THE DETERMINATION OF STATUS AT PORT AU CHOIX

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THE DETERMINATION OF STATUS
AT PORT AU CHOIX

by

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ABSTRACT

Burials have long been regarded as a potential storehouse of data for archaeologists. During the late sixties and continuing into the seventies, much of burial analysis was and still is focused on the determination of the status structure of extinct populations. For the Atlantic Provinces of Canada, however, due to very acidic soil, no suitable sites were available for this type of study.

In 1967-68, a site with incredibly good bone preservation was excavated at Port au Choix, Newfoundland, by Dr. James A. Tuck of Memorial University in St. John's. This site will be used to investigate the status structure of the Maritime Archaic people who inhabited the area some 4000 years ago.

A number of methodologies have been developed to deal with burial attributes and artifacts; but it will be argued that the best methodology for the Port au Choix data consists of an analysis of the qualitative as well as the quantitative aspects of the grave goods.

Beyond the simple description of the differences observable, an attempt will be made to relate these differences to other factors of the sociopolitical sphere. For the Port au Choix cemetery, it will be proposed that there was some form of segmentation within the society, and that this may reflect the existence of three separate "family plots" using the same cemetery. This does not preclude the possibility of the differences being due to other factors such as clan or band member-

factors such as clan or band membership.

Using the Port au Choix site as a test case, the status structure of egalitarian societies in general will be questioned, and answers will be proposed. These will relate to features such as the amount of status differentiation, the basis of these differences (sex, age, achievement, ascription, etc.), and the meaning or function of the artifacts interred with the dead.

ACKNOWLEDGEMENTS

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Lastly, I would like to thank Alan Mounier of the Anthropology Department at Memorial for his helpful assistance with statistics.

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PART I

INTRODUCTION

Beyond the description of material culture and the formulation of culture histories, archaeology is also concerned with the re-creation of the intangible aspects of culture. The excavation and interpretation of burial data serve as one of the prime sources for this type of reconstruction. As well as providing data on the physical anthropology and demography of the population, its technology and subsistence patterns, and the possible religious and aesthetic value of various artifacts, burial data also enable archaeologists to study the status systems of prehistoric societies.

It has been proposed by anthropologists that band (hunting and gathering) societies possess the most rudimentary form of status allocation - an egalitarian system. Elman Service (1962:65) states that "inasmuch as band society is small, the greater proportion of statuses are familistic and egocentric". Berreman *et al* (1971:282) add that an egalitarian society "has no stratification of class - not even rank ordering - other than the sex-age distinctions". However, egalitarian societies do possess leaders who supervise various activities, but such a leader is only a "person of influence who achieves status according to his ability" (ibid.:285). Band societies have therefore been seen as basically egalitarian, with higher status positions filled by persons who have gained recognition through achievement.

A cursory glance at the grave goods interred with the individuals at Port au Choix raises some interesting problems. It has been postulated that the Archaic Indians who buried their dead at Port au Choix some three to four thousand years ago were living at the hunting and gathering level and were probably organized into some sort of band structure (Tuck 1976a). Their status system should therefore fit the above description, if this description is correct. However, the quantity of grave goods among subadult skeletons and the great differences between individuals of the same age and sex suggests a much greater amount of status differentiation than would normally be expected, and also the possibility that ascribed (hereditary) status was present.

With this minor background, the purpose of this research was determined to be the answering of the following questions:

1. Are status distinctions detectable in the archaeological record? This question will be answered by studying the distribution of quantity and quality of grave goods.
2. Do the artifacts buried with the dead reflect the status of the deceased, or of the mourners, or of both? The answer to this question will be found in the distribution of male-specific and female-specific artifact classes.
3. Do egalitarian societies have status distinctions beyond the age-sex criterion? This will be determined by an analysis of the differences in artifact types and frequencies per age and/or sex group.
4. If so, is this status achieved, ascribed, or both?

High status child burials will tend to favor the idea of ascription.

5. What types of information can be inferred from the results of status analyses? In this case, speculations regarding other aspects of culture (e.g. band structure) will be advanced.

The report will be organized as follows. Part II will provide a review and summary of the data now available on the Port au Choix site and the Maritime Archaic Tradition. The theoretical and methodological backgrounds will be covered in Part III; while the analysis results and some interpretations will be presented in Part IV. The final section (Part V) will be a summary of the data and conclusions about the status structure at the Port au Choix site, and an attempt to answer the five questions posed above.

PART II

BACKGROUND

A. THE SITE

Approximately halfway up the west coast of Newfoundland's Northern Peninsula is the Pointe Riche Peninsula, connected to the island by a narrow strip of land formed by the near convergence of the Back Arm and Gargamelle Cove (see Figure 1, page 5). The modern fishing village of Port au Choix is located on the shore of the Back Arm where the body of the peninsula meets the causeway-like connective land formation. The actual site, consisting of three loci, was located in the village at three major areas situated approximately 550 feet from each other. From east to west, they have been designated as Locus 1, Locus 2, and Locus 4, respectively (see Figure 2, page 5).

The Port au Choix region is located west of the Long Range Mountains - the northernmost occurrence of the Appalachian Range. Composed of Precambrian granites, they form the backbone of the Northern Peninsula. To their west and along the coast, the bedrock is formed of carbonate Cambro-Ordovician sediments (Tuck 1976a:1).

The generally accepted view of the Pleistocene geology of the Port au Choix region is that Newfoundland was only partially covered by the Labradorean Ice Sheet, and that the west coast may have been covered by "local radial flows" from centers in the Long Range Mountains. The weight of this ice created a depression in the land mass

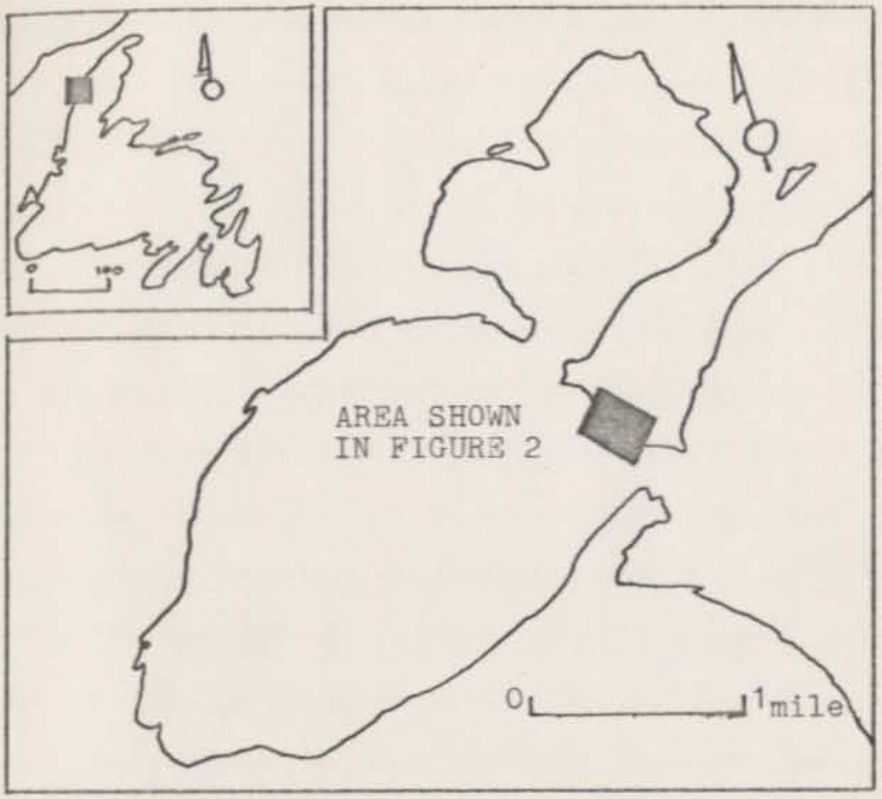

Figure 1. Location of Port au Choix area.

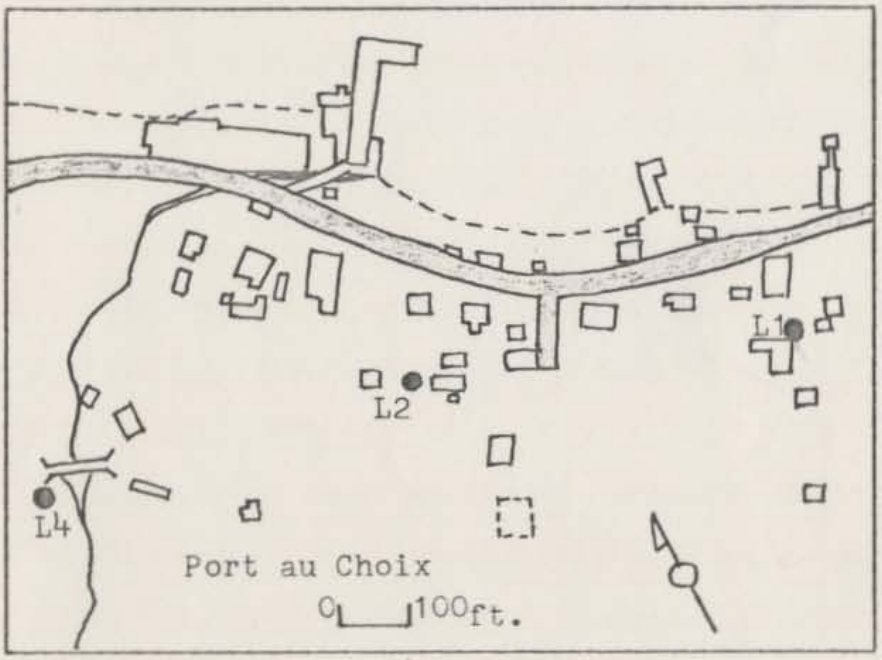

Figure 2. Location of Burial Sites.
(Both Figures from Tuck 1976a:164-165)

until the time of deglaciation around twelve to thirteen thousand years ago. Except for a readvance of the ice sheet around 11,000 years ago, the Northern Peninsula has been "emerging from the sea due to continuing glacio-isostatic rebound" (Grant 1972:101). As a consequence, the archaeological remains of the prehistoric peoples in this part of Newfoundland have not been inundated by the sea.

The emergent coastline has resulted in the formation of marine terraces and ancient raised beaches. At the present elevation of 18 feet above the high water mark, the second highest of these raised beaches was chosen by the Archaic inhabitants of Port au Choix as a place to bury their dead "partly because it allowed relatively easy digging in contrast to the gravel of the upper and lower terraces" (Tuck 1976a:2).

Although skeletal remains had for a long time been accidentally encountered in the excavation of cellars and during other construction activities, no systematic work was undertaken until Dr. James Tuck of Memorial University excavated four areas in the village in the fall of 1967 and summer of 1968. This resulted in the discovery of three temporally distinct and unequally productive excavation areas (Tuck 1976a, 1976b).

The oldest and most productive area was Locus 2. A total of approximately 90 burials and thousands of artifacts was recovered from this area, dating between 4290±110 and 3690±90 years ago. Next in time was Locus 1, dating around 3410±100 years B.P., which produced the remains of ten in-

dividuals of varying age. The most recent burial area was Locus 4, dating around 3230±220 years B.P. This area, however, was the least productive with only the remains of two very young infants (Tuck 1976a).

A fourth area, designated as Locus 3 and located between Locus 2 and the harbour, produced Dorset Eskimo artifacts but no evidence of Archaic Indians (ibid.:22).

In total, the remains of over 100 individuals and 3000 artifacts were recovered from the three Port au Choix burial loci. The skeletons span the range of newborn to old adult and enabled James Anderson (1976) to study the physical anthropology of these people. The artifacts, although a chipped-stone industry was virtually lacking, were wide-ranging enough to provide clues as to the technology, economy, sociopolitical organization, and other aspects of the culture of these Archaic Indians.

B. THE MARITIME ARCHAIC TRADITION

Definition

Initially defined by Tuck (1970, 1971, 1976a, 1976b) on the basis of the Port au Choix cemetery, the Maritime Archaic Tradition refers to a marine-oriented hunting and gathering cultural manifestation. It existed in an area stretching from northern Labrador to northern New England, and west to New Brunswick and well into the St. Lawrence estuary. It includes what has come to be known as the "Red Paint" or Moorehead burial complex of Maine and adjacent

areas. Although it is geographically situated in three ecological zones (the Canadian, Hudsonian, and Eskimoan), it exhibits remarkable homogeneity in the areas of environment, economy, technology, art, and religion (Tuck 1976a:98).

Maritime Archaic peoples existed in Newfoundland and Labrador, at least, from about 7500 years ago to 3000 years ago. On the island itself, radiocarbon dates show an occupation ranging from 4990±230 years B.P. at the Beaches site to 3230±220 years B.P. at Locus 4 of the Port au Choix site. In northern Labrador, the dates range from 5995±80 years B.P. at Black Island Cove to 2955±85 years B.P. at Smoothland Point. Southern Labrador, however, has the greatest time span - from 7530±140 years B.P. at the L'Anse Amour Mound to 2410±50 years B.P. at the Iceberg site (all dates from Tuck 1976b). Older dates exist, but it has not been demonstrated that they belong to the Maritime Archaic Tradition, although it is probable that these older sites were occupied by an ancestral Palaeo-Indian culture. The discrepencies in time periods may be due to the amount of archaeological work done in the respective areas and/or to the fact that parts of Newfoundland are submerging rather than emerging as is the Strait of Belle Isle area and the west coast of the Northern Peninsula. Older archaeological sites have therefore become inundated by the sea in areas with a submerging coastline.

Radiocarbon dates outside of the Newfoundland and Labrador region are scarce from Maritime Archaic sites. Many

of the sites in Maine, for example, were excavated prior to the advent of radiocarbon dating (Tuck 1976a; Sanger 1973). Some dates, however, do exist, and they show a time span ranging from prior to 5000 years B.P. to around 3300 years B.P. for the Maine area (Tuck n.d.:3,8).

Importance of Port au Choix

Although not greatly important in the reconstruction of settlement pattern or of culture history due to its rather short time span (4300-3200 years B.P.) and its lack of living areas, the Port au Choix loci are the prime sources of information about demography, physical anthropology, and burial ceremonialism (see Tuck n.d.) associated with the Maritime Archaic Tradition, in its late stages at least.

From osteological analysis, the skeletal remains confirmed the assumption, made on the basis of technology, that the Maritime Archaic peoples were "Indian" in physical type and not "Eskimo" (Tuck 1976b:19). The data also showed the occurrence of a relatively high infant mortality rate, as in most hunting and gathering societies, and that the male to female ratio was approximately one to one (Anderson 1976). The remains, however, are not too useful in estimating aboriginal population since the site covers a time period of more than one thousand years, and the temporal differences between the three burial groups forming Locus 2 "are not of sufficient magnitude to be detected by the C-14 method" (Tuck 1976a:94). Also, there is no knowledge of the geographical expanse served by this cemetery.

Being a cemetery, it naturally provides some data on burial ceremonialism and speculations about the religious and aesthetic functions of artifacts. The alkaline soils of Port au Choix allowed for good preservation of easily perishable objects, especially bone artifacts - a Maritime Archaic cultural inventory not represented at most other sites. However, the chipped-stone industry is not well represented at Port au Choix, but present. Possibly chipped-stone tools did not have high status value and, as a result, were not buried with the dead.

C. CULTURAL RECONSTRUCTIONS

The following reconstructions are based on the Port au Choix material, along with data from other sites when necessary for comparisons or when data from Port au Choix was lacking. Technology will only be discussed briefly, while more time will be spent on socio-politico-economic factors ranging from subsistence to aesthetics.

Technology

The underlying basis of Maritime Archaic technology is its adaptation to a marine environment. Hunting implements from Port au Choix include ground slate and bone points, slate and bone bayonets, bone daggers and spears, foreshaft fragments, and a few chipped-stone projectile points (Tuck 1976a). The multitude of projectile points from the Strait of Belle Isle region attest to a developmental trend from wide short-stemmed varieties to narrower points with more elongated

stems to expanding-stemmed varieties after around 4500 years B.P. (Tuck 1976b:50-51). Hunting implements designed specifically for marine hunting included toggling and barbed harpoons, barbed bone points, and bone lances. Fish spear or leister points attest to a fishing industry as well (Tuck 1976a:38).

Skin- and hide-working implements from Port au Choix are lacking, and only include bone scrapers made from caribou scapulae and bone "beamers". Other sites, however, provided chipped-stone butchering and cutting knives, and stone scrapers (McGhee and Tuck 1975). Awls, needles, and needle cases, representing the sewing industry, were numerous at Port au Choix - although lacking at other sites due to poor bone preservation (Tuck 1976a:41).

Gouges, axes, adzes, a stone chisel (?) and a bark peeler (?) attested to the importance of woodworking. Bone- and stone-working tools were absent from the Port au Choix site, with the exception of beaver tooth knives which could have served to cut bone and antler (Tuck 1976a, 1976b). Other sites provided evidence of bone- and stone-working tools such as a few gravers and some hammerstones (Tuck 1975; McGhee and Tuck 1975).

Direct evidence of clothing was absent. However, Tuck (1976b:31) says "it is hard to imagine anyone living in Newfoundland and Labrador without waterproof boots, leggings, a jacket, mitts, and some sort of cap or hat". Articles with aesthetic or ornamental value were numerous and included pins, pendants, combs, amulets, and charms (Tuck 1976a). Musical instruments such as flutes or whistles are directly

attested to (McGhee and Tuck 1975; Tuck 1976a), while others such as rattles and drums can only be speculated upon.

One point regarding technological innovation and borrowing seems worthy of mention. James Tuck (1976b:87) hints at the possibility that the knowledge of the true toggling harpoon may have diffused to the Eskimos from the Maritime Archaic Indians, while knowledge of the bow and arrow may have diffused from the Eskimos to the Maritime Archaic Indians.

Subsistence System

A good summary of the hypothesized annual subsistence round of the Maritime Archaic peoples is provided by Tuck (1976b). From late winter to possibly as late as June, harp seals could be hunted on the pack ice. Throughout the summer, other species of seals (harbour, grey, ringed, and bearded) could be hunted in various parts of Newfoundland and Labrador. The northward migration of swans (?), ducks, and geese, occurred in late spring, along with the movement of sea birds to shore in order to nest and moult. During the summer, Atlantic salmon was probably a major food resource, while a multitude of newly ripened berries could be gathered in late summer. With the advent of the first snows in late fall, the caribou would begin their annual migrations, and could be hunted in the interior of the island. They were probably hunted throughout the year also, even though chances of success were more precarious at other times. During the early winter, the Maritime Archaic Indians possibly lived in the interior hunting hares, ptarmigan, otter and beaver, until the late winter harp seal hunting period

arrived (Tuck 1976b). The annual round, then, is basically maritime-oriented with the exception of a winter interior orientation and partial dependence on gathering during the late summer.

Settlement Pattern

The pattern of Maritime Archaic settlements coincided with their subsistence pursuits. Information from various sites demonstrate the existence of summer base camps and fall and winter specialized exploitation camps, but always the stress is on small settlements occupied for short periods of time. All of the Saglek Bay sites, except for one summer or early fall fishing camp located on a stream bank, were close to the winter edge of landfast ice and within easy access to spring and summer drift ice (Tuck 1975). The suggestion, then, is that they served as late winter, spring, and early summer living sites from which sea mammals could be hunted.

A pattern of small, short-term occupation sites is also suggested for the Strait of Belle Isle region (McGhee and Tuck 1975) and for the Sandy Cove site in Hamilton Inlet (Fitzhugh 1972, 1975). The only dissimilar living site is the Rattlers Bight-1 site which Fitzhugh (1972) believes to be a relatively permanent summer base camp used by a fairly large group of people.

Although Port au Choix lacked a living site, other Newfoundland sites, such as the Beaches site in Bonavista Bay (Carignan 1975), attest to a similar settlement system as for the Labrador sites.

The Maritime Archaic Indians seem to fit the definition of a central-based wandering type of settlement pattern which is perceived as a

> "community that spends part of each year wandering and the rest at a settlement or 'central base', to which it may or may not consistently return in subsequent years." (Beardsley et al 1956:138).

The late winter to summer sea mammal hunting camps were relatively fixed settlements, while the late summer and fall berry gathering and caribou hunting expeditions were more or less nomadic in nature.

Social and Political Organization

Due to their elaborate burial ceremonialism and their settlement-subsistence system, it is believed that the Maritime Archaic peoples were definitely beyond the family level of sociocultural organization. However, to what variant of band organization they belonged to is difficult to determine. Tuck (1976a:84) states that they "must have arranged themselves in rather small bands who followed a seasonal round, perhaps not unlike those of the Micmac Indians of Nova Scotia". He goes on to say that the Port au Choix people, because for their concern for the dead, may be placed in between a restricted wandering type of community organization (Beardsley et al 1956:139) and a centrally-based one. In a restricted wandering organization, the society is made up of a "band of related or friendly families headed by an advisory leader" (Chang 1972:8). However, in a centrally-based system, the leader, although he

possesses no coercive power, has now become a community symbol (Beardsley et al 1956:138). Shamanism and status differences based on ability become more important in a central-based wandering system (Chang 1972:8).

This implies that the people of Port au Choix possibly had greater status differences and a more coercive political organization than present in a purely wandering type of sociopolitical organization. Supportive evidence can be gleaned from the great differences in quality and quantity of grave goods associated with the burials at Port au Choix (Tuck 1976a) and from the elaborate child burial located at L'Anse Amour (McGhee and Tuck 1975; Tuck n.d.).

Magico-Religious Organization

Although things such as rituals cannot be observed in an archaeological site, some statements can be made regarding the possible magico-religious significance of various artifacts by analogy with ethnographic data. At Port au Choix, many such artifacts were found, which Tuck (1976a:92) interprets as revolving around "the assurance of successful hunting and fishing, and probably the acquisition of certain desirable personal qualities during the course of one's life and their perpetuity in death". Hunting charms included seal claws, fox teeth and mandibles, caribou incisors, bird bills, and other bird remains. Artifacts which may have imparted desirable characteristics to the wearer include seal claws, polar bear incisors, fox teeth, marten bones, otter canines, dog and wolf teeth,

black bear canines, beaver bones, caribou bones, bird bones, and stones, crystals, and other natural objects (Tuck 1976a). Along with magico-religious functions, these artifacts must also have had aesthetic significance.

Tuck (1976a:62; 1976b:35) speculates at the possible existence of a killer whale religious cult, based upon the discovery of a large killer whale effigy carved out of a hard igneous rock.

Status and the Division of Labour

The only definitive evidence about status derived from the Port au Choix data by Tuck was the higher status enjoyed by males over females. Tuck (1976a:89-90) states that

> "other than simple ascribed individual status... to infer some more permanent rank or class system involving maintenance of status by a family over several generations would probably be complicating the picture beyond necessity."

The numerous artifacts buried with subadults lends substance to the possibility of the existence of ascribed status, whereby children of high status individuals or families might also possess high status. The L'Anse Amour burial mound also demonstrates high status for a young individual (McGhee and Tuck 1975).

From the frequency of occurrence of various artifacts, Tuck (1976a:90-91) determined that hunting and fishing and manufacturing were primarily male occupations; and that the making of clothing and hideworking were basically female occupations. Beyond this, it may be assumed that males were also

involved in defence; while females cared for the children, did the cooking, and set up and moved the camp.

D. CULTURE HISTORY

James Tuck (1976b:44) believes the Maritime Archaic Tradition to have been an *in situ* development in the Northeast. Support for this viewpoint includes a gradual stylistic evolution in projectile point form, the occurrence of bifacial knives throughout the sequence, a gradual decline in thumbnail scraper and *pièces esquillées* frequencies through time, the progressive addition of new items, and the absence of any chronological gaps in both the radiocarbon and site elevation dates (ibid.:44,48).

The actual homeland, if such a concept is acceptable, for these people is unknown. However, the earliest dates for Maritime Archaic sites are from the Strait of Belle Isle area of southern Labrador. Archaic peoples were in the Strait nearly 9000 years ago, and expanded northward along the Labrador coast to Hamilton Inlet by 6000 to 5000 years B.P., and to Saglek Bay by 5000 years B.P. Tuck (personal communication) now believes that there may be older dates all along the line. It has been suggested that a slight climatic warming resulting in the northward movement of the tree line may have been the incentive for the northward expansion, and it must be kept in mind that northern and central Labrador were unoccupied at the time (Tuck 1976b).

The discovery of Ramah chert in northern Labrador resulted in an extensive procurement network stretching as far

south as the Maritime Provinces. Around 3900 years B.P., tiny stemmed points entered the Maritime Archaic complex, suggesting the adoption of the bow and arrow from the Eskimos. At this time, Palaeo-Eskimos appeared on the Labrador coast and may have been partially responsible for the southward retreat of the Indians along the Labrador coast. Also, at the same time, there was a climatic deterioration which resulted in the southward movement of the tree line (Tuck 1976b).

As to the question of what happened to the Maritime Archaic inhabitants of northern and central Labrador, it has already been suggested that they may have migrated southward to the Strait of Belle Isle region. Other possibilities include their extinction in this region or an inland movement around Hamilton Inlet to the Lake Melville area in order to avoid contact with the Eskimos (see Fitzhugh 1972; Tuck 1976b).

The earliest Maritime Archaic dates on the Island of Newfoundland are much later than for the Strait of Belle Isle region - the oldest being 4900±250 years B.P. for the Beaches site (Carignan 1975:126). A possible reason for this lack of earlier dates is the fact that parts of Newfoundland are submerging while the southern Labrador coast is emerging; and sites in Newfoundland, as a result, are being overrun by the sea.

What happened to these Maritime Archaic Indians? It had traditionally been assumed that they had become extinct and were later replaced by the Dorset Eskimo. However,

recent excavations have shown that Indian populations (proto-Beothuk) existed side by side with the Dorset Eskimos during the latter part of Dorset occupation, at least. Further work may show that Beothuk ancestry stretches beyond the Dorset occupation and that the Beothuks were descended from the Maritime Archaic Tradition (Tuck 1976b:64).

