Chapter 3
Silence of Signs—Power of Symbols: Rock Art, Landscape and Social Semiotics

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Introduction

The international rock art discourse frequently regards rock art as a remnant of religious cults and ritual practices. For a long time this tradition has been strong and there has been more or less a general consensus about its religious or supernatural interpretation. There are no doubts that several motifs, symbols and site contexts support such an approach. However, there are several problems with a generalization of the rock art phenomenon. It is probably far more diversified and culture specific than we believe, and therefore calls for a more pluralistic approach. It is therefore appropriate to ask if we should focus more upon the communicative role that rock art may have played. In modern social science, the idea of symbols, and symbols as bearers of a political and ideological discourse has been emphasized. I argue that a theory of signs and symbols is a new and possible path in rock art research, and in this chapter I will present a case study from Southern Scandinavia as an empirical foundation for a wider theoretical debate.

The understanding of Scandinavian rock art today is founded on theories that are more than 80 years old. These saw the rock carvings as religious testimony. The rock carvings were assumed to have been adjacent to prehistoric fields and to have been part of a fertility cult (Almgren 1926). Circular figures were interpreted as the sun, the boat as the sun boat, and footprints as the tracks of the gods. In Scandinavian archaeology this viewpoint still permeates much of the research on the carvings. The religious theories regarding the rock carvings were legitimized by evolutionism, diffusionism and sympathetic magic, a theoretical foundation that has been more or less abandoned in the social sciences for a long time.

However, today we have a theoretical framework that helps understand the communicative role of signs and symbols in the society. It is commonly referred to as social semiotics. The term "semiotics" has been defined as "the science of the life

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of signs in society" (Saussure in Hodge and Kress 1988). Social Semiotics has become the study of communication and the phenomenon of communication as it is displayed in society between human beings and between groups. Language is an important tool in social communication but not all communication is channelled through verbal or linguistic expressions. Public space is permeated by codes that are included in a complex structure of social and political communication expressed through symbols. In such a way, symbols and structures of symbols serve as a medium for communication between powerful forces in society and the individual. Behind the strategies and the symbols, we can almost always see political and ideological forces mobilizing on a number of fronts and manoeuvring in order to attain power in society.

The rock carvings are physical remains of elements in social communication. There is a large diversity of rock art contexts; some sites are located deep inside caves, others are very visible and situated high up on steep cliffs. The first category could have been part of hidden rituals, perhaps accessible only for some few initiated persons. On the contrary, much rock art is exposed in a way that probably was meant to be highly visible, and its purpose was to be seen, not by a few—but as many as possible. Through their location, size, clarity and numbers, the rock carvings in Southern Scandinavia are characterized by a strategy of high visibility and presence in the public space. Those who produced and tried to control the carvings utilized a strong and forceful medium, a system of signs that once made statements through visual exposure. These conveyed an important message. Behind the signs we can get only a rough idea of a complex and intricate society with a need for communication at many levels and through different modes of expression. However, the sign as it is in its physical shape can be understood only through its context. There is no logical passage from the symbol to the meaning, no causal relationship; this is one of the foundations of social semiotics. Consequently, the context is the most important element for understanding the carving phenomenon. The most important factor in the recreation of context is the landscape and understanding the relationship that the rock carvings had to the landscape.

In Southern Scandinavia we can see the shadows of a dramatic, political change in Late Bronze Age and the rock art could have been part of this political process. In the counties of Østfold (Norway) and Bohuslän (Sweden), GIS-analysis (Geographical Information System) clearly shows that the rock carvings are systematically distributed near large areas with heavy clay soil, and pollen analyses indicate that these were forested before being altered in the Late Bronze Age. These plains were rapidly transformed into vast grasslands used for pasture, and at the same time rock carvings appeared in hundreds and thousands. This grassland could have been cleared for boosting the economy on a higher regional level, and probably it was organized by paramount chiefs as part of a political strategy (Vogt 2006 [2011]). When the new pastures were established, military force was an important part of controlling this territory and the valuable livestock that grazed there. However additional ways to maintain control could have been used. Ideology reflected through symbolic structure was probably part of that. In this chapter, I will debate the rock art phenomenon from a different point of view than religious or not religious; it is the underlying, ideological roles that are important. In this case study,

several factors point more towards an active political meaning behind the rock art. Someone sent a message, and some were the receivers—this article will try to understand what the message tells.

