Chukotski District are conducted various courses for training specialists for a hunting and reindeer herding economy, and also for training leaders-workers for collectives and for party-soviet institutions. Eskimos who in the past studied in these courses are now working as motor specialists, officers of the local hunters' courts, radiomen, zoological technicians, or chairman of the

collectives. The former hunter-Eskimo from the Chaplino collective, "Novaya Zhizn'," Kalya, upon completion of the courses in leadership of workers, was the party organizer in his native collective, and at the present time is one of the secretaries of the Chukotski District Committee, Communist Party of the Soviet Union.

In the medical clinics, found in almost all villages, and also in the three hospitals serving the coastal populations, among the middle and lower personnel are found many Eskimo women. The local cadres of medical workers are trained at the surgeon's and doctor's assistants' school in Anadyr. The folk art of the Eskimos is also developing.

The Eskimos, like the maritime Chukchi, since olden times have been famed for their carving in bone. From walrus tusks the Eskimos carve animal figures or engrave walrus tusks, portraying on them scenes of hunting and daily life. Realistic in its foundation, Eskimo art during the years of the Soviet period is developing farther along the path of overcoming abstraction. Sculptured articles of 40-50 years ago already give an appearance of a realism, although naive, with beautifully portrayed movements and an absence of standardized forms. Entire groups have been created in sculpture, in which all the figures composing the group are linked together among themselves. Engraving on tusks, weakly developed in the past, is enriched by new themes which in this way preserve national traits . . . Women's art is also developing—embroidery with reindeer hair and colored threads of belts, mittens, rugs, and slippers. The artistic handicraft of the Eskimos, like that of the Chukchis, is exhibited over and over again in the All-Union, Republic, and International exhibitions (from Hughes 1963a).

Kolarz and Armstrong both note that despite the obvious success in the implementation of many aspects of the development or "reconstruction" programs, there were areas of difficulty and opposition. Some of the opposition stemmed from continued but indirect American cultural influence in this region so close to Alaska, although intensive contacts had been cut off. Apparently the Alaskan mainland still had importance as a dominant reference culture for some years after the formal cessation of trade and other types of contacts. Vested social interests also played a large part; for example, wealthy Chukchi and Eskimo reindeer owners represented a potent source of opposition to innovation of new productive and communal ownership schemes, and such individuals had to be rendered less influential. Both these themes are important points of conflict in the Stalin Prize-winning novel, *Alitet Ukhodit B Gory* ("Alitet Goes to the Hills"), which Kolarz says describes "the transformation of Chukotka into an integral part of the Soviet Empire" (Kolarz 1954:93). Kolarz remarks on other novels which also portray life in Chukotka during the years of World War II, and notes the strenuous activities of Soviet officials to encourage the native population to contribute a praiseworthy share to the war effort, particularly in the form of increased fur production. Some of the effects of the "Cold War" on local populations and the problems of administration of so isolated an area from the governmental point of view are also considered (Kolarz 1954:96-98). In another intriguing passage he makes reference to the continued existence, in 1947, of traditional religious beliefs and practices among at least some of the Chukotka natives, an observation which has relevance to Menovshchikov's brief description of an Eskimo religious rite he witnessed as recently as ten years ago in the village of Sireniki (1962:33).

In a somewhat exhortatory statement, some aspects of which could be applied to Eskimo groups under other national jurisdictions, Armstrong at least raises the question of the various dimensions of group life to consider in judging the relative success or failure of a change and development program:

The general picture which emerges, then, is something of this sort. The native peoples of the Soviet far north have had much done for them on paper; and even if the reports are not entirely reliable, it is clear that they have benefited in material things to a very considerable extent: medical and veterinary aid, better equipment for gaining their livelihood, better organization of food supplies, facilities for education. But if they have gained materially, they have lost spiritually. For their future existence as distinct nationalities, at least in the case of the smaller groups, is threatened by the loss of any real right to self-government, and by a tide of Slav settlement which is free, as far as the Soviet authorities are concerned, to inundate them (1958:129-130).

Given the Eskimos's inhospitable natural surroundings, the "Slavic inundation" referred to will probably never materialize as a factor of any importance in the life of the Chukchis and Eskimos. But some of the other implications of Armstrong's overview deserve comment—for example, the question of the extent to which there has been success in the Soviet program of encouraging, on the one hand, retention of many aspects of local ethnic identity and affiliation; and, on the other, orientation to a nation-state, to universalistic criteria in economic and political affairs. The problems this poses both in terms of role shifts and, at a deeper level, of self-image raise important questions for investigations into processes of development, questions which have implications far beyond northeastern Siberia. Other problem areas also have considerable relevance for general knowledge of social processes; for example, the conditions under which there has been retention of aboriginal forms of religious belief and practice, and of the transformation of older social structures to new uses. To what extent is the modern, introduced artel or cooperative work group that functions in sea mammal hunting and other contexts still composed mainly of siblings or patrilineally-related males, rather than drawn randomly from the population? Sergeev notes that up to the collectivization of the hunting activities in the 1930's clan membership was the basis of the crew structure (1962), but reports available are unclear as to whether this still is the case in the 1960's. It is likely that kinship relations continue to play an important part in structuring the artels in this as well as other subsistence activities, such as reindeer herding. Studies of this nature as well as more broadly conceived problems oriented to human relations processes attendant upon a rapid technological change should be conducted so that maximum use might be made of this fourth alternative in the "natural laboratory setting" provided by a basically similar population living under four flags.

RETROSPECTUS

Few "conclusive" remarks are possible in such a wide-ranging review as this. There are, however, some

observations which can be made about the trends discussed, some of the antecedents apparently involved, and conceptual approaches to study of problems in culture change.

In the extent to which there has been attempted an over-all, integrated approach to Eskimo problems, the programs of the Soviet and the Danish governments are most similar. The United States has done much in Alaska, as Jenness points out (1962); but, as he also indicates, this has been somewhat haphazard, with an important area—economic stability—having been relatively undeveloped. The Canadian government has only recently entered the field of concerted efforts at development. This is not to say, of course, that a unified program of development necessarily solves all existing problems or avoids creating others; it is merely to indicate the extent and recency of deliberate action programs directed at change (and presumably improvement) of Eskimo life ways. Whether anything could be learned about the comparative benignity of a more tightly integrated as opposed to a less integrated approach by contrasting, for example, the situation in Greenland with that in Canada, would depend, for one thing, upon availability of much more systematic and comprehensive data than are now available. The same questions would need to be asked, which has not always been done hitherto. In addition, they would have to be cast in the framework; adumbrated earlier have been the difficulties involved in comparing "institutional" studies, such as those of the legal or economic system in Greenland, with specific community studies, such as those done in Canada and Alaska.

An assessment of the comparative merits of a tightly integrated versus more flexibly organized development scheme would also depend, and perhaps most critically, upon a clear statement of the *criteria* to be employed for assessing the "success" of such a program. Are these to be economic indices bearing on productivity? Educational criteria, such as literacy? Health measures—morbidity and mortality rates, or, in another sphere, incidence of mental disorders? Or human relations factors, such as crime and delinquency rates? Perhaps the best index of "development" is a combination of all such factors, although it appears difficult to devise a formula for the optimal *specific* types of relationship that should exist among the various segmental aspects, such as economic betterment, educational advancement, health improvement, community development, local political autonomy, etc.

Establishment and acceptance of criteria is thus a first task, for the data now in hand are incomplete and fragmentary and allow of no firm conclusions as to one type of scheme being, over-all, better than another. At this point judgements tend to be made on the basis of exhortatory political values rather than impartial assessment of actual happenings. The Soviet government, for example, points to the collectivization schemes, the development of ethnic pride, and the Eskimos' release from domination by the shamans and "kulaks." Danish authorities refer to the development of communications systems, educational facilities, hospitals and medical care, and attempts at economic rationalization. Canadians and Americans, while out-

wardly eschewing such a "welfare state" approach, nonetheless take action along many fronts to preserve the native populations and increase their share of life's rewards. This is done, however, in a sociopolitical context that stresses the values of individual freedom of choice but which, in the realities of our time, frequently means that in actual practice many people are unprotected, unguided, and unprepared to fend for themselves in a new environment demanding a certain level of education, health, and economic control for effective and self-satisfying performance.

Whether the traditional pan-Eskimo values of a stern self-reliance and capability rooted in group-orientation and communalism are best served by a tightly integrated development program with an explicit emphasis on the "state" as being only a higher order of traditional group structure; by a less well integrated but still comprehensive plan; by a collocation of separate "development schemes" undertaken by various government agencies unrelated to each other; or by a frank *laissez faire* approach, perhaps cannot be decided on the basis of evidence available now, except in the most basic terms: biological survival of the group. All populations have survived—but some, only barely. In this respect demographic statistics and death rates are relevant, and the programs of health and food support undertaken by all four governments are similar in intent, even though different in application and recency.

But when we get into the question of the most benign conditions for the psychological life, one must operate by exclusion and by making only approximate assessments. For one thing, it would seem that a life which denies to the Eskimos a worthwhile place, one of dignity and self-respect in their own surroundings, should not by any assessment be considered acceptable. Conditions that operate to create a caste division, for example, between the whites and the Eskimos would fall into this category, as would widespread conditions creating lack of opportunity and of adequate preparation for dealing with the new environment. If the greatest psychological well being for the greatest number be acceptable as an essential criterion of "development," then conditions which create such a pervading sense of hiatus between rightful wants and realistically available means to their achievement would seem to provide critical threats, no matter whether these situations exist in the disadvantaged lower socioeconomic strata of industrialized society, thereby creating widespread public health problems of many types; or in situations of culture change, where one view of what is desirable in the world is changing in favor of another, even though the means of achieving the new goals may not similarly be transmitted. Years ago Sapir discussed phenomena of this nature in his humanistically anthropological way, referring to "genuine" and "spurious" cultures (1951).

Most of the changes coming into the lives of the Eskimos over the past two decades comprise a fundamental shift in an entire field of conditions in which they live. It has rarely been a shift in only one element of an economic or social complex, such as the introduction of a new technological device. There have been instances of this, of course, which can be profitably examined within an experimental frame of

reference, as has been done with analysis of the introduction of the rifle and its attendant effects on the composition of basic socioeconomic units. In this review, however, an attempt has been made to direct attention to the *context* in which such part-patterns are occurring; for it would seem that over the past two decades in the north, the point of no return has been crossed in many places in the transition from a series of segmental changes in the Eskimo way of life to a change in the existential as well as phenomenological framework in which that life is carried on.

The most important aspects of that changed environment are not shifts in the physical setting, although, as has been indicated, these have occurred—and often as at least an indirect consequence of man's own actions. The portentous changes are in the social, cultural, and psychological components of the environment: social in the frequently daily confrontation with white men of various types as well as other kinds of Eskimos; psychological in the beginnings of a profound restructuring of the image of life, the "mazeway" (Wallace 1956) that must be tread, or the "behavioral space" (Hughes 1960) perceptually apprehended by the individual; and cultural in the shifts in the shared standards and frameworks for perceiving, valuing, and interpreting experience. Lantis has put the matter succinctly:

The substance of the situation is that Eskimos are trying just as hard today to adapt as they did 500 or 900 years ago; the difficulty is that they are adapting not to the Arctic but to a Temperate Zone way of living. The new people with their new standards have nearly overwhelmed the Eskimos, not in numbers but in wishes and wants (1957: 126).

In another article she discusses extensively some of the changed aspects of the ecological setting of the Eskimos in the North and suggests areas for focused research relating to over-all problems of adaptation (1954).

In the new ecological and sociocultural conditions obtaining in the north, one of the most potentially effective adaptive processes is, of course, education in skills appropriate to a literate society. Obviously there are many problems involved in devising an optimum curriculum for Eskimo children in their evanescent world. Such problems partake of some of those dilemmas found elsewhere in the "developing" areas—how best to balance the benign and stabilizing elements from the past with the compelling demands of the present. Moreover, there is the problem of what may be called over-all pattern congruence or complementarity. Even when an educational pattern is devised appropriate to its setting in over-all terms, local or short-range circumstances may blunt the effectiveness of new techniques. The training of Eskimo young people for clerical or other jobs when there are no openings, even though they may eventually materialize, is an obvious example. This is part of the general problem of "school-leavers" that is becoming more critical with each passing year in some developing countries, and it underscores the need for a realistic overarching program that integrates the results of one type of effort into the more comprehensive picture. If their world is changing, and if the young people are being trained in skills having

little applicability to circumstances, nothing is created but a pool of the dissatisfied who have had their hopes but not their chances raised. Such a disjunction between perceived or visualized goals which have been internalized as legitimate and proper, and the means of their attainment, can lead to many widespread social as well as individual psychological difficulties. Kleiner and Parker have recently summarized the social psychiatric epidemiological literature with reference to such a conception (1963). Two studies among the Eskimos have dealt with this type of problem and the somewhat different circumstances that have led to the same trends (Chance mss.; Chance and Foster 1962; Murphy and Hughes mss.).