PART III

THEORETICAL ORIENTATIONS AND METHODOLOGICAL CONSIDERATIONS

A. THEORETICAL BACKGROUND

Importance of Death

> "The life of an individual in any society is a series of passages from one age to another and from one occupation to another... For every one of these events there are ceremonies whose essential purpose is to enable the individual to pass from one defined position to another which is equally well defined." (van Gennep 1961:2-3)

Death is the last transition which individuals must enter, and, as with all other transitions, it creates a change in the status quo. In other words, there has been a change in the composition of the social groups comprising the living and the dead. There is then the necessity to regain stability in both social groups. In the social group of the living, the deceased can be replaced; but in the social group of the dead, actions must be taken to ensure that the deceased will enter that group and, as many societies fear, not remain in limbo with the possibility of the deceased harming the living (Bendann 1930:57-82). Death, as a consequence, becomes of major importance to the society as a whole.

Since death affects the total social group, it then

> "becomes a convenient means for inspecting the operating of a society, or, to put it another way, the ways in which the biological fact of death are refracted in the life and thought of a human group will be characteristic of the principles by which it organises, continues, and explains its actions." (Oppenheim 1973: 29).

Utility of Mortuary Analysis

Since death affects society as a whole, it is then possible that, by studying the characteristics of a set of mortuary remains, data can be inferred about the social, political, and magico-religious aspects of the society in question. In particular, and this has been the aim of most mortuary analyses, aspects of the status system of the extinct society should be evident (e.g., Rothschild 1975; Peebles 1971; Buikstra 1972; Wire 1972).

Christopher Peebles (1971:69) argues that...

> "the utility of analyzing burials as the fossilized terminal statuses of individuals is obvious; it allows the archaeologist to map the variability within these statuses and to construct a model from this variability. The dimensions of the resultant model can then be compared to typologies of status grading systems devised by cultural anthropologists..."

Other aspects of social organization may also be studied. Joseph Tainter and Ross Cordy (1977:96) define two dimensions of structural differentiation: the vertical and the horizontal. Status or rank grading comprises the first dimension, while the horizontal dimension "encompasses structural components equal at each hierarchical level". Examples of these would be task groups, sodalities, territorial bands, and so on. Bradley Bartel (1975:104) adds that "hypotheses relating to social stratification and descent may be tested through burial analysis".

Additionally, the study of mortuary attributes and artifacts enables the archaeologist to reconstruct aspects of technology, subsistence, division of labour, trade, and

demography.

Nan Askin Rothschild (1975) tested the hypothesis, and found supportive evidence from archaeological remains in Eastern North America, that differences in grave goods reflect differences in status and role positions. However, she warns that

> "the analysis of grave goods is a partial analysis in two senses. First, grave goods are only one aspect of a complex integration of death and material objects; there are others which might not be as directly accessible to the archaeologist. Therefore, if patterns do not appear in the analysis of grave goods it may be because the patterns which existed in the living society were focused on some other way of integrating property and death.
>
> The second sense in which such an analysis is incomplete is that social structure is reflected in other aspects of burial treatment such as grave orientation, the physical construction of the grave, body position, etc.". (ibid.,162)

Therefore, to make an analysis complete it is necessary to study all recoverable aspects of mortuary data. As will be discussed later, it is also necessary to assume that what is not recoverable (e.g., eulogies) will not alter the results in any major way. Tainter (1973,1) states that "much of mortuary ritual is fossilized in the archaeological record". If this is the case, there is reason to give the above assumption a fair degree of plausibility.

Grave Goods

A number of theories have been put forward to account for the presence of grave goods with the skeletal remains. The most popular is that the artifacts were required by the

deceased in the afterworld (Rothschild 1975:161). This theory is based on the assumption that "the deceased would resume, in the other world, a life like the one followed during his lifetime. To do so would require the tools, weapons, and ritual objects necessary in this world" (Tuck 1976a:95). This orientation, if it were the major or only factor, would simplify archaeological interpretations, since it logically follows that the artifacts buried with the deceased would be related to the activities that the individual performed during life. Therefore, aspects of the division of labour could be recoverable from mortuary data.

A second possibility is that the grave goods represent "tokens of friendship" (Rothschild 1975:161). This would result in individuals "offering objects of value to the deceased"; and since the mourners probably include members of both sexes, it follows that objects representing both sexes would be interred with each individual (Tuck 1976a:95). If this were the major factor, as Sanger (1973:135) believes to have been the case at the Cow Point Archaic site in New Brunswick, then certain interpretations about the division of labour based on mortuary data may be invalid.

A third theory states that the grave goods are placed in the graves to reflect the status of the dead individual (Rothschild 1975:161). This theory does not presuppose a belief in the afterlife, nor does it allow for seemingly random distributions of male-specific and female-specific artifacts as would be the case if bereavement of the mourners were the primary factor. Rather, it hints at a system of

ranking where certain artifacts represent degrees of social status. The artifacts could be both functional and ceremonial. As with the first theory presented, the artifacts should reflect the sex of the individual and probably also the activities he performed during life.

Ethnographic Analogy

One of the main interpretive aids used by archaeologists is ethnographic analogy which involves

> "inferring that the relationship between various traces of human activity in the archaeological record is the same as, or similar to, those of similar phenomena found among modern primitive peoples." (Fagan 1972:249)

Watson, LeBlanc, and Redman (1971) distinguish between two kinds of analogy: the direct-historical approach and the general-comparative approach. The direct-historical approach presupposes a strong cultural continuity between the culture whose remains are being studied and a known ethnographic culture. The general-comparative approach does not have these limitations:

> "ethnographic information gathered anywhere, even from historical sources, can be used as an aid in archaeological interpretation anywhere in the world." (ibid.:50)

However, as has been stressed by most recent authors (Watson, LeBlanc, and Redman 1971; Fagan 1972; Binford 1972), ethnographic analogy should only serve to construct hypotheses, and these hypotheses must not be accepted as valid until they have been tested against independent archaeological data.

For the purpose of this thesis, only general compara-

tive analogies will be entertained, since there is as of yet no cultural continuity proven between the Port au Choix population and any ethnographic society. Also, the age of the cemetery makes the direct-historical approach unsuitable. And, following the concept of a more scientific approach to archaeology, the analogies will only be presented as untested hypotheses at the present. The verification of these hypotheses will be possible when new graves are excavated at Port au Choix or when a similar cemetery with good skeletal preservation is discovered elsewhere.

In a paper dealing with the use of analogy in the study of funerary remains, Peter Ucko (1969:262-263) warns that

> "The use of ethnographic parallels can only in very exceptional cases suggest a one-to-one correlation between the acts of tribe A and the remains of culture B, but what they can do is suggest the sorts of possible procedures which may result in the traits characterizing culture B."

Inferences from Mortuary Data

The range of possible inferences discernible in mortuary data should be equal to the range of possible factors affecting the disposal of the dead. Effie Bendann (1930) in a study of burial rites among the peoples of Melanesia, Australia, and India, encountered the following factors which affected the disposal of the dead: rank distinctions, clan affiliation, phratry and kinship relations, location of the land of the dead, location of their original homeland (either actual or mythical), kind of death, worship

of the sun, reputation of the deceased, divination, social status, and environmental considerations. Therefore, by an analysis of the burials of the peoples she studied, most of the factors listed above should be inferable.

Among the Skolt Lapps, Nils Stora (1971) discovered that seclusion from human habitation was of importance for determining the location of the cemetery. Islands served this purpose, but being "clearly demarcated...offered special advantages as shrines, too". (ibid.:132)

Lewis Binford (1971:19-20) selected a sample of societies from different parts of the world and studied the "distribution of dimensions distinguishing status as symbolized in mortuary practices". The results were as follows: of fifteen hunting and gathering societies, 12 had sex as a dimension, 6 had social position, 4 had social affiliation, 2 had age, and one each had conditions of death and location of death. The Port au Choix population, having existed at the hunting and gathering level, should, if Binford's societies represent an unbiased sample, show status differences with regard to the sexual dimension at least, and possibly with reference to the other categories as well.

In addition to Bendann's categories, Binford (ibid.: 14) provides two more: the time of death and the place of death.

Therefore, if enough detailed data were available, it is conceivable that any or all of these factors could be inferred from mortuary remains.

Egalitarian vs Non-Egalitarian Societies

One of the aims of this thesis is to determine the structure of the status hierarchy among egalitarian societies in general and among the Port au Choix population in particular. A definition of the term "egalitarian society" now becomes a necessity. Morton Fried (1960:715) defines an egalitarian society as one "in which there are as many positions of prestige in any given age-sex grade as there are persons capable of filling them", and distinguishes it from a "rank society" in which there are "fewer positions of valued status than individuals capable of handling them. Furthermore, most rank societies have a fixed number of such positions". (ibid.:717)

André Béteille (1977:154) provides a slightly different definition. He proposes two possible alternative concepts of an egalitarian society. The first supposes that all positions have "broadly the same measure of prestige and power", while the second alternative sees an egalitarian society as one in which "all its members enjoy equal access to positions of power and prestige".

Fried's definition requires that positions of status or prestige be created when necessary, i.e., when some individual has achieved enough to deserve the position. Therefore, when the individual dies, the position he held in life does not simply become vacant, it becomes nonexistent, unless there is another individual who has achieved enough to fulfill that position. Béteille's argument is basically similar, except that he does not provide for the creation or loss of

status positions, but argues that every individual has equal access to the positions which exist.

Fried's argument also provides for the loss of status if the individual's achievement decreases or is negated (1960: 716). An example would be the skilled or lucky hunter who, after having achieved the status of 'good provider', loses his luck or skill for some particular reason. He would then lose the status of being a 'good provider'.

The position accepted by the author includes aspects of both Fried's and Béteille's views. An egalitarian society will be defined as one in which all individuals of a particular age-sex group have equal access to positions of status. Positions of status can be created and can be lost depending upon the achievement of the individuals aspiring for or holding them. Although similar positions may be created, these positions will not be entirely equal. There will be grading within the high status positions as well as between positions. for example, there may be six 'good providers' but there will be a best provider among these six. The distinction may not be too apparent, but it is hypothesized to exist. All status positions will be dependent upon the age, sex, and personal achievement of the individual. The fact that individual X's father was a good provider does not mean that individual X will be a good provider.

The acceptance of this definition suggests that child burials with a high quantity and/or quality of grave goods do not necessarily mean that the child had a high status. The possibility exists that the status evident in

the burial goods is not in fact conferred upon the child, but, rather, upon the relatives of the deceased (the child's father, mother, grandfather, etc.).

Béteille also distinguishes between status and power. He states that...

> "Status relates to the esteem and respect that are accorded to qualities and positions which are valued in themselves; it is of the essence that esteem and respect are here freely accorded. Power refers to the obedience and compliance that some more than others are able to command by virtue of the positions they hold in society; here it is of the essence that some are able to impose their will on others despite their resistance." (1977:18)

Accepting these two definitions, it then becomes apparent that there are no positions of absolute power or authority in egalitarian societies, but solely positions of status. This, however, does not preclude the possibility of some power roles, because "status and power can to some extent be converted into each other in every society" (ibid.:18). An example is the good hunter who leads and commands all the other hunters on a communal hunt. As long as he is regarded as the best hunter, he will be listened to and obeyed when dealing with hunting matters. However, if he loses his luck and/or skill in hunting, he also loses his leadership power, because "respect and esteem which are freely given can also be freely withdrawn" (ibid.:18).

Jane Buikstra (1972:63) states that age and sex are the primary dimensions of status allocation among egalitarian societies, and that there should be "little differentiation in type and kind of burial treatment" (ibid.:74).

Effie Bendann (1930:268) adds that

> "the more aristocratic the society, the more stress is laid upon the burial of the higher class, whereas in a democratic [egalitarian] society rank considerations would be almost eliminated, or certainly relegated to the background."

With rank relegated to the background, age and sex, along with achievement, become the primary if not the only factors affecting status allocation.

Two further items deserve discussion in this section on egalitarian societies. First is Arthur Saxe's (1971:41) statement that "non-egalitarian status cemeteries are often selective in the segments of the population represented". This is logical since non-egalitarian societies usually have different classes or ranks of people, and it is natural that if segmentation exists in life, it should also exist in death. However, there may be segmentation in death among egalitarian societies also. The definition of an egalitarian society specifies relatively equal status per age-sex group, but not necessarily between such groups. It is conceivable that an egalitarian society may wish to keep the burials of males and females separate, or adults and children. It will be hypothesized that the segmentation apparent in non-egalitarian cemeteries may involve differences between the cemeteries themselves, while in egalitarian societies, the total population will be represented in each cemetery, and, if there is segmentation, it will be within the cemetery.

The second item is the statement by Marcia Wire (1972:405) that

> "In earlier and smaller sites status symbols would not have been necessary to distinguish a ruler, for relations could be conducted on a person-to-person basis."

Although status symbols may not have been necessary during life, it does not mean that they did not exist or that they were not placed in the graves in memory of or for the use of the deceased.

B. METHODOLOGY - REVIEW

Criteria for a Methodology

Joseph Tainter (1975:3) specified two criteria which must be met before any methodology can be considered as useful for the purposes of mortuary analysis:

> "the procedure must be relatively sensitive to the size of the derived burial clusters";

> "the classification method must be capable of partioning the data set into aggregates of burials which can be interpreted as socially distinctive... At the minimum, such aggregates of burials must be defined by attributes reflecting equivalent amounts of energy expenditure in mortuary ceremonialism."

Therefore, a procedure which is so sensitive that it segregates burials according to minute points and results in many small burial clusters probably does not reflect social patterning, but rather reflects the idiosyncratic aspects of the burial data. A procedure which is so general that it does not create clusters at all would be of no use either.

The methodology must be geared to fit the data. Depending upon the type of burial complex studied and on

the meaning of the artifacts buried with the individuals, it appears that the most generally useful research method would be the study of energy expenditure per individual. Since at the Port au Choix site there is only one method of interment and, as will be shown later, no patterning with regard to the other burial attributes (defined as all aspects of grave structure and skeletal organization within the grave, including orientation and posture, but excluding the artifacts), the only remaining data are the artifacts themselves. If we assume that they directly represent the status of the deceased, then an analysis of distributions might be acceptable. However, if we assume that the artifacts reflect the status of the mourners, an analysis of energy expenditure on artifacts per burial should tell us something about the relative statuses of the deceased individuals.

The following is a review of different methodologies used by or available to archaeologists, and their applicability to the Port au Choix data.

Polythetic-Agglomerative and Monothetic-Divisive

> "Hierarchical methods of classifying elements into sets are subject to two independent choices. First, the strategy may be divisive, in that the population is progressively subdivided into groups of diminishing size, or agglomerative, in that individuals are progressively fused into groups of increasing size until the entire population is synthesized. Secondly the strategy may be monothetic, every group at every stage (except the entire population) being definable by the presence or lack of specified attributes, or polythetic, the groups being defined by their general overall similarity of attribute structure." (Williams, Lambert, and Lance 1966:428)

Of the four possible strategies, the two most commonly used were tested on archaeological data by Joseph Tainter (1975) to determine their applicability to mortuary analysis. The polythetic-agglomerative method resulted in "a failure to partition the data set into socially distinctive burial groups" (ibid.:8), and therefore is of limited use. Clifford and Stephenson (1975:105) further state that

> "the main disadvantages are group size dependence and a tendency to form groups of diverse members whose main property in common is their dissimilarity with other groups."

The monothetic-divisive method, on the other hand, was found to be of some use by Tainter. He performed this analysis using both chi-square and the information statistic. Chi-square is a statistic "based on the discrepancy between frequencies in a sample and frequencies expected according to some hypothesis" (Klugh 1970:148-149). The information statistic arises from the concept of entropy and is based on the fact that "the transmission of any single symbol will represent a certain quantity of information...which it is reasonable to suppose depends on the number of alternative symbols available" (Haber 1974:15). Using chi-square, "the procedure tends to fragment the final solution by splitting outliers off from the population" (Tainter 1975:9). However, "application of the information statistic... yielded a final solution which satisfactorily met the specified classification requirements" (ibid.:11). The necessity of having binary data (Lance and Williams 1968:195) would create problems if such a procedure were used on the Port au Choix data. Most studies

using this method have required the organization of various burial attributes into a binary framework, and burial clusters were determined on the basis of the presence or absence of these variables (Tainter 1975). However, as will be shown, the Port au Choix burial complex involved burial attributes which were similar to one another or randomly distributed (with the exception of flexing). Even though similarities imply cultural patterning, no useful status information can be retrieved from them. The only remaining factors are the grave goods which are not amenable to binary classification if it is accepted that the artifacts may reflect the status and occupations of the mourners and not the deceased.

Factor Analysis

A third method tested by Tainter (1975) is factor analysis, which is "a technique which begins with a large number of measures and reduces them to a few hypothetical basic variables" (Watson, LeBlanc, and Redman 1971:148). Using data from the Klunk and Gibson mound groups in the lower Illinois River Valley, Tainter (1975:8) was able to reduce eighteen variables into nine factors which discriminated between classes of burials. He therefore concluded that "the outcome of the factor analysis has a far greater likelihood of reflecting the structure of an extinct social system than do the results of the polythetic cluster analyses" (ibid.:8-9). The rejection of this procedure for the Port au Choix data rests on the same argument applied against monothetic-divisive analyses, i.e. the data are not amenable

to binary classification.

Another problem is the interpretation of the meaning of the factor analysis results. Clifford and Stephenson (1975:181) state that the method "has been much criticized by some, largely on the basis of the interpretation of the results, and by others the method has been regarded as useless". Watson, LeBlanc, and Redman (1971:149) reiterate that "the explanation of the factors cannot be based solely on the factor analysis".

Formal Analysis

In the introduction to "Approaches to the Social Dimensions of Mortuary Practices", Brown (1971a:1) asserts that

> "among the diversity of approaches there are two strategies... One seeks statistical explanations to discover central tendencies, trends, or clusters in the data... The second explores formal relationships that depend upon a theory of sets."

Some examples of statistical methods have been discussed previously.

Formal analysis is summarized by Tainter (1975:3) as

> "a technique which progressively subdivides a population on the basis of the presence or absence of all variables utilized, but without regard to the possibility that attributes may have varying degrees of importance in the domain in question."

He goes on further to say that this type of analysis is generally unworkable "when large and diverse data sets are involved", and that it sometime results in clusters containing only one burial each, because the method is unable

to handle idiosyncratic variation (ibid.:3).

Brown (1971b) used formal analysis in a study of status among the Spiro mounds and found it to be a useful procedure. However, he studied variation in grave attributes and population distribution - no attention was paid to the grave goods themselves. As has been said previously, the only useful data showing non-random variation from the Port au Choix site are the artifacts interred with the skeletons. Assuming that there will be more idiosyncratic variation among the artifacts, the author feels that a formal analysis would not be of use in a study of the Port au Choix cemetery.

Artifact-Burial-Association

Nan Askin Rothschild (1975:61) introduced an analytical procedure which she termed artifact-burial-association (ABA) defined as "the number of different categories of artifacts included in a grave". An inherent problem with this type of analysis is that no attention is paid to the quantities of artifacts per grave. The resulting ranking system would have as equal, burials with similar artifact categories regardless of the difference in amount of grave goods. This, therefore, would not necessarily reflect the relative statuses of the individuals in question. This problem was also voiced by Rothschild herself, but refuted for her sample of eastern North American societies since, with a few exceptions, she tested and discovered that there was a correlation between quantity of categories and quantity of artifacts. However, she adds that

> "some caution is necessary in interpreting this test, as the distribution of both artifacts and artifact categories is not known." (ibid.:61)

Therefore, since there are large differences in quantity of artifacts per burial at the Port au Choix site, Rothschild's ABA analysis would be of limited or no value.

Quantitative Analysis

What is here being referred to as quantitative analyses are ones whose only criteria of evaluation are the quantitative aspects of the artifacts per burial. Analyses of this type assume that artifacts occurring in low frequencies within the total assemblage of burial artifacts have high status value. This is based upon the belief that the reason that some artifacts rarely occur in burials is that they also were rare in the society as a whole, and, being so, are accorded higher status value by the population itself than artifacts which were more common. The basic problem with this reasoning stems from the unproven assumption.

The author believes that the opposite assumption is as, if not more, likely. In this case, the reason that certain artifacts have low frequencies among the grave goods is that they have low status value and are not usually deemed to be worth burying with the deceased. The probability is that both of these factors played a role in the selection of burial goods.

The methodology of such analyses as performed by different individuals is basically the same. James Tuck (1976a) used the following system in analyzing status among

the Port au Choix burials:

> "1. Burial offerings and associations were grouped and the specimens in each group counted.
> 2. A score for each artifact was then determined by dividing the total for each group into 100 percent... In addition, unique objects and items of low frequency... were arbitrarily given a maximum value of 25 points, thereby preventing an overemphasis on one particular object.
> 3. The total score was then determined for each burial by adding the artifact scores arrived at in step 2. Thus, individuals with higher percentages of more classes of artifacts received a higher score and hence, a higher inferred status." (ibid.:87)

A similar procedure was used by the author (d'Entremont 1975) in an attempt to determine the ages at which transitional markers were apparent among a prehistoric Pueblo population in east-central Arizona (i.e., the Grasshopper site). In this instance, the system used consisted of giving values to the artifacts based upon the reciprocal of occurrence of each particular artifact class. For example, if an artifact class occurred 50 times among the burial population, each individual artifact in that class would receive a value of one-fiftieth (0.02) - the reciprocal of occurrence of that particular class.

In both cases, especially the Pueblo example where differences should have been apparent, the analysis failed to demonstrate suspected relationships. In accounting for this failure, the author believes that the ranking determined in both instances did not present an accurate picture of the society studied, and proposes that to obtain a more accurate

picture requires the analysis of the artifacts in a qualitative manner before moving on to a quantification of the data.

Energy Expenditure

One method of giving qualitative values to the artifacts involves the study of energy expenditure. The amount of energy expended per burial has been frequently studied by archaeologists to determine status differentiation (Buikstra 1972; Tainter 1975; Tainter and Cordy 1977). This type of analysis, however, has usually revolved around the technical attributes of grave structure and the treatment of the body. Tainter and Cordy (1977:97) state that

> "Labour expenditure should... be reflected in such features of burial as size and elaborateness of the interment facility, method of handling and disposal of the corpse, and the nature of grave associations."

At the Port au Choix site, the only visible differences in energy expenditure, not including the artifacts, are the size of the burial facility and the degree of flexion of the skeleton. According to Tuck (1976a:93), these differences probably do not reflect cultural preferences but rather reflect "economy of effort in digging graves". Adult graves were larger in size due to the differences in body size between an adult and a child. However, it has been assumed that, to keep grave digging to a minimum, adult skeletons were flexed so they would fit into smaller graves than had they been extended. For this site, therefore, the dif-

ferences in energy expenditure in burial size and handling of the corpse are possibly not culturally significant.

The remaining criteria in energy expenditure concerns the manufacture of the artifacts themselves - a criteria significant at the Port au Choix site - which will be discussed in the following section.

C. METHODOLOGY - PROPOSAL

The methodology proposed for the determination of status at the Port au Choix Maritime Archaic cemetery will consist of the analysis of three factors: demographic data, burial attributes, and grave goods.

1. Demographic Data

The first analysis will consist of a study of the distribution of age and sex groups among the Port au Choix population. The possible relevance of this type of information has been pointed out by Arthur Saxe (1971:41) who justifies it by stating that "non-egalitarian status cemeteries are often selective in the segments of the population represented". Therefore, it is being hypothesized that, if the Port au Choix society was egalitarian in nature, there should be a random distribution of age and sex groups represented in the cemetery. This, however, is not meant to preclude the possibility of non-cultural limitations to the sample (e.g., differential mortality).

2. Burial Attributes

The second step will be a statistical analysis of

the distribution of three burial attributes: direction facing, direction heading, and degree of flexion. Kolmogorov-Smirnov one-sample tests will be performed to determine the randomness or non-randomness of these distributions. In this case, it is being hypothesized that, if burial attributes reflect status differences, they should demonstrate a non-random distribution.

3. Grave Goods

The main analysis, however, will be a qualitative-quantitative study of the grave goods themselves, and will be performed in three parts. First will be a Rank Order Analysis to determine the relative status value of each burial. The second part will consist of an analysis of the percentage of technomic artifacts per burial. This should reflect the importance of subsistence-related activities per age and sex group. Lastly, artifact distributions will be analyzed in order to determine if there is significant type variation between the three burial groups in Locus 2.

Rank Order Analysis

The Rank Order Analysis will be conducted in the following manner.

1. The individual artifact scores will be determined by a study of the following four qualitative categories:
   a) Material: All raw materials used by the population will be divided into two groups - either common or uncommon. For all categories, the distinction between common and

uncommon raw materials is based upon the relative local abundance of the material or species in question. Artifacts made of commonly occurring raw materials will be given the minimum value of one (1). Artifacts constructed from uncommon materials will be given the maximum value of five (5). The category of uncommon raw materials can consist of both local and non-local materials, since some local materials (e.g., bald eagle bones) are highly uncommon, and therefore deserve a high status value as well.

b) Manufacturing Time: Research on replicative experiments (McGuire 1891, 1892; Pond 1930) has shown to be fallacious the belief that exceedingly long time periods were required to manufacture stone tools. These researchers have demonstrated that the basic distinctions in manufacturing time range from minutes for chipped points to hours for pecked and ground stone celts. Other studies (Smith 1910; Hutton 1912) have shown a range in bone and ivory manufacturing times of similar proportions. For the purpose of this study, all artifacts will be placed in one of five categories and will receive the following values: unworked artifacts will receive a value of zero (0); artifacts requiring minutes to complete, a value of one (1); artifacts whose manufacturing time lies in the hazy area between minutes and hours will receive a value of two (2); artifacts requiring hours to make, a value of three (3); and artifacts whose manufacture requires days, a value of five (5).

c) Function: All artifacts will be divided into two functional groups: technomic and sociotechnic. Technomic artifacts will include "those artifacts having their primary functional context directly with the physical environment" (Binford 1972:23). Hunting, fishing, sewing, woodworking, and other types of tools fit into this category. Sociotechnic artifacts will encompass the artifacts labelled by Binford (1972:24) as both sociotechnic and ideotechnic, and includes artifacts whose primary functional context is in the social and/or ideological subsystems of the total cultural system. Ceremonial items, whistles, beads, pendants, amulets, etc. are considered to be sociotechnic items. Technomic artifacts will receive a value of one (1), while sociotechnic items a value of two (2). Less emphasis has been placed on the values given to function as it is assumed that it is not of as great importance as the previous two qualitative categories.

d) Unfinished Artifacts: All artifacts in a state of manufacture including those still in process and blanks will be given a value of minus one (-1) to account for their incompleteness. In other words, the score determined by an analysis of the first three categories will have a value of one subtracted from it.