Rock Art in Southern Scandinavia

In Southern Scandinavia in the counties of Østfold (Norway) and Bohuslän (Sweden), there are some 2,700 rock art sites. The rock carvings in the region are distributed within an elongated territory of roughly 160 km from one extreme to the other (Fig. 3.1). The national border between Norway and Sweden divides this territory today, but in the Late Bronze Age, it should be looked upon as one area. This is the largest concentration of rock art in Northern Europe. The most common rock art style in Southern Scandinavia is from the Bronze Age and consists of a large variety of motifs, such as cup marks, ship figures, human figures, footprints, wagons, circular figures and animal figures which represent approximately 90 % of the petroglyphs. The cup mark occurs in the largest numbers, twice the numbers of ship figures, which are the second most common motif. The ship figures occur in a large variety of sizes and shapes; some of the largest are as long as 13 ft (4 m), but most of the ships are 2–3 ft (60–100 cm) long. Cup marks are found as part of the figure repertoire at most sites; however, there also are sites that consist entirely of this type of figures. The South Scandinavian style is typically rock carvings, or petroglyphs; some are deeply cut into the hard granite surface, others are made more shallowly and can be difficult to see today.

The rock carvings in Østfold and Bohuslän have a composite and dissimilar symbolic repertory, hailing from many different environments in time and space.

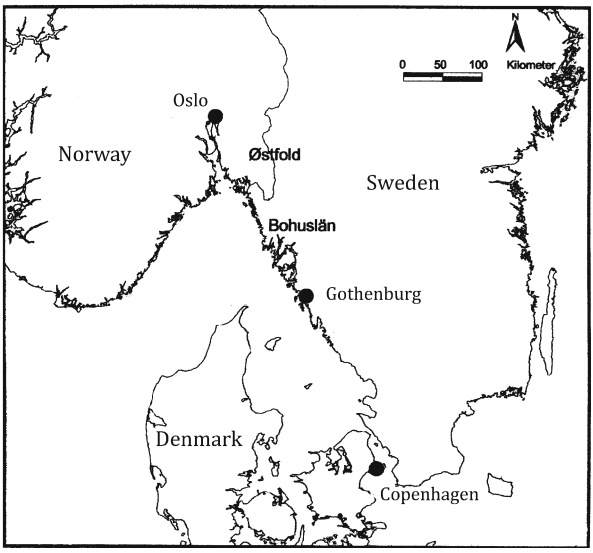

Fig. 3.1 Map of South Scandinavia. Østfold in Norway and Bohsulän in Sweden have the largest concentration of rock art sites in Northern Europe. Most sites are found in the border area (Map by author)

A wide interregional contact and connections between Europe and Scandinavia in the Bronze Age are captured and preserved in the carvings (Fredell 2003; Vogt 2006 [2011]). A part of the motifs are probably from the northern part of Scandinavia, others are found in central Europe within the Celtic culture. Some of the motifs must have their origin in the Mediterranean or farther east. In a given time period and in a chosen landscape, these symbols interacted to create a new complex visual language based upon signs and symbols. They were based on old symbols of Scandinavian origin, put together and blended with new modern images and representations from far away and presented in a new political and social context. Old traditional forms joined with modern and newer ideologies and thus gave the rock carvings meaning and force.