But education is a long-term adaptive device. A more cogent and immediately applicable tool of incalculable versatility is money. To a large extent, the people of the north, in coming into population centers for jobs that will yield money, have taken steps to acquire what appears to be the most efficient tool for controlling some of the salient features of the new environment that has been thrust upon them. The much increased use of money over the past two decades has had both social structural and psychological implications, which have been alluded to before. For one thing, in many instances it is now obtained through individual activity instead of corporate group behavior. The principal exceptions to this statement appear to be among the Soviet Eskimos working in the brigades and artels. But elsewhere in much of the north, trapping and, especially, wage employment at the military establishments have tended to take the individual worker out of the network of reciprocity and corporate activity that formerly characterized so many of his subsistence activities. In addition, the money, once acquired, is subject to different distribution patterns than those appropriate to the sharing of animal flesh. Its increased importance now as an object of work and distribution has ineluctably led to the redrawing of boundaries of many basic socioeconomic units. In effect, because money in its reductive symbolic sense is *power*, there has come about a restructuring of power relationships in many aspects of group life.

Psychologically, the greater use of money has the effect of increasing the functional autonomy of the individual, his sense of mastery and independence, of rebelliousness and defiance of authority. It is a tool for Maslow's "coping" behavior (1954) or White's "effectance motivation" and "competence" (1959); and, given the dominant vectors of the social world that has moved in upon the Eskimos, the appropriateness of this tool is clear. For phenomenologically money is much more than a medium of exchange and repository of economic value. It is an instrument of control and power. Given the operation of a system of assumptions and understandings of a particular kind, the manipulation of this symbol is a cogent way to achieve ends of many kinds. It can not only make a person or group more effective in controlling resources, skills, and knowledge for meeting the insinuations of the environment; it can at the same time help create that environment in important respects—perhaps the supreme expression of adaptation in the constant transaction between organism and surroundings that is the life process.

For years introductory texts in anthropology have spoken with admiration of the Eskimos' adaptive ingenuity in harsh and bitter surroundings. Many aspects of that environment have now radically changed, but the nature of the almost "culturally compulsive" response appears not to have altered. Through direct contact with white men as well as the multiple working experiences Eskimos have had over the last decade, it would seem that the lesson has been clear: money is an inherently compact and transposable *instrument of social action*, far more versatile than traditional adaptive techniques. It is an almost protean tool, translatable into all types of objects and capable of transforming many situations. Given the difficult nature of the setting in which the Eskimos live, and the high prevalence of subsistence and survival anxieties, it can be argued that any instrument or adaptive device that promises such a measure of greater effectiveness will be perhaps more readily adopted than by groups in less stringent situations. This is not to say, of course, that the tool is necessarily wisely used, nor that, through lack of skill and knowledge, it does not often create more problems than it solves. Some of the psychological implications of the "discovery" of money under such circumstances are briefly commented upon in another paper (Hughes 1963*b*).

A parsimonious means of characterizing the several changes that have occurred in the last two decades over much of the north is to say that there has occurred a change in a complex *system of belief*. This is one way of referring to the processes of culture change that have taken place and of attempting to capture the gist of the process of other-reference that is so pervasive in many groups. The "system of belief" can be considered that body of sentiments and values defining and interrelating the central institutions of a group; and the processes of rejection of the old and beginning acceptance of a new framework, to include identification with, internalization, and overt use of, new standards and behavioral justifications. The systemic nature of sentiments and values that gives a semblance of coherence to a group's behavior is what we deal with at one level in terms of "integration" and complementarity of structural aspects. In this case, however, the system of belief can be looked at also in terms of its participation in a phenomenological framework for viewing the world. For it is, increasingly, not just one item or another, a certain behavior pattern as against another, that is being adopted from the white culture. It is, rather, bits and pieces of an over-all pattern which serve as the bases for multiple inferences about the characteristics of that whole. And there is further, increasing commitment to that whole, that complex of institutionalized ways of behaving—having a job, participating in a certain type of family structure, worshipping in a particular way that is markedly different from traditional Eskimo forms of religion, indulging in recreational patterns of a particular type, and so on. It is an image of a way of life that has swept across the Arctic in the last two decades, much more intensively in Canada and Alaska than in Greenland and Siberia in that time span. Nonetheless, given the

more patient and over-all programs of planned change occurring in the latter two areas, the intent of the directed change programs (and probably also the perceptions of the Eskimos in these two latter places) are much the same.

There is no easy way to discern antecedent factors in many of the situations of turmoil and rapid, pervasive alteration in way of life that are occurring in today's world. The reactions of human groups are compounded of unique elements of history, of geographic, demographic, as well as social and cultural factors. The following observations are therefore offered not in the sense of being "the" explanation for patterns of shift in system of belief or reference culture for many Eskimo groups; but rather as being factors which it would be difficult to overlook in the complexity of variables involved. They do, however, find expression in several of the discussions of recent culture change contained in the published reports of a special symposium dealing with Canadian and Alaskan Arctic communities (*Anthropologica* 1963).

The element of stress and threats to existence has been highly influential in inducing, everywhere in Eskimo groups, a readiness to change. Starvation, sickness, in some groups even the threat of violence and murder—these can be viewed as predisposing people toward accepting new techniques and strategies that will give promise of getting the upper hand in adapting themselves to a capricious and sometimes punishing environment. Stress from other sources is also a feature in many groups—from interpersonal relations, from trying to live in a world that is increasingly cut by contradictory signals and behavioral cues and a lack of coherence among the elements of social life.

Over the last two decades, as detailed earlier, there has also been an increased contact with an exposure to the culture of the white man to a degree unprecedented theretofore. Again this is not so universally true of all four areas, but it certainly has been so in Canada and Alaska. In Greenland the break between two decades ago and earlier times is not so sharp, and in the Chukotski Peninsula developments since World War II have been mainly the working out of socioeconomic trends set in motion in the 1930's.

With increased contact has come a greater range of opportunity for achieving satisfaction of all types of wants than existed prior to that time. This has meant various things. Included is wage labor and other ways of earning money; medical care; schooling; release from some types of social obligations; new models for self-esteem, and many more individual types of satisfactions.

The traditional Eskimo adeptness at appraising many aspects of the environment rationally against a background of adaptive utility has also continued to manifest itself. The obvious recognition that it is money that moves much of today's world fits into this framework and has led to widespread demographic and social changes in many communities.

In an earlier publication (1960) I discussed the explanatory appropriateness to the case of the St. Lawrence Island Eskimos of a proposition concerning change in systems of belief which contained these four elements, a proposition originally developed by Leigh-

ton (1946). As initially set forth the proposition was as follows:

The things which alter the systems of belief that people hold are:

- a. Observation of fact and reasoned thinking.
- b. Contact with other systems of belief.
- c. All types of stress.
- d. New opportunities for achieving security and satisfying aspirations.

In the case of the St. Lawrence Islanders it was clear that, lying behind their changed orientation to the mainland of Alaska, there had been a shift in conditions between the pre-war years and the decade following World War II, such that at the latter time all four sets of factors seemed to combine to induce a fundamental change (Hughes 1960: chap.7). Although these people had always experienced stresses of many kinds and had always exercised a high degree of reasoned behavior, not until the decade following World War II did they have contact in any prolonged sense with outsiders in situations calculated to lead to change, or have available to them opportunities for role behavior and material and ideational resources instrumental in satisfying aspirations. It would seem, therefore, that it is the combination of all four sets of factors, and not any one or even the two, that may be required for so fundamental a change in a way of life (Hughes 1960:374).

This is not to say, of course, that any single proposition such as this one can be universally applied in any rigorous sense to cover all situations of change in the Arctic at the present time. But the elements of which the proposition is compounded have tended to function in many places. Whether it is this or some other combination of circumstances that lies behind the changing of a way of life, it would seem from these materials that there are numerous elements involved, forming a syndrome of existential conditions. In an attempt to understand the course of change in any particular instance in such a way that its resemblances to other situations will be seen, one may adopt various approaches, ranging from those which would emphasize the primacy of social structural factors of various types through those which center on motivational and perceptual factors. Or one may try to employ some combination of both. It is the latter which is suggested here as necessary to the fullest understanding of the world of the modern Eskimos and to some brief discussion of which we can finally turn.

NEED FOR A TRANSACTIONAL FRAMEWORK

Many advances in scientific understanding of nature can be attributed to saltatory successes in release of investigators from concepts which imprison their view of phenomena and blind them to recognition of new, as yet undisclosed relationships (e.g., see Kuhn 1962). Studies of culture change have perhaps too often suffered from such a premature hardening of the abstracted concept, "culture," through its encouraging an overconcentration on only one aspect of the multiple interacting systems. Such an aspect—the traditional indigenous culture—is sometimes

viewed in isolation, almost as if it were being treated in the same way as a man's reflection in a mirror might be analyzed without reference to the person whose presence makes the image and whose movements give it life.

In culture change, especially that induced by contact between two groups of people, the phenomenological situation is not that of one "culture" confronting another. Rather, it is one of people whose patterns of behavior tend to cluster around particular modes interacting in multiple ways with other people, many features of whose behavior are characterized by a different style. The changing of such behavior patterns, the movement toward congruence or creation of an entirely new style, occurs as individuals appraise their total environment and interact with its limitations and opportunities against a background of personal imperatives, perceptive frameworks, anxiety thresholds, emotional vulnerabilities, and other psychodynamic features. Although it is, admittedly, a convenient shorthand abstraction, to assert that "cultures change" may serve to disguise more pitfalls in the path toward a comprehensive theory of changing behavior than point the way through the abyss of "why?". For in an initially too rigid emphasis on "culture" when investigating "culture change," one can lose sight of the dynamic qualities of life and its continuous attempt to synthesize an optimal balance from the materials at hand.

In every human group there has always been some degree of "sociocultural change," and this, each day of its existence. The speed, extensiveness, and ramifications of the change are what have varied, along with the particulars of the antecedent situation that prompted the change. Thus, in many obvious instances, radical alterations in life ways have come about as a result of stimulation from direct confrontation between people of two formerly separated groups. But at the same time, in much of human history endogenous change has been of critical importance—an example being the functional effects of technological inventions in isolated Paleolithic bands. With the creation of more manipulative control over aspects of nature, a new "field of forces" is created which restructures the behavioral and psychological environment for both group and individual life. In terms which have much meaning, although they are exceedingly difficult to define operationally, the older pattern of equilibrium is upset and forces are set in motion for the formation of a new configuration. Even the accidental discovery of a new technique or tool by one man in the group can be, by virtue of that event, a significant development in the lives of other members to which they must make some response. This is the familiar problem of the chain reaction, the ramifying effects of an event, the interrelation of processes—of the pebble cast in the pool.

Thus, looked at paradigmatically, the individual always operates in the midst of a field of influences which have varying implications for him. While one can single out any given person and infer the principal phenomenological features of his environment consisting not only of physical forces but also those arising from networks of human interaction, this is only a momentary, arbitrary juxtaposition; for each of the other people, who in the previous framework

are part of the environment for ego, can similarly be the point of focus in another formulation. Each person, then, is simultaneously both the perceiving, pinpoint center of a unique, vast, and complicated psychological world and an object in the world of everyone else. Cantril has touched on this point in the following way:

The psychologist cannot avoid his responsibilities merely by becoming insensitive to the compelling aspects of human experience which defy neat systematization or the use of picturesque models which can be quantitatively described. If, for example, we take the more traditional, "scientific" point of view alone and try to account for another person's experience and behavior, we are likely to over-emphasize the aspects of any transaction of living which have been determined in the past. For from this point of view—e.g., from the past—since we are *outside* the personal behavioral center which is our object of understanding, we ourselves cannot possibly participate as another individual is himself participating in what is to him a "now" or "present" where *he* must make *his choices* in order to carry out *his* purposes in a situation that impinges upon *him* and in which he initiates some action that is, in part, pushed by a determined, repeatable past and in part pulled by an undisclosed, uncertain future. Likewise, from the "objective," "outside" point of view we may entirely neglect the experiential background and the past interpersonal relationships that bring to an occasion of living a determined set which affects the direction that occasion of living will take. We then land in the complete situational determinism "outside of us," a metaphoric "field" theory and cannot account for the consistency of behavior, the apparently directed flow of living, or the value overtones without which any transaction of living would not be what it is (Cantril 1955:285-286).

