

THE ALTA PETROGLYPHS, NORWAY

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The aim of this paper is to present some of the main trends seen in the petroglyphs in Alta, the fourth Norwegian entry on UNESCO's World Heritage List. The petroglyphs, or rock carvings, are located at 69 57' N and 23 10' E at the base of the Alta fjord in Finnmark, Arctic Norway. They are pecked into surfaces of red slate, grey hard sandstone and vulcanite. The surfaces are situated between 8 and 27 meters above the present mean tide level in a terrain sloping towards the sea.

Today, four major areas of petroglyphs, with 49 panels, are registered. The total number of petroglyphs are estimated to be more than 3,000. The present excursion is based on the petroglyphs from three of the four preliminary stages. Furthermore, the presentation is based on a sample since there are a number of observed but unrecorded figures within two of the areas. The sample consists of 1,500 figures which probably represent the variation of the figures both in time and space.

There are distinct morphological differences between the petroglyphs located at the various altitudes above sea level. A statistical analysis of a classification of the figures based on morphology gave four main groupings (Helskog, 1983, 1985a, nd). Some types of figures, especially human stick figures, are found in more than one group, but as a rule there is little overlapping. The groups are located at different altitudes above sea level. As the land rose out of the sea due to isostatic changes, new clean smooth rock surfaces emerged to be used as carving surfaces. On this basis the figures are separated into four, main diachronic phases. Parts of the figures of phase 4 are again divided into two diachronic units. The phases are dated as follows, in calendric years.

Phase 1 4200 - 3600 B.C.

Phase 2 3600 - 2700 B.C.

Phase 3 2700 - 1700 B.C.

Phase 4 1700 - 500 B.C.

a) 1700 - 1100 B.C.

b) 1100 - 500 B.C.

The dates are based on the date of the shoreline immediately below the petroglyphs of the different phases. Adjacent to the petroglyphs in two of the areas, namely Hjemmeluft and Amtmannsnes there are sites which cover the same time span as the petroglyphs.

Phase 1 (4200 - 3600 B.C.)

The people who made the petroglyphs lived in small settlements along the coastline. The houses, at least the winter ones, probably consisted of a wooden frame covered by sod. They were between 8-20 sq m large, and housed one to three families. Judging from the data in eastern Finnmark the average house was between 10-12 sq.m large. There are reasons to believe that the settlements seldom contained more than approximately six houses or individuals, clustered or scattered at one or adjacent localities. Like ethnographically known and described hunters and fishers in the Arctic the people are assumed to have been organized in egalitarian societies where status and leadership were acquired characteristics, and where food was divided between members according to a specific set of rules. It has also been proposed (Helskog, 1987) that there were persons, such as shamans, who gained power by the control of meaning in rituals of which the petroglyphs were a part. Like the preceding Early Stone Age population, they relied on the exploitation of seasonal resources by means of hunting and fishing

(Simonsen, 1965, 1979; Helskog, 1983; Engelstad, 1981; Andreassen, 1985; Renouf, 1981).

The petroglyphs in phase 1 are found at three localities in Hjemmeluft, and at Storsteinen in Bossekop (Helskog, 1984a). Altogether there are seven sites with approximately 47% of the figures which are recorded in Alta. These fall into nine main classes: human figures, boats, reindeer and/or moose, bears, other mammals, birds, patterns, miscellaneous, and unidentified.

A classification of the human figures into active (those visibly doing something) or passive (those not doing anything) shows that 85% are engaged in some sort of visible activity (Helskog, 1984a). Some of these activities are identifiable and in a few cases possible arguments as to their symbolic meaning can be presented.

This pertains especially to two scenes where a group of hunters are attacking bears which, forcibly or voluntarily, have left their den in winter or in the spring. Among the hunters there is one unarmed person who appears to be in dance with hands raised over his shoulders. Perhaps this is a shaman in dance. There can be little doubt, if any, that bears are being killed when leaving their dens, which from an ethnographical point of view is not surprising. The scenes are very reminiscent of descriptions of such hunts among people in the circumpolar zone, such as the Sami. These hunts are connected with rituals and beliefs referred to as Bear ceremonialism which has roots back into the Palaeolithic. Therefore, it should also be quite possible that the bear cult as known among the Sami from 17-19th century A.D. and previously traced to the 11-12th centuries A.D. represent the continuation of a tradition which existed 5,000 to 6,000 years ago among the cultures of northern Scandinavia (Helskog, 1985a, 1987).

Reindeer and moose are hunted in the petroglyphs; both on land and from boats. Reindeer are the most commonly depicted animal. Associated with reindeer, and perhaps with moose, is the 12.5 m long, clover shaped depiction of a fence, probably originally a wood construction. There are two openings which can be closed or opened at need. Inside the fence there are reindeer, moose, two boats, and a person who is thrusting a spear (?) towards a reindeer. The fence which is the oldest existing evidence of such a construction in the circumpolar zone, points towards the existence of societies whose members co-operated in communal reindeer drives/hunts and who possessed the ability to keep reindeer enclosed in fences. In addition, there are scenes where the front or the hind legs of reindeer seem to be caught in a trap and there are depictions of reindeer both in groups and alone.