2. The score for each artifact will then be computed by

adding the values derived from each of the four categories. Grouped items, however, will be an exception. Grouped items will be defined as non-functional items which usually appear in bulk quantities, and will include artifacts such as beads, bird bills, unmodified beaver incisors, etc. The value of grouped items will be the value of one item plus ten percent of the total number of items in the group, as demonstrated by the following formula:

$$\text{Grouped Item Value} = \text{Individual Artifact Value} + \frac{\text{Number of Items}}{10}$$

3. The total score for each burial will then be computed by adding the values of all the artifacts in that particular burial. Only the artifacts definitely assigned to a particular burial will be considered.

4. The last step will consist of ranking the burial scores from highest to lowest. Since no age and/or sex information is available from the few burials with no skeletal remains, only those with such remains will be used in the analysis.

Due to the small number of burials from both Loci 1 and 4 and the differences in radiocarbon ages between the three loci, the analysis of these loci as a unit is not particularly useful relative to the possible information gain which can be derived from such an union. Therefore, although the burial scores of these two loci will be tabulated, they will be kept separate from those of Locus 2,

and will not be included in the main interpretational statements. They may, however, be discussed as an aside to the Locus 2 results.

The data will be summarized in tabular form, beginning with the overall distributions and mean scores per age and sex group for Locus 2. As a next step, the data will be divided into three segments to correspond to Tuck's (1976a) three distinct burial clusters comprising Locus 2. Similar tables dealing with distribution and mean scores per age and sex group will be constructed for each burial cluster. Along with an analysis of central tendency, the data will also be plotted on frequency graphs for visual interpretation, and will be tabulated for statistical analysis using the Mann-Whitney U test.

Percentage Technomic Artifact Analysis

This analysis will consist of calculating the percentage of technomic artifacts per burial, and then ranking the burials from highest to lowest percentages. The tabulations will be the same as for the Rank Order Analysis. The data will be summarized for all of Locus 2 first, and then divided per burial cluster. Distribution and mean scores per age and sex group will also be performed. Also, the data will be plotted on frequency graphs and studied statistically using the Mann-Whitney U test.

The only major difference is that burials with no grave goods will not be considered as they cannot provide any information on the percentage of technomic artifacts.

Artifact Distributions

This analysis will test whether certain artifact classes are more characteristic of one of the three Locus 2 groups than the others. In order to do this, certain artifact classes will be abstracted from the raw data and their distributions per number of graves per group will be tested for chance variation using the Kolmogorov-Smirnov one-sample goodness of fit test.

4. Additional Data

Since some previous studies have dealt with aspects of status at the Port au Choix site, it was deemed necessary to incorporate their findings into this report.

James Tuck (1976a:90-92) performed a series of chi-square computations dealing with artifact distributions per age and sex group, and achieved some speculative results. These results on the division of labour will be summarized in this section, and possible interpretations will be advanced.

Nan Askin Rothschild (1975) used Port au Choix as one of a multitude of sites studied in her analysis of status and role among the prehistoric societies of eastern North America. She also performed some chi-square computations on age and sex distributions of various artifact classes. These will also be summarized and analyzed along with Tuck's findings.

D. ASSUMPTIONS

The preceeding methodology and following interpreta-

tions are dependent upon a number of major assumptions. The assumptions are that status value increases with:

1) rarity of raw material

2) length of manufacturing time

3) sociotechnic use versus technomic use, and

4) with degree of completion.

Further, it is assumed that values differ in relation to these criteria in the order given above.

A second assumption is that the archaeological record reflects status differentials as well as if the non-preservable artifacts and non-tangible aspects (ceremonies, etc.) of mortuary data were available for study. This assumes that burials with a large amount of grave goods of high quality would also have had a large amount of related ceremonials, etc., while burials with low artifact frequencies would have had few ceremonials, etc.

The last major assumption relates to the significance of the grave goods. One viewpoint (Stora 1971:180) postulates that the grave goods belonged to the deceased and therefore reflect his personal status. Another viewpoint postulates that the artifacts reflect the status of the mourners (Sanger 1973:134-135). The third viewpoint accounts for both of these positions (Wire 1972; Peebles 1971; Binford 1971). Here, the proposition is that the grave goods account for both the status of the deceased and of the mourners. Peebles (1971: 68) summarizes the situation with the statement that

> "the status of the deceased and the statuses of the mourners, are in part reflexive; the status of the deceased in part determines who

> is to be included in the mourners, and the statuses of the mourners in part determine the status, in death, of the deceased."

The assumption being made, then, is that regardless of whether the grave goods reflect the status of the deceased or the mourners or both does not alter the ranking system, because all three possibilities relate, either directly or indirectly, to the status of the deceased. The only possible exception would be in the case of high status child burials where the status reflected may be of the child's family and not of the child himself. However, in this instance, a certain degree of ascribed status can be inferred, and, if this is so, then the status reflected is really the child's.

PART IV

ANALYSIS AND RESULTS

A. DEMOGRAPHIC DATA

Using demographic data, the hypothesis to be tested is that if the Port au Choix society was egalitarian in nature, then there should be a random distribution of age and sex groups represented in the cemetery. This is based upon the assumption offered by Arthur Saxe (1971:41) that there should be very little or no selectivity in the segments of the population represented in an egalitarian status cemetery.

The distribution of age and sex groups per locus for the Port au Choix site is presented in Tables I and II on the following page. As can be seen, the Port au Choix cemetery as a whole seems to represent a sample of the entire population. The subadult population comprises 50.5% of the sample, while the adult population (including the 18-21 year age group) is composed of the remaining 49.5%. Loci 1 and 4 show only a few segments of the age scale, but this is probably only due to the minute sizes of the samples contained in these two loci. Another aspect of the age distribution which probably reflects natural population trends is that most of the subadults are less than two years old - an expected result considering the assumed high infant mortality rates in hunting and gathering societies.

The sex distribution also demonstrates the lack of selective representation at the site. Although the percen-

TABLE I

Population Age Distribution

Ages	Locus 2 N	%	Locus 1 N	%	Locus 4 N	%	Total N	%
Newborn	12	13.5			1	50.0	13	12.9
0-2 years	15	16.9			1	50.0	16	15.8
2-6 years	2	2.2					2	2.0
6-12 years	7	7.9	2	20.0			9	8.9
12-18 years	5	5.6	3	30.0			8	7.9
Juvenile	3	3.4					3	3.0
18-21 years	1	1.1					1	1.0
Young Adult	4	4.5	1	10.0			5	5.0
Adult	33	37.1	4	40.0			37	36.6
Old Adult	7	7.9					7	6.9
TOTAL	89	100.1	10	100.0	2	100.0	101	100.00

TABLE II

Population Sex Distribution

Sex	Locus 2 N	%	Locus 1 N	%	Total N	%
Male	21	48.8	1	16.7	22	44.9
Male ?	3	7.0			3	6.1
Female	11	25.6	5	83.3	16	32.7
Female ?	8	18.6			8	16.3
TOTAL	43	100.0	6	100.0	49	100.0

tages of 'definite' males to 'definite' females is 44.9% to 32.7%, the ratio of total males (including questionable males) to total females (including questionable females) is 51% to 49% respectively.

In conclusion then, it may be stated that there was no selectivity of population segments at the Port au Choix cemetery. All segments of the population were equally represented, keeping in mind the population trends and mortality rates expectable in a hunting and gathering level of existence. This therefore lends support to Saxe's assumption, and to the belief that the Port au Choix population formed part of an egalitarian society.

B. BURIAL ATTRIBUTES

1. Background.

For this analysis, the hypothesis to be tested is that, if the burial attributes reflect status differences, they should demonstrate non-random distributions. Since all individuals at Port au Choix had been interred and there were no major structural differences in burial mode, the only remaining burial attribute categories which might reflect status differentiation are the directions the body was facing and heading, and the degree of flexion of the skeleton.

The sample for these tests will include all skeletal remains with both age and/or sex determinations and orientation and/or degree of flexion determinations. The sample, however, will vary in size per test due to the nature of the variables involved. For example, there are more age determi-

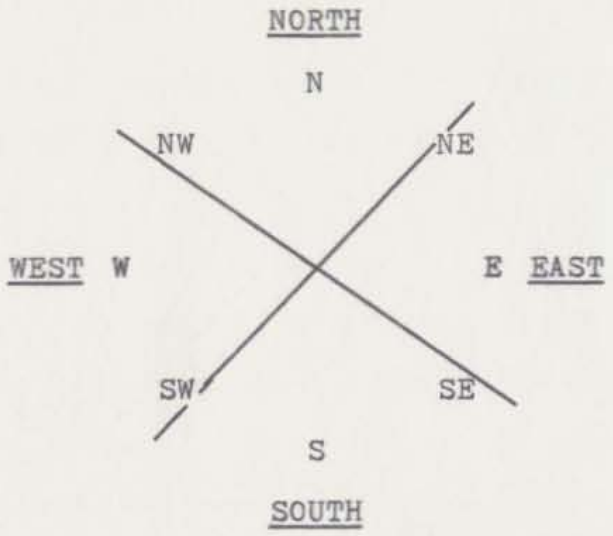

Figure 3. Diagram showing collapsed ORIENTATION points.

nations than sex determinations since only adults can be validly sexed. Also, for certain skeletons, only one or two of the three burial attribute variables could be determined.

The orientations of the skeletons were derived from Tuck (1976a:Appendix B). Since some determinations appeared to be more specific (e.g., NNE) than others (e.g., N), it was decided to collapse the orientations into four equal sections of the compass (see Figure 3, above) and to label these as North, South, East, and West.

Due to the sample size, chi-square and Fisher's Exact Probability Tests were ruled out since the sample was too small and too large, respectively, to run these tests. The Kolmogorov-Smirnov two-sample test was also eliminated due to the inequality of the sample sizes to be compared. With these limitations, it was decided to perform Kolmogorov-Smirnov one-sample goodness of fit tests. This test involves the comparison of the expected and observed cumulative fre-

quencies of a given distribution, and the determination of whether the differences were large enough to be due to factors other than chance variation (Siegel 1956:47-51). This test has the advantage of not being limited by sample size.

The null hypothesis tested was that the observed distribution was derived from a population with equal frequencies of occurrence for each available choice, resulting in the conclusion that the observed differences can be explained by chance variation. The level of significance accepted will be .05 or less. Therefore, all tests with an observed probability of .05 or less will constitute a rejection of the null hypothesis (i.e., the probabilities are that the observed differences are not due to chance variation alone).

2. Results.

The test results are presented in Appendix A, and can be summarized as follows. Of the ten tests run, two demonstrated a level of significance of .05 or less. The relationship between adult age (18 years and over) and degree of flexion was obvious even without the test: all adults were flexed. However, the subadults provided a distribution which has a high probability of being due to chance variation alone. The expected predictive relationships between degree of flexion and age were not demonstrated. Although it can be stated with a high degree of probability that extended skeletons represent subadults, the corresponding statement regarding flexed skeletons and adults cannot be made since both adults and some subadults were

flexed.

This, however, does not necessarily reflect status differences. It has been hypothesized by Tuck (1976a:93), and the author agrees with this position, that the differences in flexion "probably reflect economy of effort in digging graves rather than any strong cultural preference". By flexing the larger individuals (adults and older subadults), less time and energy was required to dig the graves since they could be smaller.

The other significant correlation was between direction heading and subadult age. In this instance, it can be said that there was a preference for burying subadults with the body heading either east or west.

All other possible relationships between burial attribute and population variables were found to be explainable by chance variation alone. Although not statistically significant, there seemed to be a tendency for both females and adults to be buried facing north (probability is greater than .15).

C. GRAVE GOODS

The analysis of the grave goods was divided into three parts: the Rank Order Analysis, the Percentage Technomic Artifact Analysis, and a study of Artifact Distributions.

Rank Order Analysis

1. Background.

The purpose of this analysis was to determine the

relative status value of each burial. To reach this objective, the characteristics of the artifacts and their respective values first had to be determined. These include material, manufacturing time, function, and completeness of the artifact.

a) Material:

The materials from which the artifacts were made can be divided into a number of general categories: rocks and minerals; mammal species; bird species; shellfish and fish species; and a miscellaneous category. For all categories, the distinction between common and uncommon raw materials is based upon the relative local abundance of the material or species in question. Although arbitrary, it does provide us with a method of measuring the relative importance of various materials.

In determining the availability of various types of rocks and minerals in the Northern Peninsula area of Newfoundland, four primary sources were used (Baird 1955, 1957; Snelgrove 1938; McKillop 1968) along with Tuck (1976a). Of the materials exploited, only red slate, native copper, garnets, amethyst, and quartz and calcite crystals, were deemed to be uncommon to the area. The remainder, ranging from mica and agate to shale and sandstone, were believed to be available in quantities large enough to be classified as common materials.

Of the land mammals (Northcott 1974), only the polar bear and moose were not native to Newfoundland. The

walrus (Mansfield 1967) was the only marine mammal whose distribution did not touch upon Newfoundland waters. Although all of these species are infrequent accidental visitors to the area, their scarcity requires that they be labelled as uncommon.

The category with the most species represented were the birds. The following were considered to be uncommon in the area (Peters and Burleigh 1951; Austin 1932; Todd 1963; Chapman 1966): the harlequin duck, bald eagle and all other eagle species, Hudsonian godwit, marsh hawk, red-throated loon, common merganser, snowy owl, and all swan species.

All of the shellfish species represented are local to the area, and are common to fairly common (Bousfield 1960). Of the fish species, only the shark was deemed to have been uncommon (Leim and Scott 1966). The miscellaneous category included birchbark shreds (common, though not usually preserved) and fossils (uncommon) including crinoid stems.

Following the methodology proposed in Part III, all the materials and species labelled as uncommon above will be given a value of five (5), while the common items will receive a value of one (1). When the identification of the particular species or subspecies is not certain (e.g., loon <u>species</u>) and there are examples at the site of both a common and an uncommon variant, the unidentified variant will be assumed to be the common species.

b) Manufacturing Time:

As stated earlier (page 42), the criteria used for placing various artifacts into particular time ranges of manufacture are the results of replicative experiments performed during the last 100 years, especially those of Joseph McGuire (1891, 1892) and A. W. Pond (1930). They demonstrated the time required to manufacture various artifacts using various methods, and their results are the basis for my classificatory scheme.

After having analyzed the Port au Choix artifacts at the Newfoundland Museum, the following correlation of artifact class and manufacturing time was ascertained. Except for ivory adzes, all the other artifacts requiring hours to manufacture were made of stone: axes, adzes, celts, gouges, rods, slate points, bayonets, and spears, and one killer whale effigy. Many artifacts were placed into the category of minutes/hours: antler gouges, miniature slate points, plummets, bone foreshafts, daggers, bayonets, sheaths, harpoons, leister points and some other bone points, a slate weaving tool, slate knife, and one stone whale effigy. Artifacts which could be made in minutes included beads, pendants, whistles, tubes, needles and awls, modified mammal teeth, etc. Unworked artifacts were primarily sociotechnic in nature, ranging from pebbles and concretions to bird wing elements and skulls. No artifacts were deemed to necessitate the expenditure of days in

their manufacture. The value system for each category is as listed in Part III (see page 42).

c) Function:

Technomic artifacts are those that relate directly to the physical environment and include the following: hunting equipment (points, bayonets, daggers, spears, foreshafts, and harpoons), fishing equipment (leister points), skin- and hide-working implements (beamers, scrapers), sewing implements (needles and needle cases, awls), woodworking implements (axes, adzes, gouges, chisels, beaver incisor implements), raw materials (blanks), and fire-making sets (iron pyrites and quartz strikers). Plummets, sometimes considered as net sinkers (fishing equipment) or bola balls (hunting equipment), are here thought to have been worn as pendants due to their small size and apparent placement in the graves around the individual's neck area. Therefore, along with plummets, the sociotechnic artifact category will include beads, pins, pendants, combs, amulets, natural stones, musical instruments (whistles, tubes?), and various unworked bones (bird skull, bill, and wing elements; mammal claws, teeth, etc.).

d) Unfinished Artifacts:

All blanks along with artifacts in an obvious incomplete state were considered to be unfinished and, therefore, had a value of one (1) subtracted from the total artifact score.

2. Procedure.

The analysis involved the following steps. First, the individual artifact scores were calculated using the specified criteria (see Appendix D for artifact descriptions and individual scores) and the total scores for each burial were then computed and ranked per locus (Table IV) and per group in Locus 2 (Table VIII). Although all artifacts from all burials were given status scores, for the purpose of analysis only those burials which were described as undisturbed by James Tuck (1976a) will be studied. Due to the small number of burials from both Loci 1 and 4 and the differences in radiocarbon ages between the three loci, the analysis of them as a unit is not particularly useful relative to the possible information gain which can be derived from such an union. The analysis, therefore, will be directed at Locus 2 only, and will deal primarily with the possible significance of the three separate burial groups forming this locus.

The second step involved the determination of the parameters of my low, normal, and high status designations. Normal status was assumed to include values from one-half of the mean ($\overline{X}$ + 50%$\overline{X}$) to one and a half times the mean ($\overline{X}$ + 50%$\overline{X}$). Low and high status involve values below and above these normal values, respectively.

The data were then tabulated according to mean scores per age and sex group for both Locus 2 as a whole and for each of the three groups. The raw scores were also plotted on frequency graphs (see Appendix B).

In order to determine whether there was any statistical support for the observed distributions, Mann-Whitney U tests were performed. These tests "may be used to test whether two independent groups have been drawn from the same population" (siegel 1956:116). This test involves the ranking of the scores of both groups (e.g., subadults and adults) and the calculation of the sum of the ranks, which is then placed in an appropriate formula to determine the value of the U statistic. Using this U value, the probability of the ranking being due to chance variation can be determined by reference to given tables of probabilities. The null hypothesis in this case is that the ranking can be explained by random variation. Accepting a level of significance of .05, all tests which result in a probability of ,05 or less will constitute a rejection of the null hypothesis (i.e., the probabilities are that the observed rankings are not due to chance variation alone).

3. Results.

For status scores, the parameters for the relative designations are as follows:

TABLE III

Status Score Parameters

Rank	Range	From	To
Low	less than $\bar{X}$ - 50%$\bar{X}$	0.0	40.6
Normal	$\bar{X} \pm$ 50%$\bar{X}$	40.7	122.1
High	more than $\bar{X}$ + 50%$\bar{X}$	122.2	-

$\bar{X}$ = 81.412

Table IV shows the raw scores ranked per locus. A

TABLE IV

Raw Scores: Ranked per Locus

Burial Number	Score	Age	Sex
Locus 1:			
1A	26.2	Adult	F
1B	0.0	12-18 years	F
Locus 4:			
1	22.7	0-2 years	?
Locus 2:			
33	238.2	0-2 years	?
35A	199.2	Adult	M
50A	169.7	Adult	F
3	162.6	12-18 years	F ?
42	136.3	0-2 years	?
32	127.8	Adult	M
27A	118.2	Young Adult	M
25	116.0	Adult	F ?
50B	109.2	Adult	M
26	104.5	Newborn	?
45	94.5	Juvenile	?
34	89.2	Adult	M
47B	81.3	Adult	M
28A	79.1	Young Adult	F
18B	74.8	18-21 years	F
30C	72.5	Old Adult	M
49B	67.9	0-2 years	?
14	47.9	Old Adult	M
49A	47.3	Adult	F
21	46.2	Old Adult	F
10	45.5	Old Adult	F
47A	43.6	Adult	M
43	32.3	0-2 years	?
11	31.8	0-2 years	?
50C	29.0	0-2 years	?
20	28.0	Newborn	?
39	21.3	0-2 years	?
52	18.0	Old Adult	F
48	10.6	Newborn	?
8	0.0	Adult	M

TABLE V

Mean Scores per Age and Sex Group: Locus 2

Age	Number	Range	Mean
Newborn	3	10.6 - 104.5	47.70
0-2 years	7	21.3 - 238.2	79.54
12-18 years	1	162.6	162.60
Juvenile	1	94.5	94.50
18-21 years	1	74.8	74.80
Young Adult	2	79.1 - 118.2	98.65
Adult	10	0.0 - 199.2	98.33
Old Adult	5	18.0 - 22.5	46.02
TOTAL SUBADULT	12	10.6 - 238.2	79.75
TOTAL ADULT*	18	0.0 - 199.2	82.52

Sex of Adults*	Number	Range	Mean
Male	10	0.0 - 199.2	88.89
Female	7	18.0 - 169.7	68.66
Female ?	1	116.0	116.00
TOTAL MALE	10	0.0 - 199.2	88.89
TOTAL FEMALE	8	18.0 - 169.7	74.58

*The 18-21 year age group is included under ADULTS.

TABLE VI

Status Scores of Adults and Subadults: Locus 2

Adult Score	Rank	Subadult Score	Rank
199.2	29	238.2	30
169.7	28	162.6	27
127.8	25	136.3	26
118.2	24	104.5	21
116.0	23	94.5	20
109.2	22	67.9	14
89.2	19	32.3	8
81.3	18	31.8	7
79.1	17	29.0	6
74.8	16	28.0	5
72.5	15	21.3	4
47.9	13	10.6	2
47.3	12		
46.2	11		$R_1 = 170$
45.5	10		
43.6	9		
18.0	3		
0.0	1		
	$R_2 = 295$		

$n_1 = 12$; $n_2 = 18$; level of significance = .05; U = 92

RESULT: probability is greater than .10

TABLE VII

Status Scores of Males and Females: Locus 2

Male Score	Rank	Female Score	Rank
199.2	18	169.7	17
127.8	16	116.0	14
118.2	15	79.1	10
109.2	13	74.8	9
89.2	12	47.3	6
81.3	11	46.2	5
72.5	8	45.5	4
47.9	7	18.0	2
43.6	3		
0.0	1		$R_1 = 67$
	$R_2 = 104$		

$n_1 = 8$; $n_2 = 10$; level of significance = .05; U = 31

RESULT: probability is greater than .10

cursory glance at Locus 2 enables the reader to see that both age and sex variables are distributed throughout the ranks, although it does appear that there are more subadult scores towards the lower end of the scale. The mean scores, however, are nearly equal for both subadults and adults and for males and females (Table V), and they all fit into the normal status range. Although not providing a clear picture, the frequency graph for the age variables for Locus 2 as a whole (Appendix B, page116) does demonstrate a tendency for adult scores to be higher than subadult scores. Male and female scores, according to the graph, seem to be randomly distributed.

The probability of the ranking being due to chance is demonstrated by both Mann-Whitney U tests (Tables VI and VII). In both cases, the probability of chance being the determining factor is appreciably higher than .10; therefore, no cultural patterning can be demonstrated.

Differences, however, are apparent between the three burial groups forming Locus 2. Group A (consisting of six undisturbed burials) shows a mean subadult score nearly three times as high as the mean adult score, and a mean female score twice as high as the mean male score (Table IX). Although these differences are probably due to sample size, there is still the possibility that it reflects some differential burial treatment. In this instance, the differences might be that the individuals using the Group A area of the cemetery were composed of normal status subadults and females (although the female mean score is very low) and low status

TABLE VIII

Raw Scores: Locus 2 - Group A, B, C.

Burial Number	Score	Age	Sex
Group A:			
3	162.6	12-18 years	F ?
14	47.9	Old Adult	M
21	46.2	Old Adult	F
10	45.5	Old Adult	F
11	31.8	0-2 years	?
8	0.0	Adult	M
Group B:			
33	238.2	0-2 years	?
27A	118.2	Young Adult	M
25	116.0	Adult	F ?
26	104.5	Newborn	?
28A	79.1	Young Adult	F
18B	74.8	18-21 years	F
30C	72.5	Old Adult	M
20	28.0	Newborn	?
Group C:			
35A	199.2	Adult	M
50A	169.7	Adult	F
42	136.3	0-2 years	?
32	127.8	Adult	M
50B	109.2	Adult	M
45	94.5	Juvenile	?
34	89.2	Adult	M
47B	81.3	Adult	M
49B	67.9	0-2 years	?
49A	47.3	Adult	F
47A	43.6	Adult	M
43	32.3	0-2 years	?
50C	29.0	0-2 years	?
39	21.3	0-2 years	?
52	18.0	Old Adult	F
48	10.6	Newborn	?