Typology and Comparative Dating

It is of great importance to establish when the rock carvings were made since the question regarding the context of the rock art is crucial to understanding the phenomenon. There has been a long debate in Scandinavia on the dating of the rock art. The South Scandinavian rock art style was originally dated to the Bronze Age (1700–500 BC), however uncertainty increases when we seek a more accurate dating. It is important to gain a clearer picture of when the carving phenomenon appeared, when it reached its widest distribution and its greatest production phase as well as when it ended. A quick review of the research record shows that the topics, chronology and dating have not been treated in a summary fashion in the research on rock carvings in Scandinavia. On the contrary, dating has been the most important and most often discussed topic in many publications (Ekhoff 1880; Marstrander 1963; Malmer 1981; Forsberg 1993; Fredell 2003; Vogt 2011[2006]). Few works have tried to see the large outlines and draw conclusions about frequency, discontinuity and continuity. I will present some of the problems and some attempts to date the South Scandinavian rock carvings here and make some concluding comments.

The best way to gain a better and more accurate dating of the rock carvings was considered to be typological (Malmer 1981). Scholars tried to establish an accurate typology based upon the boat figures. However, they were confronted with a series of problems. The first problem concerning typology of the carved figures is that it is not possible to use context. The type series that exist for bronze axes or brooches are founded on artefact comparisons and stratigraphy and thus the comparisons were decisive for placing the object (type) in the series (Gräslund 1996:61–65). This implies that it is not—as it often seems—only the typological change of the objects that is the basis for the series. The series of types is based on the assumption of a development, an evolution of one form into another, from simple to complex. The ship or boat figures that resemble each other were assumed to lie close in time, whereas boats that were different were considered far apart. The series of types was based on an assumed technological development of boats in the Bronze Age, and

Fig. 3.2 Rock art site from Hede in Kville, Northern Bohuslän. The site depicts round shield, horned helmets and wing-formed shapes among other attributes. The main motif is probably a battle scene (Tracing by Fredsjö 1981)

elements such as single or double prows, single- or double-lined ships were established and interpreted as an expression of development. However, such detailed knowledge about Scandinavian ships from the Bronze Age does not exist. From such a classification, different scholars have placed the same boat in different places in the type series depending on which elements are stressed. The placement of the boats in the series thus becomes subjective. The typological method was not particularly successful.

More problematic is the fact that this method did not offer an overall, clear view of the emergence of the carving phenomenon, its progress and culmination. Thus I argue that comparative dating is a far better way to date the carvings than typology. The rock carvings show warriors and weapons and other motifs that can be recognized. They provide more accurate knowledge about the date of these artefacts and offer a comparative way to date the carvings more precisely. That technique gives a more secure date for the individual figures and makes it possible to establish an outline of the chronological development in which the rock carvings occur. I will briefly present some examples of comparison between artefacts and rock art motives in south Scandinavia.

The rock art panels display warriors and their arms. There are three types of warrior equipment that seems to be common: round shields, horned helmets and wing-formed and chaps (Figs. 3.2 and 3.3). The latter is a characteristic trait that occurs

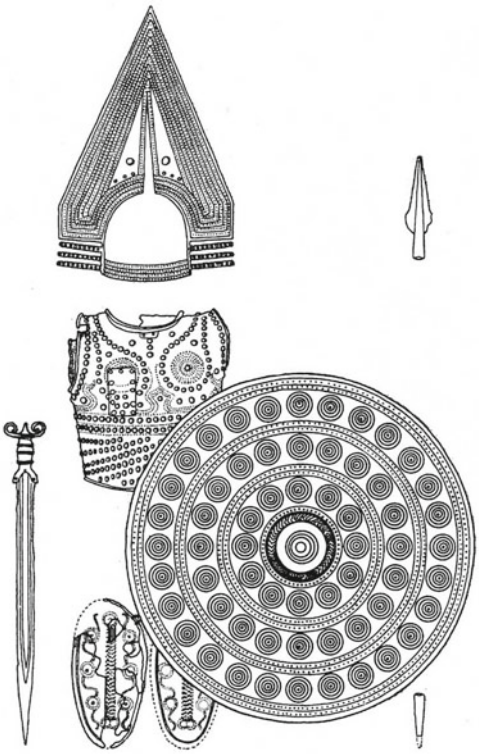

Fig. 3.3 Bronze round shield and graves from a royal Hallstatt grave in central Europe. This shield can be compared with the shield at Fig. 3.2 (Kristiansen 1998 and Schauer 1971)