It is little wonder that the pre-existing cultural structure of sentiments and beliefs and the social structure of standardized interaction patterns are never identically transmitted from one generation to another, when such transmission must depend, not upon DNA molecules, but upon this teeming, fertile substratum of interpersonal transactions carried on by each individual attempting to deal with a world largely comprised of others in similar creative, synthesizing postures.

Yet at the same time each person is born, reared, and lives in a *relatively* stable field of conditions which confront him with dilemmas and problems as well as opportunities for development; and much of what composes this field is based on the repetitiveness, habitualness, and comparative predictability of other people's behavior. A "structure of social action" consisting of reciprocal and interlocking ways of behaving forms a large part of what every incoming member of the group must learn and participate in. He, in turn, from out of a unique welter of motivations, perceptions, and feelings which constitute him as a psychobiological whole, contributes a series of what might be called "behavioral products" to ongoing sequences of social action. Each such product is one element taken out of its phenomenological locus in a psychodynamic pattern. These products—gestures, utterances, bodily movements, etc.—can be the focus of abstraction and analysis in their own right and predictable sequences between sets of them can be discerned. At the same time, the interstices between

such products can be examined in the interests of a fuller understanding of the course of events—what Nadel in his oscillatory diagram called the “mental event” that connects trains of social action (1951:218). “Culturological” formulations of culture change deal with such products in their own right; but they are formulations at only a first level of approximation if our purpose is eventually to make fine-grained predictions as to alternative consequences of action in such situations (cf. Lenzen 1955; Pareto 1935:323). And, as first approximations, they are subject to further analysis and incorporation of component, contributory processes, such as the phenomenological structuring of experience characteristic of each “behavioral center,” as Cantril puts it.

While we may never be in a position to formulate an answer to the question “what accounts for socio-cultural change?” in a way that will fully satisfy all who ask it (see Kushner *et al.* 1962), the position taken here is that no explanatory approach which advocates exclusively either a social structural or an individual psychological primacy, to the exclusion of the strategic patterns of transaction between the two, will ever be as fruitful for elucidating sociocultural change as one which starts initially from a transactive paradigm. To focus on the structural level will be to fail to ask the relevant question: what are the phenomenological considerations that foster the motivation either for change or maintenance of pattern? To deal only with a psychological framework will be to neglect the other part of the relationship—the array of possibilities as well as limitations, the structure of the world which the person(s) are dealing with.

Such a position obviously hearkens back to that set forth a decade (and more) ago by Dewey and Bentley, who stressed the epistemological need for abstractive patterns which would not force the investigator into the position of attempting to put together that which should never have been separated in the first place but, rather, would set him on the right track from the beginning of his inquiry, through explicitly incorporating dynamic aspects—the transactive nature of the relationship—in the original abstraction. Individual and environment are only with distortion separable; each partakes of and contributes to the defining characteristics of the other. The initial abstraction which starts the inquiry should not, then, set individual and environment off against each other as foils later to be connected by discoverable processes. Rather, it should accept their phenomenological unity as the indispensable paradigm for knowledge about human behavior in the empirical world:

... Human life itself, both severally and collectively, consists of transaction in which human beings partake together with non-human things of the milieu along with other human beings, so that without this togetherness of human and non-human partakers we could not even stay alive, to say nothing of accomplishing anything. From birth to death every human being is a *Party*, so that neither he nor anything done or suffered can possibly be understood when it is separated from the fact of participation in an extensive body of transactions—to which a given human being may contribute and which he modifies, but only in virtue of being a partaker in them (Dewey and Bentley 1949:271).

To say, however, that individual and environment

are participants in the actualization of each other is of little help in investigation of discrete aspects of this process unless research can focus on the means, the structures, by which such mutual effects occur in this “field of reciprocal determination,” as Stainbrook describes such a relationship in another context (1961). There is widespread dissatisfaction with theoretical constructions which view the individual as an isolated unit actuated by immanent, autonomous forces bearing no relation to the particulars of time and circumstance through which he has come or in which he is found. At the same time, a simplistic sociological determinism is no answer to the complexities of behavior seen as alternative modes of adaptation, as Wrong (1961) so lucidly pointed out. What seems to be needed is an approach which will single out the most crucial aspects of the phenomenal unities of person-in-environment and assess the variations that exist among these sets over time and under changing conditions.

That a disquietude with current conceptions exists and a need for new approaches to old problems is recognized is not, of course, an original observation (cf., for example, Spiro 1961). Insofar as it relates to studies of culture change, it is straightforwardly set forth by the Spindlers, who emphasize the need for what they term a “psychocultural approach”:

Culture may be defined in various ways, depending on the purpose of analysis and the problem. For us, the definition which follows is most useful in culture-change analyses. Culture consists of the patterns for behavior, both explicit (verbalized) and implicit (usually not verbalized but inferable from behavior) which are shared by a group of people and transmitted to new members. These patterns are antecedent to the existence of any new member of the group, but are continually in transformation or modification as people react to and mediate them. Our construct includes definitions of personality traits, possessions, symbols of status, and conditions of being which are considered desirable by the group; norms for behavior in all roles and statuses available to members of the group; and patterns for subsistence activity, child training, ceremonials, medical practice, etc.; and patterns of belief that justify the behaviors required in the various areas mentioned.

Culture is represented in, though never identical with, the cognitive maps, motivations, perceptual structuring, affective controls, and ego defenses of individuals. These constructs we regard as the consequences, in individuals, of the life experience within a culturally patterned environment, and together constitute the personality. Each individual's personality is different in some degree from that of any other person's depending on idiosyncratic life experience. Both the derivation of personality and the expression of it are, however, bounded by cultural norms. The personalities of individuals and the cultural patterns of the group are modified by new experience.

In acculturation situations, the established culture significantly affects the adaptations people make to changes in the conditions of life which are created by the impact of another culture and its bearers. As changes in the conditions of survival occur, established cultural patterns at least temporarily lose their meaning. Under conditions of rapid acculturation they may even become dysfunctional and therefore threatening to the individual who is trying to adapt to the new situation. The binding of cultural patterns upon the individual becomes loosened. Behaviors become comparatively, though never wholly, randomized. New alternatives are perceived and reacted to differently by different individuals, but within a spectrum limited in part by

prior cultural patterns. When a successful (i.e., functional) adaptation is reached by a number of persons, new cultural patterns emerge and are consolidated in coherent form.

Most groups (societies, in the larger sense) in the world today, particularly primitive or nonliterate groups undergoing rapid and disjunctive change, have not reached the consolidative phase of adaptation. They are, rather, in the adaptive phase of pattern loosening and comparative randomization of behavior. Precisely because this is so, we feel that psychological concepts, tools, and methods must be utilized if the strategy of so-called "culture change" studies is to be satisfying. Individuals are thrown upon their own resources of adaptation to a greater extent when previously tight cultural boundaries are weakened or destroyed. Their psychology must be understood, including the cognitive maps, etc., that reflect the imprint of their traditions, their reactive mediation of these patterns under stress conditions, and their preception of and groping toward new solutions.

This is not to say that all culture-change phenomena must be "reduced" to the level of individual psychology. Precisely because antecedent patterns of culture are shared, even though shared with idiosyncratic variation, regularities in psychological adaptation may be expected. The fact that all culture bearers in adaptation are human beings also suggests that regularities of psychological process must exist in disintegrating and reformulating situations. In fact, one of the significant potential contributions of the study of peoples adapting to the exigencies of rapid culture change should be a fuller understanding of panhuman regularities in psychological adaptation. There is no logical reason why a psychologically oriented study of individuals as such any more than a culturally oriented study must be a study of abstraction from behavior as such. Psychological process exhibits regularities and structure. "Personality," "cognitive system," "ego structure," etc., are abstractions from minutiae of observation just as culture patterns, traits, and complexes are.

The strategies of this complex study are only beginning to be worked out. Much fumbling must be expected. But worked out we feel they must be. In part, this paper details how anthropologists have dealt with the problems of this strategy, variously conceived; in part, it is a prediction of what will happen as future resolutions are effected. We will term this emergent strategy a *psychocultural approach* (1963:515-516).

A possible contribution to such a "psychocultural approach" in investigations of culture change might be exploration and application of the concept of *transactive structures*. A transactive structure can be defined as a recurring pattern of articulated elements of behavior and situation considered in the same abstractive framework. That is to say, instead of attempting to work with abstractions rooted in a "levels" approach to phenomena which dichotomizes, polarizes, autonomizes (e.g., "individual" vs. "society"; "personality" vs. "culture", etc.), one might from the very beginning focus on abstractions which select salient aspects from the phenomenal unities of people in structured situations striving for goals against a background of appropriate and inappropriate means. The abstractions constituting the units of analysis would, then, not be the familiar ones of "personality," "culture," "social structure," etc., used as dichotomous reciprocals for each other; but rather, units which would cut across such "levels" and link significant structural and processual aspects of each in the same analytic framework. A paradigm for a transactive structure would then contain four components:

I. A Person or persons (or "behavioral center") charac-

terized by particular types of: cognitive maps, sentiments and value patterns, intelligence levels, stresses, anxiety and other emotional thresholds, security resources, emotional liabilities and assets of particular types, etc.

II. in a Situation characterized by particular types of: facilitative or impeditive factors as these relate to problems of adaptation (e.g., biological and/or psychological threats; social structural imperatives and channelizations; culturally selective valuational frameworks; geographic and ecological factors, etc.).

III. striving for subjectively defined Goals of particular types (material, intangible, human relational, etc.).

IV. through the employment of Means of particular types, realistic and/or unrealistic (skills and knowledge, material resources, social roles, etc.).

In trying to portray the interrelations among these elements, one is tempted to use a linear paradigm and suggest that a person "enters" a situation and then begins to employ certain types of means to achieve his ends. In reality, the process is circular. It is, in large part, the selecting of goals and striving for them that create the person and create the environmental situation for other people; and the manifestations of patterns of striving and selection of goals of other people that help shape the individual. The circularity is not that of a spurious semanticism; it is a reflection of the concomitance of natural processes. It is, moreover, not a "circularity" really, so much as a "spirality," since these articulating processes occur in an evolving, non-repetitive flow of time.

Thus a transactive structure reflective of empirical regularities is comprised by a person (or category of persons) in a situation striving for goals and employing various types of means. The abstraction consists in the union of all four elements and without all four there is no structure. This means that there are many such identifiable structures to be found in any particular time segment of individual or group behavior, since different empirical "values" exist for each element of the paradigm. The properties of persons vary; situations differ; goals are various; and means heterogeneous. But there are obviously some generalizable regularities. The task is to identify such strategic simultaneous sequences.

As an heuristic example, let us focus on a particular segment of the Eskimo population in the present day. The individuals comprising it (the young people, particularly young men) can be characterized as sharing some major situational and social psychological features. The following illustration is intended only to point to the types of data that would go into the systematic formulation of major transactive structures now manifested in many Eskimo groups and is based upon some of the general discussions in the empirical data presented earlier. Utilization of the transactive structure scheme would require other, more comprehensive and systematic, types of data of a psychological, situational, and sociocultural nature:

Situational elements:

demographic and ecological characteristics (e.g., morbidity and mortality features; declining animal populations)

conjunction of differing cultures

new reference cultures on the scene

maintenance of some elements of traditional culture
new patterns of selective valuation of the world
new types of activities rewarded
economic hardships
discriminatory practices
lack of jobs . . .

Person (phenomenological) elements:

confused sense of self identity
self-disparagement alternating with self-approval
alienative reference group behavior
many skills inappropriate to new world
activism; stress on constructive, positive adaptation rather than retreative adaptation . . .

Goal elements:

acceptance by peers
sense of self-esteem, self-worth
economic security
engagement in valued activities
one-upmanship; competence; effectance . . .

Means elements:

traditionally appropriate roles
new economic opportunities

role patterns emulating white culture
innovative institutions: educational, occupational, religious, medical . . .

