

EFFECTS OF A TECHNOLOGICAL CHANGE IN AN ALEUTIAN VILLAGE†

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THIS paper describes the way in which a change in one aspect of the economy of a small and isolated Aleutian village has affected the culture of all its members. The village is Nikolski, a community of 56 Aleuts on Umnak Island. The information upon which this paper is based was gathered during the summer of 1952 when the writer was a member of a small party of anthropologists, led by W. S. Laughlin, who resided in Nikolski. The party was supported by grants from the Arctic Institute¹ and the Graduate School of the University of Oregon.

In the past, Aleut livelihood was, in typical Eskimo fashion, almost entirely dependent upon the plentiful products of the sea. Among the most important of these were sea lions, seals, and salmon. Kayaks, now called *bidarkies* by the Aleuts, were fundamental to this maritime economy. The richly varied technology also included throwing boards, which were used to propel a variety of harpoons to secure sea mammals, and weirs, fish-spears, and hooks and lines for fishing.

A remarkable degree of economic security was achieved through the use of all available resources, and by a combination of self-sufficiency within the family and community-wide cooperation and sharing. Thus every man was capable of securing his own sea lions, but every sea lion catch was shared throughout the village. To some extent this situation still exists today.

The Russians, who first contacted the Aleuts in 1741, were quick to realize the value of their skills. They put the men to work hunting sea otter throughout the islands and as far away as Siberia and California. This resulted in tremendous hardship and, together with massacre and disease, led to depopulation and the disappearance of many villages. In those villages which survived, however, the traditional economy continued. Rather than trying to make the Aleuts adopt their customs, the Russians encouraged them to keep their own village life², and in many ways it was the Russians who adapted themselves to the local culture, living in and depending upon the Aleut villages for their needs.

With the purchase of Alaska in 1867, the United States also acquired the Aleutians, but changes were few until after the turn of the century. Then the economic situation began to alter rapidly, with serious effects throughout the Aleut culture.

†This paper was read before the Social Sciences Section of the 31st Annual Meeting of the Alabama Academy of Science, 2 April 1954.

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¹With funds provided by the U.S. Office of Naval Research.

²An exception was in religious matters. The Aleuts adopted the Russian Orthodox Church in the 1820's, and that church remains today a focal point of village interest.

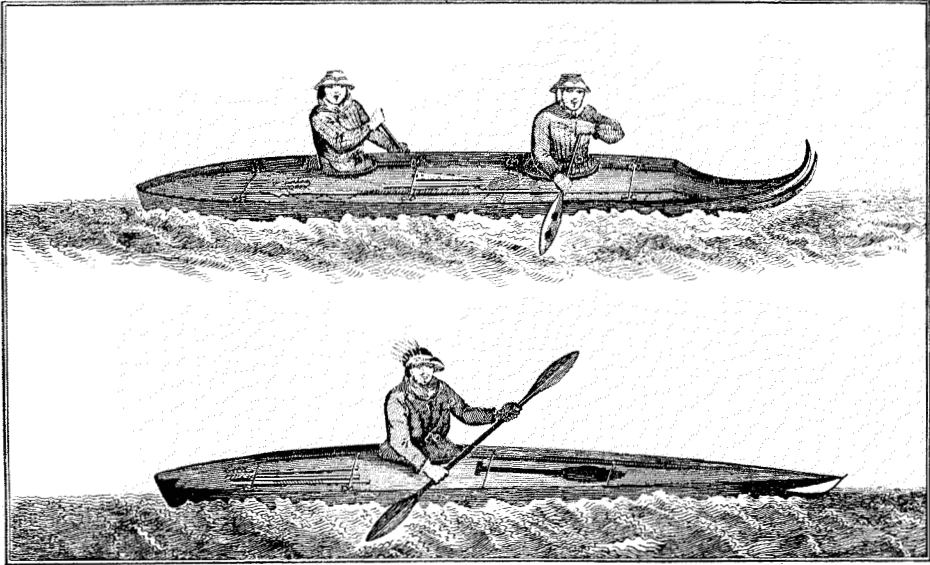


Fig. 1. Aleut bidarkies outfitted for hunting (from 'A voyage to the Pacific Ocean' by Capt. James Cook and Capt. James King, 1784, facing p. 112). The two-man bidarky may have been a post-Russian innovation.

These effects and their interrelationship can be illustrated by taking one very specific and fundamental technological innovation—the change from the traditional bidarky, the one-man skin boat, to the large wooden dory, which was introduced by the Americans and is exclusively used today—and showing its ramifications in the community culture of Nikolski. This transition has come about within the last forty years, and proceeded most rapidly during the 1920's.