TABLE IX

Mean Scores per Age and Sex Group:
Locus 2 - Group A

Age	Number	Range	Mean
0-2 years	1	31.8	31.80
12-18 years	1	162.6	162.60
Adult	1	0.0	0.00
Old Adult	3	45.5 - 47.9	46.53
TOTAL SUBADULT	2	31.8 - 162.6	97.20
TOTAL ADULT	4	0.0 - 47.9	34.90

Sex of Adults	Number	Range	Mean
Male	2	0.0 - 47.9	23.95
Female	2	45.5 - 46.2	45.85

TABLE X

Status Scores of Adults and Subadults: Group A

Adult Score	Rank	Subadult Score	Rank
47.9	5	162.6	6
46.2	4	31.8	2
45.5	3		
0.0			$R_1 = 8$
	$R_2 = 13$		

$n_1 = 2$; $n_2 = 4$; level of significance = .05; U = 3

RESULT: probability equals .800

TABLE XI

Mean Scores per Age and Sex Group:
Locus 2 - Group B

Age	Number	Range	Mean
Newborn	2	28.0 - 104.5	66.25
0-2 years	1	238.2	238.20
18-21 years	1	74.8	74.80
Young Adult	2	79.1 - 118.2	98.65
Adult	1	116.0	116.00
Old Adult	1	72.5	72.50
TOTAL SUBADULT	3	28.0 - 238.2	123.57
TOTAL ADULT*	5	72.5 - 118.2	92.12

Sex of Adults*	Number	Range	Mean
Male	2	72.5 - 118.2	95.35
Female	2	74.8 - 79.1	76.95
Female ?	1	116.0	116.00
TOTAL MALE	2	72.5 - 118.2	95.35
TOTAL FEMALE	3	74.8 - 116.0	89.97

*The 18-21 year age group is included under ADULTS.

TABLE XII

Status Scores of Adults and Subadults: Group B

Adult Score	Rank	Subadult Score	Rank
118.2	7	238.2	8
116.0	6	104.5	5
79.1	4	28.0	1
74.8	3		
72.5	2		$R_1 = 14$
	$R_2 = 22$		

$n_1 = 3$; $n_2 = 5$; level of significance = .05; U = 7

RESULT: probability equals 1.000

TABLE XIII

Status Scores of Males and Females: Group B

Male Score	Rank	Female Score	Rank
118.2	5	116.0	4
72.5	1	79.1	3
		74.8	2
	$R_1 = 6$		$R_2 = 9$

$n_1 = 2$; $n_2 = 3$; level of significance = .05; U = 3

RESULT: probability equals 2(.600) = 1.200

TABLE XIV

Mean Scores per Age and Sex Group:
Locus 2 - Group C

Age	Number	Range	Mean
Newborn	1	10.6	10.60
0-2 years	5	21.3 - 136.3	57.36
Juvenile	1	94.5	94.50
Adult	8	43.6 - 199.2	108.41
Old Adult	1	18.0	18.00
TOTAL SUBADULT	7	10.6 - 136.3	55.99
TOTAL ADULT	9	18.0 - 199.2	98.37

Sex of Adults	Number	Range	Mean
Male	6	43.6 - 199.2	108.38
Female	3	18.0 - 169.7	78.33

TABLE XV

Status Scores of Adults and Subadults: Group C

Adult Score	Rank	Subadult Score	Rank
199.2	16	136.3	14
169.7	15	94.5	11
127.8	13	67.9	8
109.2	12	32.3	5
89.2	10	29.0	4
81.3	9	21.3	3
47.3	7	10.6	1
43.6	6		
18.0	2		$R_1 = 46$
	$R_2 = 90$		

$n_1 = 7$; $n_2 = 9$; level of significance = .05; U = 18

RESULT: probability is greater than .10

TABLE XVI

Status Scores of Males and Females: Group C

Male Score	Rank	Female Score	Rank
199.2	9	169.7	8
127.8	7	47.3	3
109.2	6	18.0	1
89.2	5		
81.3	4		$R_1 = 12$
43.6	2		
	$R_2 = 33$		

$n_1 = 3$; $n_2 = 6$; level of significance = .05; U = 6

RESULT: probability equals .548

adults and males. Due to the very small sample size, nothing can be inferred from the frequency graphs for Group A (Appendix B, page 117).

The Mann-Whitney U tests demonstrate that the ranking is probably due to chance variation (Table X). It was not possible to perform the test on the sex criteria due to the small sample size. Although this distribution could not be tested statistically, it is supposed that the observed distribution is due to chance alone.

The Group B burials included eight undisturbed individuals. Male and female mean scores were basically equivalent and both within the range of normal status, as was the adult mean score (Table XI). The subadult mean score, however, was approximately 33% higher than the adult mean score, and just barely attained the high status range. The frequency graphs (Appendix B, page 118) were based on such small numbers that relevant information was not discoverable. As with the Group A results, the possibility exists that some form of differential treatment was performed here also. Sample size, however, is assumed to be the main factor creating this picture.

Both Mann-Whitney U tests (Tables XII and XIII) demonstrate, in this instance also, that the observed differences are probably due to chance variation only.

The Group C sample was much larger (n = 16) and it may provide some valid results. Although the mean adult score was nearly twice the mean subadult score and the mean male score 37% larger than the mean female score (Table XIV),

all four mean scores fit into the normal status range. As with Locus 2 as a whole, the frequency graph for the age criteria shows a peak for adult scores at a higher status point than the peak for subadult scores (Appendix B, page 119). Although not very clear, a tendency for male scores to be higher than female scores is also shown by the graphs.

As with all the previous Mann-Whitney U tests, those performed on Group C data also demonstrate that the observed ranking can be explained by chance variation alone (Tables XV and XVI).

4. Summary.

The analysis of status values was aimed at the discovery of relationships between the quantity and quality of artifacts and the sex and age of the deceased. For the Locus 2 population as a whole, it was discovered that the mean scores were equal for both sex and both age variables. Minute differences were discovered in mean values for the three burial groups in Locus 2. Most age and sex groups fell within the normal status range, with two exceptions. Group A, according to mean scores, included low status adults and males, while Group B had high status subadults. These differences cannot, however, be statistically validated, as the Mann-Whitney U tests demonstrated.

The frequency graphs seemed to show that adults peaked at a higher score than subadults in both Group C and Locus 2 generally. This may be interpreted as meaning that the occurrence of a few high status subadult values distorted the picture presented by the mean scores.

The problems raised by this analysis could be the result of the methodology used, sample size, or the fact that differentiation may be partly due to variables which the analysis does not take into account such as achievement and/or ascription.

Percentage Technomic Artifact Analysis

1. Background.

The Percentage Technomic Artifact analysis was performed as an attempt to determine the following two things. First, it provides the archaeologist with an index of the relative importance of technomic versus sociotechnic tasks in the society, or, at the least, an index of the importance of technomic artifacts in the total burial paraphenalia. Secondly, and of greater importance, it may provide another basis for determining status. If consistent relationships can be demonstrated between the percentage of technomic artifacts and the age and/or sex of the deceased individuals, it may be possible that by determining such percentages we will be able to predict the age and/or sex of the deceased. In this instance, it would serve as a formula for predicting the age and sex of individuals from burials where no skeletal remains have been preserved.

The percentage technomic artifact values were determined by dividing the total technomic artifact score for each burial by the total artifact score for the same burial. As with the Rank Order Analysis, the percentage scores were then tabulated and ranked per locus (Table XVIII) and per group in

Locus 2 (Table XXII). A similar procedure of calculating means, plotting the data on frequency graphs, and performing Mann-Whitney U tests was carried out.

Since it was felt to be difficult to talk about percentage scores for burials with no artifacts, Burial 8 had to be eliminated from the sample of undisturbed burials from Locus 2.

2. Results.

For the percentage technomic artifact scores, the parameters for the relative designations are as follows:

TABLE XVII

Percentage Technomic Artifact Score Parameters

Rank	Range	From	To
Low	less than $\bar{X}$ - 50%$\bar{X}$	0.0	17.4
Normal	$\bar{X} \pm$ 50%$\bar{X}$	17.5	52.5
High	more than $\bar{X}$ + 50%$\bar{X}$	52.6	-

$\bar{X}$ = 35.008

Table XVIII shows that for Locus 2 as a whole, although the percentage scores include males, females, adults, and subadults at both the high and low ends of the scale, there appears to be a concentration of subadult scores towards the lower end. This fact is also borne out by the frequency graphs for subadult and adult percentages (Appendix B, page 120). It is also possible to interpret the frequency graphs for sex as providing a picture, though not very clear, of higher male to female percentage scores. The mean scores (Table XIX), however, show nearly equivalent scores for both sex and both age groups,

TABLE XVIII

Percentage Technomic Artifacts: Ranked per Locus

Burial Number	Percentage	Age	Sex
Locus 1:			
1A	0.0	Adult	F
Locus 4:			
1	30.8	0-2 years	?
Locus 2:			
26	86.1	Newborn	?
52	83.3	Old Adult	F
47B	79.9	Adult	M
45	75.1	Juvenile	?
3	63.3	12-18 years	F ?
33	56.9	0-2 years	?
28A	55.6	Young Adult	F
47A	48.2	Adult	M
39	46.9	0-2 years	?
34	45.1	Adult	M
30C	40.3	Old Adult	M
49A	38.1	Adult	F
27A	36.5	Young Adult	M
32	35.2	Adult	M
43	34.1	0-2 years	?
35A	33.1	Adult	M
50A	31.2	Adult	F
21	31.0	Old Adult	F
14	21.5	Old Adult	M
18B	21.4	18-21 years	F
42	13.9	0-2 years	?
25	13.8	Adult	F ?
50B	10.1	Adult	M
49B	8.8	0-2 years	?
10	6.6	Old Adult	F
11	0.0	0-2 years	?
20	0.0	Newborn	?
48	0.0	Newborn	?
50C	0.0	0-2 years	?

TABLE XIX

Percentage Technomic Artifacts per Age and Sex Group: Locus 2

Age	Number	Range	Mean
Newborn	3	0.0 - 86.1	28.70
0-2 years	7	0.0 - 56.9	22.83
12-18 years	1	63.3	63.30
Juvenile	1	75.1	75.10
18-21 years	1	21.4	21.40
Young Adult	2	36.5 - 55.6	46.05
Adult	9	10.1 - 79.9	37.19
Old Adult	5	6.6 - 83.3	36.54
TOTAL SUBADULT	12	0.0 - 86.1	32.03
TOTAL ADULT*	17	6.6 - 83.3	37.11

Sex of Adults*	Number	Range	Mean
Male	9	10.1 - 79.9	38.88
Female	7	6.6 - 83.3	38.17
Female ?	1	13.8	13.80
TOTAL MALE	9	10.1 - 79.9	38.88
TOTAL FEMALE	8	6.6 - 83.3	35.12

*The 18-21 year age group is included under ADULTS.

TABLE XX

Percentage Technomic Artifact Scores of Adults and Subadults: Locus 2

Adult Percentage	Rank	Subadult Percentage	Rank
83.3	28	86.1	29
79.9	27	75.1	26
55.6	23	63.3	25
48.2	22	56.9	24
45.1	20	46.9	21
40.3	19	34.1	15
38.1	18	13.9	9
36.5	17	8.8	6
35.2	16	0.0	2.5
33.1	14	0.0	2.5
31.2	13	0.0	2.5
31.0	12	0.0	2.5
21.5	11		
21.4	10		$R_1 = 165$
13.8	8		
10.1	7		
6.6	5		
	$R_2 = 270$		

$n_1 = 12$; $n_2 = 17$; level of significance = .05; U = 87

RESULT: probability is greater than .10

TABLE XXI

Percentage Technomic Artifact Scores
of Males and Females: Locus 2

Male Percentages	Rank	Female Percentages	Rank
79.9	16	83.3	17
48.2	14	55.6	15
45.1	13	38.1	11
40.3	12	31.2	7
36.5	10	31.0	6
35.2	9	21.4	4
33.1	8	13.8	3
21.5	5	6.6	1
10.1	2		
	$R_2 = 89$		$R_1 = 64$

$n_1 = 8$; $n_2 = 9$; level of significance = .05; U = 28

RESULTS: probability is greater than .10

and all fit into the range of normal values.

Thees differences, however, are shown to be insignificant by the Mann-Whitney U tests (Tables XX and XXI). Whether the differences are due to chance variation or clouded by factors which this analysis does not take into account is not certain at the moment.

Since Group A consists of only five individuals, the results have to be considered very speculative. All four age and sex mean scores fall within the range of normal values, although all except the mean subadult percentage are on the low value borderline (Table XXIII). Due to the sample size, the frequency graphs (Appendix B, page 121) are uninterpretable. The Mann-Whitney U test on age (Table XXIV) clearly demonstrated the probability of chance variation as being the only required factor. The same test however could not be performed on the sex criteria because the sample size was too small. The interpretation advanced in this case, as was done earlier, is that all possible rankings when the sample size is so low can be due to chance variation alone.

Similar results were obtained from the Group B data. All mean scores fell within the range of normal values, although the mean subadult percentage was close to the high status range (Table XXV). Also, all Group B scores were 53% to 79% higher than their corresponding Group A scores. This could possibly imply greater importance in technomic activities among Group B individuals than among Group A individuals.

As with Group A, the frequency graphs (Appendix B, page 122) fail to show any patterning, with the exception that

TABLE XXII

Percentage Technomic Artifacts:
Locus 2 - Group A, B, C.

Burial Number	Percentage	Age	Sex
Group A:			
3	63.3	12-18 years	F ?
21	31.0	Old Adult	F
14	21.5	Old Adult	M
10	6.6	Old Adult	F
11	0.0	0-2 years	?
Group B:			
26	86.1	Newborn	?
33	56.9	0-2 years	?
28A	55.6	Young Adult	F
30C	40.3	Old Adult	M
27A	36.5	Young Adult	M
18B	21.4	18-21 years	F
25	13.8	Adult	F ?
20	0.0	Newborn	?
Group C:			
52	83.3	Old Adult	F
47B	79.9	Adult	M
45	75.1	Juvenile	?
47A	48.2	Adult	M
39	46.9	0-2 years	?
34	45.1	Adult	M
49A	38.1	Adult	F
32	35.2	Adult	M
43	34.1	0-2 years	?
35A	33.1	Adult	M
50A	31.2	Adult	F
42	13.9	0-2 years	?
50B	10.1	Adult	M
49B	8.8	0-2 years	?
48	0.0	Newborn	?
50C	0.0	0-2 years	?

TABLE XXIII

Percentage Technomic Artifacts per Age and Sex Group: Locus 2 - Group A

Age	Number	Range	Mean
0-2 years	1	0.0	0.00
12-18 years	1	63.3	63.30
Old Adult	3	6.6 - 31.0	19.70
TOTAL SUBADULT	2	0.0 - 63.3	31.65
TOTAL ADULT	3	6.6 - 31.0	19.70

Sex of Adults	Number	Range	Mean
Male	1	21.5	21.50
Female	2	6.6 - 31.0	18.80

TABLE XXIV

Percentage Technomic Artifact Scores of Adults and Subadults: Group A

Adult Percentage	Rank	Subadult Percentage	Rank
31.0	4	63.3	5
21.5	3	0.0	1
6.6	2		
	$R_2 = 9$		$R_1 = 6$

$n_1 = 2$; $n_2 = 3$; level of significance = .05; U = 3

RESULT: probability equals 2(.600) = 1.200

TABLE XXV

Percentage Technomic Artifacts per Age and Sex Group: Locus 2 - Group B

Age	Number	Range	Mean
Newborn	2	0.0 - 86.1	43.05
0-2 years	1	56.9	56.90
18-21 years	1	21.4	21.40
Young Adult	2	36.5 - 55.6	46.05
Adult	1	13.8	13.80
Old Adult	1	40.3	40.30
TOTAL SUBADULT	3	0.0 - 86.1	47.67
TOTAL ADULT*	5	13.8 - 55.6	33.52

Sex of Adults*	Number	Range	Mean
Male	2	36.5 - 40.3	38.40
Female	2	21.4 - 55.6	38.50
Female ?	1	13.8	13.80
TOTAL MALE	2	36.5 - 40.3	38.40
TOTAL FEMALE	3	13.8 - 55.6	30.27

*The 18-21 year age group is included under ADULTS.

TABLE XXVI

Percentage Technomic Artifact Scores of Adults and Subadults: Group B

Adult Percentage	Rank	Subadult Percentage	Rank
55.6	6	86.1	8
40.3	5	56.9	7
36.5	4	0.0	1
21.4	3		
13.8	2		$R_1 = 16$
	$R_2 = 20$		

$n_1 = 3$; $n_2 = 5$; level of significance = .05; U = 5

RESULT: probability equals .572

TABLE XXVII

Percentage Technomic Artifact Scores of Males and Females: Group B

Male Percentage	Rank	Female Percentage	Rank
40.3	4	55.6	5
36.5	3	21.4	2
		13.8	1
	$R_1 = 7$		$R_2 = 8$

$n_1 = 2$; $n_2 = 3$; level of significance = .05; U = 2

RESULTS: probability equals .800

TABLE XXVIII

Percentage Technomic Artifacts per Age and Sex Group: Locus 2 - Group C

Age	Number	Range	Mean
Newborn	1	0.0	0.00
0-2 years	5	0.0 - 46.9	20.74
Juvenile	1	75.1	75.10
Adult	8	10.1 - 79.9	40.11
Old Adult	1	83.3	83.30
TOTAL SUBADULT	7	0.0 - 75.1	25.54
TOTAL ADULT	9	10.1 - 83.3	44.91

Sex of Adults	Number	Range	Mean
Male	6	10.1 - 79.9	41.93
Female	3	31.2 - 83.3	50.87

TABLE XXIX

Percentage Technomic Artifact Scores of Adults and Subadults: Group C

Adult Percentage	Rank	Subadult Percentage	Rank
83.3	16	75.1	14
79.9	15	46.9	12
48.2	13	34.1	8
45.1	11	13.9	5
38.1	10	8.8	3
35.2	9	0.0	1.5
33.1	7	0.0	1.5
31.2	6		
10.1	4		$R_1 = 45$
	$R_2 = 91$		

$n_1 = 7$; $n_2 = 9$; level of significance = .05; U = 17

RESULT: probability is greater than .10

TABLE XXX

Percentage Technomic Artifact Scores of Males and Females: Group C

Male Percentage	Rank	Female Percentage	Rank
79.9	8	83.3	9
48.2	7	38.1	5
45.1	6	31.2	2
35.2	4		
33.1	3		$R_1 = 16$
10.1	1		
	$R_2 = 29$		

$n_1 = 3$; $n_2 = 6$; level of significance = .05; U = 8

RESULT: probability equals .904

subadult values seem to encompass both the high and low ends of the distribution while adult values are evenly distributed between these polar extremes. The Mann-Whitney U tests (Tables XXVI and XXVII) demonstrate that all observable differences can be due to chance variation alone.

Although all mean values in Group C fall within the normal range of values (Table XXVIII), a major difference in mean values is observable. Instead of the mean subadult value being higher, the opposite case is shown. The mean subadult value is only about one-half of the adult value which is nearly equal for both sexes. The frequency graphs (Appendix B, page 123) also support this viewpoint - the subadult values peak in the 0-10% range while the adult values peak in the 30-50% range. Although the mean scores and frequency distributions seem to provide evidence of differentiation, the Mann-Whitney U tests (Tables XXIX and XXX) still show that the variation could have been due to chance alone.

3. Summary.

The importance of technomic artifacts among the total burial artifact inventory has been shown to be approximately 35%, while the other 65% were sociotechnic artifacts. No consistent relationships between age and/or sex and percentage of technomic artifacts could be demonstrated, and all the variability could have been due to chance variation alone. Though not statistically significant, a few differences deserve mention. There appeared to be a tendency for subadult

percentages to cluster at the lower end of the ranking for Locus 2 as a whole. Groups A and B demonstrated a higher mean subadult score than mean adult score, while the reverse was shown for Group C. All the mean scores were higher in Group B than in Group A, and, while the mean adult score of Group C was higher than the mean adult scores for both Groups A and B, the mean subadult score was at its lowest in Group C. This increasing importance of technomic artifacts for adults from Group A to B to C, and for subadults from Group C to A to B, may possibly reflect some form of differentiation - possibly the existence of what Tuck (1976a: 94) calls "several coeval social groups".

Artifact Distributions

1. Background.

Since statistical tests of both status values and percentage technomic artifact values failed to demonstrate any intergroup differentiation, it was decided to test whether certain artifact classes were characteristic of each group. In order to do this, certain artifact classes were abstracted from the raw data and their distributions per number of graves per group were tested for chance variation using the previously described Kolmogorov-Smirnov one-sample goodness of fit test. In each case, the observed distribution is tested against the null hypothesis that the variation is random. The accepted level of significance was .05. Therefore, all observed probabilities of .05 or less will be considered to constitute a rejection of the null

hypothesis (i.e., the variation will be seen as due to cultural patterning).

The sample will consist of all burials with artifacts, with the provision that burials containing more than one individual and where the provenience of the artifacts is unknown will be counted as one unit only (for example, Burials 37A to K will be considered as one burial unit because it is not known to which one or ones the artifacts belong to). Disturbance will not be considered to be a limiting factor, since what is in question is intergroup distribution of artifacts. The resulting sample includes 15 burials for Group A, 23 for Group B, and 27 for Group C.

2. Results.

The results of the Kolmogorov-Smirnov tests are presented in Appendix C and summarized below. Only one artifact class met the acceptable level of significance - the distribution of great auk bills. Eight of the nine burials with great auk bills were located in Group C. Three of the other ten tests were significant to the .15 level - these were the distributions of gull bones, teal bones, and otter bones. These three were most frequently found in Group A burials - the last two occuring only in Group A but in so few burials to make the test insignificant.

A number of other species had unique burial distributions. Tern and whimbrel or Eskimo curlew remains were found in one burial each in Group A. Snowy owl, puffin, and shearwater remains were found in one burial each in Group B.

Group C included murre bones which occurred in two burials, and single burial occurrences of guillemot, Hudsonian godwit, ptarmigan, and moose remains. All of these, however, were in too low numbers to be statistically significant.

Even without statistical validation, it appears from these distributions that there are meaningful differences in artifact type between the three burial groups in Locus 2 - a further point in the possible interpretation of these three clusters as signifying the existence of three different "family plots" or other form of sociocultural differentiation.

D. ADDITIONAL DATA

Two individuals, James Tuck (1976a) and Nan Askin Rothschild (1975), had previously dealt with status at the Port au Choix site.

Tuck (1976a:90-91) performed a series of chi-square computations to determine if certain artifact types were randomly distributed by sex. The results are summarized in Table XXXI. Males more than females were involved in hunting and fishing, woodworking, and the manufacture of implements other than sewing tools. Females, on the other hand, did the skin- and hide-working, the sewing, and the manufacture of sewing implements, and possibly also woodworking since heavy woodworking tools occurred primarily in female graves. Tuck (ibid.:91), however, argues that these woodworking tools may have belonged to the male mourners and therefore do not reflect the occupational status of the women. These results

TABLE XXXI

Division of Labour Among Adults*

Artifact Class	Distribution	Occupation
slate spears and bayonets, daggers, foreshafts, bone points	more often with males	hunting and fishing
needles and other skinworking tools	more often with females	hide-working and sewing
gouges, axes, adzes, celts	more often with females	woodworking**
modified beaver incisors	more often with males	woodworking
needle blanks	more often with females	manufacturing of sewing implements
other antler and bone blanks	more often with males	manufacturing
other artifacts	random	---

*The data for this table were derived from Tuck (1976a: 90-91).

**"...perhaps the practice of male relatives contributing their own property to the mortuary offerings is responsible for this anomalous distribution." (Tuck 1976a:91)

reflect the expected occupational distribution in a hunting and gathering society: males being preoccupied with subsistence-related tasks, while females being preoccupied with the manufacture of clothing and sewing implements. It can also be assumed that they did the cooking and cared for the children and the camp since their occupations are mainly on-site tasks.

Chi-square tests were also performed by Rothschild (1975) who discovered the following distributions: adults had a high percentage of the projectile points, awls, and needles represented in the cemetery (ibid.:96), while the awls were mostly found with the females (ibid.:99). She adds that for the prehistoric societies of eastern North America as a whole "males and adults have more task-related or technomic artifacts than females and children, although there are fewer sex-based differences than age-based ones" (ibid.:101), and, further, that the Port au Choix site "is an unusual one in terms... of the distribution of grave goods, which demonstrate fewer age and sex differences than most sites analyzed" (ibid.:100-101).

From these two individuals' analyses, it becomes apparent that the sexual division of labour can be determined for the Port au Choix population, and that, although there are no differences from the status value perspective, there are differences from the perspective of the kinds of work performed by both sexes.

PART V

SUMMARY AND CONCLUSIONS

The analyses provided some insight, though limited, into the status structure of the society which buried its dead at the Port au Choix site some 4000 years ago. It has been proposed that no cultural preferences existed as to whom could be buried at the site. All segments of the population were represented and, by reversing Arthur Saxe's definition, it can be postulated that Port au Choix served as an "egalitarian status cemetery". In other words, an egalitarian structure is being proposed for the Port au Choix society. As expected in a hunting and gathering society, there appears to be evidence of a high infant mortality rate (over 30% of the Locus 2 burials were of individuals less than two years old).

Most of the burial attributes (e.g., orientation) were shown to be randomly distributed. The only statistically significant relationships were that all adults were flexed and that subadult skeletons were preferentially buried heading either east or west. Although not statistically validated, there appeared to be a tendency for adults and females to be buried facing north.

For both the Rank Order Analysis and the Percentage Technomic Artifact Analysis, all observed differences could have been due to chance variation alone. No relationship could be shown to be significant at the .05 level according to the results of the Mann-Whitney U tests. However, some

speculations can be advanced from an analysis of the mean scores and frequency graphs. There seems to be a concentration of subadult status scores and percentage technomic artifact values at the lower ends of both distributions, and the frequency graphs also show adult scores peaking at a higher level than subadult scores. This leads one to hypothesize a structure whereby adults enjoy greater status and technomic functions than subadults. Although sexual differences are not as apparent, males seem to be buried with more task-related or technomic artifacts than females.

Speculations may also be proposed regarding intergroup differentiation. Group A burials demonstrated a higher mean status score and a higher percentage of technomic artifacts for subadults than for adults. A similar picture can be seen for Group B burials, although in this case all the values are appreciably higher. Group C individuals, however, demonstrate a reversal of this pattern. Among these, adults have higher mean status scores and technomic artifact percentages than subadults. Also, the Group C values are higher than both the Group A and Group B values. Although not statistically significant and possibly only due to sample size, these results could signify the existence of three separate "family plots" at the Port au Choix site.