in Central Europe and Hallstatt culture in the Late Bronze Age and is a type of fitting on the point of the sword scabbard. This is an uncommon find in Scandinavia, but is typical on the continent. The chaps were a common part of the Hallstatt culture and should be seen in connection with the flange-hilted Hallstatt-sword (Fig. 3.4). These appeared in Northern Europe in the last part of the Bronze Age, and are divided into Gundlingen type and Mindelheim type (Reith 1942; Cowen 1967; Pare 1991b and Jensen 1997). In addition to these attributes an important motif is the two wheeled war chariot. These are depicted in a large number of variations that coincide with the Hallstatt period and culture in Central Europe (Cunliffe 1997; Kristiansen 1998a).

In 1921 a magnificent find was made in a deep bog. In southern Denmark, at Hjortspring on the island of Als, a fragmented ancient vessel was discovered. In prehistory the site had been a small lake, and the location had been used for sacrifice. At approximately 400–300 BC a foreign army had been beaten and all their equipment, weapons and gear was smashed to pieces and then dropped in the lake. In this spectacular find there was also a large war-canoe built of wood planks with space for 20–25 men (Crumlin-Pedersen 2003). This boat is precisely the type we find depicted in the South Scandinavian petroglyphs, a couple centuries earlier in Østfold and Bohuslän.

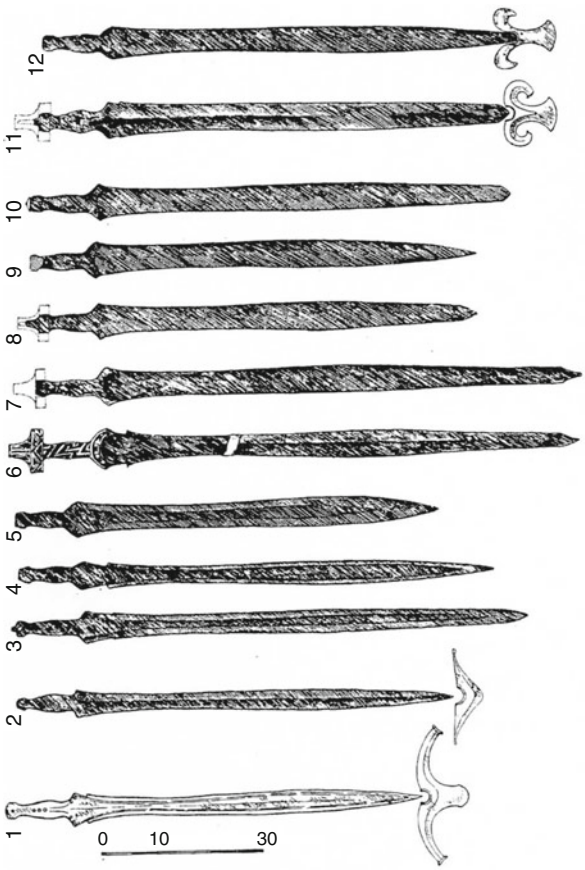

Fig. 3.4 Hallstatt swords—with and without chapes (after Reith 1942)

The Hjortspring boat also throws light on the dating of the rock carvings. The old Scandinavian figure motifs acquire a new stylistic expression (Fig. 3.5).