The scenes with humans and moose give an impression of depictions of rituals more than hunting. At one panel there are two scenes where moose are surrounded by people carrying poles shaped like a moose head. Some are carrying small, short, curved objects

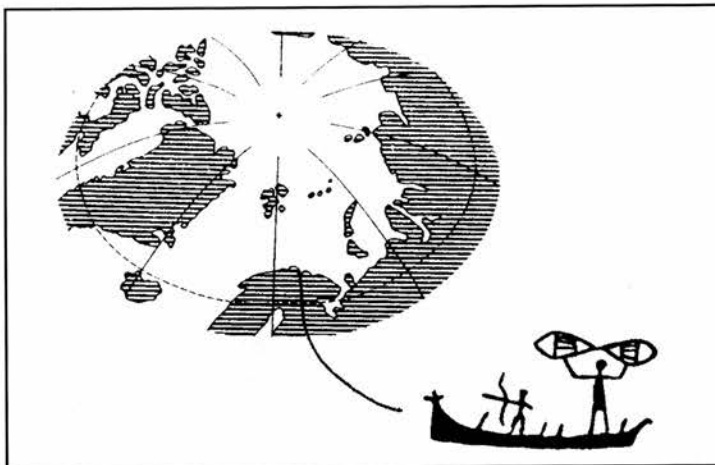


Fig. 23. Locational map of Alta in a circumpolar perspective.



Fig. 24. Alta petroglyph morphological chart illustrating differences in the reindeer and the moose.

and some are dancing. People carrying these moose headed poles are also depicted in two other panels, where the moose is a dominant animal. Combining these depictions with archaeological finds of moose head effigies in various combinations and contexts in northern Scandinavia and in Karelia (Carpelan, 1964; Gurina 1958) there is an increasingly strong argument that moose, or moose associated powers or spirits, were central to the religious beliefs of northernmost Europe. What other reason could there be for poles, tools or weapons and boats decorated with moose heads over such a large area, and for thousands of years.

Humans are also depicted in boats (Helskog, 1984, 1985a). All the boats which have an animal head (moose) in the bow are depicted by a single line and have a completely pecked out hull. They are used in connection with hunting, fishing and travel. The number of people varies between one and twelve. Compared with activities on land, activities associated with boats are clearly in a minority. This suggests an emphasis on land based activities in rituals. Furthermore, a similar emphasis is reflected in the dominance of land over marine fauna (50:1) and also over avi-fauna (250:1). Unless one bird or one fish was worth hundreds of land animals the reindeer or moose was considered more valuable to depict; or symbolism and rituals associated with moose and reindeer had more of a connection with depictions on rock than fish and birds. In two cases moose are depicted being attacked by wolves or dogs. There are four scenes with people in dance or a procession which might be illustrations of rituals or parts of rituals themselves. In some of these scenes both men and women are clearly participating. In another there are what appear to be two grownups holding a child between them. In some dancing scenes it is not possible to distinguish the participants by their sex, status or role. In yet another scene, four people are standing crosswise; two are holding onto an oval shaped object and the other two are holding onto the wrists of the first, like two couples. Two of the figures seem to have a penis. The scene probably depicts two couples of which the two women are the largest figures. Of these two the squatting woman is the largest. Relative size can be used to depict persons of unequal status or role and the two largest figures, the women, might be the two most important persons in this scene. The squatting woman could be giving birth. The oval which they are holding between them looks like an egg, or perhaps the sun. This, together with the coupling of men and women, the emphasis on the women, and in particular on the one who is squatting, seems to indicate the association of this scene with human fertility, childbirth and/or the protection of the unborn. Perhaps the scene depicts a ritual connected with giving birth.

There are also a few other examples where figures are obviously paired. In one case it is a man and a woman where the man has an erect penis and the woman a distinct depicted hip region or a vulva. In another case one of the figures has a distinctly large stomach like a pregnant woman. The scenes are possibly associated with human fertility.

In one scene five people are seen moving away from the viewer. Two of these persons carry a large bird, and the person to the left carries a curved pole under the left arm. The top of this pole looks somewhat like a bird's head. Beside this person someone is carrying a curved pole and to the left there is yet another person. Behind this group there is a person who carries a circular object in his left hand and in his right a short straight object. Perhaps we have here a shaman who is beating his drum in a ritual after a successful hunt.

In connection with "transport" it should be mentioned that there is direct evidence of snowshoes on two of the sites. At Bergheim I, a hunter (?) is standing on snowshoes. These shoes, like those at the site in Kafjord, prove beyond doubt that snowshoes once existed in the European Arctic. Similar shaped figures as these shoes, but without associated persons, are found on petroglyphs further south in Scandinavia. Presumably snowshoes went out of use sometime during the Stone Age to be reintroduced in the Middle Ages?

Reindeer and moose constitute the absolute largest part of the fauna. There is almost no marine life, only one salmon, one shark, two halibuts, and two bottlenosed dolphins. Marine life is clearly underrepresented both in relation to the total fauna that

existed and in relation to the fauna which was exploited (Helskog, 1985b). The marine fauna was the main basis of subsistence for the coastal population, but ways to deal with the spirits and gods associated with marine fauna do not seem to have left many traces in the petroglyphs.

The last main class of figures consist of various types of patterns. There are two main types, namely those made by horizontal lines crossed by vertical lines and those which are "roundish". In some cases those of the first type look like nets and in one case a reindeer is trapped in such a net (depending on perspective; it might be a herd of reindeer seen in profile). In other cases they look like different braided patterns. Perhaps they are some sort of pattern associated with specific groups of people as identifiers of group adherence. The other main type of pattern is more homogeneous than the first type. The figures look like "necklaces" (amulets), which is the first interpretation to come to mind among most people who have seen them. They probably represent an item which existed and which was important enough to be depicted. Perhaps it is claws from animals which were arranged in different ways for identifying religious importance and/or group adherence.