In order to further test the possible existence of segmentation within the cemetery (i.e., 'family plots'), the distribution of a number of artifact classes between the three Locus 2 groups was tested by the use of the Kolmogorov-Smirnov test. Only the preferential inclusion of great auk

bills with Group C individuals was shown to be statistically significant. Gull remains, however, had a tendency to be buried with Group A individuals. A number of other species demonstrated distributions which may be meaningful, but due to sample size could not be validated by statistics. These species were distributed uniquely within one group of burials, and execpt for teal, otter, and murre elements (which occurred in two burials each), all the remainder occurred only in one burial each. The species unique to Group A included teal, otter, tern, and whimbrel or Eskimo curlew. Group B had snowy owl, puffin, and shearwater represented; while murre, guillemot, Hudsonian godwit, ptarmigan, and moose were only found with Group C individuals.

The evidence of artifact distribution combined with the speculative results from the Rank Order and Technomic Artifact analyses, though not proving anything, is substantial enough to lead the author to hypothesize that the three burial groups comprising Locus 2 do in fact represent some form of segmentation. This form of segmentation was probably internal (i.e., family segments within a band organization), although the possibility of the segmentation being on a higher level (e.g., clan or band) cannot be ruled out.

This leads us to ponder the five questions posed in the Introduction. The following answers are therefore proposed:

1. Status distinctions are detectable in the archaeological record. Although no strong relationships could be shown

between status and age or sex variables, differences of a large magnitude were observed bwtween individual burial scores. These seem to be partially related to age and sex, although other factors may have been affecting the scores (e.g., achievement and/or ascription).

2. The artifacts buried with the deceased individuals reflect both the status of the deceased and of the mourners. Although James A. Tuck (1976a:90-91) could not statistically validate his division of labour analysis due to small sample size, it tended to show male- and female-specific artifact classes. However, at the same time, there were many male- and female-specific artifacts interred with each individual. It therefore appears that part of the grave goods were buried along with the individual to indicate his position in life, while others were probably artifacts belonging to the mourners which were included as 'tokens of friendship'.

3. It is also being proposed that there were status distinctions beyond the age-sex criterion. The range of values within a particular age-sex group was probably not due solely to randomness, but probably reflected the effects of other status criteria on the individual.

4. These other status criteria are believed to have included both achievement and ascription. The achievement criteria would reflect the relative positions held in life with respect to the subsistence sphere primarily. Above-average

hunters, for example, would probably have been accorded above-average status. The hypothesized ascribed status needs further clarification. By this term, I am referring to infants and children of 'high' status parents or families being accorded status treatment in death beyond the expected. However, this does not mean that the difference in status was apparent in life or that it would continue into adulthood. Rather, the ascription reflects the mourners' respect for the deceased's parents or family. Also, if the high status parent were to lose his standing, then his children would also lose their standing. To conclude, then, ascription is perceived as being non-permanent and only comes into focus with the death of young children of high status adults.

5. The kinds of information derivable from status analyses should be numerous (see Bendann 1930). For the Port au Choix cemetery, however, only a few conclusions are worthy of mention. First, it does appear that the society was egalitarian in nature, and that the subsistence-settlement system was probably something like Beardsley et al's (1956) central-based wandering type. The second point is that the differences in status scores and the technomic artifact percentages per burial cluster in Locus 2 probably reflect some form of sociopolitical segmentation. This may be on the family, clan, or band level. It has been proposed by the author that the distinctions are due to family affiliation.

One question remains to be answered: Why did the analysis fail to demonstrate the existence of any significant amount of differentiation among the Port au Choix people? The reason could be a result of either, or a combination of any, of the four explanations proposed below.

First, the possibility exists that there was in fact little differentiation in the society. Nan Askin Rothschild (1975:100-101) found the Port au Choix site to be "an unusual one in terms...of the distribution of grave goods, which demonstrate fewer age and sex differences than most sites analyzed". This, however, does not eliminate the importance of differentiation. Pièrre van den Berghe (1973) has stressed the importance of age "in all societies", but "the relative importance of age compared to other aspects of social differentiation...is inversely related to the total degree of differentiation in a given society" (ibid.:75).

This leads to the second possible explanation. In this case, the lack of significant differentiation observed reflects the fact that the variables that the analyses were capable of handling were not the major variables operating in the society with regard to differentiation. These variables, or unknown factors, probably included achievement and/or ascription. The results of these unknown factors was the blurring of the observed picture. Support for the idea of some amount of ascription comes from the observation that some very young individuals demonstrated both high status scores and a high percentage of technomic artifacts.

The third reason could be inadequacies in the me-

thodology. The arbitrariness of the qualification of the data may have resulted in an innacurate portrayal of the social structure of the population. Alterations to the methodology based upon ethnographic analogy could possibly significantly affect the results. The methodology could be made to match more closely the artifact-value structure of some Eastern Algonquian society or societies.

The final explanation, and one which the author believes is definitely involved, is the small sample size. Many of the tests could not be statistically validated simply on the basis of the sample size.

To remedy the situation will require either increasing the sample size or adapting the methodology to provide an analysis of factors such as achievement and ascription or both. Further work at the Port au Choix site and in Newfoundland generally may lead to a larger sample. The methodology could also be tested on a site where status differentiation has been statistically demonstrated to exist.

As a last note, the similarities between the Port au Choix burials and those of the Micmac, Malecite, and Montagnais tribes of Eastern Canada as described by Father Pièrre Biard in A.D. 1616 deserve attention. Biard wrote...

> "They bury their dead in this manner: First they swathe the body and tie it up in skins; not lengthwise, but with the knees against the stomach and the head on the knees, as we are in our mother's womb. Afterwards they put it in the grave, which has been made very deep, not upon the back or lying down as we

> do, but sitting. A posture which they like very much, and which among them signifies reverence. For the children and the youths seat themselves thus in the presence of their fathers and of the old, whom they respect... When the body is placed, as it does not come up even with the ground on account of the depth of the grave, they arch the grave over with sticks, so that the earth will not fall back into it, and thus they cover up the tomb... If it is some illustrious personage they build a Pyramid or monument of interlacing poles; as eager in that for glory as we are in our marble and porphyry. If it is a man, they place there as a sign and emblem, his bow, arrows, and shield; if a woman, spoons, matachias, or jewels, ornaments, etc. I have nearly forgotten the most beautiful part of all; it is that they bury with the dead man all that he owns, such as his bag, his arrows, his skins and all his other articles and baggage, even his dogs if they have not been eaten. Moreover, the survivors add to these a number of other such offerings, as tokens of friendship..." (in Bushnell 1920:12-13)

Except for the position of the body (sitting) and the wooden arch over the grave, the remainder of the description closely resembles what appears to have happened at the Port au Choix cemetery. Whether this represents anything in the line of cultural ancestry is uncertain, but it does demonstrate the commonality of this type of mortuary ceremonialism.

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APPENDIX A

RESULTS OF KOLMOGOROV-SMIRNOV TESTS ON BURIAL ATTRIBUTES

The Kolmogorov-Smirnov one-sample test for goodness of fit involves the comparison of the expected cumulative frequency (F_o) with the observed cumulative frequency (S_i). The maximum difference (D) is then calculated, and, using the appropriate table of values (Siegel 1956), the probability of the differences being due to chance is determined.

The hypotheses to be tested are:

H_o: the variation is due to chance (i.e., randomness);

H_i: the variation is not due to chance (i.e., non-randomness or patterning).

The level of significance will be set at .05 meaning that, if the test reveals a probability of .05 or less, the null hypothesis (H_o) will be rejected. However, if the probability is greater than .05, there is no basis for rejecting H_o.

Test #1: Male and Direction Facing.

	North	South	East	West
f	5	2	3	3
$F_o(X)$	1/4	2/4	3/4	4/4
$S_{13}(X)$	5/13	7/13	10/13	13/13
Difference	.135	.038	.019	0

N = 13; D = .135; Probability greater than .20

Test #2: Female and Direction Facing.

	North	South	East	West
f	7	2	2	1
$F_o(X)$	1/4	2/4	3/4	4/4
$S_{12}(X)$	7/12	9/12	11/12	12/12
Difference	.333	.250	.167	0

N = 12; D = .333; Probability greater than .10 and less than .15

Test #3: Subadults and Direction Facing

	North	South	East	West
f	3	3	1	1
$F_o(X)$	1/4	2/4	3/4	4/4
$S_8(X)$	3/8	6/8	7/8	8/8
Difference	.125	.250	.125	0

N = 8; D = .250; Probability greater than .20

Test #4: Adults and Direction Facing.

	North	South	East	West
f	12	3	6	4
$F_o(X)$	1/4	2/4	3/4	4/4
$S_{25}(X)$	12/25	15/25	21/25	25/25
Difference	.230	.100	.090	0

N = 25; D = .230; Probability greater than .10 and less than .15

Test #5: Male and Direction Heading.

	North	South	East	West
f	4	4	4	2
$F_o(X)$	1/4	2/4	3/4	4/4
$S_{14}(X)$	4/14	8/14	12/14	14/14
Difference	.036	.071	.107	0

N = 14; D = .107; Probability greater than .20

Test #6: Female and Direction Heading.

	North	South	East	West
f	4	2	4	3
$F_o(X)$	1/4	2/4	3/4	4/4
$S_{13}(X)$	4/13	6/13	10/13	13/13
Difference	.058	.038	.019	0

N = 13; D = .058; Probability greater than .20

Test #7: Subadults and Direction Heading.

	North	South	East	West
f	3	1	7	12
$F_o(X)$	1/4	2/4	3/4	4/4
$S_{23}(X)$	3/23	4/23	11/23	23/23
Difference	.120	.326	.272	0

N = 23; D = .326; Probability less than .05

Test #8: Adults and Direction Heading.

	North	South	East	West
f	8	6	8	5
$F_o(X)$	1/4	2/4	3/4	4/4
$S_{27}(X)$	8/27	14/27	22/27	27/27
Difference	.046	.018	.065	0

N = 27; D = .065; Probability greater than .20

Test #9: Subadults and Degree of Flexion.

	Flexed	Extended
f	8	15
$F_o(X)$	1/2	1/2
$S_{23}(X)$	8/23	23/23
Difference	.152	0

N = 23; D = .152; Probability greater than .20

Test #10: Adults and Degree of Flexion.

	Flexed	Extended
f	28	0
$F_o(X)$	1/2	1/2
$S_{28}(X)$	28/28	28/28
Difference	.500	0

N = 28; D = .500; Probability less than .01

APPENDIX B

FREQUENCY GRAPHS

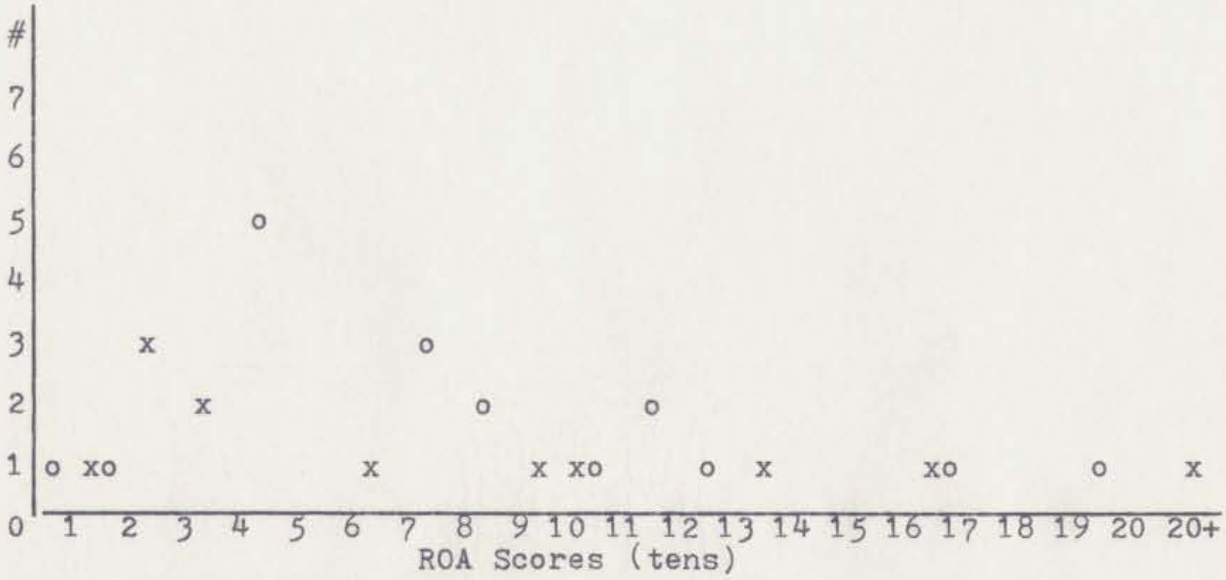
The following eight pages demonstrate graphically the distribution of status and percentage technomic artifact scores per age and sex group. In each instance, the vertical dimension represents number of occurences or frequency, while the horizontal dimension represents the various scores. In this section, the following abbreviations are used:

ROA: Rank Order Analysis;

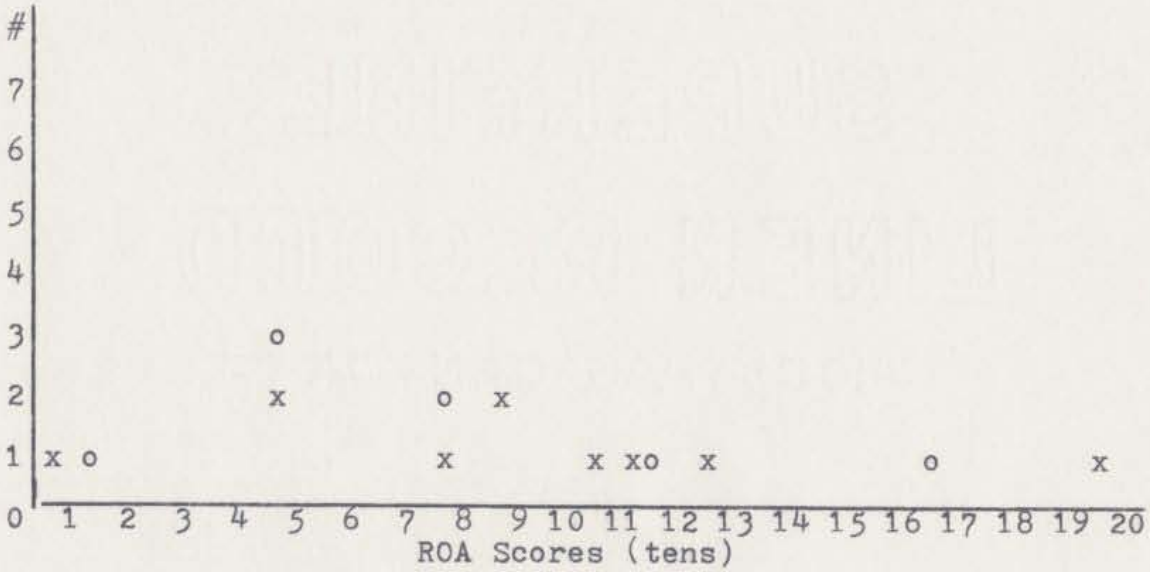
%TAA: Percentage Technomic Artifact Analysis.

For the %TAA scores, two sets of graphs were plotted. The first set was based on units of five (5) percentage points, while the second set was based on units of ten (10) percentage points.

ROA SCORES: LOCUS 2

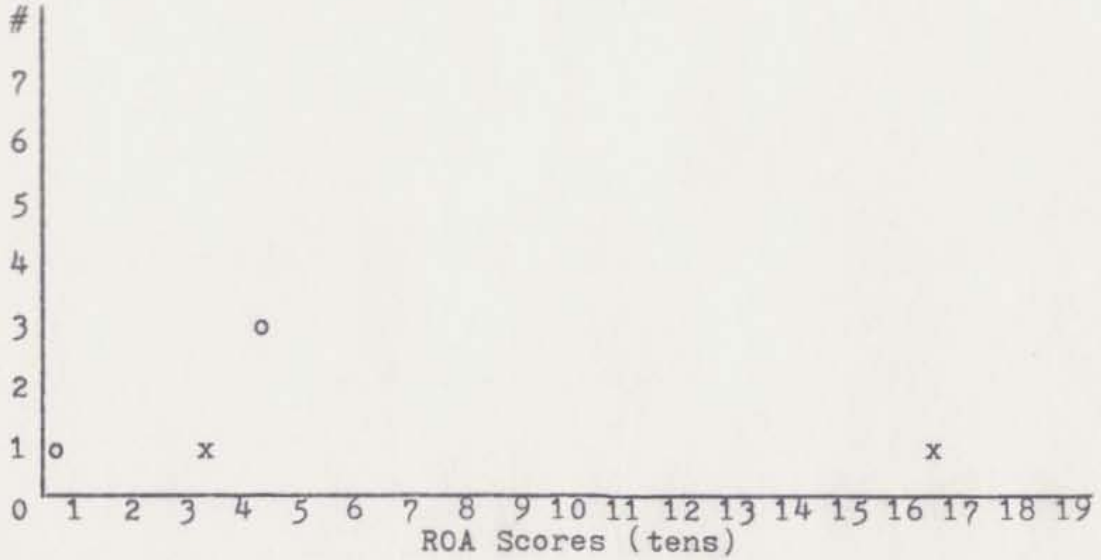


KEY: x = subadults(12); o = adults(18)

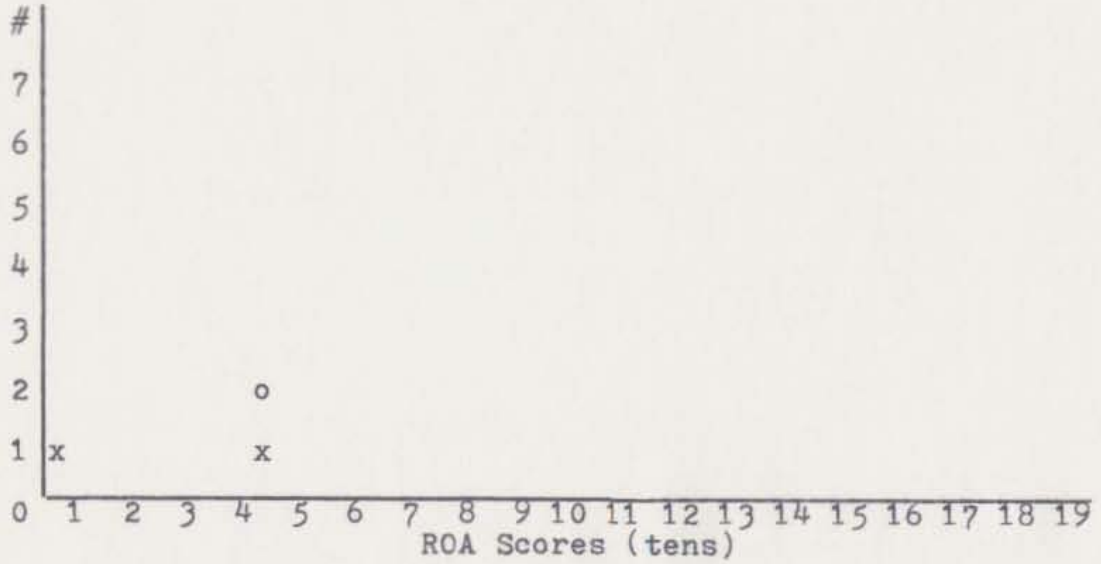


KEY: x = males(10); o = females(8)

ROA SCORES: LOCUS 2 - GROUP A

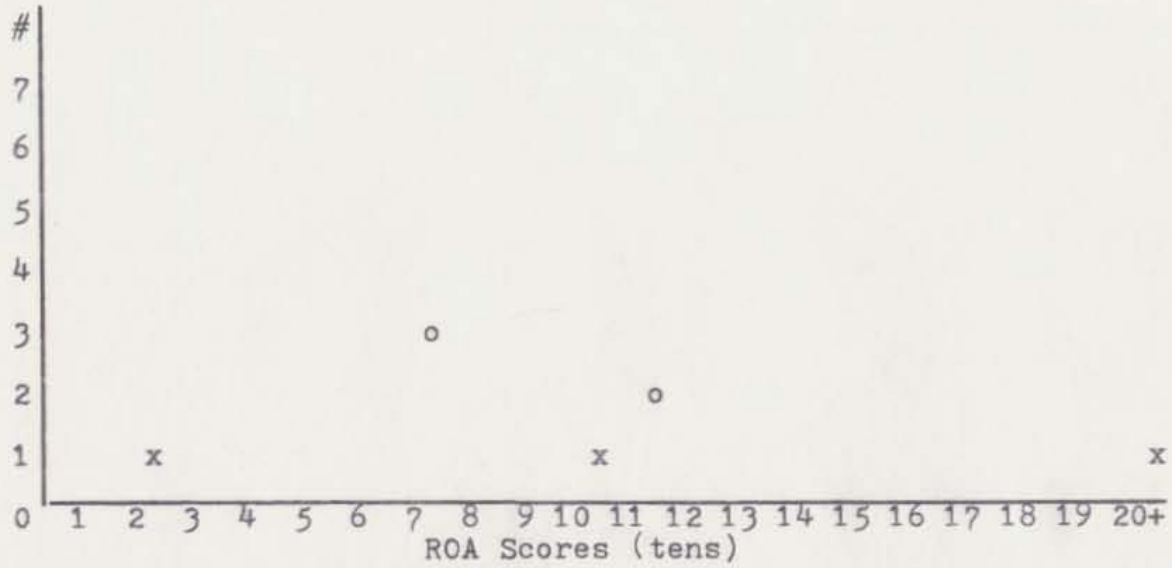


KEY: x = subadults(2); o = adults(4)

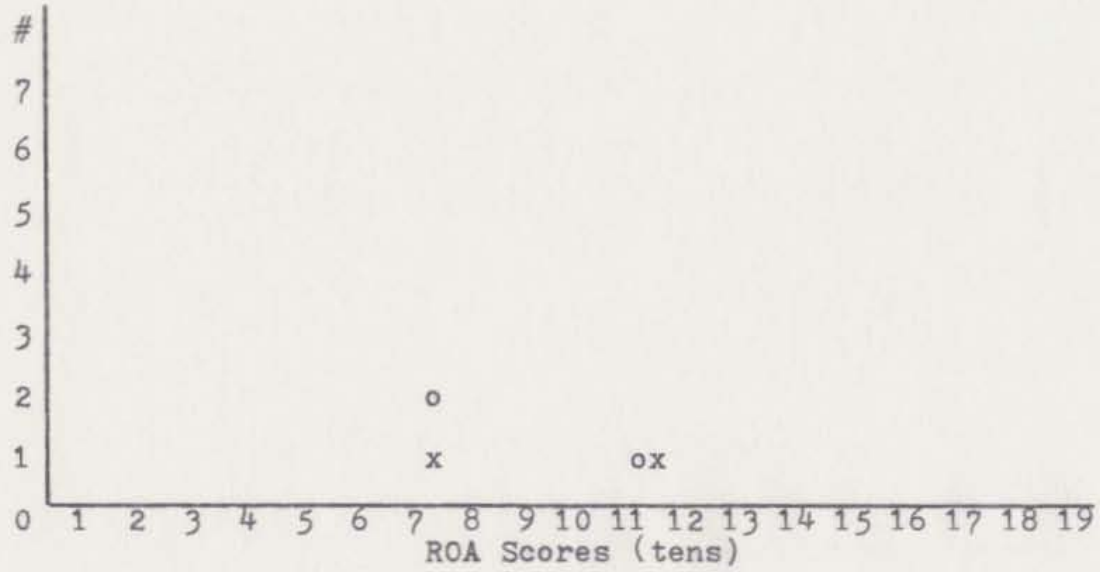


KEY: x = males(2); o = females(2)

ROA SCORES: LOCUS 2 - GROUP B

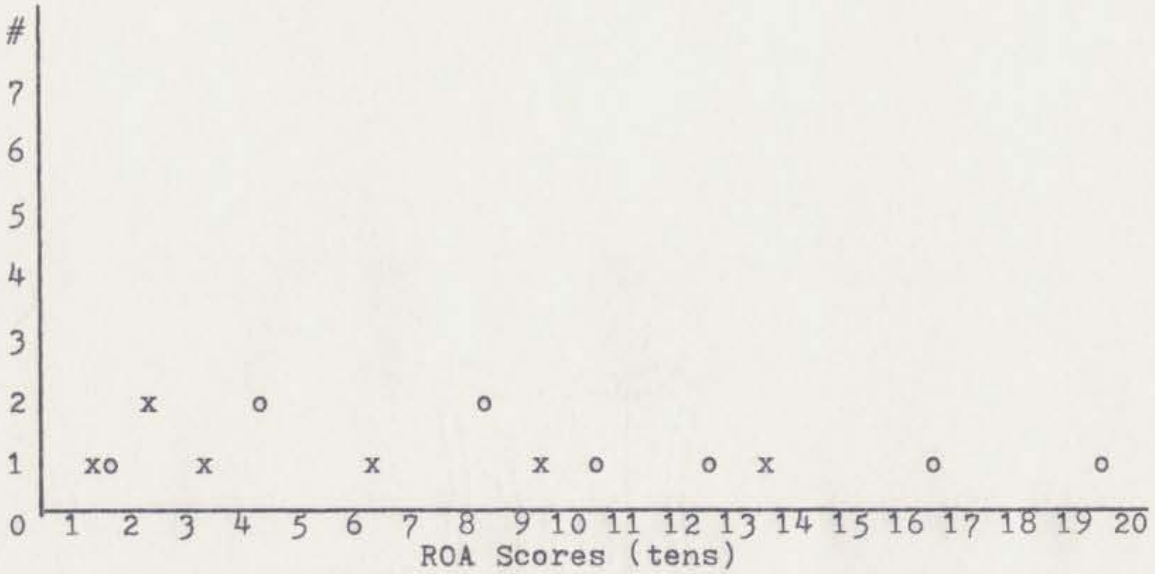


KEY: x = subadults(3); o = adults(5)