Thus the picture of culture change among the Eskimos is the familiar one in which the ecological, demographic, sociocultural, and psychological environments are in flux, in which new goals or ends of activity are superseding the old, in which means of attaining such ends are confused and unclear, in which evaluative standards and criteria are shifting, and in which all of these things have had psychological repercussions on many individuals. What we are dealing with is not *simply* alterations in "cultures," "social structures," "basic personality types," etc. We are also, in terms of another formulation, studying shifts in the form, content, and interrelations among *sets of transactive structures*. It would seem that a rewarding task now would be to identify the theoretically most important of these sets, catalogue, and analyze interrelationships and processes of change among them. To do so may call for techniques and procedures unfamiliar to the practitioner of anthropology, but of such challenges is the growth of a discipline.

Abstract

The paper attempts to review the widespread changes occurring in Eskimo societies since World War II, and especially to bring together an inventory of trends in Greenland, Canada, Alaska, and Chukotka (Siberia) in the areas of community structure, social and political organization, and economic adaptation. Such an integrative inventory is needed in view of the sustained power of the stereotyped image of "the Eskimos" in anthropological literature, as well as the rapidity and extensiveness of their involvement in the industrialized world over the last two decades. Data of diverse types are the basis for the review: anthropological community studies, ethnographic accounts, reports of governmental agencies concerned with separate aspects of development, technical and semi-popular journal articles, unpublished theses and reports.

Despite the frequent incomparability and disparity in basic data sources, it is evident that at some levels of generalizability certain pervasive tendencies exist across the four national jurisdictions represented. In most areas, for example, there has been greater population concentration into stable, year-round communities; much increased use of technology imported from the industrialized world; greater demand for wage work and use of money as a standard of value and symbol of a new ecological transaction with the environment; lessened sociopolitical autonomy in the context of more widespread governmental activity of diverse types; development of schooling and of health and sanitation programs; decline in formal and overt aboriginal religious practice; more primary

contact with representatives of the dominant culture. In some areas for which data exist there are beginnings of factionalism based upon ethnic, religious, socioeconomic, and "self-image" criteria. The existence of changing personality patterns may also be inferred in behavioral evidences of a shift in self-identification; and there appear widespread instances of sentiments of relative deprivation and of behavior oriented to conceptions of outside "reference cultures." Questions of community integration and of psychological adjustment and mental health are too sparsely covered in the literature to allow for systematic comparative interpretation.

The extent of overall integration differs among the development programs being undertaken by the four national governments concerned. Activities of the Danish and Soviet governments, for example, avowedly cover wider areas of group life than is true of those of Canada and the United States, and appear to be based on a more explicit set of long-range goals and images of community life.

A range of factors, often acting in concert, is suggested as having been involved in effecting some of the basic changes in many areas: ecological and habitat shifts; increased levels of stress, of contacts with the outgroup, and of opportunities for "anticipatory socialization"; as well as continued application of traditional Eskimo cultural and personality emphases on coping with a changing environment. It is suggested, finally, that the most fruitful framework for studying situations of change in group behavior is a dynamic one which combines psychological with sociocultural factors in a reciprocative and transactive relationship.

By KAJ BIRKET SMITH★

Copenhagen, Denmark. 18 v 64

Dr. Hughes gives an interesting, sorely needed, and well documented survey of the effects of recent culture contact among the Eskimo. On the other hand I do not feel competent to discuss their sociopsychological aspects, which, in my opinion at least, belong to the periphery of anthropology.

The author regrets that he is not able to read Danish, and it may be useful, therefore, to give some statistical information. Greenland's native population amounted to 31,304 in 1961 (west coast: 28,504; east coast: 2,310; Thule district: 490). For many years the principal economic problem has been the constant decrease in the number of seals, the food staple of former times. The number of seals caught on the west coast during the 1958/59 season was 53,362, but whereas this meant 21 per hunter in the northern districts, it was only 7 on the southern part of the coast; in east Greenland the total number was 13,854 or a little more than 36 per hunter. As a consequence, the promotion of economic activities has for more than 50 years been of paramount importance, particularly that of the fisheries. There are at present 73 depots for the landing and salting of fish, mostly cod, and 7 canneries, etc. In the southernmost districts the number of sheep has risen to ca. 27,000 and that of domestic reindeer to 3,000 and is rapidly increasing. As to health facilities, there were in 1961 35 medical officers, 18 dentists, 92 trained nurses, a great number of midwives, and 17 hospitals besides sanatoria, etc.

The statement that there is no compulsory education in the Thule district is, I regret to say, simply wrong; it is there exactly as in the rest of Greenland and, for that matter, as in Denmark.

In the discussion of present-day conditions among the Canadian Eskimo I miss a reference to the plans for moving the Caribou Eskimos from the inland to the Hudson Bay coast. Since the caribou herds have declined disastrously, it may, perhaps, be necessary, to do so, but it should be realized that this is a dangerous enterprise, for the inland dwellers will be totally ignorant of the economic potentialities of coastal life. On the whole, a carefully guided change to modern conditions seems to be even more needed in Canada than in Greenland (and to some extent than in Alaska, too), because the Canadian Eskimo have retained their aboriginal culture to a far greater extent than their kins-

men elsewhere. Incidentally, the term "kabloonamiut" (*qablunârmiut*) is not actually Canadian Eskimo but (though a linguistic monstrosity) a now obsolete Greenlandic word (*qavd-lunârmiut*).

The author touches on the important question of patrilineal "clans" among the Bering Sea Eskimo. Among all other Eskimo, including those of northern Alaska and the Pacific coast, descent is bilateral, as is apparent, i.a., from the kinship terminology. There can be no doubt that there is, e.g., at Point Hope, on Nunivak, and on St. Lawrence Island, a rather clear conception of more or less localized patrilineages; that patrilineal exogamy is here preferable, but not compulsory; and that to some extent we may even speak of an incipient totemism. However, I would hesitate to call such social groups "clans," though that may be a matter of choice. If Sergeev maintains that "exogamy was strictly observed" among the Siberian Eskimo—who are closely related to those of St. Lawrence Island—he is certainly at variance with Levin and Potov and may, perhaps, be influenced by the evolutionistic theories of Morgan.

It is a tragic fact that throughout the world the immediate result of the clash between aboriginal and Euro-American cultures is the creation of a proletariat possessing harmoniously neither the one nor the other, and it is still more deplorable that we are responsible for at least 90% of these effects. It must be hoped that this state of affairs is only transient and that in spite of all the most valuable parts of the native cultures will be able to survive.

By EDMUND CARPENTER★

Northridge, California. 22 vi 64

Though I have written, over a period of 15 years, on a variety of topics concerning my life with the Eskimo, I have never, until recently, attempted to describe those experiences that touched me most, the images that come to mind when I think back, the ones I live with. I've wondered whether this failure derived from personal censorship or from poverty of expression; whether the words used to cover ordinary experiences failed when the situation went beyond; whether the spirit and memory didn't recede as well. The few times I tried, in relaxed moments, to tell someone what it felt like to undergo intense happenings, I faltered: "It was more involved than that . . . I guess I loved her, but that says nothing . . . he sat in the dark, crying, blaming me . . ." Words failed, images failed, even me-

mory failed. The whole key and rhythm of my life had been altered forever by a handful of experiences that left no communicable mark. And even now, as I wait for the right words, I wonder how accurate, how honest, these descriptions will be, and to what extent I am working them up a little afterwards.

For months after I first arrived among the Aivilik, I felt empty, clumsy. I never knew what to do, even where to sit or stand. I was awkward in a busy world, as helpless as a child, yet a grown man. I felt like a mental defective. There was so much distance between us, such unnatural silences. So I smiled a lot, though smiles come grudgingly to me, and helped lift or pull, do anything. These efforts were met with stares. But gradually my feelings of stupidity and clumsiness diminished, not as a consequence of learning skills so much as becoming involved with a family, with individuals. If they hadn't accepted me, I would have remained less than an outsider, less than human.

I had done extended fieldwork before, in the tropics, and did more later. But this was different. I recall an afternoon with an Eskimo whom I admired and his daughter whom I loved. She was betrothed. I was married. He once sent her to me, an act that embarrassed me and hurt her. She was named after his first wife, whose memory I knew he lived with. The sealskin tent was warm and close; all of us were laughing at his stories until she saw her eldest half-brother approaching with his team along the coast ice: "Son-ours-comes, betrothed." It was a spontaneous outburst, at once tender, incestuous, pleading, yet with full awareness of its effect on each of us.

Such experiences left me indifferent to the cold reports coming out on the Eskimo: they were alien to all I had experienced. I gradually stopped taking the wrapper off the *American Anthropologist*; I let my membership in that organization drop; I listed my occupation as "teacher," not "anthropologist."

In the early fifties there was only limited interest in arctic research and even less backing. So I helped dig the Toronto subway and worked nights in a brewery to finance trips, a breach of faculty etiquette my colleagues never forgave. In the first trip my food never arrived—a great asset—and soon I abandoned all gear, traveling unencumbered, dependent on hosts. It was still a primitive world. The Iglulik used stone lamps; impoverished Okomuit hunted without cartridges; an angakok publicly hung himself following an unsuccessful seance. But soon

the Canadian Arctic was drawn into the world battleground and anthropologists settled about the posts, exhausting the traders' liquor and misinformation. They seemed uniformly unhappy, counting days until they left. I assumed they would publish nothing, because they experienced nothing, or if they did publish, their reports would be ignored. I was doubly wrong: Dr. Hughes invites us to take seriously such reports.

I speak only of Canadian reports, for though I've visited Alaska, Greenland, Siberia, and Outer Mongolia, these trips were superficial. Most Canadian reports I judge to be based on casual observation, full of heavy theory, fusty kinship data and pretentious claims to insight into self-concepts, all badly written and few of lasting value. Most are so dull they lessen man's respect for man. I see anthropology as far more than the study and presentation of man. It's experiencing man: sensing, apperception, recognition. It's art.

We're not all agreed on this, of course, but we are agreed—at least we pay it lip-service—on the necessity of accuracy. I checked one voluminous Eskimo kinship study and found a 32% error in marriages alone: the investigator simply had not known who was who. In another instance, an Oblate missionary forwarded to me a list of Eskimo kinship terms requested by an itinerant anthropologist; he asked that I locate the man, whose name he had forgotten. The list, with added Eskimo equivalents, came from *Notes and Queries on Anthropology*.

When I encountered these anthropologists at conventions, they didn't seem at all ludicrous. They were poised, sure, condescending. Their data and theories seemed eminently suitable to their role as government advisors. They communicated easily among themselves, reaffirming concepts that arose solely from professionalism, unencumbered by those thrilling insights that pierce the heart of those who care nothing for professionalism.

Shallow fieldwork and bad writing are forgiven on the assumption that if a professional was "there", his data must be valuable. "Being there" is regarded as necessary and sufficient. Civil War veterans who read *The Red Badge of Courage* said, "Crane must have been there. No one else could have known what it was like." Yet we know he was born 6 years after Appomattox and, at the time he wrote, had never seen a battle. The details he heard from veterans; the truth of terror he learned by more complex means. *Top of the World* contains superb Eskimo dialog, yet Ruesch never saw an Eskimo. Rasmussen and Freuchen combined field-life with genius; the world knows the Eskimo

through their books, not because they were the first to publish, which they weren't, but because they experienced man and left us intense, beautiful relations.

By NORMAN A. CHANCE★

Montreal, Canada. 1 vi 64

Hughes' article on recent Eskimo culture change is a valuable contribution to the literature on arctic anthropology. Not only has he taken account of regional differences in ecology, technology, social structure, and culture—points that appear to need continual emphasis in this age of generalization—but he has provided important insight into motivational and other psychological factors as well. In the section on Alaska, I would have liked a more thorough discussion of the extensive trading system carried on between the Eskimo, early Europeans, and Indians, the impact of the whalers on the inland Eskimo (Nunamiut), and the effect of commercial trapping on traditional Eskimo social structure and values. But given the breadth of topic and limitation of length these commissions are very understandable. Actually, appreciation should go to the editor as well as the author for allowing an article of this size to appear in print.

I would like to direct most of my comments to Hughes' discussion of the process of technological, social, and cultural change among the Eskimo and how these changes are related to his concluding theoretical section. Few would argue with Hughes' statement that "in every human group there has always been some degree of 'sociocultural change...'" (p. 51). Yet all too often we think of the traditional world of the Eskimo as one of stability where, given the techniques they have developed, they could live harmoniously with their environment for an indefinite period. And in a limited sense this appears to be a valid picture. Eskimos have been able to survive in an extremely difficult climate for thousands of years. While each generation has undergone important changes, they have been for the most part recurring—that is, each new generation has tended to follow the established cultural patterns of the previous generation (cf. Vogt 1960). This type of change produces a high degree of regularity in social relationships enabling an individual Eskimo to predict with a fair degree of accuracy the course his future will follow. And if these predictions fail to materialize, the society has provided other mechanisms to explain this failure.