Altogether, the symbolic meaning of the human figures seem mainly conducted on land surface and are often connected with subsistence activities and possibly with fertility. The fauna depicted are mainly large land mammals while the marine and avi

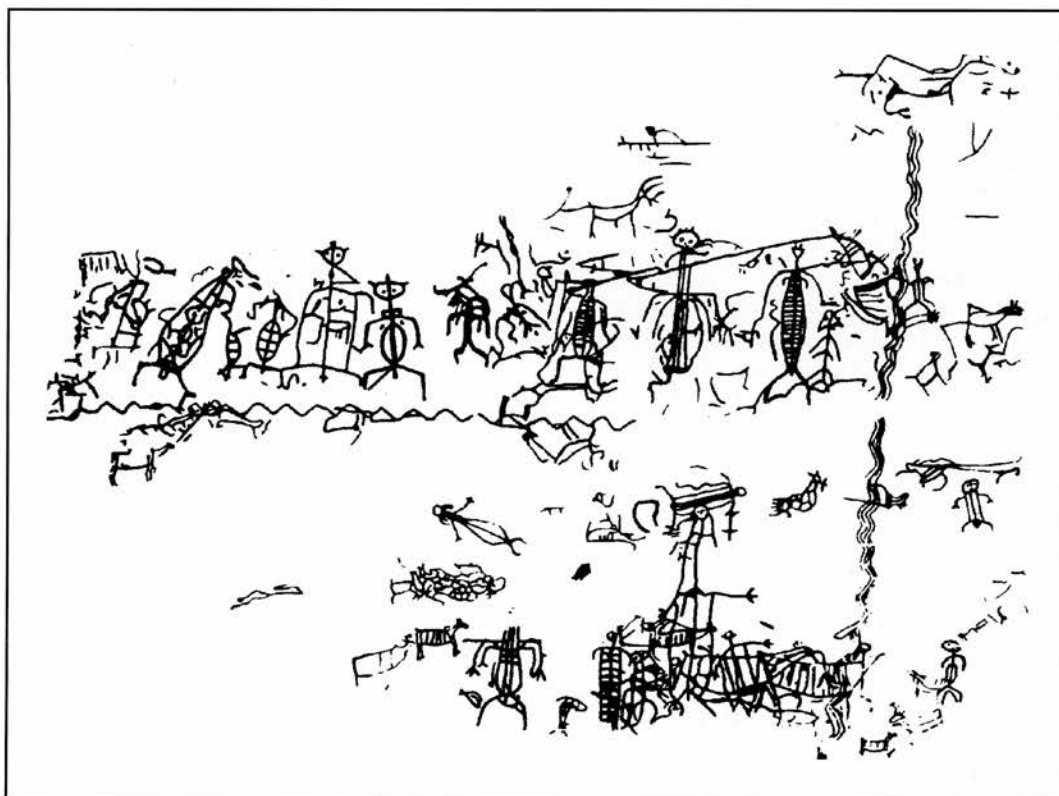


Fig. 25. Alta. Human-like figures 2700-1700 B.C. Note that they are all different as if they were different individuals.

fauna are clearly underrepresented both in scenes and as single depictions. Likewise, activities connected with domestic chores are not directly depicted (Helskog, 1987).

On the basis of historic descriptions of hunters and fishers in the Arctic it has been suggested that the Late Stone Age populations believed that natural (innate) objects were inhabited by spirits that there were a set of nature gods, and that animals had souls.

Associated with this there was formalized human behaviour to communicate with gods and spirits. In addition there might have been shamans who were healers, conjurers, diviners and who travelled into the world of the spirits. They acquired power by the control of interpretation in rituals.

All this is quite general but if the early religion of the Sami and the Samoyeds were a product of a long tradition then these generalities can have some bearing on the religion of the prehistoric population in Arctic Scandinavia. The bear hunt scenes point towards some continuity in bear ceremonialism. The unarmed, and, in one case, dancing persons associated with these scenes seem to imply a shaman. The bird hunting scene with a person carrying a possible drum and drum stick perhaps indicates a shaman and a drum. The hunting/trapping of reindeer and moose suggests some rituals and perhaps magic associated with hunting. In addition, the large number of animals singly or in herds (not depicted as being hunted or trapped) might be similarly interpreted. Some (or all) might also represent the spirit or the soul of the animal, or the shaman in the spirit world. Other scenes and single figures, like dancing males and females, couples, or pregnant women or animals, point towards some meaning and rituals connected with fertility, as well as forms of social interaction.

Phase 2 (3600 - 2700 B.C.)

The figures dated in phase 2 include approximately 21% of the total number of petroglyphs.

In approximately 3,600 B.C. there is some evidence of change in the material culture of the Late Stone Age populations when slate became the dominant lithic material for making tools. Otherwise, there seems to be a continuation both in subsistence and settlement size and settlement pattern. Yet, there is a distinct change in form and content among the petroglyphs. The forms of the human figures have the same variation as in phase 1 but they are more engaged in activities connected with boats and water than in phase 1 where the emphasis was on land activities. For example there are two scenes where swimming reindeer and in one case a swimming moose, are hunted from a boat. One of the people in these boats is holding a long T-shaped object while the others have no implements/tools/weapons. In another case there are three boats in a group, each carrying a crew of two persons. One of these people has harpooned a seal (?). In other cases there are a number of persons in the boats, who are often carrying long T-shaped or C-shaped objects, and in two cases a spear.