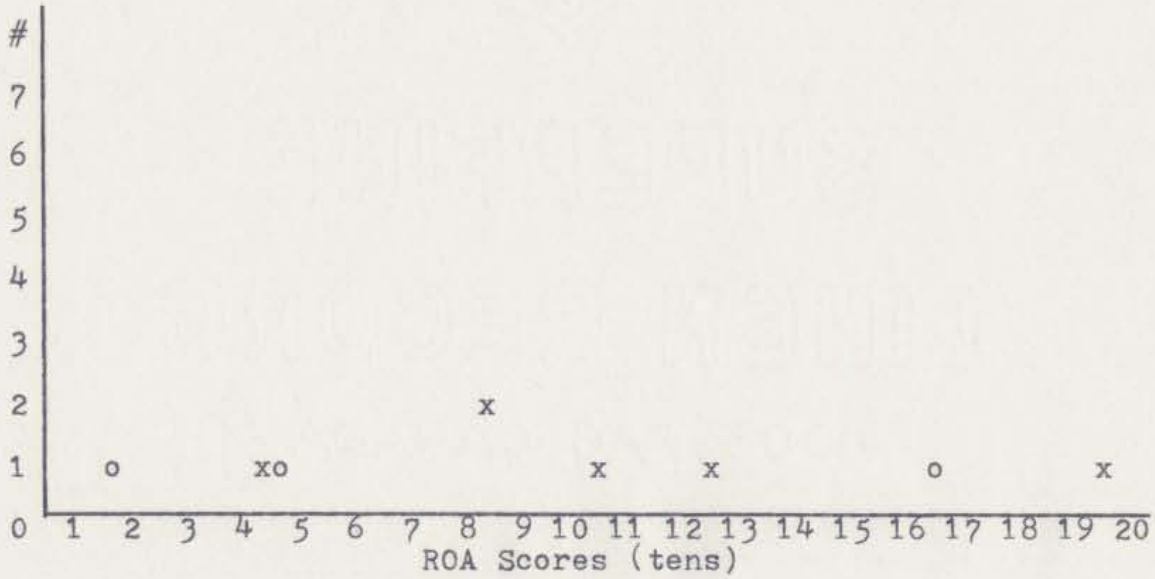


KEY: x = males(2); o = females(3)

ROA SCORES: LOCUS 2 - GROUP C

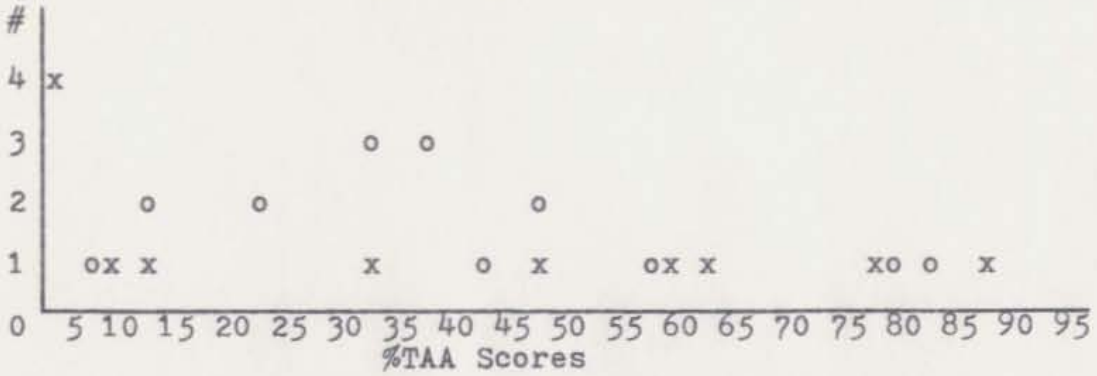


KEY: x = subadults(7); o = adults(9)

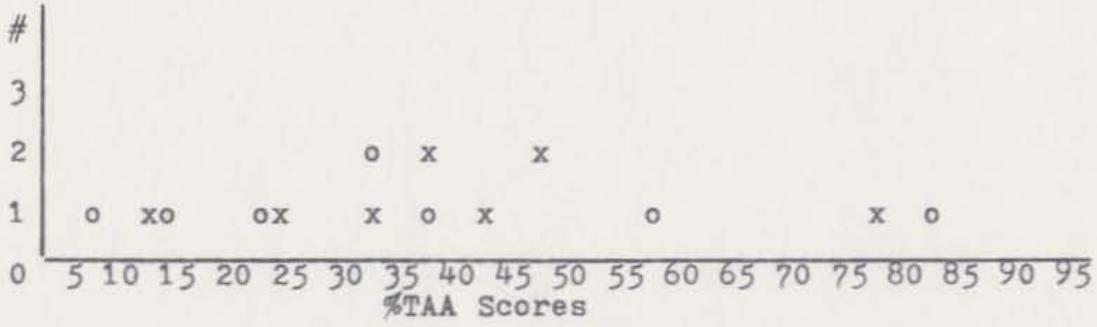


KEY: x = males(6); o = females(3)

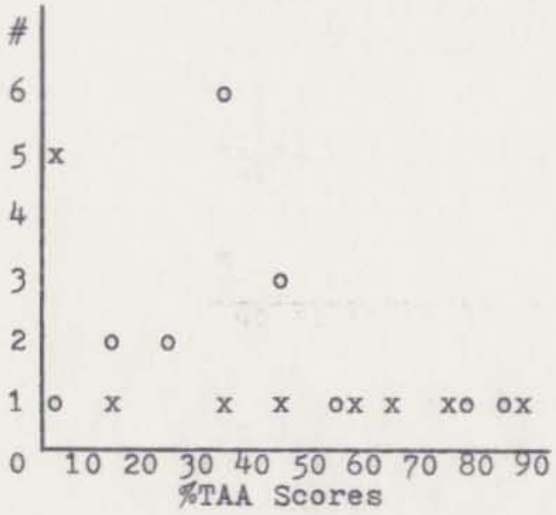
%TAA SCORES: LOCUS 2



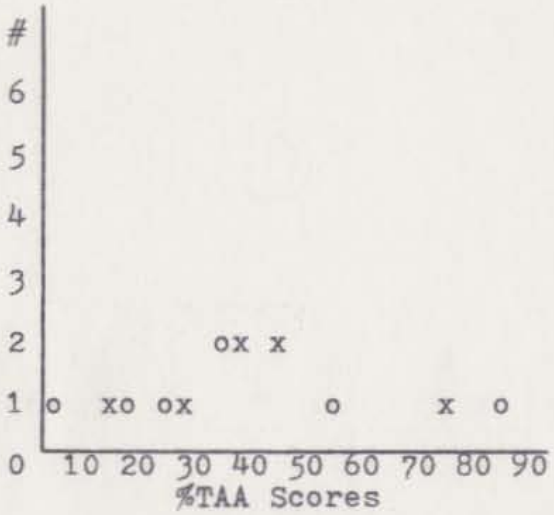
KEY: x = subadults(12); o = adults(17)



KEY: x = males(9); o = females(8)

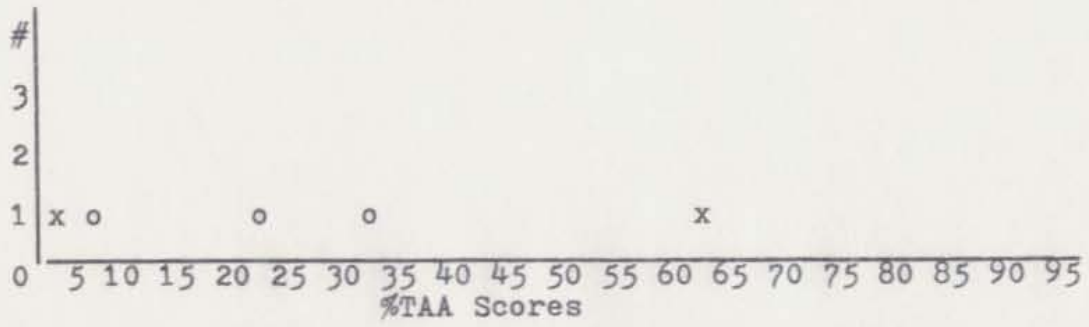


KEY: x = subadults(12);
o = adults(17)

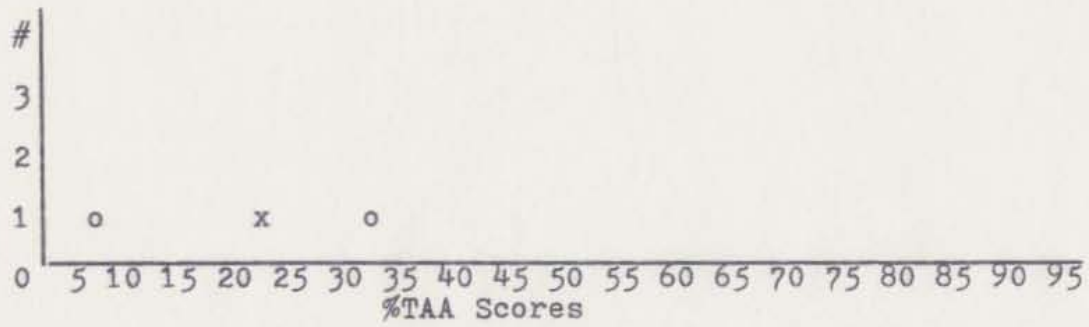


KEY: x = males(9);
o = females(8)

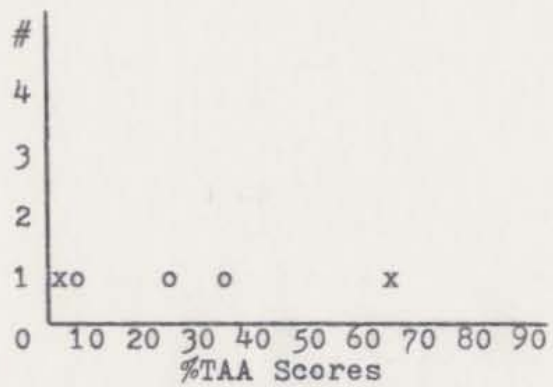
%TAA SCORES: LOCUS 2 - GROUP A



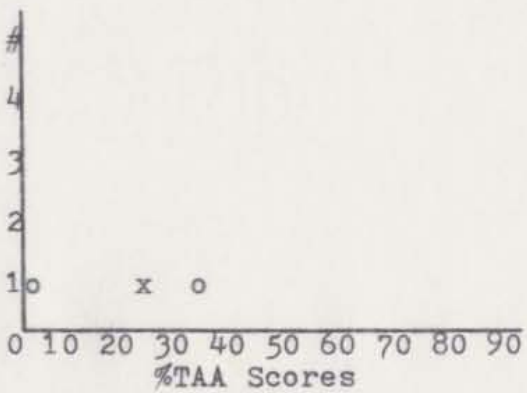
KEY: x = subadults(2); o = adults(3)



KEY: x = males(1); o = females(2)

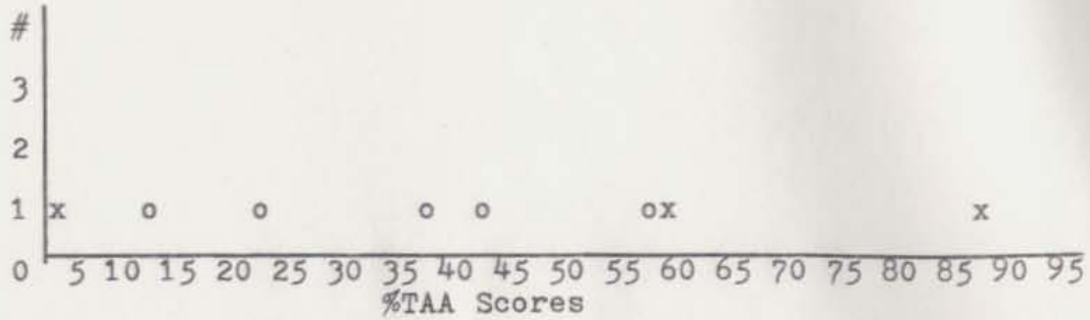


KEY: x = subadults(2);
o = adults(3)

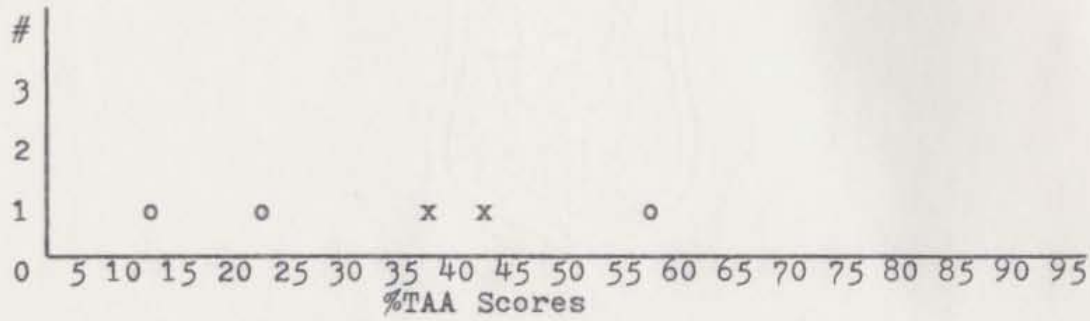


KEY: x = males(1);
o = females(2)

%TAA SCORES: LOCUS 2 - GROUP B



KEY: x = subadults(3); o = adults(5)



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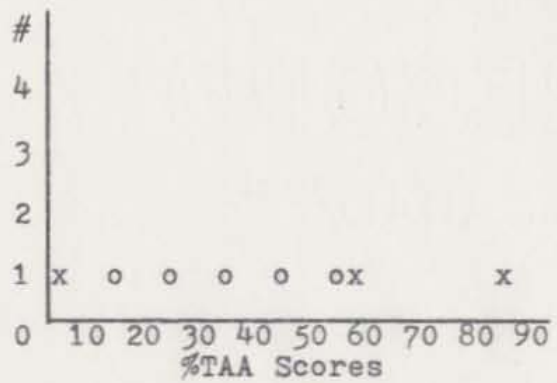

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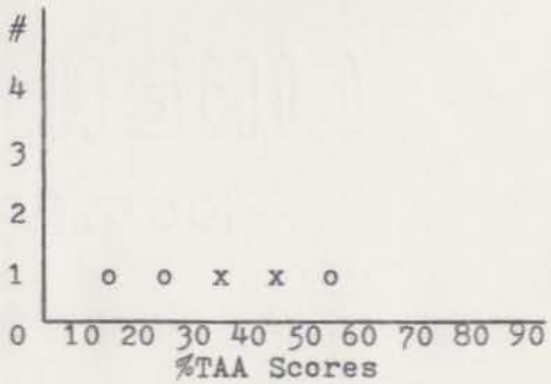
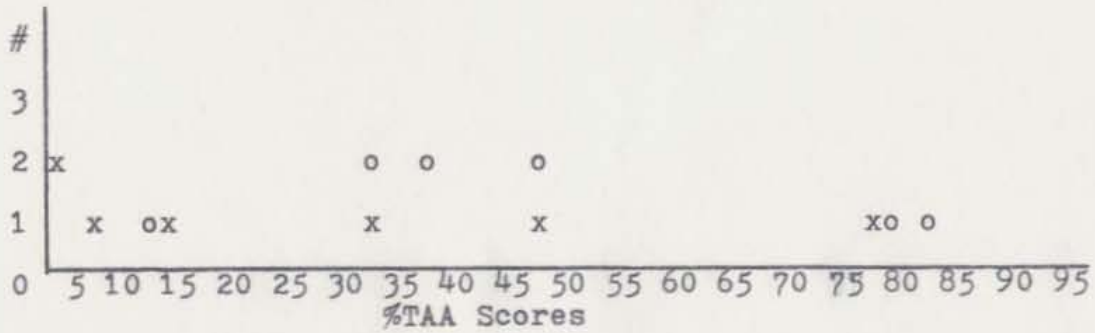
o = adults(5)

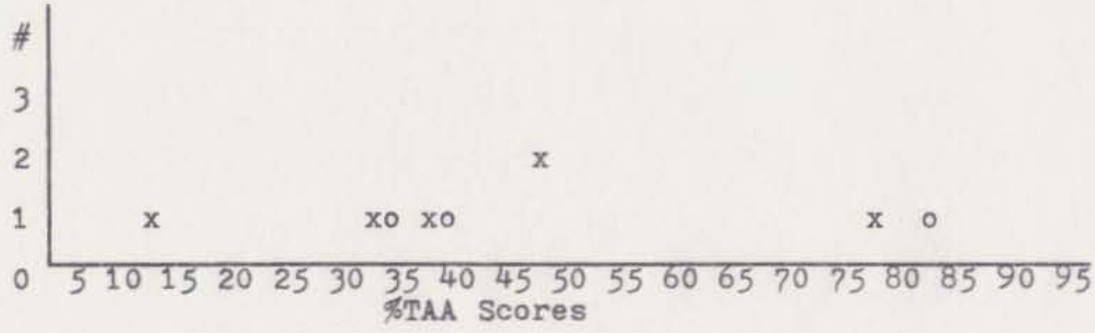


KEY: x = males(2);
o = females(3)

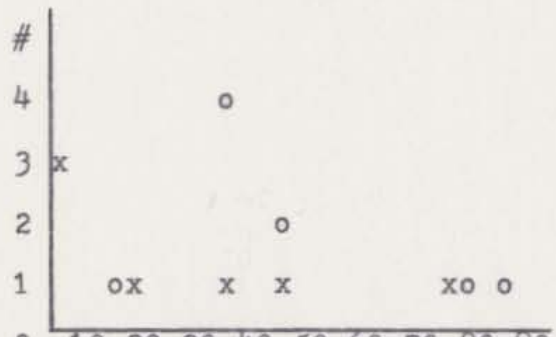
%TAA SCORES: LOCUS 2 - GROUP C



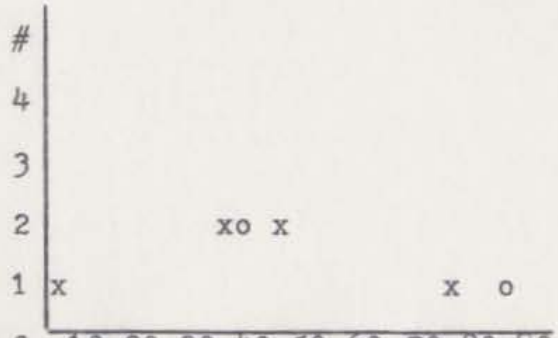
KEY: x = subadults(7); o = adults(9)



KEY: x = males(6); o = females(3)



KEY: x = subadults(7);
o = adults(9)



KEY: x = males(6);
o = females(3)

APPENDIX C

RESULTS OF KOLMOGOROV-SMIRNOV TESTS ON ARTIFACT DISTRIBUTIONS

The Kolmogorov-Smirnov one-sample test for goodness of fit involves the comparison of the expected cumulative frequency (F_o) with the observed cumulative frequency (S_i). The maximum difference (D) is then calculated, and, using the appropriate table of values (Siegel 1956), the probability of the differences being due to chance is determined.

The hypotheses to be tested are:

H_o: the variation is due to chance (i.e., randomness);

H_i: the variation is not due to chance (i.e., non-randomness or patterning).

The level of significance will be set at .05 meaning that, if the test reveals a probability of .05 or less, the null hypothesis (H_o) will be rejected. However, if the probability is greater than .05, there is no basis for rejecting H_o.

Test #1: Great Auk Bills.

	A	B	C
f	0	1	8
$F_o(X)$	15/65	38/65	65/65
$S_9(X)$	0/9	1/9	9/9
Difference	.231	.474	0

N = 9; D = .474; Probability less than .05

Test #2: Swordlike Pins or Pendants.

	A	B	C
f	0	1	4
$F_o(X)$	15/65	38/65	65/65
$S_5(X)$	0/5	1/5	5/5
Difference	.231	.385	0

N = 5; D = .385; Probability greater than .20

Test #3: Gull Bones.

	A	B	C
f	8	2	5
$F_o(X)$	15/65	38/65	65/65
$S_{15}(X)$	8/15	10/15	15/15
Difference	.303	.082	0

N = 15; D = .303; Probability greater than .10 and less than .15

Test #4: Swan Bones.

	A	B	C
f	1	4	6
$F_o(X)$	15/65	38/65	65/65
$S_{11}(X)$	1/11	5/11	11/11
Difference	.140	.130	0

N = 11; D = .140; Probability greater than .20

Test #5: Red Fox Bones.

	A	B	C
f	4	1	6
$F_o(X)$	15/65	38/65	65/65
$S_{11}(X)$	4/11	4/11	11/11
Difference	.133	.130	0

Test #6: Gannet Bones.

	A	B	C
f	1	3	0
$F_o(X)$	15/65	38/65	65/65
$S_4(X)$	1/4	4/4	4/4
Difference	.019	.415	0

N = 4; D = .415; Probability greater than .20

Test #7: Goose Bones.

	A	B	C
f	0	1	5
$F_o(X)$	15/65	38/65	65/65
$S_6(X)$	0/6	1/6	6/6
Difference	.231	.418	0

N = 6; D = .418; Probability greater than .15 and less than .20

Test #8: Loon Bones.

	A	B	C
f	0	3	4
$F_o(X)$	15/65	38/65	65/65
$S_7(X)$	0/7	3/7	7/7
Difference	.231	.156	0

N = 7; D = .231; Probability greater than .20

Test #9: Teal Bones.

	A	B	C
f	2	0	0
$F_o(X)$	15/65	38/65	65/65
$S_2(X)$	2/2	2/2	2/2
Difference	.769	.415	0

N = 2; D = .769; Probability greater than .10 and less than .15

Test #10: Otter Bones.

	A	B	C
f	2	0	0
$F_o(X)$	15/65	38/65	65/65
$S_2(X)$	2/2	2/2	2/2
Difference	.769	.415	0

Test #11: Merganser Bones.

	A	B	C
f	4	4	4
$F_o(X)$	15/65	38/65	65/65
$S_{12}(X)$	4/12	8/12	12/12
Difference	.103	.082	0

N = 12; D = .103; Probability greater than .20

Unique Distributions (N = 1):

Group A: tern and whimbrel or Eskimo curlew.

Group B: snowy owl, puffin, and shearwater.

Group C: guillemot, Hudsonian godwit, ptarmigan, and moose (also murre (N = 2)).

APPENDIX D

SUMMARY OF ARTIFACT VALUES

As previously described, the method of imparting values to the artifacts is dependent on four variables. They are the following:

A. Material
   i) common (value: 1)
   ii) uncommon (value: 5)

B. Manufacturing Time
   i) unworked (value: 0)
   ii) minutes (value: 1)
   iii) minutes/hours (value: 2)
   iv) hours (value: 3)
   v) days (value: 5)

C. Function
   i) technomic (value: 1)
   ii) sociotechnic (value: 2)

D. Unfinished Artifact (value: -1)

Unfinished artifacts will be marked by a (U) following the artifact description.