A large repertory of new figures arrive from the Central European Hallstatt and Urnfield cultures, mainly weapons as attributes to the human figure, chariots and horse motifs as well as the animal figures with deer, oxen, the "Hallstatt bird" and snake motifs among the most important and prominent (Fig. 3.6). These became universal symbols of the warrior aristocracy in one period of time and over a large geographical area from the Alps in the south to southern Scandinavia in the north, from Ireland in the west to the Carpathians in the east. Within this region there were many different groupings with many ethnic boundaries, but at the elite level, there was a tightly knit and uniform affinity of status symbols and warrior equipment within particular groups, probably of significant symbolic value. The new motifs blend with the old ones of Nordic origin, and together they give a new and marked stylistic expression. At the end of Bronze Age period VI and at the beginning of the

Fig. 3.5 Ship on top is reconstruction of the Hjortspring ship found in Denmark in 1921, the second is a ship figure from Bossum in Onsøy, Norway (Tracing by author)

Fig. 3.6 Two wheeled chariot from Beg by in Fredrikstad parish Østfold (Tracing by author)

Iron Age the production of carvings ceases. The square shields and the single boat figures of the Hjortspring type can be seen as the last phase of carving production (Vogt 2006 [2011]).

The published material from Bohuslän and Østfold (prior to 2006) documents 1227 rock carved panels. I have evaluated the datable attributes and the results clarify a tendency, although a precise and secure knowledge of the age of all the rock carving panels is difficult to obtain (Vogt 2006 [2012]). The conclusions to be drawn depend on how strictly one evaluates the arguments and the premises which have been advanced. While parts of the material give a good indication of the age of the carvings, other figures and sites cannot on the whole be dated. A reliable core exists, but the more panels are integrated into the sample, the greater the uncertainty. About 60 % of the figured carvings were created within a time period of 180–200 years, from the last half of period V around 800 BC to the end of period VI around 620 BC Vogt 2006 [2011]).

Dating remains problematic because more than 40 % of the sites are not dated, mainly cup marks and boat figures without datable attributes, and that raises the

question whether those carvings are from the same period or from another. I have thus tried to determine whether there are structures in the spatial organization of the sites that can provide indications of an older phase; possibly the ancient shorelines reveal an older structure or distribution in the carvings. I have not found this, and I therefore believe that the outlines of a distribution pattern are homogenous. There is no divergence between the dated and the undated sites when it comes to context and their situation; therefore, it is likely that most of the carvings were produced within this time span. It can be argued that it is most likely that the rock carvings in Østfold and Bohuslän were made within a short time period during the Late Bronze Age. The homogenous landscape context, the distribution pattern and the related stylistic repertory of figures, as well as the fact that the datable figures are close in time, support such a view.

Within a wider discussion it is interesting to reflect on production frequency and continuity of the carvings. Most sites could well have come into existence within an even shorter time span than 180–200 years, thought to be the chronological framework for the production of the carvings. How many rock carving panels were made within the course of 1 year? If we take the 2700 rock carving panels in Østfold and Bohuslän and imagine that there were ten individuals in the whole area who could make rock carvings, and each individual made five rock carving panels per year, the whole corpus could have been achieved in 55 years. If there were fifteen individuals in all of this vast area and each individual made ten rock carving panels per year, all the sites could have been produced in 18 years. My point is that despite the fact that the dating of the different comparative representations of the carved figures can be stretched to an interval of 180–200 years, it is possible also to relate the production of carvings to a shorter time span within that chronological framework (Vogt 2006 [2011]). This means that the entire production of rock art in the region was done in a short and intensive phase, more like a visual campaign. That assumption will be central in this exposition.

Extensive Pasture, Rock Carvings and the Politics of Landscape

The distribution of the rock carvings shows the way to a forgotten landscape. It is an empty landscape with few archaeological finds, only massive deposits and granite masses shaped by the ice and thousands of rock carvings. There must have been something particular about this landscape in order for the rock carvings to have been made precisely here. It contrasts with the habitation sites, grave mounds and prehistoric fields, all of which are situated on drier land with sandy soil, areas that today are easy recognizable in the archaeological record. GIS-analysis based on large databases with information about soil conditions shows that the rock carvings are systematically distributed near large areas with heavy clay soil (Figs. 3.7 and 3.8). This is in contrast to ice-polished bedrocks and instances of sandy ground which dominate the Quaternary geology in other parts of Østfold and Bohuslän. Pollen