It should also be noted that 60% of the boats are unmanned, indicating there was a difference in symbolic meaning between the activity in which a boat and crew are engaged and a boat depicted alone. In contrast, in phase 1 all the boats were manned (Helskog, 1985).

Among other activities associated with water, but not depicted in boats, is a man who has caught a halibut. Apart from halibuts and whales no marine life has been recognized. Compared with phase 1 a larger number (16) of birds are now depicted. All are aquatic birds such as geese, swans, ducks and a cormorant. In one case a person is holding a goose by the neck.

Of land based activities there is a person who has stuck a spear into a bear, and a man holding an axe-shaped object over his head. There are also two couples. In one case the man has an erect penis and is moving beside another person who is interpreted as a woman by the association with the man. In the other case a man is holding a woman by the ankles from behind. Both men have genitalia and one woman also has an anus. This woman appears to be nude while the man appears to be dressed. The man has a pointed mask over his face and the scene as a whole points towards a ritual rather than normal intercourse or a mythological story.

As a whole, the meaning of most of the active human figures seems to be associated with the activities in which they are engaged in contrast to the inactive figures where the meaning appears to be associated with the figure itself. In this the depictions are similar to those in phase 1. The difference is that in phase 1 most of the activities are on land in contrast to phase 2 where they mainly take place at sea.

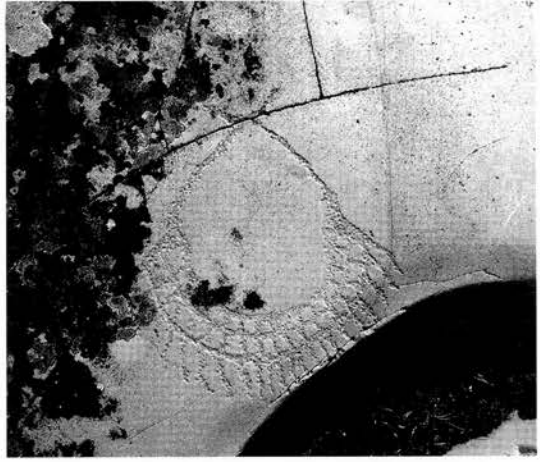


Fig. 26. Alta. An amulet to hang around the neck? 4200-3600 B.C.

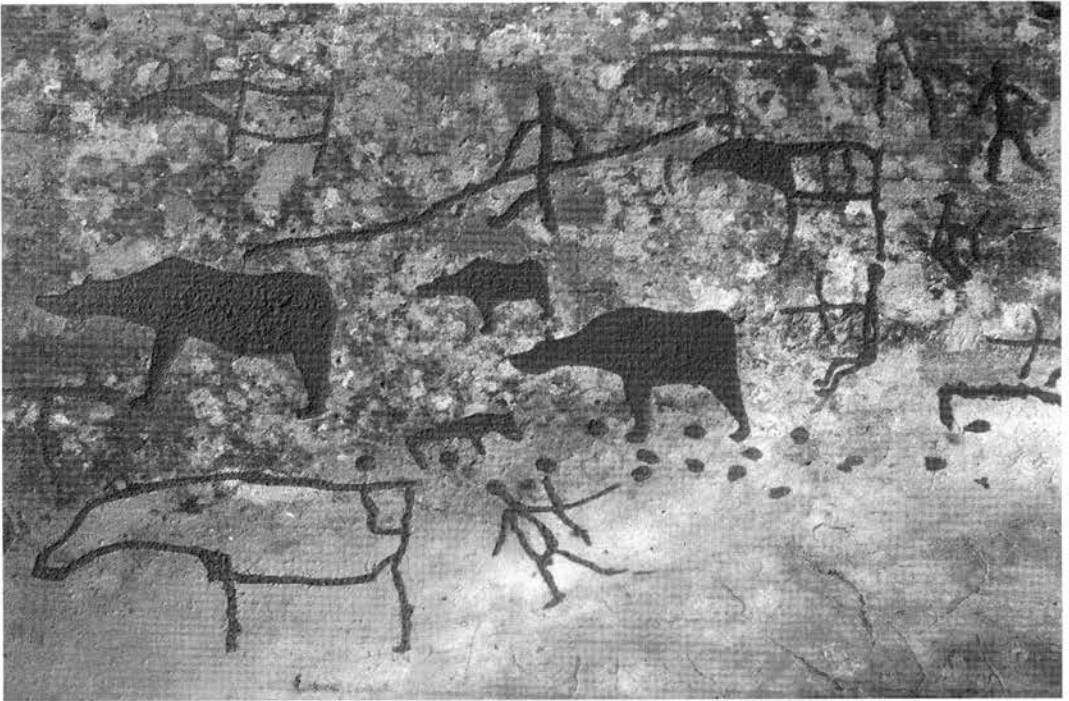


Fig. 27. Alta. The bear hunt at Bergbukten I. 4200-3600 B.C. Bear ceremonialism? (carvings have been painted so that visitors can see them.)

As in phase 1 the majority of the animals are reindeer and moose, singly or in herds. The shape of most of the animals is somewhat different from those in phase 1 but there is no reason to suggest that such schematic differences reflect any differences in meaning from phase 2.

The same might be the case with the patterns (geometric figures). They consist of a mixture of horizontal, vertical and diagonal lines. There is no repetition of any of the specific patterns from phase 1.

Essentially, in phase 2 the classes of the figures appear to be a continuation of phase 1 with a slight difference in the emphasis on the activities which are associated with the human figures, and changes in form or schematization. The changes in form, such as the introduction of a new type of boat, are often quite distinct. The main overlapping of



Fig. 28. Alta. A pregnant reindeer and a goose. 3600-2700 B.C.