To take one example, we know that the traditional Eskimos were continually faced with the problem of an unstable food supply. Given the level of their technology, "solutions" or "explanations" for these problems

were provided by their social structure and cultural patterns. Eskimo social structure called for the sharing of food, particularly among the kin group. Eskimo cultural values also played their part. The value placed on fatalism took some of the pressure off the unsuccessful hunter and his family. The physiological feeling of hunger was not lessened, but it was at least accepted with minimal frustration. Traditional Eskimo religious values and beliefs could also be called upon to "explain" a temporary loss of food supply. A kin member had broken a cultural taboo, or an evil spirit had driven away the game.

Other examples could be given, but the point to be stressed here is that among the traditional Eskimo, the social structure and belief system together provided a generally effective although imperfect "solution" to many of the basic problems brought on by life in an arctic environment with a limited technology. It is this relatively adequate interdependence or integration of these three spheres of Eskimo life that enables one to speak of traditional Eskimo society as being stable as well as changing.

Then, as explorers, whalers, traders, and other whites moved north, an entirely new series of changes took place. Some of the most immediate and obvious, such as the introduction of the rifle, iron and steel implements, and western drugs and medicines, occurred in the technological sphere. As Hughes suggests, at this point, many of the traditionally unresolved technological problems of the Eskimo were removed and this in turn disrupted the previous balance between the technological, social, and cultural value spheres. Although the rifle made hunting easier, it reduced the need for sharing and cooperation among kin groups (trapping had an even greater impact). It affected the prestige system of the Eskimo hunters, and brought into question the validity of the traditional religion by raising doubts about the importance of various rituals and taboos connected with hunting—and this questioning of religion in turn affected the traditional means of social control. The threat of supernatural punishment for deviating from approved Eskimo practices lost much of its impact.

As one traces the history of Eskimo-white contacts in the north, he sees how the discontinuity between these three sets of factors (technology, social structure, and cultural values) generated important and irreversible changes among the Eskimos. For thousands of years the impact of technological-ecological factors on the Eskimo were direct and dominant. In recent years, however, the increased technological control over the environ-

ment has enabled the Eskimos to exercise more choice over their actions, and it is at precisely this point that the study of Eskimo values assumes key importance in understanding the course of present and future change. Unfortunately, our knowledge on this subject is minimal. This is clear from Hughes' discussion of the changing "system of belief." There is no question that the Eskimo belief system has undergone important changes over the past two decades (p. 49), but we have relatively little idea how much. Certainly, as Hughes has suggested, recent Eskimo-white contact in the economic, health, and educational spheres has dramatically altered Eskimo behavior patterns. Yet behavioral changes do not always signify important changes in systems of belief. In undertaking a study of changing Eskimo values, one must ask questions such as the following: Are many Eskimos who adopt western-oriented behavior traits complying with the wishes of an outside group in order to achieve a favorable response which can be of benefit in the attainment of their traditional goals? Do many Eskimos imitate models of western society and use its material goods because these items provide a refreshing change in the day-to-day life of the community or simply make life easier, but without its affecting their basic values? Or do these behavioral changes reflect a new self-identification in which the Eskimos see themselves as part of a larger outside world? Given the difficulty of objectively delineating motivations behind actions, proposed answers to these questions are tentative at best. Nevertheless, recent research has provided some interesting insights (Berreman 1964; Parker 1964; Chance 1965 forthcoming), and we may expect more to come in the future.

Hughes has given us a deeper understanding of the process of recent change among the Eskimos. Equally important, he has indicated where our knowledge is weakest and how we may go about improving it.

By RONALD COHEN[★]

Evanston, Illinois. 18 v 64

Professor Hughes, with almost disarming simplicity, has attempted a monumental task and brought it off successfully and elegantly. In so doing he has made a major contribution to the study of the Eskimo, and to substantive and theoretical anthropology as a whole. This "article," or more correctly, this monograph, should stand for a long time as a model of its kind. Its merits are patently obvious. It puts together an enormous amount of material on the Eskimo and updates our knowledge of these perennially fas-

inating people. By using all of the Eskimo data it also affords us a unique opportunity to compare both the internal differences among the various Eskimo groups and the differential effects of various outside forces that have impinged on life in the Arctic. I could go on praising and summarizing, but the very importance of Hughes' work demands that we give it careful scrutiny so that issues in data interpretation and in theory raised here can be more widely discussed. In what follows I shall go over, point by point, problems raised for me by this monograph in 2 areas, (a) data, and data interpretation, and (b) theory, and then discuss a problem concerning Soviet anthropology which stems from Hughes' work.

Data and Interpretation

As a whole the selection and use of data is excellent, and the following critical comments should be seen in the light of this generalization. It might have been useful if Hughes had included a passage reviewing his sources and had given us, in one place, some rationale for the inclusion and exclusion of material. However, this is to some extent a quibble since he does review his sources as he refers to them.

In the substantive material a number of points require some further discussion. Evidence is given (p. 28) to awaken our curiosity about incipient unilineal descent among the central Canadian Eskimos, where such is not traditionally present, but where conditions favoring its development have recently come into existence. It is suggested, however, that such a development will be "blunted" by trends in other directions brought on by wage labor. If the factors producing unilineality are actually present then we should try to obtain means of testing their effects. The Eskimo material is so easily handled because of the small numbers of people involved and the comparative simplicity of the cultural inventory that it behooves us to find out if such measurements can be made before they are in fact "blunted" as predicted. If a carefully designed study fails to elicit the unilineal tendency then a suggestion about what might have been, except for countervailing forces, is interesting but untestable.

A "demographic balance" (p. 10), or imbalance, is said to have led to (produced? caused?) a series of cultural patterns such as wife-exchange, abandonment of the aged, starvation of orphans, and female infanticide. Causality is a thorny problem in any science, and this undemonstrated assertion is no exception. What we need

here is some carefully controlled cross-cultural comparisons designed to establish the exact relationship between demographic variation and those factors that certain demographic conditions are said to have caused. This obviously involves historical work as well as correlational study since causal connections demand antecedent co-variation between cause and effect(s).

The rapid decline in the caribou herds seems to be correlated with a recent rise in radioactivity in lichens and sedges, the two most important sources of food for these animals (p. 18). This is important and should be considered carefully. The difficulty with this statement is that we are not given enough data to evaluate it. Certainly there seems to be a decline of the herds associated with the increase of Strontium-90 and Cesium-137 in the Arctic plants, but such data as are given also indicate that there was a very considerable decline among the caribou before nuclear testing began in the atmosphere. This does not mean that increased radioactivity could *not* have brought about a significant acceleration of the decline of the caribou as suggested, but it does mean that the point has not been validly demonstrated as yet.

Modern schooling and its effects on the Eskimo are crucial to our understanding of their present position as a people in the modern world. Nevertheless we seem to know very little about such effects in any of the four regions, and in one area, that of Asia, we are given what on the surface appears to be contradictory evidence. This makes the problem even more intriguing. The Russians claim to have had all Eskimo children in school by 1937, and yet the members of this group are said to have preserved parts of their traditional subsistence patterns, perhaps their social organization, and even some of their religious beliefs up to at least 1952 (p. 46-7). As Hughes suggests, it seems important that we know more about the drop-out rate, its causes and results, and its comparability in Greenland, Canada, Alaska, and Asia.

The mention of Aklavik and Inuvik (p. 20) brings up a number of problems, some of which are crucial to the future of the people of the Arctic. Hughes suggests that Aklavik has not been receiving an excessive amount of relief payments, and this does indeed seem to be true, but my own research on this subject for other communities of the Mackenzie Valley (Arctic but non-Eskimo) suggests that there is a positive relationship between relief payments per household and population size per settlement (Cohen 1963). On the other hand, while the number

of jobs increases per settlement, the number per household decreases as settlements get larger since more people are attracted to the larger town than there are jobs for them to take. Income from trapping cannot carry a family for an entire year, and so rising expectation and other results of acculturation tend to produce a depressed population whose maintenance becomes the primary concern of the Federal Government of Canada. Unless education, migration, or economic development take a radically different course (i.e., young people remain in school rather than drop out, and/or move to the southern Canadian labor market rather than remaining in Arctic settlements, and/or some new sources of income are found from local resources), then the future seems quite predictable—more relief payments and a depressed population.

In the light of these considerations, will the people of Aklavik move across the Mackenzie delta to the shining new town of Inuvik? There does not seem to be a radical rise in the number of jobs available in the new town, and it is an area of deficient resources for hunting and trapping as compared to Aklavik. On this basis I would predict that the movement will be quite slow, especially since the administration of Inuvik is discouraging the "camp" into which new immigrants move from becoming a permanent settlement, and almost all other housing in the town carries some rent. All of this leads to a question that has plagued me and others (Jenness 1961) for some time. Given the present resources of the Arctic regions, and the avowed goals of the various governments to raise standards of living in these areas, is such a goal actually feasible, or must these people relocate in centers of population where the desired standard of living can be obtained?

Theory

The theoretical section at the end of the monograph is a seminal essay which, although it stems from the Eskimo material, has an independent value of its own. Several points in this well thought out section need more discussion. First of all, Hughes asks for a developmental index for which we should establish some agreed upon criteria. I would argue that such an index is neither possible nor desirable. There are very likely a number of different paths to development. Operationally, this means that we can probably establish criteria for specific developments in education, or productivity, or wage scales, or health, etc. But to make some kind of holistic judgment, which may be perfectly acceptable at some gross level, is probably not satisfactory from the point of view of a particular society

and its culture. I would hate to think that because American society is "developed" this over-all judgment applied to all of its institutions. Indeed, American treatment of the aged seems underdeveloped compared to many African societies where the aged are not regarded as obsolete.

Secondly, Hughes suggests that we regard the sociocultural universe and the persons in it from the point of view of a "transactional" approach. I think there is much merit in this, although it should perhaps be qualified by saying that transactions are in fact a particular form of interaction, one in which there is a response by alter (s') to ego's action such that ego "bar-gained" for it. Ego is engaged in this sense in transactions with his environment when he does things to get things, i.e. "transactional" action implies purposive action directed towards gaining a response, and one must ask whether all action comes under this rubric.

The most important point raised here is worth emphasizing. This is Hughes' desire for a theory in which limits are not placed on variables to be considered for methodological or disciplinary reasons. Instead, he suggests a theoretical development in which all of the relevant variables should be considered no matter what methods or approaches are used. In this I believe he is pointing the way to the future, a future in which we shall emerge as social scientists studying similar problems with a large kit-bag of techniques and a wide variety of situations in which to apply these techniques.

One final and important issue remains, one which Hughes raises by implication, if not directly, although he devotes no space to its discussion. This is the differences in interpretation and theory applied by Western anthropologists as opposed to their Russian colleagues. Hughes gives us some detailed insights into the Asian Eskimo material and also into the interpretation of these data by Russian anthropologists. The evidence seems quite strong in favor of the interpretation that these Eskimos have patrilineal descent groups, and on this point scientists both east and west would very likely agree. The Russian workers go on to claim, however, that certain aspects of kinship terminology indicate a previous stage of exogamy, and that some evidence of bride service indicates a previous stage of matriliney. Both of these statements, as well as the one about Eskimo art in which it is suggested by a Russian anthropologist that it is "developing further along the lines of overcoming abstraction" (p. 46), indicate a line of reasoning that is difficult for us to agree with. To say that kinship terminology, or bride service indicate or

suggest something in a previous time period, is to imply that these things are correlated very significantly with the phenomena they are said to represent. This correlation must be established empirically, not theoretically, so that there can be very little doubt about the matter. If empirical methods are not used, then the Eskimo data, or any other data used by our Russian colleagues, are simply being used to illustrate their theories, when according to the universal canons of science data should be used to prove theories right or wrong.

In conclusion, I must thank Professor Hughes for his efforts. His monograph has taken us a long step forward. If I have picked on this or that point for criticism, it is only because he has given us so much material and given me personally so much to think about.