Dories proved to be simpler to maintain and operate than bidarkies; they were larger, sturdier, and had a greater carrying capacity. They were especially useful in transporting hunters, equipment, and furs when fox hunting was profitable, as it was in the 1920's. Furthermore, the dory was approved by the white man, while the bidarky was ridiculed. Today only a few of the older men know how to handle a bidarky, and fewer still (two or three, by Aleut estimate) know how to build one. Only one bidarky existed in the village in 1952, and it had long been unused.

An immediate effect of this change from bidarky to dory was an alteration of the basic hunting patterns. The dory, by its very bulk and clumsiness, was largely responsible for a decline in the use of valuable offshore fishing and hunting areas, for which the small, light and manoeuvrable bidarky had been ideally suited. The throwing-board and harpoon were rendered almost useless by the noise and size of the dory which kept sea mammals at a distance. Instead, the rifle, long used in addition to traditional weapons, came to be relied on exclusively for procuring game. This contributed to dependence upon the outside economy and to decreased use of the immediate local resources, which have probably been the most far reaching of the effects of the bidarky-to-dory shift.



Fig. 2. Aleut dories, Umnak Island, 1952.

The bidarky was made entirely of local products, such as driftwood and sea lion skins, which every man could obtain for himself. Construction and repairs required skill and diligence, but not outside help. Dories, by contrast, are made from commercial lumber, and those now in use have all been imported ready-made. Six of the eight dories in the village in 1952 were powered by ponderous, single-cylinder gasoline motors. In order to utilize the marine economy today, a man requires money to buy, maintain, and operate a boat. This is only one of the many reasons for wanting money, but it was one of the earliest and most urgent. Now, every male over fifteen years of age has a wage-paying job for part of the year. These are, with few exceptions, summer jobs at the government sealing station in the Pribilof Islands. While there, the men miss the summer fish runs and the best hunting and wood-gathering weather in Nikolski. They therefore miss the opportunity to make use of the local natural resources which were traditionally the basis of the local economy.

During the summer months the Aleuts formerly camped in family groups away from the village on sites which offered especially favourable opportunities for hunting and fishing. Summer labour outside has reduced this activity from a regular and economically essential pursuit to an occasional vacation outing, which has lost its importance as training in the traditional ways of life.

In the summer time the women and children are now left in the village with few men for their support. The stability of the family is adversely affected by the absence of men and by resulting changes in household membership. Women who are left alone at the beginning of the summer move in with friends or relatives for the three-to-six-month period. The few men who do remain in the village must spend most of their time supplying the daily needs of the community. Consequently, little preparation is made for winter,

and the money of the returning labourers becomes essential for survival later on. Hence, money is as necessary as are the dory and rifle it maintains. Only a combination of the unreliable cash income and the marine economy keeps the village going, neither alone being sufficient as a sole source of livelihood.

The combination of local and outside resources has not been a happy one. In the past fifty years the village population has decreased by half. Poor health and low morale, both at least partly resulting from economic insecurity, have contributed to lowering the birth-rate and raising the emigration rate. These changes may also be seen in the outlook and behaviour of individuals. Personal conflicts, at a minimum in other phases of Aleut life, are prominently associated with money matters, even when connected with such a cohesive force as the church. Decreased cooperation and community responsibility in general are often commented upon by elder villagers, one of whom said, "Now, people want money for everything". Recently, community sharing of the salmon, which are communally seined, has given way to sharing among only those who participate in the seining. The seine keeper remarked, "Now, that is the only way we could get them down to help. Everyone would rather let the other fellow do it than pitch in and help". Similar comments and changes in procedure could be cited in several other activities.

These changes have resulted in decreased community identification and loss of traditional controls, and the acquisition, by young people, of goals associated with money—goals which are attainable only outside the village. These include expensive equipment and American foods, clothing, recreation, and education. The introduction of the dory hastened this dependence upon money.

Childhood training, and therefore transmission of the culture as a whole, was also altered significantly. Formerly a boy underwent intensive training from infancy for adult responsibilities. He was taught, for example, to sit with his legs straight in front of him in preparation for the bidarky, and to bend his arm properly to propel the harpoon from this position. From the age of about ten years, he began to spend most of his time with his father or another man, acquiring the complex skills and knowledge necessary to survive and obtain a living in a bidarky. At about fifteen years he could hunt alone, and by the age of eighteen he could have his own bidarky. Girls were trained to outfit a man and his bidarky for the sea. During the long training period, children learned not only the skills necessary to livelihood; they were also taught the proverbs and legends, the *mores* and values, the ideal and actual behaviours which constitute Aleut culture. Traditional controls were thus instilled in the children and the largely informal social structure was handed down.