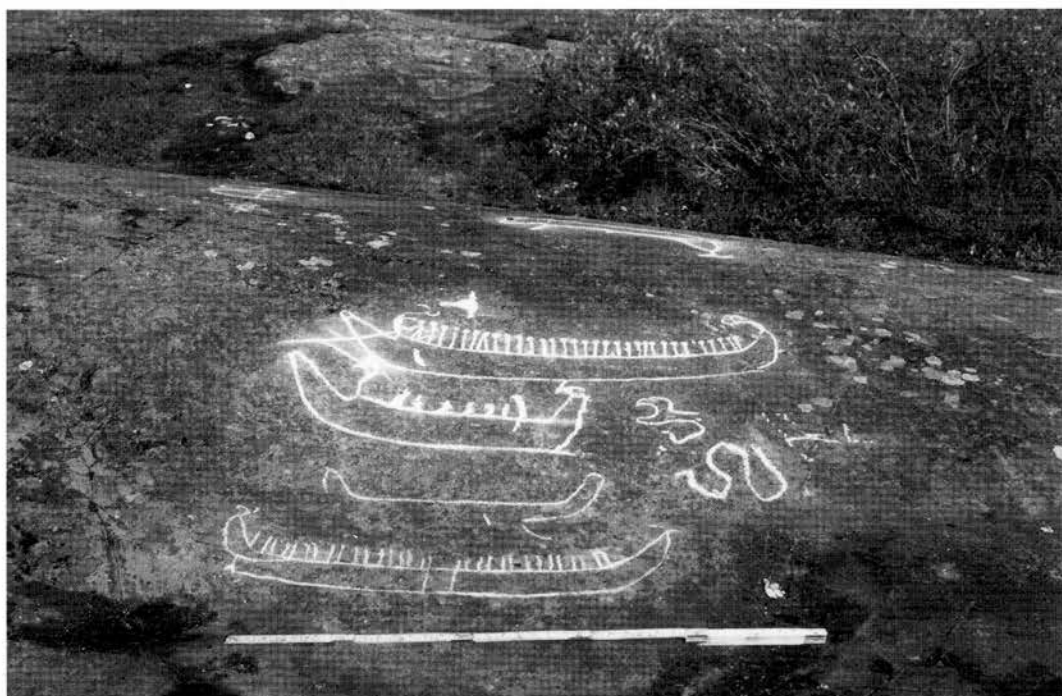


Fig. 29. Alta. Boats from 1100-500 B.C. They are the only examples of this type of boat found in northern Scandinavia. Base of lower boat 85 cm.

types between the phases are found within single line stick human and animal figures, otherwise there seems to be little overlapping. The changes seem mainly to be so distinct both in form and in time that the transformations possibly happened during a relatively short period of time. The changes correspond in time with general changes in technology among the populations in Finnmark. Furthermore, since similar figures to those in Alta are found both in Northern Sweden and further south in Norway the change is likely to be caused at least partly by some outside influence and is probably not purely a local phenomena. It should also be noted that, compared with the figures in phase 1, body patterns are rare.

Phase 3 (2700-1700 B.C.)

The petroglyphs from this phase comprise approximately 26% of the total number of petroglyphs.

At approximately the beginning of this phase there is, in parts of Finnmark, a change in the size of houses, which generally became larger, from approximately 11-12 sq m. to an average of 25 sq m. This has been interpreted both as an increase in the number of families living in the same house and as a change from nuclear family houses to extended and multi-family houses. Simultaneously there are some typological changes in the tool of inventory (Helskog, 1980, 1985a). The subsistence economy is still based on hunting and fishing, and flexibility continued in the exploitation of the natural resources which these people possessed.

The distinct changes in the petroglyphs from phase 2 to phase 3 also indicate that there were some contemporaneous changes in religion, both in the use and the symbolic meaning of the figures.

The majority of the human figures must be considered passive, in contrast to phase 2. Most of the figures are standing and the symbolic meaning seems to be found in the figures themselves rather than in any activity. The figures are partly of the single line stick type, possessing a torso with/ without vertical pattern as in phase 1 and 2, and partly of a new type with torso and horizontal body pattern. Both of these figure types are on the average more than twice as large than the torso figures in phases 1 and 2. Furthermore, some of the figures have facial features and hair, a few are pregnant, and most have genitalia or breasts. Altogether these figures are more elaborate than those in the preceding phases.

There is not one single scene showing people hunting or fishing as in phases 1 and 2. In contrast to phase 2 there are neither human activities associated with water nor any boats depicted in the petroglyphs of phase 3.

The reindeer and moose have changed forms compared with those in phase 2. None are depicted in traps. Most of the animals have body patterns in contrast to phase 2. As in the other phases with the largest land animals rather than small animals, birds and fish. There are a few bears. There is one bird, and of marine fauna there are only three halibuts and one salmon.

The patterns have also changed character from those of phase 2. Now there are long zig-zag lines transversing one of the sites, there are snake patterns, and there are 6 which are shaped like a star. All these patterns are found at both the main sites.