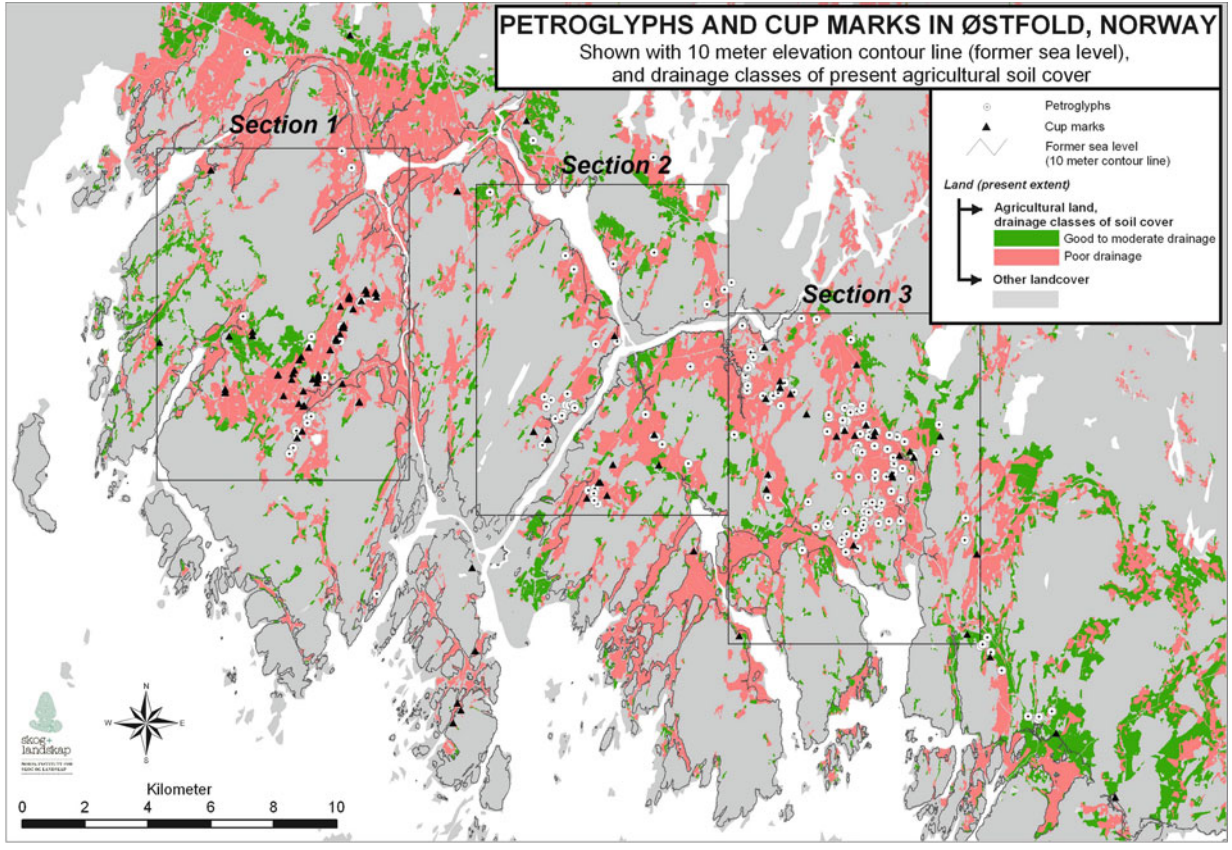

Fig. 3.7 Map showing the distribution of rock art sites (figures and cup marks) and drainage classes. Former sea level in Bronze Age is marked (Map made for the author by The Norwegian Forest and Landscape Institute 2003)