With the advent of the dory and rifle, youngsters could learn the necessary skills in a fraction of the former time. Careful tutoring was no longer a necessity. It became important to prepare for work outside even before becoming competent with the dory, so that money could be earned with which to buy the new-found necessities. In 1922, when intensive bidarky training was coming to an end, an American school was established in the village.

Children then spent even less time with their elders. As a result of decreased traditional training, knowledge and skills necessary to make use of many local products were irretrievably lost to Nikolski. The younger generation also failed to acquire much of the rest of the community culture which they would have learned incidentally from their tutors. Behaviours, values, and goals shifted to those advocated by the school teacher and were associated with the new and foreign culture. The gravity of this situation to the community is shown by the fact that in 1952 every child over nine years of age planned to emigrate from the community as soon as possible. Several have already gone. The reasons given invariably indicate a desire to be successful in the white man's way of life.

Patterns of social structure and behaviour in the village have also been affected. Individualism, in one of its most important forms, was eliminated when the dory was adopted. Two men (or a man and boy) are needed to operate a dory, and four or more to launch and beach it each day. A bidarky, in contrast, was a one-man craft. With it, a man was a free agent who could secure a livelihood for himself and his family alone, if necessary. Now he must depend on others for help. Furthermore every man owned a bidarky, whereas only one out of three men can afford a dory. Those without must depend upon the generosity of the dory owners, and are at a social and economic disadvantage. The prestige a man formerly derived from a fine bidarky of his own making has been replaced by the prestige of possession of a good dory, obtained with money. Today it is not the most able, in the Aleut sense, who have the best means to obtain a livelihood and prestige; it is those who have spent the most time outside and so have acquired money and its material benefits. Respect for the older men has suffered; they no longer have the best equipment and give the most useful advice. They are out-of-date, and they are monetarily poor. Their role as tutors, sources of knowledge, and authorities on behaviour has been impaired, with serious effects upon social controls.

The position of the village chief himself, traditionally a respected leader of village affairs, is threatened. His authority is challenged by young people who have been successful in the new economy, and who have won the approval of the powerful white men in the village—the school teacher, who represents the Government, and the sheep-rancher, who legally owns the village lands. Some of these young people are on the government-sponsored "village council" which conflicts with the chief in authority on village affairs. Community stability has been weakened by friction between this group and the more traditionally-minded villagers who support the chief.

Another social change has been in the status of women. Women have long had a role decidedly subordinate to that of men in Aleut society, but the acquisition of the dory has intensified this. In the past women performed one vital function connected with the sea and hunting: that of sewing the cover on the bidarky. Now they have nothing to do directly with the dory. The women also used to gather most of the wood for fires. Today the spacious dory can transport it much more efficiently. These factors, plus the ability

of men to buy their clothes, have lowered the female status, and may have contributed to the present postponement and even decrease in incidence of marriage. One Aleut said, "The reason this village is going down is that the men don't marry and raise families. Too many stay single". Perhaps wives are no longer as essential as they used to be, although economic insecurity has also made family life less attractive.

The ramifications of the bidarky-to-dory shift are thus abundantly evident throughout the culture. It is important to note, however, that acceptance of the dory cannot be said to have been directly causal in all cases. It is often virtually impossible to determine a clear cause-effect sequence in such a context. Nevertheless the adoption of the dory has contributed significantly and was responsible for many of the changes described here.

Oscar Junek said of a somewhat similar situation in an isolated Labrador community, ". . . the adoption of some of the modern mechanical equipments (e.g., one-cylinder gasoline motor) which help the isolated folk community system to pursue its fishing techniques with much greater facility than before the introduction of such articles . . . [does] not affect the precepts or *mores* of the social system."¹

It seems more likely, in the light of the example presented here, that such innovations do vitally affect the less tangible aspects of community life, but not as directly or obviously as they affect the economy. It is improbable that any cultural compartment is as watertight as Junek's statement implies. Certainly in Nikolski all changes appear to provoke other changes.

The bidarky-to-dory shift has helped transform the culture from the traditional cooperative, independent, and secure village, to one of individual dependence upon unreliable, outside resources. Since the outside resources cannot be satisfactorily obtained and used within the community, emigration has increased and the village appears to be disintegrating. If it were possible to provide a cash income which could be fully utilized to satisfy the Aleut's wants within the village, the future might be brighter. This is suggested by the fact that among Aleutian villages today an inverse ratio apparently exists between village stability and prosperity, and the distance from the mainland, and therefore from the source of money and goods.

¹Junek, Oscar W. 1937. 'Isolated communities: a study of a Labrador fishing village'. New York: American Book Co., p. 130.