As a whole, the petroglyphs imply some significant conceptual changes from phase 2. The first of these is the emphasis on the individual figures rather than scenes. The symbolic meaning might, from now on, to a much larger extent be found in the figures themselves rather than in the activity in which they are engaged. Furthermore, there is a whole group of elaborately made large human figures which almost look like portraits and appear to be specific individuals. This strong emphasis on particular individual figures might indicate the existence of societies in which social inequality was more pronounced than in phases 1 and 2. In essence, the change from small to larger residential units, from smaller to larger groups of people, could have been associated with a structural change where some individuals gained power or were recognized as communal leaders to a larger and longer extent than before. Alternatively the change might be purely religious where the ideas of social inequality or the depictions of e.g.

certain gods, spirits or shamans were introduced into the area. It is interesting to note that the type of human figures, animals and geometric patterns found at Alta are also found at sites like Vingen on the west coast of Norway. This might indicate that the change which took place in Alta was not a purely local phenomenon. Like the changes in the previous phases, what happens in Alta also seems to happen over larger geographic areas. It has been proposed (Helskog 1984) that the changes in phase 3 might reflect ideas associated with agricultural societies further to the south. Even so, the societies which existed in Alta were basically egalitarian societies whose livelihood was based on hunting and fishing.

Phase 4 (1700 - 500 B.C.)

The petroglyphs from this phase include approximately 6% of the total number of petroglyphs.

In Finnmark there seems to be a general continuation of the socio-economic structure of the previous phase. The settlements are still small but there are some indications of changes in material culture. Furthermore, towards the end of the phase, in the last millennium B.C., the pit houses disappear as a house type.

In a larger perspective including Finnmark and northern Troms, Alta is somewhat special due to the discovery of grasspollen of *Hordeum* structure which might indicate that barley (*Hordeum*) could have been cultivated at the west side of the fjord sometime in the first half of the second millennium B.C. This is the first time there is some evidence to possibly indicate a change in subsistence economics. Yet agriculture, if it was practiced in Alta, would always have been subsidiary to the main activities of hunting and fishing.

The human figures are associated with both boats and land based activities. There is a dominance of active over passive humans. The crew members are mostly depicted as single-line figures and only exceptionally with head and other extremities. There is only one boat with persons who have head and other extremities. Above this boat there is one person depicted horizontally both in relation to the orientation of the boat and the slope of the rock surface. This latter relation is unique and therefore considered intentional and part of the boat scene implying that there is a person flying over this manned boat; possibly a shaman in flight. In the second sub-phase there are 12 persons dancing on the deck (?) of a boat. The two persons in the centre appear to be holding what might be a drum. It should also be noted that besides being the youngest petroglyphs in Alta, these last type of boats also possess larger crews than any of those from an earlier age. This also indicates that some of these youngest boats are larger than any boats previously depicted.

The petroglyphs of the boats are of a type which is in general associated with Bronze age agricultural societies. This does point towards strong influences from the south Scandinavian agricultural societies. Extensive influences of this type might also be seen in the petroglyphs of the previous phase.

The boats of this phase can be divided into two types each of a different age, namely 1700 - 1100 B.C. and 1100 - 400 B.C. Perhaps the rest of the figures in phase 4 should be divided into two diachronic subphases like the boats, although none of the other types of figures displayed a similar pattern to the boats. Since the altitudinal differences between the lowest and highest located figures are only 2.5 m in a low gradient terrain at a time with slow isostasy there are obvious difficulties in using altitude as a chronological aid. With the exception of one moose all the land animals are reindeer. It should be noted that the antlers are unusually large in relation to the body of the reindeer. The emphasis on the antlers of the bucks might be a depiction of the enormous antlers which grow on castrated bucks as well as an expression of fertility or male dominance. In the first case this would be associated with the reindeer for transportation.

In addition to the reindeer there are a few smaller animal figures which might be dogs and wolves as well as reindeer or reindeer calves. There are no depictions of birds, and the only fish represented are three halibuts with a body pattern. The emphasis on the

large land animals over marine and avi-fauna is a direct continuation of the practice in previous phases.

Besides the boat crews there are two scenes with active people. One is three people with drawn swords and shields, and the other a skier who is hunting a moose with a bow and arrow. The first scene is, by its weapons, of a southern Bronze age or later (early Iron age?) origin and date. The second scene introduces skis for the first time on the petroglyphs although skis are at least 2000 years older than the maximum date of the petroglyph itself.

In essence, the petroglyphs of phase 4 and other contemporaneous archaeological

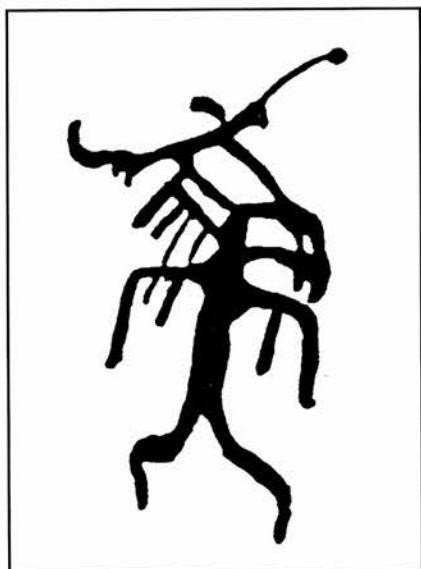


Fig. 30. Alta. A shaman with head gear (?) 2700-1700 B.C.