The total artifact value will be the summation of the values for variables (A) to (D), with the exception of Grouped Items (e.g., beads, pebbles). The value of Grouped Items will be followed by an asterisk (*), and will be calculated as follows:

$$\text{Total Value} = \text{Value of A,B,C,D} + \frac{\text{Number of artifacts forming the group}}{10}.$$

DESCRIPTION	MATERIAL	M.TIME	FUNCTION	VALUE
Locus 1: Burial 1A				
2 polar bear canines	uncommon	unworked	sociotechnic	7.2*
150 Thias l. beads	common	minutes	sociotechnic	19.0*
Locus 1: Burial 1B				
no artifacts				0.0
Locus 2: Burial 1A				
spatulate whalebone tool	common	minutes	technomic	3.0
whalebone blank(U)	common	minutes	technomic	2.0
antler square(U)	common	minutes	technomic	2.0
3 harp seal terminal phalanges	common	unworked	sociotechnic	3.3*
seal bone	common	unworked	sociotechnic	3.0
swan mandible	uncommon	unworked	sociotechnic	7.0
merganser mandible	common	unworked	sociotechnic	3.0
eider humerus and tarsometatarsus	common	unworked	sociotechnic	3.0
tern ulna and carpometacarpus	common	unworked	sociotechnic	3.0
bird bone fragments	common	unworked	sociotechnic	3.0
Locus 2: Burial 1B				
7 needle fragments	common	minutes	technomic	3.7*
paddle-handle pin	common	minutes	sociotechnic	4.0
human figurine, antler	common	minutes	sociotechnic	4.0
worked eagle radius	uncommon	minutes	sociotechnic	8.0
2 bird vertebrae	common	unworked	sociotechnic	3.0
6 lumps of iron pyrites	common	unworked	technomic	2.6*
3 quartz cobbles	common	unworked	sociotechnic	3.3*
Locus 2: Burial 1C				
15 Thias l. beads	common	unworked	sociotechnic	4.5*
Locus 2: Burial 1X (not attributable to any individual)				
slate bayonet frag.	common	mins/hrs	technomic	4.0
square-barbed bone point fragment	common	minutes	technomic	3.0
harp seal canine	common	unworked	sociotechnic	3.0
harp seal phalanx	common	unworked	sociotechnic	3.0
mammal bone	common	unworked	sociotechnic	3.0
birdlike pebble	common	unworked	sociotechnic	3.0
quartz chip	common	unworked	technomic	2.0

DESCRIPTION	MATERIAL	M.TIME	FUNCTION	VALUE
Locus 2: Burial 2X (not attributable to any individual)				
2 bone needles and fragments	common	minutes	technomic	6.0
pine marten mandible	common	unworked	sociotechnic	3.0
seal bone fragments	common	unworked	sociotechnic	3.0
gull skull and lower mandible	common	unworked	sociotechnic	3.0
100 quartz pebbles	common	unworked	sociotechnic	13.0*
calcite crystal	uncommon	unworked	sociotechnic	7.0
boot-shaped concretion	common	unworked	sociotechnic	3.0
teardrop concretion	common	unworked	sociotechnic	3.0
zoomorphic concretion	common	unworked	sociotechnic	3.0
slate chip	common	unworked	technomic	2.0
Locus 2: Burial 3				
whalebone foreshaft	common	mins/hrs	technomic	4.0
ivory dagger	uncommon	mins/hrs	technomic	8.0
antler sheath (?)	common	mins/hrs	technomic	4.0
caribou metapoidal dagger	common	minutes	technomic	3.0
square-barbed whale-bone leister pt.	common	mins/hrs	technomic	4.0
4 needles	common	minutes	technomic	12.0
16 needles(U)	common	minutes	technomic	32.0
split birdbone awl	common	minutes	technomic	3.0
fragmentary awl	common	minutes	technomic	3.0
3 awls or pins	common	minutes	technomic	9.0
axe	common	hours	technomic	5.0
adze	common	hours	technomic	5.0
stone chisel	common	minutes	technomic	3.0
2 ground beaver incisors	common	minutes	technomic	6.0
merganser effigy comb, antler	common	minutes	sociotechnic	4.0
c.70 Thias l. beads	common	minutes	sociotechnic	11.0*
15 skate teeth	common	unworked	sociotechnic	4.5*
seal bone fragments	common	unworked	sociotechnic	3.0
caribou dew claw	common	unworked	sociotechnic	3.0
red-breasted merganser bill	common	unworked	sociotechnic	3.0
gull skeleton	common	unworked	sociotechnic	3.0
2 quartz pebbles	common	unworked	sociotechnic	3.2*
2 quartz crystals	uncommon	unworked	sociotechnic	7.2*
15 quartz fragments	common	unworked	sociotechnic	4.5*
dumbell-shaped concretion	common	unworked	sociotechnic	3.0
2 garnets	uncommon	unworked	sociotechnic	7.2*
limestone w/quartz	common	unworked	sociotechnic	3.0
agate (?) chip	common	unworked	technomic	2.0

DESCRIPTION	MATERIAL	M.TIME	FUNCTION	VALUE
Locus 2: Burial 4				
chert knife	common	minutes	technomic	3.0
slate weaving tool	common	mins/hrs	technomic	4.0
mammal bone frags.	common	unworked	sociotechnic	3.0
Locus 2: Burial 5				
2 toggling harpoons	common	mins/hrs	technomic	8.0
3 barbed harpoons	common	mins/hrs	technomic	12.0
whalebone lance	common	minutes	technomic	3.0
bone point tip	common	minutes	technomic	3.0
square-barbed bone point	common	minutes	technomic	3.0
caribou scapula scraper	common	minutes	technomic	3.0
birdbone needle	common	minutes	technomic	3.0
splinter awl	common	minutes	technomic	3.0
5 modified beaver incisors	common	minutes	technomic	15.0
mammal longbone blank(U)	common	minutes	technomic	2.0
dog (?) canine	common	unworked	sociotechnic	3.0
pine marten mandible	common	unworked	sociotechnic	3.0
dog (?) incisor	common	unworked	sociotechnic	3.0
3 seal claw cores	common	unworked	sociotechnic	3.3*
gull coracoid and furculum	common	unworked	sociotechnic	3.0
eider mandible	common	unworked	sociotechnic	3.0
codfish ossicle	common	unworked	sociotechnic	3.0
soft clam shell with red ochre	common	unworked	sociotechnic	3.0
Locus 2: Burial 6				
2 single-barbed harpoons	common	mins/hrs	technomic	8.0
saw tooth point	common	minutes	technomic	3.0
square-barbed antler leister point	common	mins/hrs	technomic	4.0
caribou scapula scraper	common	minutes	technomic	3.0
bone needle	common	minutes	technomic	3.0
bone awl	common	minutes	technomic	3.0
12 skate teeth	common	unworked	sociotechnic	4.2*
pine marten mandible	common	unworked	sociotechnic	3.0
6 gull mandibles	common	unworked	sociotechnic	3.6*
bird bone fragments	common	unworked	sociotechnic	3.0
Locus 2: Burial 6-7 (not attributable to any burial)				
miniature ground slate point	common	mins/hrs	technomic	4.0

DESCRIPTION	MATERIAL	M.TIME	FUNCTION	VALUE
ground slate frag.	common	minutes	technomic	3.0
single-barbed antler harpoon	common	mins/hrs	technomic	4.0
red fox right maxilla	common	unworked	sociotechnic	3.0
3 beaver incisors	common	unworked	sociotechnic	3.3*
seal bones	common	unworked	sociotechnic	3.0
2 codfish ossicles	common	unworked	sociotechnic	3.2*
eider ulna	common	unworked	sociotechnic	3.0
bird bone, uniden.	common	unworked	sociotechnic	3.0
waterworn pebble	common	unworked	sociotechnic	3.0
quartz crystal	uncommon	unworked	sociotechnic	7.0
Locus 2: Burial 7				
2 bone needles	common	minutes	technomic	6.0
4 needle blanks(U)	common	minutes	technomic	8.0
slate weaving tool	common	minutes	technomic	3.0
slate scraper (?) fragment	common	minutes	technomic	3.0
2 modified beaver incisors	common	minutes	technomic	6.0
retouched flake	common	minutes	technomic	3.0
red slate pendant	uncommon	minutes	sociotechnic	8.0
212 shell beads	common	minutes	sociotechnic	25.2*
53 skate tooth beads	common	unworked	sociotechnic	8.3*
4 perforated otter canines	common	minutes	sociotechnic	4.4*
harp seal claw core	common	unworked	sociotechnic	3.0
2 seal humeri	common	unworked	sociotechnic	3.2*
bear (?) canine	common	unworked	sociotechnic	3.0
red fox left maxilla	common	unworked	sociotechnic	3.0
2 beaver incisors	common	unworked	sociotechnic	3.2*
antler scrap	common	unworked	technomic	2.0
12 calcined bone chips	common	unworked	technomic	3.2*
2 soft clam shells with red ochre	common	unworked	sociotechnic	6.0
fish rib	common	unworked	sociotechnic	3.0
whimbrel or Eskimo curlew wing els.	common	unworked	sociotechnic	3.0
2 gull bills	common	unworked	sociotechnic	3.2*
gull wing elements	common	unworked	sociotechnic	3.0
13 calcite crystals	uncommon	unworked	sociotechnic	8.3*
calcite crystals in stone matrix	uncommon	unworked	sociotechnic	7.0
170 quartz pebbles	common	unworked	sociotechnic	20.0*
12 quartz crystals	uncommon	unworked	sociotechnic	8.2*
2 cobbles	common	unworked	sociotechnic	3.2*
8 birdlike stones or concretions	common	unworked	sociotechnic	24.0

DESCRIPTION	MATERIAL	M.TIME	FUNCTION	VALUE
Locus 2: Burial 8				
no artifacts				0.0
Locus 2: Burial 9				
bear effigy pendant	common	minutes	sociotechnic	4.0
merganser effigy pendant	common	minutes	sociotechnic	4.0
duck effigy pendant	common	minutes	sociotechnic	4.0
2 loon or gannet effigy pendants	common	minutes	sociotechnic	8.0
bird effigy pendant	common	minutes	sociotechnic	4.0
30 shell beads	common	minutes	sociotechnic	7.0*
mammal epiphyseal cap	common	unworked	sociotechnic	3.0
calcined mammal bone	common	unworked	sociotechnic	3.0
32 shark teeth	uncommon	unworked	sociotechnic	10.2*
gull bill	common	unworked	sociotechnic	3.0
gannet wing elements (2 wings)	common	unworked	sociotechnic	3.2*
bird vertebra	common	unworked	sociotechnic	3.0
6 quartz crystals	uncommon	unworked	sociotechnic	7.6*
stone resembling claw or tooth	common	minutes	sociotechnic	4.0
Locus 2: Burial 10				
square-barbed bone point tang	common	minutes	technomic	3.0
plemmetlike concretion	common	unworked	sociotechnic	3.0
217 shell beads	common	minutes	sociotechnic	25.7*
mammal bone fragment	common	unworked	sociotechnic	3.0
gull mandible	common	unworked	sociotechnic	3.0
8 quartz crystals	uncommon	unworked	sociotechnic	7.8*
Locus 2: Burial 11				
steatite amulet or plummet	common	mins/hrs	sociotechnic	5.0
2 shell pendants	common	minutes	sociotechnic	8.0
35 shell beads	common	minutes	sociotechnic	7.5*
3 perforated otter canines	common	minutes	sociotechnic	4.3*
red fox incisor	common	minutes	sociotechnic	4.0
teal (?) foot elements	common	unworked	sociotechnic	3.0
Locus 2: Burial 12				
slate bayonet frag.	common	hours	technomic	5.0
2 square-barbed whalebone points	common	mins/hrs	technomic	8.0
9 shell beads	common	minutes	sociotechnic	4.9*

DESCRIPTION	MATERIAL	M.TIME	FUNCTION	VALUE
5 skate tooth beads	common	unworked	sociotechnic	3.5*
12 mammal bone frags.	common	unworked	sociotechnic	4.2*
merganser skull	common	unworked	sociotechnic	3.0
Locus 2: Burial 13				
slate point or knife fragment	common	mins/hrs	technomic	4.0
slate bayonet fragment	common	hours	technomic	5.0
square-barbed whale-bone point	common	mins/hrs	technomic	4.0
axe or adze fragments	common	hours	technomic	5.0
2 modified beaver incisors	common	minutes	technomic	6.0
beaver incisor	common	unworked	sociotechnic	3.0
115 skate tooth beads	common	unworked	sociotechnic	14.5*
5 shell beads	common	minutes	sociotechnic	4.5*
seal claw core	common	unworked	sociotechnic	3.0
red fox mandible	common	unworked	sociotechnic	3.0
mammal bone blank(U)	common	minutes	technomic	2.0
merganser skull	common	unworked	sociotechnic	3.0
3 merganser mandibles	common	unworked	sociotechnic	3.3*
gull phalanx	common	unworked	sociotechnic	3.0
Locus 2: Burial 14				
toggling harpoon	common	mins/hrs	technomic	4.0
foreshaft	common	mins/hrs	technomic	4.0
11 shell beads	common	minutes	sociotechnic	5.1*
5 harp seal claw cores	common	unworked	sociotechnic	3.5*
polished bear canine	common	minutes	sociotechnic	4.0
green-winged teal carpometacarpus	common	unworked	sociotechnic	3.0
crescentic concretion	common	unworked	sociotechnic	3.0
5 birdlike concretions	common	unworked	sociotechnic	15.0
10,pebbles	common	unworked	sociotechnic	4.0*
3 iron pyrite frags.	common	unworked	technomic	2.3*
Locus 2: Burial 15				
2 miniature ground slate points	common	mins/hrs	technomic	8.0
toggling harpoon	common	mins/hrs	technomic	4.0
2 double-barbed harpoons	common	mins/hrs	technomic	8.0
foreshaft	common	mins/hrs	technomic	4.0
3 square-barbed antler points	common	mins/hrs	technomic	12.0
bone knife(?)(U)	common	minutes	technomic	2.0
ground stone axe	common	hours	technomic	5.0
modified beaver incisor	common	minutes	technomic	3.0
3 bone blanks(U)	common	minutes	technomic	6.0

DESCRIPTION	MATERIAL	M.TIME	FUNCTION	VALUE
antler blank(U)	common	minutes	technomic	2.0
codfish ossicle	common	unworked	sociotechnic	3.0
cormorant wing elements (2 birds)	common	unworked	sociotechnic	3.2*
puffin foot elements	common	unworked	sociotechnic	3.0
eider foot elements	common	unworked	sociotechnic	3.0
2 quartz pebbles	common	unworked	sociotechnic	3.2*
Locus 2: Burial 16A				
whalebone lance	common	minutes	technomic	3.0
square-barbed antler point	common	mins/hrs	technomic	4.0
birdbone needle	common	minutes	technomic	3.0
spearlike bone pin	common	minutes	sociotechnic	4.0
Locus 2: Burial 16B - assigned to Burial 19.				
Locus 2: Burial 16C				
shell pendant	common	minutes	sociotechnic	4.0
pendant blank(U)	common	minutes	sociotechnic	3.0
cormorant mandible	common	unworked	sociotechnic	3.0
Locus 2: Burial 16X (artifacts from grave fill - associated with Burial 16D?)				
bone dagger or spear fragment(U)	common	minutes	technomic	2.0
2 bone blanks(U)	common	minutes	technomic	4.0
burned seal bone	common	unworked	sociotechnic	3.0
whalebone fragments	common	unworked	sociotechnic	3.0
gannet ulna	common	unworked	sociotechnic	3.0
cormorant mandible	common	unworked	sociotechnic	3.0
bird vertebra	common	unworked	sociotechnic	3.0
cluster of quartz crystal	uncommon	unworked	sociotechnic	7.0
3 mica flakes	common	unworked	sociotechnic	3.3*
Locus 2: Burial 17				
caribou metapoidal dagger	common	minutes	technomic	3.0
codfish otolith	common	unworked	sociotechnic	3.0
wolf (?) incisor	common	unworked	sociotechnic	3.0
miniature ground slate point	common	mins/hrs	technomic	4.0
waterworn pebble	common	unworked	sociotechnic	3.0
Locus 2: Burial 18A				
2 modified beaver incisors	common	minutes	technomic	6.0

DESCRIPTION	MATERIAL	M.TIME	FUNCTION	VALUE
whalebone fragments	common	unworked	sociotechnic	3.0
bird vertebra	common	unworked	sociotechnic	3.0
quartz chip	common	unworked	technomic	2.0
Locus 2: Burial 18B				
adze	common	hours	technomic	5.0
shallow gouge	common	hours	technomic	5.0
2 modified beaver incisors	common	minutes	technomic	6.0
beaver incisor	common	unworked	sociotechnic	3.0
115 skate tooth beads	common	unworked	sociotechnic	14.5*
5 shell pendants	common	minutes	sociotechnic	20.0
bird wing elements	common	unworked	sociotechnic	3.0
goose ulna whistle or pendant	common	minutes	sociotechnic	4.0
bird bone scrap	common	unworked	sociotechnic	3.0
2 quartz cobbles	common	unworked	sociotechnic	3.2*
51 quartz pebbles	common	unworked	sociotechnic	8.1*
Locus 2: Burial 18C				
no artifacts				0.0
Locus 2: Burial 18D				
no artifacts				0.0
Locus 2: Burial 19				
2 perforated caribou phalanges	common	minutes	sociotechnic	4.2*
2 merganser effigy pendants	common	minutes	sociotechnic	8.0
12 shell beads	common	minutes	sociotechnic	5.2*
4 harp seal claw cores	common	unworked	sociotechnic	3.4*
swan radius whistle	uncommon	minutes	sociotechnic	8.0
gannet pollex and carpometacarpus	common	unworked	sociotechnic	3.0
loon bill	common	unworked	sociotechnic	3.0
duck (?) vertebra	common	unworked	sociotechnic	3.0
quartz crystal	uncommon	unworked	sociotechnic	7.0
8 mica flakes	common	unworked	sociotechnic	3.8*
2 concretions	common	unworked	sociotechnic	6.0
stone chip	common	unworked	technomic	2.0
Locus 2: Burial 20				
c.240 shell beads	common	minutes	sociotechnic	28.0*
Locus 2: Burial 21				
miniature saw tooth bone point	common	minutes	technomic	3.0

DESCRIPTION	MATERIAL	M.TIME	FUNCTION	VALUE
saw tooth bone point	common	minutes	technomic	3.0
whalebone lance or spear	common	minutes	technomic	3.0
2 seal phalanges	common	unworked	sociotechnic	3.2*
dog (?) femur fragment	common	unworked	sociotechnic	3.0
killer whale tooth	common	unworked	sociotechnic	3.0
2 mammal phalanges	common	unworked	sociotechnic	3.2*
gull mandible	common	unworked	sociotechnic	3.0
3 slate chips	common	unworked	technomic	3.3*
75 quartz pebbles	common	unworked	sociotechnic	10.5*
hematite fragments	common	unworked	sociotechnic	3.0
reel-shaped concretion	common	unworked	sociotechnic	3.0
birchbark shreds	common	minutes	technomic	3.0
Locus 2: Burial 22A				
serrated bayonet fragment	common	hours	technomic	5.0
antler tine	common	unworked	sociotechnic	3.0
3 modified beaver incisors	common	minutes	technomic	9.0
eagle ulna whistle	uncommon	minutes	sociotechnic	8.0
swan ulna whistle	uncommon	minutes	sociotechnic	8.0
2 gannet humerus tubes	common	minutes	sociotechnic	8.0
seal motoid	common	unworked	sociotechnic	3.0
24 shell beads	common	minutes	sociotechnic	6.4*
codfish otolith	common	unworked	sociotechnic	3.0
waterworn stone, birdlike	common	unworked	sociotechnic	3.0
Locus 2: Burial 22B				
no artifacts				0.0
Locus 2: Burial 22C				
gouge or adze	common	hours	technomic	5.0
65 shell beads	common	minutes	sociotechnic	10.5*
Locus 2: Burial 22D				
bird effigy pendant	common	minutes	sociotechnic	4.0
2 quartz crystals	uncommon	unworked	sociotechnic	7.2*
Locus 2: Burial 22X (not attributable to any individual)				
barbed bone point	common	minutes	technomic	3.0
2 bone pins	common	minutes	sociotechnic	8.0
bird effigy pendant	common	minutes	sociotechnic	4.0
2 carnivore teeth	common	unworked	sociotechnic	3.2*
red-throated loon wing elements	uncommon	unworked	sociotechnic	7.0
2 red-breasted merganser bills	common	unworked	sociotechnic	3.2*

DESCRIPTION	MATERIAL	M.TIME	FUNCTION	VALUE
Locus 2: Burial 23				
ground stone chip	common	unworked	technomic	2.0
bear femur fragment	common	unworked	sociotechnic	3.0
seal bone fragments	common	unworked	sociotechnic	3.0
Locus 2: Burial 24				
2 caribou radius daggers	common	minutes	technomic	6.0
Locus 2: Burial 25				
naturally perforated pebble	common	unworked	sociotechnic	3.0
ground stone rod	common	hours	sociotechnic	6.0
4 quartz crystals	uncommon	unworked	sociotechnic	7.4*
slate bayonet	common	hours	technomic	5.0
caribou ulna awl	common	minutes	technomic	3.0
2 modified beaver incisors	common	minutes	technomic	6.0
2 beaver incisors	common	unworked	sociotechnic	3.2*
chert biface or preform(U)	common	minutes	technomic	2.0
9 dog or wolf claw cores	common	unworked	sociotechnic	3.9*
2 beaver forepaws	common	unworked	sociotechnic	3.2*
polar bear incisor	uncommon	unworked	sociotechnic	7.0
beaver claw core	common	unworked	sociotechnic	3.0
mammal claw core	common	unworked	sociotechnic	3.0
mammal bone fragments	common	unworked	sociotechnic	3.0
seal bone fragments	common	unworked	sociotechnic	3.0
2 soft clam shells	common	unworked	sociotechnic	3.2*
4 loon bills	common	unworked	sociotechnic	3.4*
merganser bill	common	unworked	sociotechnic	3.0
whistling swan phalanx and mandible	uncommon	unworked	sociotechnic	7.0
bird bill	common	unworked	sociotechnic	3.0
bird skull, crushed	common	unworked	sociotechnic	3.0
chisel-like ground stone fragment	common	unworked	sociotechnic	3.0
105 quartz pebbles	common	unworked	sociotechnic	13.5*
2 banded and mottled pebbles	common	unworked	sociotechnic	3.2*
pebble resembling tooth or claw	common	unworked	sociotechnic	3.0
3 birdlike concretions	common	unworked	sociotechnic	9.0
Locus 2: Burial 26				
5 slate points	common	hours	technomic	25.0
3 bone points	common	minutes	technomic	9.0
3 slate bayonets	common	hours	technomic	15.0

DESCRIPTION	MATERIAL	M.TIME	FUNCTION	VALUE
triple-barbed harpoon	common	mins/hrs	technomic	4.0
foreshaft	common	mins/hrs	technomic	4.0
4 bone spears or daggers	common	minutes	technomic	12.0
slate knife (?)	common	mins/hrs	technomic	4.0
4 modified beaver incisors	common	minutes	technomic	12.0
5 beaver incisors	common	unworked	sociotechnic	3.5*
antler handle	common	minutes	technomic	3.0
sandstone slab whetstone	common	unworked	technomic	2.0
2 merganser effigy pins	common	minutes	sociotechnic	8.0
merganser bill	common	unworked	sociotechnic	3.0
Locus 2: Burial 27A				
double-barbed harpoon	common	mins/hrs	technomic	4.0
barbed harpoon frag.	common	mins/hrs	technomic	4.0
non-functional harpoon, pendant (?)	common	minutes	sociotechnic	4.0
2 whalebone foreshafts	common	mins/hrs	technomic	8.0
64 quartz pebbles	common	unworked	sociotechnic	9.4*
antler weaving tool	common	minutes	technomic	3.0
6 worked beaver incisors	common	minutes	technomic	18.0
pendant	common	minutes	sociotechnic	4.0
red fox mandible	common	unworked	sociotechnic	3.0
4 beaver incisors	common	unworked	sociotechnic	3.4*
killer whale effigy	common	hours	sociotechnic	6.0
seal premolar	common	unworked	sociotechnic	3.0
34 seal claw cores	common	unworked	sociotechnic	6.4*
4 black bear canines	common	minutes	sociotechnic	4.4*
2 soft clam shells	common	unworked	sociotechnic	3.2*
ovate concretion	common	unworked	sociotechnic	3.0
2 waterworn pebbles	common	unworked	sociotechnic	3.2*
naturally perforated cobble	common	unworked	sociotechnic	3.0
calcite crystal cluster	uncommon	unworked	sociotechnic	7.0
iron pyrites	common	unworked	technomic	2.0
quartz striker	common	unworked	technomic	2.0
2 irregular concretions	common	unworked	sociotechnic	6.0
finlike concretion	common	unworked	sociotechnic	3.0
dumbell-shaped concretion	common	unworked	sociotechnic	3.0
2 quartz flakes	common	unworked	technomic	2.2*
Locus 2: Burial 27B				
dog tooth calcite crystal	uncommon	unworked	sociotechnic	7.0

DESCRIPTION	MATERIAL	M.TIME	FUNCTION	VALUE
Locus 2: Burial 28A				
caribou radius spear or dagger	common	minutes	technomic	3.0
birdbone needle	common	minutes	technomic	3.0
18 needle blanks(U)	common	minutes	technomic	36.0
whetstone (?) pebble	common	unworked	technomic	2.0
2 beaver incisors	common	unworked	sociotechnic	3.2*
mammal bone scrap	common	unworked	sociotechnic	3.0
2 birdlike concretions	common	unworked	sociotechnic	6.0
126 quartz pebbles	common	unworked	sociotechnic	15.6*
3 quartz crystals	uncommon	unworked	sociotechnic	7.3*
Locus 2: Burial 28B (trophy skull belonging to 28A ?)				
Locus 2: Burial 29				
square-barbed bone point fragment	common	mins/hrs	technomic	4.0
whalebone fragments	common	unworked	sociotechnic	3.0
seal premolar	common	unworked	sociotechnic	3.0
20 soft clam shell fragments	common	unworked	sociotechnic	5.0*
merganser bill	common	unworked	sociotechnic	3.0
limestone cobble	common	unworked	sociotechnic	3.0
Locus 2: Burial 30A				
no artifacts				0.0
Locus 2: Burial 30B				
no artifacts				0.0
Locus 2: Burial 30C				
slate bayonet	common	hours	technomic	5.0
2 whalebone foreshafts	common	mins/hrs	technomic	8.0
foreshaft or lance	common	mins/hrs	technomic	4.0
gouge	common	hours	technomic	5.0
whetstone pebble	common	unworked	technomic	2.0
2 cormorant effigy pins (?)	common	minutes	sociotechnic	8.0
5 beaver incisors	common	unworked	sociotechnic	3.5*
snowy owl ulna	uncommon	unworked	sociotechnic	7.0
harlequin duck wing elements	uncommon	unworked	sociotechnic	7.0
2 iron pyrites	common	unworked	technomic	2.2*
56 quartz pebbles	common	unworked	sociotechnic	8.6*
red shale fragments	common	minutes	technomic	3.0
birdlike concretion	common	unworked	sociotechnic	3.0
finlike stone	common	unworked	sociotechnic	3.0
2 tabular cobbles	common	unworked	sociotechnic	3.2*

DESCRIPTION	MATERIAL	M.TIME	FUNCTION	VALUE
Locus 2: Burial 31				
red slate bayonet	uncommon	hours	technomic	9.0
4 antler blanks(U)	common	minutes	technomic	8.0
mammal rib fragment	common	unworked	sociotechnic	3.0
bird bill fragment	common	unworked	sociotechnic	3.0
antler problematic object(U)	common	minutes	technomic	2.0
Locus 2: Burial 32				
2 slate point frags.	common	mins/hrs	technomic	8.0
double-barbed harpoon	common	mins/hrs	technomic	4.0
whalebone lance	common	mins/hrs	technomic	4.0
barbed whalebone point	common	mins/hrs	technomic	4.0
square-barbed bone pt.	common	minutes	technomic	3.0
caribou metapoidal dagger	common	minutes	technomic	3.0
caribou metapoidal awl	common	minutes	technomic	3.0
3 modified beaver incisors	common	minutes	technomic	9.0
5 beaver incisors	common	unworked	sociotechnic	3.5*
2 mammal longbone blanks(U)	common	minutes	technomic	4.0
mammal longbone scraper	common	minutes	technomic	3.0
327 shell beads	common	minutes	sociotechnic	36.7*
pendant or pin	common	minutes	sociotechnic	4.0
2 perforated polar bear incisors	uncommon	minutes	sociotechnic	8.2*
seal canine	common	unworked	sociotechnic	3.0
soft clam shell	common	unworked	sociotechnic	3.0
3 scallop shells	common	unworked	sociotechnic	3.3*
2 gull wings	common	unworked	sociotechnic	3.2*
passerine bird carpometacarpus	common	unworked	sociotechnic	3.0
19 quartz pebbles	common	unworked	sociotechnic	4.9*
green/white pebble	common	unworked	sociotechnic	3.0
quartz crystal	uncommon	unworked	sociotechnic	7.0
Locus 2: Burial 33				
3 slate bayonets	common	hours	technomic	15.0
4 bone bayonets	common	minutes	technomic	12.0
toggling harpoon	common	mins/hrs	technomic	4.0
3 barbed harpoons	common	mins/hrs	technomic	12.0
3 foreshafts	common	mins/hrs	technomic	12.0
caribou metapoidal dagger	common	minutes	technomic	3.0
antler dagger	common	minutes	technomic	3.0
slate pick or large bayonet	common	hours	technomic	5.0