By STEPHEN P. DUNN and
ETHEL DUNN*

Berkeley, California. 21 v 64

While Hughes shows commendable courage in handling the Soviet data at all, both his choice of sources and his treatment of them leave much to be desired. *Narody Sibiry* is intended, as S. P. Dunn points out (1964), as a semi-popular, largely uncritical summary of Soviet achievements. If Soviet Far Northern studies were based solely on this type of writing, they would offer little of use to the Western scholar. Hughes has done an injustice to Smoliak by presenting him in a truncated version. Our study of culture change in the Soviet North (Dunn and Dunn 1963a, 1963b) alerts us to the complexity of Smoliak's data in both its explicit and its implicit aspects. Several things must be borne in mind concerning Chukotka: the treelessness of its northern districts, its extreme isolation, and the fact that, like the rest of the Soviet North, it was excepted from the economic provision of the first Five Year Plan, of which collectivization was only one aspect, although a significant one. While economic development was delayed, psychologically important cultural advances were accomplished during this period, the effects of which are being felt now.

Smoliak's data permit the conclusion that the delay in economic development is at present in conflict with the psychological culture change, although Smoliak does not write in these terms. For instance, people are perfectly willing to build and live in wooden houses, but in Naukan this is impossible, both because of terrain and because all building materials, with one exception (home-made unfired bricks) must be brought in over long distances at great cost. Significantly, the making of bricks is entrusted to women and

children. Although the state bears 70% of the cost of building Russian-type houses, some adaptation of the native yaranga seems more practical—at least as long as the people continue to live semi-nomadically. The people at Naukan can watch for seals from their homes, while those coming from far away and lacking adequate housing must face severe discomfort and sometimes hazards. Smoliak would like to see the people resettled, but the people do not want to go.

The position of women under Arctic conditions is extremely difficult. Hughes makes it seem that they have little to do but sew, while in fact they are responsible for the entire handling of seal carcasses once they are brought off the ice. They also fish and gather wild plants, both of which activities are nutritionally important, and neither of which is properly encouraged. Lastly, they must keep house and prepare food for both men and dogs. Smoliak says that a dog needs 146 kilograms of meat and 18 kilograms of fat a year, which may explain why in some households the average number of dogs is 4. Economic activities are curtailed accordingly, because a dog team is still indispensable for hunting, for bringing in the kill, and for transporting goods.

Smoliak repeatedly introduces comparative data for 1948 and 1953; in 1953, most Northern kolkhozy were put on a sounder basis; in 1958, the machinery held by the MZS's was sold to the kolkhozy, and the functions of the MZS's were reduced to maintenance and repair of equipment; if desiderata discussed in the recent Plenum of the Central Committee of the Communist Party are realized, still further gains might be expected here. If, for example, industrial development on Kamchatka and in Khabarovsk Krai is allowed to benefit Chukotka rather than some more distant region as has heretofore been the case, a radical change in the situation may be possible. At present, 23% of the consumer goods (mostly food) used in the North is produced there (Izvestiia 29/5/63:3) and some vegetables are being grown in hothouses in Chukotka. The significance of this should not be underestimated, even though there are indications that from a nutritional standpoint the effort is largely wasted (Libo 1961).

In short, there are some things which the Soviet regime has been able to do, such as modifying the division of labor *within the group* by enlisting women in non-traditional occupations, and so forth. There are some things which it has not been able to do, such as modifying the division of labor *between groups*: reindeer herders remain reindeer herders, fishermen fishermen, and so forth, in spite of

mixed kolkhozy and the introduction of new skills. The way of life as such and natural conditions are responsible for this. As children born after the War grow up, this situation may change, since they are being educated in ways which do not fit them for the traditional life. As they succeed to positions in the middle-range intelligentsia, things may change still more. Teachers, medical and veterinary personnel, administrative officials and Party workers have been specially cultivated, and expectations have been raised in them which are difficult of fulfilment under the existing conditions. This new class must be induced to return to the North, since these are the people who are responsible for the execution of over-all policy on the local level. There have lately been some cautious gestures toward granting increased power to local governments, particularly in such areas as communal services and housing. The main obstacle here is the apathy and habitual non-involvement of the population (in part a legacy of the Stalin era), and the extent of change will depend on whether this obstacle can be overcome. A serious disagreement now exists among Soviet ethnographers as to the best method of handling the problem of native education. Some, like Smoliak, advocate decentralization of the educational and cultural facilities in accordance with the nomadic way of life, while others favor centralized education on a Russian model: the people, if they lost their native identity, would at least acquire a Soviet one in return.

We see that the problems facing those dealing with Eskimos are very similar over the entire Eskimo area, and that the only government to have adopted a distinctive approach to Eskimo culture change is the Danish. Everywhere there is the problem of integrating the Eskimos into a larger society, and giving them the wherewithall for the kinds of achievement which that society respects. Only the Danes have tried to mitigate the problem by purposely limiting the scope and speed of culture change in their area. In Canada, Alaska, and the Soviet Union, no complete solution has been found, despite the differences in political orientation and methods of culture change. A more complete and careful reading of the Soviet data than Hughes has given would, we think, have shown this conclusively.

By R. W. DUNNING*

Vancouver, B.C., Canada. 28 v 64

Comment here is restricted to the following:

1. This systematic comparative work

exposes the paucity of and lacunae in the available regional studies.

2. The combined phenomenological and psychocultural approach or study of "sets of transactive structures" is a new dimension. Its strength would, however, rest on rigorous structural analyses, and this latter has been a weakness of the literature. In addition the "transactive structures" one should take cognizance of the overwhelmingly directive power of the non-Eskimo economy, organization, personnel, and bureaucratic policies. Something of this has been shown for northern Lapp settlements by Barth and associates (1963).

3. This type of broad discussion of the general literature runs the risk of establishing cultural or structural components without adequate evaluation. For example: (a) Van Stone's preferred parallel or cross-cousin marriage at Point Hope (p. 39) appears to be based on informants' statements about the past with reference to neither genealogical material nor marriage incidence. The implications of this kind of statement must be evaluated with the kind of intensive quantitative data provided by Damas (1963). (b) Dr. Hughes (p. 26) mentions an emergent social unit characterized in part by coresidentiality, endogamy, and bilateral descent. Rather than a significant social change, this may be merely the settling together of the former persons who made up the social network and had been prevented by ecological considerations in former times from establishing permanent local groups. If the latter is true it would diminish the emphasis on change from band exogamy to settlement endogamy. (c) The suggestion of a potential development of linearity may also be more truly an incidence of virilocal residence as Damas (1963) found.

4. Minor inaccuracies: (a) page 22—the maximum family allowance is \$8 per month (Canada Year Book 1963-4, p. 293); (b) the spelling of Dr. Asen Balıkcı's name; (c) page 26—I do not know if the first reference to "caste-type" society in the region was Dunning (1959:120), but it has been omitted, and it predates the reference cited. Also in the same context Vallee (1962) was not speaking of a "caste structure" but rather of "paternalism" and "uncaste-like" features (pp. 124-26).

By I. S. GURVICH and
L. A. FINEBERG

Moscow. 21 viii 64

We have read with interest Hughes' informative article in which important and fresh material on the life of the

Eskimos in Greenland, Canada, and Alaska is presented. The author's ideas concerning social structure, in particular the information about survivals of kinship organization among contemporary Eskimos, seem very fruitful.

Because the section on the Eskimos of Siberia is a little incomplete, we would like to supplement it on the basis of recent, still-unpublished data of field investigations conducted in 1962-63 in Chukotka by Soviet scientists.

During the last 5-6 years remarkable changes have occurred in the economy of the Asiatic Eskimos and their neighbours the Chukchi, stimulated by further technical progress. In connection with the liquidation of the motor-hunting stations, the collectives of Chukotka received their own equipment—whaleboats with motors, and tractors. Some collectives replaced their whaleboats by schooners and seiners as offshore facilities were mechanized. Fur breeding has had widespread development especially of blue foxes, silverblack foxes and minks. At the same time, some elements of the traditional material culture of the Eskimos have remained mainly those responding to local natural conditions. Thus, fur clothing is widely used. On the model of the traditional kameleks (parkas) work clothes of the traditional cut are sewn.

Within the past decade, the rapprochement of the few Asiatic Eskimos with the Chukchi and Russians has been strengthened on the basis of co-managing the general economy. The reconstruction of the hunting economy of Chukotka has brought about the merging of the Eskimo collectives and villages with those of the Chukchi (Nunyamo, New Chaplino, and Sirenik). Thus, for example, in the collective "Leninski Put'" (village of Nunyamo) there were 65 families in 1962 of which 40 were Chukchi, 16 Eskimo, 3 Russian, and 6 mixed (Eskimo-Chukchi, 4; Eskimo-Russian, 1; Russian-Chukchi, 1).

Isolated Eskimo families in recent years have moved into the large Russian-Chukchi settlements (Lavrentiya, Provideniya, Anadyr). The study of the ethnic composition of the coastal villages of Chukotka shows that in recent years there has clearly occurred a dispersal of Eskimos into villages from Uelen to Zaliva Kresta, where they live alongside the Chukchis. In these villages the Eskimos form a minority population. For this reason, in addition to their native language, many have become proficient in the Chukchi and Russian languages. Thus, in 1962, in the village of Nunyamo the Eskimos were distributed on the basis of knowledge of language into the following groups: of 65 adult

Eskimos, 7 men were proficient only in Eskimo; in Eskimo and Chukchi, 5 men; in Eskimo and Russian, 9 men; in Eskimo, Chukchi, and Russian, 43 men; one man was proficient in Chukchi and Russian and did not know Eskimo. Knowledge of the Chukchi language by the Eskimos is restricted usually to conversational ability; the Eskimos frequently master the Russian language better than Chukchi, since they study it in school.

The widespread displacement of the Eskimos, mixed marriages, the prevalence among Eskimos of bilingualism and trilingualism, attests that in recent years the process of merging of Asiatic Eskimos and Chukchis has been strengthened. It is precisely this fact that explains Hughes' observation of the decrease in population of Eskimos. (It would be more exact to speak of a decrease in number of people considering themselves Eskimos.)

Between the censuses of 1926 and 1959 children from mixed marriages between Eskimos and Chukchis, and Eskimos and Russians, as a rule, did not consider themselves to be Eskimos and on the census called themselves Chukchis.

In this way, in our opinion, proceeds the interesting ethnic process of voluntary merging of 2 peoples already quite close in their culture. This process is being intensively studied by Soviet ethnographers. In this connection Hughes' article is especially interesting to us, illuminating in detail contemporary ethnic processes occurring among the Eskimos of Alaska, Canada, and Greenland.

By JOHN J. HONIGMANN*

Chapel Hill, North Carolina. 11 v 64

That the Eskimo should be the first ethnic group to receive CA* treatment indeed testifies to their popularity among anthropologists as among many other people. Hughes' admirably thorough review will be most useful in updating specialists' and nonspecialists' knowledge about those people.

Despite Hughes' attempt to present a well-rounded picture of change, he is perhaps overly influenced both by his theoretical predilection and by the literature he examined and so a little too ready to see confusion and other evidence of distress deriving from the rapid evolution to which Eskimo culture has been subjected. He specifically mentions the people's unpreparedness to manage their own affairs, including the maintenance of social control, as one problematic area in their current situation. To the extent that I am accurate in perceiving in Hughes and some of his sources readiness to see social and psychological disturbance, my own work with Irma Honigmann in Frobisher Bay, Baffin Is-

land, may provide a useful if only partial corrective. (Obviously, I don't mean to speak for the Eskimo area as a whole.)

Considering the scope of the changes adopted by the Eskimo in Frobisher Bay (their number had grown to 900 in 1963), we remain astonished at the relative adjustment of the population as whole. Our view is supported by the quotation Hughes' gives from Toshio Yatsushiro's (1962) report to the effect that a majority of the people "expressed general satisfaction" with several aspects of their new situation. Yet, Yatsushiro promptly follows that by, in effect, ignoring what the people told him and referring to signs of profound social and psychological disturbances. There are persons who are disturbed, but we would avoid generalizing from these individual cases to the Eskimo in general without better data.

Eskimos also expressed to us their satisfaction with life in the town. At the same time a few thoughtful men with an new found objectivity that allowed them to assess their culture pointed to social problems in their midst, much as American sociologists and anthropologists in college classes refer to social problems in American life. Some of these thoughtful Eskimos are resolved somehow to reconcile as far as possible the traditional, land-based Eskimo cultural heritage with their present life in the town. Their resolution is no mere hope, but has been translated into some rather specific recommendations which they have carried to the school principal and other government authorities.

Such problems are far from constituting evidence of disintegration or profound psychological disturbance. Rather, they represent a new level of growth and intellectual development. With his basic needs satisfied the Eskimo is going on to satisfy what Maslow (1954:147-148) calls "higher needs." Most Frobisher Bay Eskimos satisfy their higher needs through recreation; a few, however, turn to thinking hard about their current cultural situation. That they do so is indicative of health, not sickness.