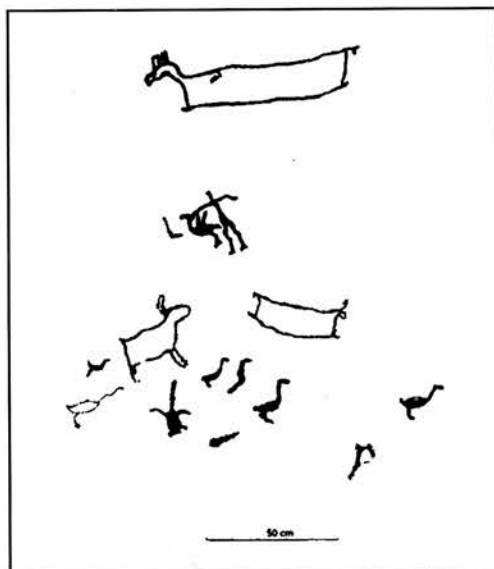


Fig. 31. Alta. A hunter (?), birds and boats from 3600-2700 B.C.

evidence, indicate that there was contact with Bronze Age (ranked?) societies further south. Altogether the changes in the petroglyphs, as well as their total reduction in number, and their disappearance during the last millennium B.C., indicate changes in the way and frequency of using petroglyphs as a means of communication.

Summary

The combination of the visible stratigraphic, altitudinal location of the petroglyphs, the groups of morphological types, seen by correspondence analysis, and the location of these groups at specific altitudes, do give an unusually good foundation for reconstructing a chronology. In this the petroglyphs in Alta are outstanding. Much of the basis for the transformations which are seen in the petroglyphs and their relationship to the Late Stone Age societies of northernmost Norway, depends on this framework.

It is assumed that the depictions and their meaning were part of the socio-religious structure of the time. They were probably used in rituals and depict rituals and events as well as experiences of visions. As such, they must reflect both use and meaning, and whoever controlled the meaning in rituals also had power. Such a person could have been a shaman. Judging from depictions of people with masks, costumes, drums, and the case with the dancer in the bear-hunt, in the petroglyphs, and the argument of historic continuity of shamanism to the Sami and the Samoyeds (and all other Arctic peoples), it is not unlikely that there were shamans and shamanistic rites in prehistory. I will argue that the shamans and their status, rites, ceremonies, and rituals as well as the norms provided the basis for the change in the ideology of the society. The archaeological material through the years 4000 - 500 B.C. indicate that the societies in

this area were dynamic and changing. There must have been information exchange with the rest of Scandinavia. There were several social and technological transformations. Neither meaning and power or the practice of shamanism remained static, but instead, underwent changes and/or adjustments caused by new ideologies and ideas, and external pressures (economic and ideological). Thus, a way to understand the meaning of the

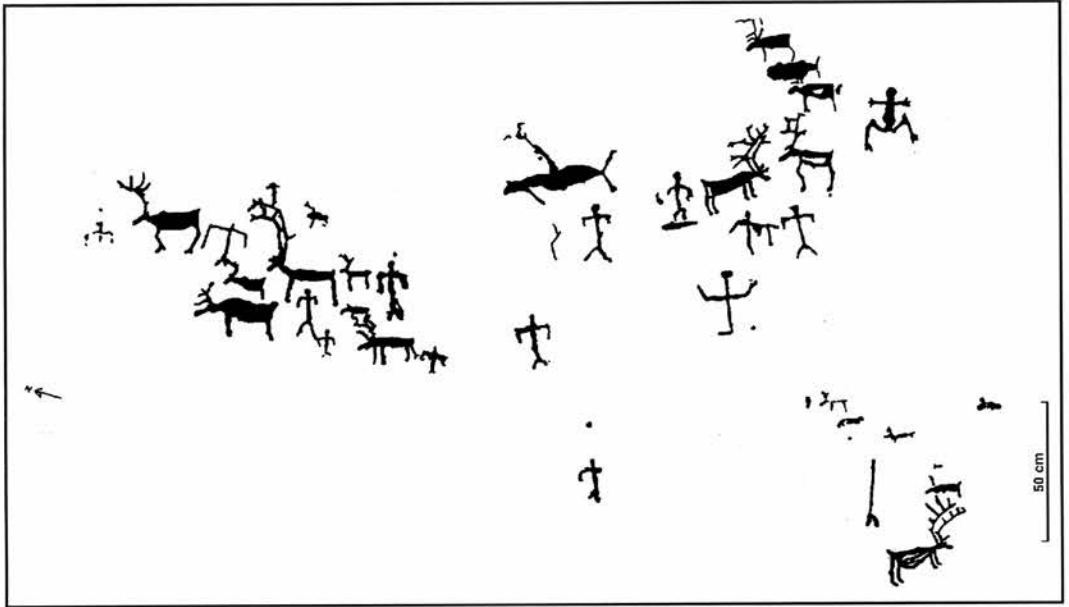


Fig. 32. Alta. A herd of reindeer, 1700-1100 B.C.

depictions in society might be to understand the relationship of shamanism and the shaman's position to, or within the social context.

It has not, however, been possible to connect the petroglyphs with specific local groups of people or communities. Therefore, the patterns are seen as a part of the cultural complexity of the broader region of the province of Finnmark.

The analysis indicates that the changes in the petroglyphs are contemporaneous with changes in material culture and socio-economic structure. In some cases, the changes in the petroglyphs can be interpreted as ones of symbolic meaning, at other times they might simply be ones of style and selectivity. That certain scenes or classes of petroglyphs are unique, and not repeated from phase to phase as well as the changes between the dominance of active versus passive human figures are a good example of this selectivity. Other examples of both selection and style are the continued dominance of land mammals (especially reindeer and moose) over marine fauna and avi-fauna and the emphasis on outdoor over domestic chores.