DESCRIPTION	MATERIAL	M.TIME	FUNCTION	VALUE
double-barbed antler point(U)	common	minutes	technomic	2.0
scapula knife	common	minutes	technomic	3.0
caribou longbone beamer	common	mins/hrs	technomic	4.0
birdbone needle	common	minutes	technomic	3.0
bone needle case	common	minutes	technomic	3.0
stone axe	common	hours	technomic	5.0
axe or adze	common	hours	technomic	5.0
axe or adze(U)	common	hours	technomic	4.0
2 walrus ivory adzes	uncommon	hours	technomic	18.0
3 stone gouges	common	hours	technomic	15.0
ground beaver incisor	common	minutes	technomic	3.0
bone blank(U)	common	minutes	technomic	2.0
3 bird effigy pins	common	minutes	sociotechnic	12.0
3 other pins	common	minutes	sociotechnic	12.0
swordlike pin	common	minutes	sociotechnic	4.0
swan ulna whistle	uncommon	minutes	sociotechnic	8.0
2 swan radius tubes	uncommon	minutes	sociotechnic	16.0
gull ulna tube	common	minutes	sociotechnic	4.0
4 seal claw cores	common	unworked	sociotechnic	3.4*
4 beaver incisors	common	unworked	sociotechnic	3.4*
16 caribou incisors	common	unworked	sociotechnic	4.6*
2 cormorant bills	common	unworked	sociotechnic	3.2*
2 great auk bills	common	unworked	sociotechnic	3.2*
shearwater wing elements	common	unworked	sociotechnic	3.0
199 quartz pebbles	common	unworked	sociotechnic	22.9*
birdlike concretion	common	unworked	sociotechnic	3.0
5 chert flakes	common	unworked	technomic	2.5*
Locus 2: Burial 34				
3 slate spears	common	hours	technomic	15.0
2 barbed harpoons	common	mins/hrs	technomic	8.0
caribou radius dagger	common	minutes	technomic	3.0
square-barbed antler point	common	minutes	technomic	3.0
3 modified beaver incisors	common	minutes	technomic	9.0
15 shell beads	common	minutes	sociotechnic	5.5*
antler comb	common	mins/hrs	sociotechnic	5.0
cut and ground wolf maxilla	common	minutes	sociotechnic	4.0
4 seal claw cores	common	unworked	sociotechnic	3.4*
beaver incisor	common	unworked	sociotechnic	3.0
American pelicans foot shell	common	unworked	sociotechnic	3.0
Canada goose ulna whistle	common	minutes	sociotechnic	4.0
gull bill	common	unworked	sociotechnic	3.0

DESCRIPTION	MATERIAL	M.TIME	FUNCTION	VALUE
red-breasted merganser bill	common	unworked	sociotechnic	3.0
'wormy' limestone fragment	common	unworked	sociotechnic	3.0
91 quartz pebbles	common	unworked	sociotechnic	12.1*
2 iron pyrite frags.	common	unworked	technomic	2.2*
Locus 2: Burial 35A				
banded slate bayonet	common	hours	technomic	5.0
3 red slate bayonets	uncommon	hours	technomic	27.0
barbed harpoon	common	mins/hrs	technomic	4.0
side-notched point	common	minutes	technomic	3.0
scapula knife	common	minutes	technomic	3.0
3 bone needles	common	minutes	technomic	9.0
awl(U)	common	minutes	technomic	2.0
2 modified beaver incisors	common	minutes	technomic	6.0
sandstone abrader	common	minutes	technomic	3.0
gouge(U)	common	hours	technomic	4.0
great auk effigy pin	common	minutes	sociotechnic	4.0
221 shell beads	common	minutes	sociotechnic	26.1*
shell pendant	common	minutes	sociotechnic	4.0
117 skate tooth beads	common	unworked	sociotechnic	14.7*
native copper pendant	uncommon	minutes	sociotechnic	8.0
2 seal claw cores	common	unworked	sociotechnic	3.2*
red fox maxilla	common	unworked	sociotechnic	3.0
46 beaver incisors	common	unworked	sociotechnic	7.6*
beaver maxilla and mandible	common	unworked	sociotechnic	3.0
stone whale effigy	common	mins/hrs	sociotechnic	4.0
goose wing elements	common	unworked	sociotechnic	3.0
merganser wing element	common	unworked	sociotechnic	3.0
murre wing elements	common	unworked	sociotechnic	3.0
guillemot wing elements	common	unworked	sociotechnic	3.0
200 great auk bills	common	unworked	sociotechnic	23.0*
3 quartz cobbles	common	unworked	sociotechnic	3.3*
quartz crystal	uncommon	unworked	sociotechnic	7.0
3 calcite crystals	uncommon	unworked	sociotechnic	7.3*
cobble with quartz vein	common	unworked	sociotechnic	3.0
Locus 2: Burial 35B				
3 seal claw cores	common	unworked	sociotechnic	3.3*
great auk mandible	common	unworked	sociotechnic	3.0
2 beaver incisors	common	unworked	sociotechnic	3.2*
7 skate tooth beads	common	unworked	sociotechnic	3.7*
c.240 shell beads	common	minutes	sociotechnic	28.0*
Locus 2: Burial 36X (not attributable to any individual)				
4 slate spears	common	hours	technomic	20.0

DESCRIPTION	MATERIAL	M.TIME	FUNCTION	VALUE
2 toggling harpoons	common	mins/hrs	technomic	8.0
2 barbed harpoons	common	mins/hrs	technomic	8.0
3 saw tooth bone points	common	minutes	technomic	9.0
bone lance	common	minutes	technomic	3.0
2 foreshafts	common	mins/hrs	technomic	8.0
caribou radius spear or dagger	common	minutes	technomic	3.0
3 square-barbed points	common	minutes	technomic	9.0
modified beaver incisor	common	minutes	technomic	3.0
4 red fox maxillae and mandibles	common	unworked	sociotechnic	3.4*
11 beaver incisors	common	unworked	sociotechnic	4.1*
quartz crystal	uncommon	unworked	sociotechnic	7.0
Locus 2: Burial 37X (not attributable to any individual)				
slate point	common	mins/hrs	technomic	4.0
2 miniature slate points	common	minutes	technomic	6.0
barbed harpoon	common	mins/hrs	technomic	4.0
2 saw tooth bone point	common	minutes	technomic	6.0
saw tooth bone pt.(U)	common	minutes	technomic	2.0
caribou radius spear or dagger	common	minutes	technomic	3.0
square-barbed bone point	common	minutes	technomic	3.0
scapula knife	common	minutes	technomic	3.0
caribou ulna awl	common	minutes	technomic	3.0
antler blank(U)	common	minutes	technomic	2.0
3 bone blanks(U)	common	minutes	technomic	6.0
smoothed antler tine	common	minutes	technomic	3.0
swan effigy comb	common	minutes	sociotechnic	4.0
5 seal claw cores	common	unworked	sociotechnic	3.5*
red fox mandible	common	unworked	sociotechnic	3.0
martin mandible and maxilla	common	unworked	sociotechnic	3.0
bear canine	common	unworked	sociotechnic	3.0
3 beaver incisors	common	unworked	sociotechnic	3.3*
dog canine	common	unworked	sociotechnic	3.0
gull wing elements	common	unworked	sociotechnic	3.0
whalebone rod	common	minutes	technomic	3.0
quartzite striker or battered knife	common	minutes	technomic	3.0
steatite amulet	common	minutes	sociotechnic	4.0
Locus 2: Burial 38X (not attributable to any individual)				
2 toggling harpoons	common	mins/hrs	technomic	8.0
barbed harpoon	common	mins/hrs	technomic	4.0
square-barbed bone point	common	minutes	technomic	3.0

DESCRIPTION	MATERIAL	M.TIME	FUNCTION	VALUE
caribou tibia dagger	common	minutes	technomic	3.0
goose radius tube	common	minutes	sociotechnic	4.0
bird bone tube	common	minutes	sociotechnic	4.0
goose ulna fragments	common	unworked	sociotechnic	3.0
merganser effigy pin or pendant	common	minutes	sociotechnic	4.0
merganser bill	common	unworked	sociotechnic	3.0
plummetlike object	common	minutes	sociotechnic	4.0
problematic antler object	common	minutes	technomic	3.0
Locus 2: Burial 39				
slate bayonet	common	hours	technomic	5.0
stone axe	common	hours	technomic	5.0
43 shell beads	common	minutes	sociotechnic	8.3*
pine marten mandible	common	unworked	sociotechnic	3.0
Locus 2: Burial 40X (not attributable to any individual)				
3 barbed harpoons	common	mins/hrs	technomic	12.0
2 toggling harpoons	common	mins/hrs	technomic	8.0
quartz pebble	common	unworked	sociotechnic	3.0
harpoon midsection	common	mins/hrs	technomic	4.0
foreshaft	common	mins/hrs	technomic	4.0
caribou ulna awl	common	minutes	technomic	3.0
bark peeler	common	minutes	technomic	3.0
celt fragment	common	hours	technomic	5.0
caribou ulna blank(U)	common	minutes	technomic	2.0
antler blank(U)	common	minutes	technomic	2.0
3 beaver incisors	common	unworked	sociotechnic	3.3*
modified beaver incisor	common	minutes	technomic	3.0
15 caribou incisors	common	unworked	sociotechnic	4.5*
polished/perforated human clavicle	common	minutes	sociotechnic	4.0
red fox maxilla and mandible	common	unworked	sociotechnic	3.0
seal claw core	common	unworked	sociotechnic	3.0
loon skull	common	unworked	sociotechnic	3.0
eider carpometacarpus	common	unworked	sociotechnic	3.0
Hudsonian godwit ulna and radius	uncommon	unworked	sociotechnic	7.0
ptarmigan carpometacarpus	common	unworked	sociotechnic	3.0
goose mandible	common	unworked	sociotechnic	3.0
2 bird skull and bill fragments	common	unworked	sociotechnic	3.2*
limonite mass	common	unworked	technomic	2.0
elongate pebble	common	unworked	sociotechnic	3.0
2 granite pebbles	common	unworked	sociotechnic	3.2*
2 quartz crystals	uncommon	unworked	sociotechnic	7.2*

DESCRIPTION	MATERIAL	M.TIME	FUNCTION	VALUE
Locus 2: Burial 41				
2 barbed harpoons	common	mins/hrs	technomic	8.0
foreshaft	common	mins/hrs	technomic	4.0
needle blank(U)	common	minutes	technomic	2.0
stone adze	common	hours	technomic	5.0
human figurine(?), antler	common	minutes	sociotechnic	4.0
pine marten mandible	common	unworked	sociotechnic	3.0
red fox mandible	common	unworked	sociotechnic	3.0
7 beaver incisors	common	unworked	sociotechnic	3.7*
swan ulna whistle	uncommon	minutes	sociotechnic	8.0
Locus 2: Burial 42				
2 barbed harpoons	common	mins/hrs	technomic	8.0
foreshaft	common	mins/hrs	technomic	4.0
square-barbed bone point	common	mins/hrs	technomic	4.0
modified beaver incisor	common	minutes	technomic	3.0
bald eagle wing elements	uncommon	unworked	sociotechnic	7.0
4 trumpeter swan radius tubes	uncommon	minutes	sociotechnic	32.0
trumpeter swan radius whistle	uncommon	minutes	sociotechnic	8.0
2 trumpeter swan ulna tubes	uncommon	minutes	sociotechnic	16.0
trumpeter swan ulna whistle	uncommon	minutes	sociotechnic	8.0
30 shell beads	common	minutes	sociotechnic	7.0*
expanded head pin or pendant	common	minutes	sociotechnic	4.0
3 swordlike pins or pendants	common	minutes	sociotechnic	12.0
bird effigy pendant	common	minutes	sociotechnic	4.0
beaver incisor	common	unworked	sociotechnic	3.0
gull metacarpus	common	unworked	sociotechnic	3.0
large bog iron nodule	common	unworked	sociotechnic	3.0
3 mica flakes	common	unworked	sociotechnic	3.3*
birdlike concretion	common	unworked	sociotechnic	3.0
problematic antler object	common	minutes	sociotechnic	4.0
Locus 2: Burial 43				
whalebone lance	common	minutes	technomic	3.0
2 tapered barbed points	common	mins/hrs	technomic	8.0
beaver incisor	common	unworked	sociotechnic	3.0
15 caribou incisors	common	unworked	sociotechnic	4.5*
waterworn cobble	common	unworked	sociotechnic	3.0

DESCRIPTION	MATERIAL	M.TIME	FUNCTION	VALUE
8 quartz pebbles	common	unworked	sociotechnic	3.8*
quartz crystal	uncommon	unworked	sociotechnic	7.0
Locus 2: Burial 44A				
5 bone bayonets	common	mins/hrs	technomic	20.0
toggling harpoon	common	mins/hrs	technomic	4.0
barbed harpoon	common	mins/hrs	technomic	4.0
foreshaft	common	mins/hrs	technomic	4.0
moose canon bone dagger	uncommon	minutes	technomic	7.0
square-barbed bone point	common	mins/hrs	technomic	4.0
11 needle blanks(U)	common	minutes	technomic	22.0
stone adze	common	hours	technomic	5.0
walrus ivory adze	uncommon	hours	technomic	9.0
gouge or adze	common	hours	technomic	5.0
modified beaver incisor	common	minutes	technomic	3.0
2 antler chips	common	unworked	technomic	2.2*
2 bone blanks(U)	common	minutes	technomic	4.0
77 shell beads	common	minutes	sociotechnic	11.7*
3 swan ulna tubes	uncommon	minutes	sociotechnic	24.0
5 harp seal claw cores	common	unworked	sociotechnic	3.5*
4 beaver incisors	common	unworked	sociotechnic	3.4*
2 loon carpometacarpi	common	unworked	sociotechnic	3.2*
swan carpometacarpus	uncommon	unworked	sociotechnic	7.0
merganser cranium	common	unworked	sociotechnic	3.0
7 great auk upper mandibles	common	unworked	sociotechnic	3.7*
iron pyrites	common	unworked	technomic	2.0
284 quartz pebbles	common	unworked	sociotechnic	31.4*
3 quartz cobbles	common	unworked	sociotechnic	3.3*
3 birdlike concretions	common	unworked	sociotechnic	9.0
problematic antler object	common	minutes	sociotechnic	4.0
2 red slate cones	uncommon	hours	sociotechnic	20.0
crescentic limestone fragment	common	unworked	sociotechnic	3.0
fossil fragment	uncommon	unworked	sociotechnic	7.0
limestone fragment	common	unworked	sociotechnic	3.0
limestone pebble	common	unworked	sociotechnic	3.0
Locus 2: Burial 44B				
slate bayonet	common	hours	technomic	5.0
red slate bayonet	uncommon	hours	technomic	9.0
2 foreshafts	common	mins/hrs	technomic	8.0
2 square-barbed bone points	common	mins/hrs	technomic	8.0
2 antler blanks(U)	common	minutes	technomic	4.0
stone blank(U)	common	minutes	technomic	2.0
bird effigy pin or pendant	common	minutes	sociotechnic	4.0

DESCRIPTION	MATERIAL	M.TIME	FUNCTION	VALUE
5 swan ulna tubes	uncommon	minutes	sociotechnic	40.0
cormorant wing elems.	common	unworked	sociotechnic	3.0
20 great auk upper mandibles	common	unworked	sociotechnic	5.0*
3 common (?) murre bones	common	unworked	sociotechnic	3.3*
quartz cobble	common	unworked	sociotechnic	3.0
quartz crystal	uncommon	unworked	sociotechnic	7.0
4 chert flakes	common	unworked	technomic	2.4*
3 mica flakes	common	unworked	sociotechnic	3.3*
cut mica flake	common	minutes	sociotechnic	4.0
crinoid stem	uncommon	unworked	sociotechnic	7.0
Locus 2: Burial 45				
ground slate spear	common	hours	technomic	5.0
slate bayonet	common	hours	technomic	5.0
toggling harpoon	common	mins/hrs	technomic	4.0
8 needles	common	minutes	technomic	24.0
caribou metapoidal needle case	common	minutes	technomic	3.0
awl	common	minutes	technomic	3.0
2 stone adzes	common	hours	technomic	10.0
2 stone gouges	common	hours	technomic	10.0
adze or axe stem	common	hours	technomic	5.0
stone blank(U)	common	minutes	technomic	2.0
grooved plummet	common	minutes	sociotechnic	4.0
harp seal claw core	common	unworked	sociotechnic	3.0
beaver incisor	common	unworked	sociotechnic	3.0
5 great auk upper mandibles	common	unworked	sociotechnic	3.5*
10 caribou incisors	common	unworked	sociotechnic	4.0*
2 concretions	common	unworked	sociotechnic	6.0
Locus 2: Burial 46X (probably attributable to Burial 46A)				
2 bone needles	common	minutes	technomic	6.0
needle blank(U)	common	minutes	technomic	2.0
3 modified beaver incisors	common	minutes	technomic	9.0
bird effigy pendant	common	minutes	sociotechnic	4.0
swordlike pendant	common	minutes	sociotechnic	4.0
shell bead	common	minutes	sociotechnic	4.0
eagle (?) ulna tube	uncommon	minutes	sociotechnic	8.0
6 seal claw cores	common	unworked	sociotechnic	3.6*
2 beaver incisors	common	unworked	sociotechnic	3.2*
5 caribou incisors	common	unworked	sociotechnic	3.5*
gull wing elements	common	unworked	sociotechnic	3.0
great auk upper mandible	common	unworked	sociotechnic	3.0
2 quartz cobbles	common	unworked	sociotechnic	3.2*
4 mica flakes	common	unworked	sociotechnic	3.4*
ground stone chip	common	minutes	technomic	3.0

DESCRIPTION	MATERIAL	M.TIME	FUNCTION	VALUE
2 elongate pebbles	common	unworked	sociotechnic	3.2*
misc. dog bones	common	unworked	sociotechnic	3.0
Locus 2: Burial 47A				
2 saw tooth bone points	common	mins/hrs	technomic	8.0
3 modified beaver incisors	common	minutes	technomic	9.0
43 shell beads	common	minutes	sociotechnic	8.3*
human effigy pendant	common	minutes	sociotechnic	4.0
loon bill	common	unworked	sociotechnic	3.0
iron pyrites	common	unworked	technomic	2.0
3 quartz crystals	uncommon	unworked	sociotechnic	7.3*
chert flake	common	unworked	technomic	2.0
Locus 2: Burial 47B				
slate spear	common	hours	technomic	5.0
barbed harpoon	common	mins/hrs	technomic	4.0
3 saw tooth bone points	common	minutes	technomic	9.0
3 caribou metapoidal daggers	common	minutes	technomic	9.0
square-barbed leister point	common	mins/hrs	technomic	4.0
splinter awl	common	minutes	technomic	3.0
bone knife	common	minutes	technomic	3.0
3 antler blanks(U)	common	minutes	technomic	6.0
9 bone blanks(U)	common	minutes	technomic	18.0
2 stone blanks(U)	common	minutes	technomic	4.0
shell pendant	common	minutes	sociotechnic	4.0
seal claw core	common	unworked	sociotechnic	3.0
red fox maxilla and mandible	common	unworked	sociotechnic	3.0
wolf maxilla	common	unworked	sociotechnic	3.0
3 goose mandibles	common	unworked	sociotechnic	3.3*
Locus 2: Burial 48				
26 shell beads	common	minutes	sociotechnic	6.6*
problematic antler object	common	minutes	sociotechnic	4.0
Locus 2: Burial 49A				
saw tooth bone point	common	minutes	technomic	3.0
2 stone axes	common	hours	technomic	10.0
modified beaver incisor	common	minutes	technomic	3.0
great auk bill	common	unworked	sociotechnic	3.0
81 quartz pebbles	common	unworked	sociotechnic	11.1*
2 birdlike concretions	common	unworked	sociotechnic	6.0

DESCRIPTION	MATERIAL	M.TIME	FUNCTION	VALUE
2 soft clam shells	common	unworked	sociotechnic	3.2*
bog iron fragments	common	unworked	sociotechnic	3.0
quartz flake	common	unworked	technomic	2.0
dumbell-shaped concretion	common	unworked	sociotechnic	3.0
Locus 2: Burial 49B				
bone needle or awl	common	minutes	technomic	3.0
5 shell beads	common	minutes	sociotechnic	4.5*
5 shell pendants	common	minutes	sociotechnic	20.0
3 perforated caribou styliform bones	common	minutes	sociotechnic	4.3*
native copper fragment	uncommon	unworked	sociotechnic	7.0
3 beaver incisors	common	unworked	sociotechnic	3.3*
fox or otter femur	common	unworked	sociotechnic	3.0
76 quartz pebbles	common	unworked	sociotechnic	10.6*
2 quartz cobbles	common	unworked	sociotechnic	3.2*
birdlike concretion	common	unworked	sociotechnic	3.0
clam shell	common	unworked	sociotechnic	3.0
cord (?) fragment	common	minutes	technomic	3.0
Locus 2: Burial 50A				
2 slate bayonets	common	hours	technomic	10.0
red slate bayonet	uncommon	hours	technomic	9.0
foreshaft	common	mins/hrs	technomic	4.0
scapula scraper	common	minutes	technomic	3.0
beamer	common	minutes	technomic	3.0
stone adze	common	hours	technomic	5.0
stone gouge	common	hours	technomic	5.0
2 modified beaver incisors	common	minutes	technomic	6.0
stone axe or adze	common	hours	technomic	5.0
tabular whetstone	common	minutes	technomic	3.0
2 swordlike pendants	common	minutes	sociotechnic	8.0
spearlike pendant	common	minutes	sociotechnic	4.0
10 bone pendants	common	minutes	sociotechnic	40.0
2 shell beads	common	minutes	sociotechnic	4.2*
shell pendant	common	minutes	sociotechnic	4.0
ground plummet	common	minutes	sociotechnic	4.0
pendant(U)	common	minutes	sociotechnic	3.0
3 seal claw cores	common	unworked	sociotechnic	3.3*
2 beaver incisors	common	unworked	sociotechnic	3.2*
swan wing elements	uncommon	unworked	sociotechnic	7.0
200 quartz pebbles	common	unworked	sociotechnic	23.0*
stone rod	common	hours	sociotechnic	6.0
amethyst crystal	uncommon	unworked	sociotechnic	7.0
Locus 2: Burial 50B				
barbed harpoon	common	mins/hrs	technomic	4.0
foreshaft	common	mins/hrs	technomic	4.0

DESCRIPTION	MATERIAL	M.TIME	FUNCTION	VALUE
perforated whetstone	common	minutes	technomic	3.0
3 swordlike pendants	common	minutes	sociotechnic	12.0
2 expanded base pendants	common	minutes	sociotechnic	8.0
broken pendant	common	minutes	sociotechnic	4.0
swan ulna tube	uncommon	minutes	sociotechnic	8.0
swan radius tube	uncommon	minutes	sociotechnic	8.0
loon bill	common	unworked	sociotechnic	3.0
harlequin duck skull	uncommon	unworked	sociotechnic	7.0
300 quartz pebbles	common	unworked	sociotechnic	33.0*
birdlike concretion	common	unworked	sociotechnic	3.0
52 amethyst crystals	uncommon	unworked	sociotechnic	12.2*
Locus 2: Burial 50C				
207 shell beads	common	minutes	sociotechnic	24.7*
13 seal claw cores	common	unworked	sociotechnic	4.3*
Locus 2: Burial 51				
great auk bill	common	unworked	sociotechnic	3.0
quartz pebble	common	unworked	sociotechnic	3.0
Locus 2: Burial 52				
3 axes	common	hours	technomic	15.0
beaver molar	common	unworked	sociotechnic	3.0
Locus 2: Burial 53				
5 round cobbles	common	unworked	sociotechnic	3.5*
Locus 4: Burial 1				
25 caribou incisors	common	unworked	sociotechnic	5.5*
quartz pebble(s)	common	unworked	sociotechnic	3.0
problematic antler object	common	mins/hrs	technomic	4.0
bird bones	common	unworked	sociotechnic	3.0
2 worked fox canines	common	minutes	sociotechnic	4.2*
caribou scapula scraper	common	minutes	technomic	3.0
Locus 4: Burial 2				
barbed harpoon	common	mins/hrs	technomic	4.0
foreshaft (2 frags.)	common	mins/hrs	technomic	4.0
stone axe	common	hours	technomic	5.0
caribou antler gouge	common	mins/hrs	technomic	4.0
8 beaver incisors	common	unworked	sociotechnic	3.8*
bird longbones	common	unworked	sociotechnic	3.0
loon (?) bill	common	unworked	sociotechnic	3.0
2 antler tines(U)	common	minutes	technomic	4.0

DESCRIPTION	MATERIAL	M.TIME	FUNCTION	VALUE
cut section of antler(U)	common	minutes	technomic	2.0
4 mammal longbone blanks(U)	common	minutes	technomic	8.0
limestone cobble	common	unworked	sociotechnic	3.0
birchbark fragments	common	unworked	sociotechnic	3.0