At many points the Eskimo is truly confronted by the necessity for new learning, including the learning of political forms. There is nothing pathological in being confronted by such a demand. It is part and parcel of growth, present from birth to death in every culture, intensified for the modern world—including the Eskimos—by rapid change.

Hughes and others deplore the social separation of Euro-Canadian and Eskimo in places like Frobisher Bay, a separation which they call, somewhat pejoratively, the caste system. We deplore it too, especially the exclusion

of Eskimos but not other townspeople from the United States Air Force club-rooms at Frobisher Bay during the days when Strategic Air Command was there. Most Eskimos in Frobisher Bay, however, are no more inclined to cross the caste line than whites. They may have learned not to try but we rather think that they don't particularly wish to. But there is one important exception to this latter conclusion: the upward-mobile Eskimo leaders in the town, on whom power will increasingly settle and who help to form public opinion, deeply resent their exclusion from certain affairs—an exclusion which limits them in learning the wider culture in which they must increasingly participate.

Finally, the poverty of his sources has forced Hughes to underplay contemporary Eskimo religion. He treats religion as related to social structure, but not as a system of ideology and ritual. If we anthropologists encounter Christianity among exotic people, apparently all we do to ascertain whether any elements of the traditional religion persist, note those, and stop. We regard it as hardly worthwhile to study the introduced religious forms, unless there is some marked distortion in the way they have been taken over.

By HEINZ ISRAEL★

Dresden, D.D.R. 22 v 64

Hughes' article on so-called culture change among the Eskimo in our time is a very interesting effort to comprehend widely scattered statements in this field. To have undertaken this task in spite of the variety and fragmentariness of the material deserves the appreciation of the scholarly world.

Owing to shortness of time I am unable to contribute a long comment; I restrict myself to a few points and I will quote some authorities in addition to the literature.

1. Hughes has aimed at a broad indication of "some of the sociocultural as well as situational changes and continued trends in the Greenland, Canadian, Alaskan, and Siberian Eskimo populations over the last two decades." The introductory sections of each chapter demonstrate that the historical background must always be taken into consideration. In the chapter "Greenland" is mentioned the activity of the Danish mission which was founded by Hans Egede in 1721. Here also should be mentioned the effectiveness of German missionaries in West Greenland who came from Herrnhut, Oberlausitz, who for nearly 2 centuries, from 1733 to 1900, profoundly influenced the life of the Eskimo in this region. Today the records of these Moravian missionaries (i.e., diaries, letters, registers, etc.) repre-

sent important sources whose ethnological significance has not yet been evaluated. (cf. Knuth 1963; Israel 1963).

2. In addition to the summarizing literature there is a publication in English by Williamson (1953), which in its second part concerns itself with the "New Deals" in Greenland. In recent years numerous works on Greenland's economic development have been published in Denmark; to my knowledge the most comprehensive (Boserup 1963) includes many statistics. Soviet scholars also have recently published papers dealing with the problems of modern Eskimo life, most recently L. A. Fineberg (1963).

3. Hughes touches on a very significant question when he compares the Soviet Union's program of development for the Eskimos of Siberia with that of Denmark for Greenland. The nature of these endeavours—which proceed from different foundations, socialistic on the one hand and capitalistic on the other—is not finally demonstrated by establishing some resemblances. Nellemann (1963:108) justly pointed to this when he confronted some conceptions and establishments with others of the same kind in Greenland and Siberia (Commission on Greenland—Committee of the North, Travelling Teachers—Red Tents, and so on).

4. Finally it should be pointed out that Hughes cites several authors without citing their works in the list of references. These are: Sveistrup 1949; Becker 1956; Sanders *et al.* 1953; and Mirsky 1937.

By HELGE KLEIVAN★

Bergen, Norway. 1 vi 64

Dr. C. C. Hughes has taken a valuable initiative in preparing this survey of recent culture change among the Eskimos. It is in all respects a difficult task, but it has been performed with great skill. I will give a few comments, mostly referring to the eastern areas, which for various reasons are less satisfactorily treated than the western. Part of my comment deals with a few general problems.

Hughes attacks the widespread stereotype of "the Eskimo," thereby backing, within a wider frame of reference, the views expressed by J. L. Giddings Jr. some years ago (1952). It has been maintained that the stereotype is due to a too heavy leaning on descriptions from the eastern areas. Despite an admittedly greater degree of cultural uniformity in the east, it is by no means so uniform as has been presumed by some authors. Also, within the vast eastern areas, there are very considerable ecologic differences,

and as these stamped and varied the traditional cultures, they are of prime importance also in the present period of change.

This may be exemplified by referring, for instance, to the dilemma created through the transition to stove-heated wooden houses on the coast of Labrador (Kleivan 1962, 1964). Likewise, in referring to ecological restrictions to the development of commercial fishing in parts of west Greenland, and to how the hunting of sea birds for food, has been reduced through the introduction of wooden boats, which made the application of traditional hunting methods impossible.

Just as there is reason to conclude that "the Eskimo environment" offered opportunities for more than one type of "Eskimo social organization," there is adequate evidence that there are regional differences in the total effect of the influences from the outside world, even where these have been almost identical over great areas (such as west Greenland).

Strange to say, while the literature frequently gives the impression that the socio-economic pattern characteristic of the Eskimos is one of "communalism" and "equality," it is interesting to note that another stereotype of opposite character is met with in present day Greenland. It is maintained, especially among administrators, that the Greenlander is "extremely individualistic," and this is said to be an impediment to the introduction of larger fishing boats. The conception stems from a lack of understanding of the importance of kinship relations. The Greenlander's attitude is probably a result of a strong kinship reference, rather than an overall individualism, which today manifests itself as a hindrance to joint ownership of new capital goods.

It is a curious fact that the two parts of the Eskimo area proper which have for the longest period of time been exposed to continuous contact with the white man, that is, Greenland and the Atlantic coast of Labrador, are those from which we have the most meager literature both with respect to cultural and social anthropological studies, and to studies of contact and change. Danish anthropologists working in the Arctic area, have, for example, not until the last few years have been interested in modern culture change.

It is interesting to note that the Danish polyhistor scientist and Greenland administrator, Dr. H. J. Rink ("the father of Eskimology") a century ago demonstrated interest in the social effects in Greenland of the contact with the outside world. Rink understood the implications of the deve-

lopment of asymmetrical relations (dealt with by Hughes). He pointed out (Rink 1862) that plural family houses were being abandoned near the larger instead of hunting seals and contributing to the pattern of food sharing, were converting their work into money or its equivalents as employees of the nearby Europeans. The sociological effect of this was, in fact, almost identical with that of the present-day selling of seal meat by Greenland hunters to their cod-fishing countrymen in some localities where only part of the population is solely engaged in commercial fishing.

Hughes' treatment of Labrador is more meager than necessary, even admitting his expressed and acceptable reservation with respect to the exploitation of Mission files. When material of a professional anthropological kind is practically lacking, the author could at least have covered the survey side better, through utilization of the easily obtained annual reports of the Moravian Mission (Periodical Accounts). This would have given the reader a more up-to-date idea of situational changes. Having at an early stage in my anthropological training drawn heavily on the Periodical Accounts (Kleivan forthcoming), I can with regret confirm the paucity of data on social life in these reports. But a considerable number of notes, interesting and relevant in connection with the present paper, can nevertheless be found in this source.

A detail: the catalogues from American and Canadian department stores, overflowing parts of the Eskimo area in the last 15-20 years, should be mentioned. These catalogues may in some instances have been even more "Rubicon-izing" than the presence of some of the missionaries in these areas.

I regard it as a mere accident that R. W. Dunning's highly relevant contribution (1959) has not been referred to by the author.

With regard to Greenland, there is a jungle of printed official reports, most of them of course in Danish. With the present lack of professional studies, I am afraid that it is almost impossible to cover situational changes in Greenland in a satisfactory manner without access to sources printed in Danish. A citation saying that "the country is divided into districts, each having a medical officer, a hospital-trained nurse and a hospital," does not tell much. Greenland is divided into 17 health districts, each with a hospital and one or more medical officers. Furthermore, there is in Godthaab a central hospital with special departments and nearly 200 beds. Forty doctors are now employed in Greenland. With a total population of about 35,000,

there are less than 900 persons per doctor, which is near the Danish average. This shows briefly how important it is to have access to official material published in Danish, if compilation of a survey of recent developments is part of one's objective.

A statement to the effect that "everyone is literate in the Greenland language" does not say much. What matters is the extent this literacy can be utilized, and for what purpose. A comparison between west Greenland and the Labrador coast (which also has a long record of literacy) would reveal an extreme difference with regard to the possibility of utilizing the existing literacy. There is a very considerable and fast-growing literature of a varied character accessible in the Greenland Eskimo language, whereas the total number and variety of books printed in Labrador Eskimo is exceedingly small. (We should, of course, remember that the Eskimo population of Labrador's Atlantic coast is not much more than 2% of the native population of Greenland.)

Despite these critical remarks, I am impressed to see how much correct information the author has been able to extract and utilize from the limited number of publications on Greenland existing in English.

With reference to the northern part of west Greenland, Hughes is afraid to over-emphasize socioeconomic change. But even though this area lies outside that part of the coast where commercial fishing can be developed on a great scale, the opportunity of selling seal meat to money-earning townspeople exists in some localities. This new opportunity to convert one's products, will surely generate socioeconomic change and modifications in interpersonal relations.

I believe I am in accord with the author when I maintain that investigations pertaining to what we may call "the sociology of interpersonal relations" are among the most needed in the study of recent changes in Eskimo society. The patterns of gift exchange and food sharing have been dealt with in a rather summary fashion by many authors in the past. Very confusing has been the lack of distinction between (a) the technical arrangements of partition of animals between those present during a particular hunting event, and (b) the allocation of the products of the individual hunter when he returns to his settlement. The sociological priority of the latter should, according to my experiences, need no further qualification. In changing west Greenland it has been interesting to note that whereas the arrangements mentioned under (a) in some districts have not been much modified, changes in the mode of allocation, due to the transition to a market economy, have

had far-reaching consequences in the field of interpersonal relations.

The "need for studies" outlined by Hughes for Greenland is fully endorsed by the writer. I will only add that the fields of local and "national" politics offer interesting opportunities for anthropological research. Increased participation in political activities may be expected in the immediate future due, i.e., to the recent law stipulating that Greenlanders and Danes shall not have equal remuneration for equal work when working in Greenland. There is little reason to believe that Danish-Greenlandic relations will be as peaceful in the near future as they have been in the past.

By GEORGE NELLEMANNS*

Copenhagen, Denmark. 28 v 64

I shall comment with great pleasure on Dr. Hughes' manuscript, "Under Four Flags," though only as far as the section on Greenland is concerned. It is very refreshing to learn that a colleague has had the courage to treat the conditions of the Eskimos comparatively under one hat. Courage is needed, especially when one considers the great differences between the four countries, differences for instance in language and in the main views of research. We must therefore be grateful for this survey of Hughes and congratulate the author on his results. Because the problem is difficult, colleagues must give their supplementary remarks when necessary. The author himself points out the difficulties and also his ignorance of the Danish language. It may appear immodest that I, a Dane, point this out; but it may serve as my excuse that around 50% of all Eskimos are Danish subjects. Because a survey in CA quite naturally will function as one of the most important international sources on the subject which it treats, I shall, rather than criticize details, deal with the working technique of CA itself. If the articles were submitted for correction before printing there would be a possibility for correcting misunderstandings and errors. As the procedure is now it is only to be hoped that the person who wants to make use of information in an annotated CA article will take the trouble to read all notes through to ensure that this information has been corrected. For those who do not take this trouble upon themselves, an article like that of Hughes may turn out to be a dangerous source.

At the stage which the article has now reached I shall restrain myself from a pedantic correcting of errors (e.g. errors in the description of the administrative division of Greenland; assertions that cryolite mining and animal husbandry are modern phenom-

ena, and that the caribou is almost extinct, etc.).

As the article, as far as Greenland is concerned, has been written on the basis of literature in English, I shall take the opportunity partly to comment on the value of these sources, and partly to supply information on what has been written on this subject in Danish, and what works in the English language the author has not succeeded in discovering.

The much-used "Birket-Smith 1959" is certainly the latest published composite work on the Eskimos, but it is hardly suitable as a source to the ethnographic present. The book was written before 1928. It has of course been brought up to date on many points; however, not on all. For instance, one of the passages which Hughes quotes is taken without alteration from the original edition. It must also be considered that Birket-Smith takes an interest merely in the traditional Eskimo culture and never has occupied himself with a study of the culture change. And lastly, Birket-Smith cannot be supposed to be able to give a satisfactory description of the conditions in Greenland today because he has not set foot there for 40 years.