A rather complex picture emerges. For example, the scenes in phase 1, of bears which are hunted in or outside their dens and interpreted as evidence of bear ceremonialism, are not depicted after 3600 B.C. There are a few single bears, some of which are "poked at" with a spear. It is known that bear ceremonialism was a part of the Sami religion as late as the 18th and 19th centuries. In essence, even if types of petroglyphs or scenes disappear this does not necessarily mean that the belief disappears. Similarly, there are quite distinct morphological changes between the phases within the same class of figures. In some cases, they are clearly stylistic and not real. Nobody, for example, would claim that reindeer and moose changed shape in reality as they do in the petroglyphs. In other cases, such as with the patterns and the boats, the morphological variation could, at least to some degree, have been real and is informative of technological and structural variation.

In essence, the variation and continuity in class, types, subtypes, and the selectivity

of depictions through time, reflect a variety of changes in beliefs, style, technology, and socio-economic organization. Seen as a whole, substantial changes occur five or six times. In a broad economic spectrum the population had a subsistence economy based upon hunting and fishing throughout the entire Stone Age. The only changes in the subsistence base is the slight possibility of some passing agriculture between 1800 - 1500 B.C. There is no evidence that subsistence changes promoted the changes in the petroglyphs. Rather, the transformation seen in the petroglyphs were linked to changes in social structure, beliefs and ideologies.

The multiple changes in social and ideological practices and in ritual practices, and in beliefs within the small egalitarian hunting - fishing societies were promoted by external contacts, (migration, trade, marriage, etc.) and new ideas and practices (Helskog, 1987b). The use of different meanings in the petroglyphs and their role as signs of ritual and power arrived - changed and then disappeared.

The depictions do not only represent changes and continuities in beliefs and powers, social structure and ideology, but also represent ritual areas for the people who lived in this region of the Arctic. Seen in a geographic perspective there is not found any similar congregation of petroglyphs in the Arctic area of Fenno-Scandinavia. There are scattered smaller panels, mostly in the coastal area to the south, and there are none in the interior. It is difficult to assess the distance which people might have travelled to participate in ceremonies and rituals but some hundred kilometers might not be unreasonable. The petroglyphs are at least associated with the population in the fjordal and perhaps adjacent fjordal - coastal areas and the interior. They signify seasonal ritual occurrences, probably from spring to late fall, when the ground was not covered by snow and temperatures were not low. During this time there was probably one or several congregations of people participating in rituals. As such, the bottom of the Alta fjord was a centre to which groups of people and individuals travelled annually, where they met and interacted, strengthened their ties and signalled their differences.

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Riassunto:

Le datazioni dei petroglifi alla base del fiordo Alta in Finnmark, Norvegia Artica, sono in relazione a quelle delle linee di ritiro della battigia. La fase 1 (4200-3600 .C.), 47% del numero totale, è concentrata su renne ed alci. Due scene mostrano una caccia all'orso forse alla presenza di uno sciamano. Enfasi è posta sulle donne. Durante la fase 2 (3600-2700 a.C.), 21%, le attività si svolgono principalmente sul mare. Il 60% delle barche sono senza equipaggio. Nella Fase 3 (2700-1700 a.C), 26%, le scene di caccia e di pesca sono totalmente assenti e l'attenzione è posta sulle figure umane individuali. Nella fase 4 (1700-500 a.C.), 6%, dominano le renne, alcune con palchi enfatizzati, e alci. Non ci sono evidenze che cambiamenti nella sussistenza abbiano comportato cambiamenti nei petroglifi. Le raffigurazioni probabilmente venivano usate nei rituali, nelle celebrazioni ed anche come potenze evocative. La trasformazione può quindi essere connessa con cambiamenti delle strutture sociali, delle credenze e delle ideologie.

Summary:

The dates of the petroglyphs at the base of the Alta fjord in Finnmark, Arctic Norway, are based on the date of the receding shoreline. Phase 1 (4200-3600 B.C.), 47% of the total number, is centred around the reindeer and moose. Two scenes show a bearhunt with a probable shaman present. Women are emphasized. During phase 2 (3600-2700 B.C.), 21%, the activities mainly take place at sea. 60% of the boats are un manned. In phase 3 (2700-1700 B.C.), 26%, hunting and fishing scenes are wholly missing and the emphasis is on individual human figures. In phase 4 (1700-500 B.C.), 6%, reindeer, some with emphasized antlers, and moose dominate. There is no evidence that subsistence changes promoted the changes in the petroglyphs. The pictures were probably used in rituals and depict rituals and events as well as visions. The transformation can, therefore, be linked to changes in social structures, beliefs and ideologies.

Résumé:

La datation des pétroglyphes à la base du fjord Alta dans le Finnmark, Norvège Arctique, se fonde sur la datation de la ligne de retrait du rivage. La phase 1 (4200-3600 av. J.-C.), 47% du nombre total, est centrée sur le renne et l'élan. Deux scènes montrent un chasse à l'ours, peut-être en présence d'un chaman. L'emphase est mise sur les femmes. Durant la phase 2 (3600-2700 av. J.-C.), 21%, les activités se déroulent principalement en mer. Le 60% des barques est sans équipage. Dans la phase 3 (2700-1700 av. J.-C.), 26%, les scènes de chasse et de pêche sont totalement absentes et l'attention se porte sur des figures humaines individuelles. Dans la phase 4 (1700-500 av. J.-C.), 6%, dominent les rennes, certains aux bois accentués, et les élans. Il n'y a pas lieu de penser que des changements de subsistance aient amené des changements dans les pétroglyphes. Les représentations étaient probablement utilisées lors des rituels et dépeignent des rituels et des événements, aussi bien que des visions. La transformation pourrait être liée à des changements dans les structures sociales, les croyances et les idéologies.