As for the literature in Danish let it be said at once that much of what Hughes is seeking is not "hidden" there. Danish anthropology has up to the present been directed from the Department of Ethnography at the National Museum in Copenhagen, and here they have as far as the Greenland research is concerned till now predominantly concentrated upon archaeological excavations. The first university graduate in anthropology (ethnography) left Københavns Universitet as a Master of Science in 1950. Besides anthropologists you will in Denmark find the term "eskimologist": students of Eskimo language and culture. Københavns Universitet has had, since 1926, a chair in this sphere.

But even if no comprehensive literature in either Danish or in English has been published, there is something which ought to have caught the attention of the author. In the Umanaq district a community and culture study is being conducted by Bent Jensen, an M.A. in "eskimology" and educated in this sphere by professor Erik Holtved. This investigation was commenced in 1956 and will continue through 1976. I have cited a number of published studies from this project in the bibliography.

The study of the traditional Greenlandic religion from a culture change

point of view has also been described in English (I. Kleivan 1960; G. Nellemann 1960).

Another community study has been accomplished in the Cape Farewell area by Inge and Helge Kleiven, but the results of this have not yet been published (but see H. Kleivan, 1964).

Hughes refers to 3 volumes published by "Udvalget for samfundsforskning i Grønland" (The Commission on Social Research in Greenland), which is a governmental commission the task of which is to investigate the effects of the innovations which the changed policy towards Greenland after 1950 have brought about. Besides the 3 volumes quoted I have in the bibliography listed the other 60.

Apparently Hughes' article builds in the main upon the literature which has been admitted to the "Arctic bibliography." Out of consideration for the colleagues who go so far as to read comments on using Hughes' article, I shall have to mention a couple of "English language" bibliographies: "Publications by Danish Anthropologists" and "Danish Arctic Research." I have also added a number of other works to the bibliography which scholars interested in the culture of modern Greenland may find helpful (see Bertelsen 1960; Bornemann 1956; Glarborg 1962; Goldschmidt 1959, 1963; I. Kleivan 1957, 1960; Lidgaard 1961; Nellemann 1960, 1961, 1962; Rosendahl 1958; see also the several items listed as "Reports from the Commission on Social Research in Greenland").

Allow me at last to draw attention to one more aid. "Associates in Current Anthropology" published yearly in "Current Anthropology". I am aware that not all associates answer letters, but some do it anyhow.

By JAMES W. VANSTONE*

Toronto, Canada. 13 v 64

Professor Hughes has done a fine job in bringing together recently published materials from the 4 areas of Eskimo population. Since I do not differ with the author on any major points, my comments are, for the most part, confined to emphasizing the importance of his conclusions.

In the section on Greenland we note that the role of the Danish government looms large but we get only a vague idea of the role played by Danish anthropologists either in government-supported or independent research. For this reason the author does well

to point out future research needs.

The treatment accorded the Canadian Eskimos is particularly good, giving as it does a complete picture of present conditions, the factors which brought about these conditions, and the nature of research in the area. This reader is particularly pleased to note the emphasis that Hughes has placed on the emergence of the "deme" as an important social unit, since this seems to be a vital factor among northern Athabascans as well as Canadian Eskimos. The necessity for newly emerging northern communities to develop leadership patterns capable of dealing with the new population groupings is a point that has been stressed by most social scientists working in northern Canada.

With regard to the section on Alaska, the point-by-point comparison with Canada is a meaningful and thought-provoking approach. It is treatment of this kind that is certain to make this review article interesting to the anthropologist who is not an arctic specialist.

From the standpoint of value to the specialist and non-specialist alike, the Siberian section, like that on Greenland, is useful because it brings together material not previously available and provides generalizations that are meaningful in terms of all Eskimo populations. Since Hughes dwells to some extent on the role of Soviet planners in northeastern Asia, I would like to have seen a more detailed comparison between these activities and the work of the Department of Northern Affairs and National Resources in the Canadian Arctic. Although the goals are presumably different, it might be surprising to note the extent to which the methods and results have been the same.

The concluding section, on "retrospectives," is the only disappointing part of the article for this reader. The theoretical discussion on the nature of culture change, although interesting, does not always seem to be as relevant to the Eskimo data previously presented as the author doubtless supposed. More to the point here would have been a critical evaluation of further comparative research needs in the Eskimo area. This and other criticisms, however, are of a very minor nature. Dr. Hughes deserves the thanks of all arctic specialists for his detailed and thoughtful summary of the present status of research in their area.

Reply

By C. C. HUGHES★

Comments elicited from CA readers have ranged from corrections and suggested additions to the data discussed, to expressions of differing points of view concerning interpretive statements. For all of these I am deeply appreciative and feel that they substantially contribute to the principal original purpose of the article: viz., to present in a single overview as comprehensive and up-to-date a picture of the contemporary Eskimos as possible. Alternative interpretations and gaps in the data obviously will remain to be noted, lacunae which, hopefully, may now be discerned more easily than before on the basis of the approximations presented here.

There is little need to add further comments of my own where suggestions are of a concrete nature (e.g., indicating additional sources of relevant source materials), or report more recent data than those given in the article (such as census figures). Birket-Smith and some of the other commentators furnish correctives along this line, and I will not take upon myself the task of adjudicating where these commentators disagree among themselves. In some cases, however, I wish to add a brief "comment to the comment" in the interest of clarifying the dialogue.

First, however, to specifics. I regret the inadvertent omission from the bibliography of the 4 references which Israel noted. These have now been incorporated into the final bibliography. Nelleman's appended bibliographic list will obviously be a considerable contribution to the overall comprehensiveness of the article. (In this connection, it should be noted that the bibliography for the article represents "references cited" and does not purport to be a complete bibliography of all relevant sources examined, such as other volumes in the series sponsored by the Commission on Social Research in Greenland.) Israel and also Kleivan usefully point out the potentially rich source of data to be found in the Moravian mission records concerning Labrador and, to a lesser extent, Greenland. In one other comment directed to bibliographic matters, elsewhere I have noted and used Dunning's excellent article on ethnic relations in the north; indeed, it could well have been included here, as Kleivan and others suggest.

Of the geographic divisions discussed, those which appear to have prompted more comment than the others are Greenland and Siberia. This is all to the good, at least so far as English speakers are concerned. For

Greenland, Birket-Smith, Nelleman, Israel, and Kleivan set forth additional material supplementing or correcting some statements in the article. Kleivan's forthcoming publications on cultural change in the context of ecological considerations should be an especially important contribution toward increasing our knowledge of man in the north.

Regarding the Eskimos of Siberia there are comments by Birket-Smith, Cohen, the Dunns, Gurvich and Fineberg, and Israel. I am especially indebted to the Dunns for presenting additional and more recent data in regard to aspects of the change program in the Soviet north which were either not fully or apparently inaccurately covered in my discussion, for this section is perhaps least adequate of all in source material. But I do demur from some of their interpretations of my statement. For example, to say that in the Siberian section I make it seem that women "have little to do but sew" appears to me to be stretching the point; anyone familiar with Eskimo life, be it in the New World or the Old, knows well enough the many tasks that women perform and that a complete cataloguing is unnecessary. Regarding the "truncated Smoliak," on this occasion I was interested solely in Smoliak's remarks about the Chukotski Eskimos, not also the Chukchis; hence I had a specific purpose in abstracting only that passage discussing the Chaplino collective. With reference to their final paragraph of comments, it was never my intention, nor upon rereading do I think I did so, to imply that a "complete solution" to the problems of change had been found in Soviet Siberia, much less in Alaska and Canada. The intent was, rather, to raise the issue, to indicate paucity of data on which an accurate assessment could be made, and to stimulate the type of useful comment evoked from the Dunns.

The matter of possible overdetermination of observation and overselectivity of data through rigid adherence to a theoretical scheme (e.g., Morgan-Marx-Engels's theory of social evolution and especially of clan structures), discussed by Cohen and passively illustrated by Gurvich and Fineberg, is not directly relevant to the present issue of contemporary culture change, but not irrelevant to a non-Soviet scholar's appraisal of Soviet-ethnographic accounts of the Eskimos. The existence of clans among the Eskimos exercises Soviet scholars far less than those of the New World. In the form of contemporaneous "survivals," the former find evidence of purported earlier stages of matrilineal organization among the Eskimos. In conformance with theoretical expecta-

tions, it is claimed that most Eskimo groups had progressed to the first of the 2 stages of clan organization prior to the intervention of historical events which disturbed the "normal" evolution of matriliney into patriliney and thence to monogamy. Soviet theorists would, then, point to the patrilineal clans of the Western Bering Sea Eskimos as being further evidence of the autonomous and inexorable sequential development of clan forms, and would not look to local conditions of habitat and ecological change for an explanation of the development of patrilineal and patrilineal organization (e.g., L. Fineberg, "K voprosu o rodovom stroye u Eskimosov," *Sovietskaya Etnografiya*, No. 1, 1955, pp. 82-99; L. Fineberg's review of C. C. Hughes', "An Eskimo Deviant from the 'Eskimo type' of Social Organization," in *Sovietskaya Etnografiya*, No. 3, 1961, p. 134. Perhaps the most generally applicable statement that can be made with respect to clans among the Eskimos considered as an entire cultural group is that much basic ethnographic and comparative work remains to be done before the full scope of differences and similarities in the pattern of social evolution in Eskimo societies can be definitively outlined.

With Birket-Smith, I agree that use of any term (such as "clan") is mostly a matter of choice and convention. The recognition of empirical indicators of social forms should not, however, be arbitrary. The existence of a strong patrilineal emphasis in the Bering Sea region, whether the social unit be labelled "clan," "lineage," or whatever, should henceforth be included in all discussion of "the" Eskimos, and research should be directed toward specification of the limits and scope of apparent unilineality. Cohen's suggestion that some of the emergent social units in Canadian settlements should be closely studied with respect to their clan "status" is well taken.

Honigmann's cautionary statements that culture change and personality disintegration are separate phenomena which may not be invariably associated arouses no dissent from me. I did not mean to imply a simplistic relationship, and his theoretical and substantive comments on change in Forbisher Bay will be appreciated. The basic intent of my comments was to suggest that, among other psychological phenomena, change may induce anxieties and stresses; and that the resolution of these stresses, the retreat from anxiety, may well take the form of symptoms, which in turn may become severe enough that they are viewed by others and by the individual himself as overly debilitating. Obviously anxiety—to some degree, in some situations, under some conditions

—is a normal concomitant of all life. But it *per se* is not an instance of psychological disorder. It may become that, or may be a component of a syndrome which clearly is psychiatric disorder. And its relationship to cultural change—or cultural stability—is 1 potentially solvable by empirical research of the type being done by Hognigmann and others.

Cohen raises the question of criteria of "development" and—correctly, in my judgement—takes issue with the idea of a single terminal goal for the developmental process. I did not intend necessarily to imply the desirability of such a Procrustean plan, but rather, to raise to the level of explicit discussion the need for looking functionally at the nature of the end product of development—to look at it from the point of view of an interrelated whole, rather than let continue the series of discrete, pseudo-autonomous developmental schemes which are set in motion as if they will have no socio-

cultural repercussions. Education of the young, for example. If there are no "ecological niches" appropriate to the newly acquired skills and aspirations, one may well reap more problems (of different types, to be sure) than earlier existed as stimuli for development.

On another matter, Cohen appears to have misread my discussion of reasons for decline in the caribou herds. I did not indicate that decline is due to radioactivity; but rather (as on p. 18) that human depredation, disease, weather conditions, etc., seem to be mainly responsible in the view of specialists. Radio-active fallout is a critical problem of direct concern to the human populations dependent on caribou, whatever its role may be in population dynamics.

Dunning states that fruitful use of a comprehensive research paradigm

such as that suggested by the idea of "transactive structures" is dependent upon adequate structural analyses, which are scarce in the Eskimo literature. With this I agree, and would add only that also necessary are more complete and comprehensive data on ecological factors and especially on the psychocultural environment and the "phenomenology" of the change situation.

Carpenter's comments puzzle me but their impact is not lost. Beautiful, compelling insights, a poignant statement of the human experiences involved in anthropological fieldwork, they perhaps better than many other pieces illustrate Carpenter's feeling that anthropology is an art as well as a science. In any case, as an art, anthropology has perhaps had no better field of application and enduring fascination than the Eskimos.

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