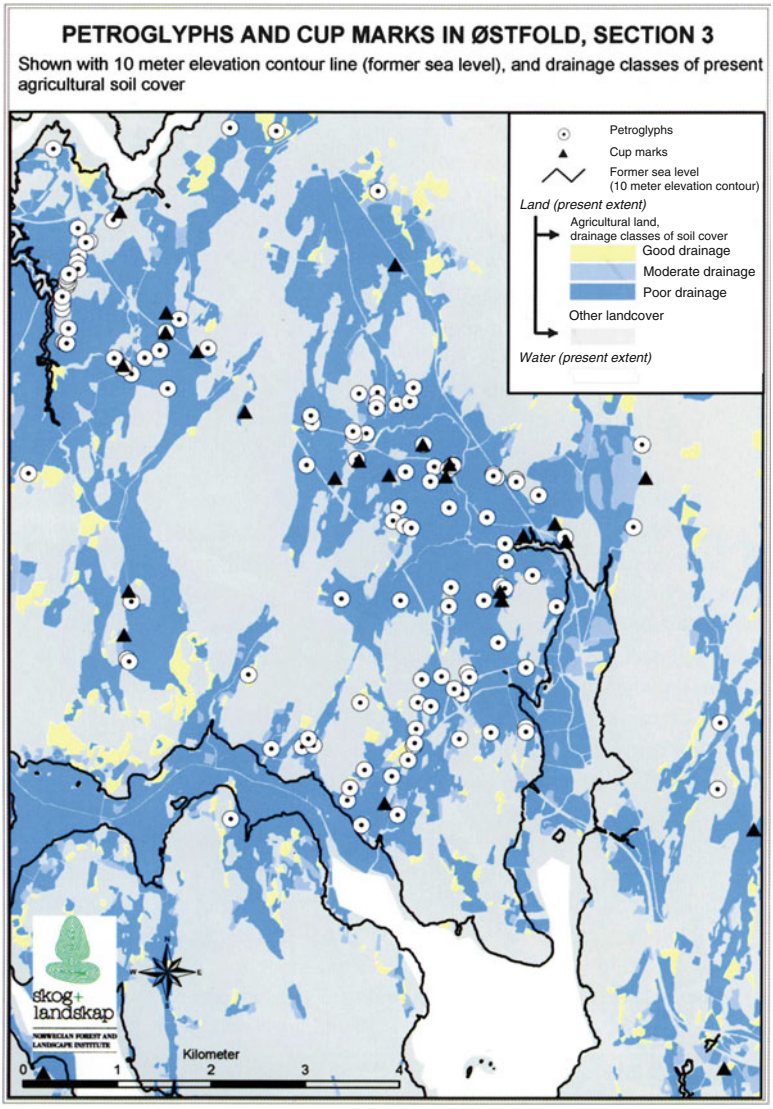

Fig. 3.8 Map showing the distribution of rock art sites (figures and cup marks) and drainage classes in relation to areas well or poorly drained soil at Årum and Skjeberg in Østfold, Norway. Former sea level in Bronze Age is marked (Map made for the author by The Norwegian Forest and Landscape Institute 2003)

analyses indicate that these were forested before being altered in the Late Bronze Age. Pasturage seems suitable with this type of soil. First of all, the clay was suitable for providing lush grass vegetation. Secondly, water was easily accessible in the swampy areas with surface water, streams and rivers. The bare ridges made

natural barriers and it was easy to control the grazing flocks within these areas. The proximity to the sea favoured the microclimate on the clay flat lands; warmth from the sea water made the grassy vegetation start to grow early in spring and the winters were mild in such a way that the areas were suitable for grazing throughout the winter. It is possible that we see the outline of a differentiated exploitation of the landscape that is governed by economic and political factors. One could imagine an economic niche based on extensive and expanding cattle-breeding in a region connected by political expansion to another area. The grazing animals could be the key factor in such a system. Grazing animals are able to transport themselves over long distances and as such become an important commodity.

It is evident that regions in Europe with important raw materials such as copper, tin or salt experienced a significant economic upswing in the Bronze Age, and the same holds true for centres situated along the trade routes. However, rich arable areas also gained economically. For example, Denmark and southern Sweden are some of Europe's richest areas in terms of finds from the Bronze Age (Kristiansen 1998a; Cunliffe 1997). In the material recovered, there are indications of extensive exploitation of local resources, specialization and expansion, probably as an economic source for a political organization in rapid expansion and development. Communication over long distances in well-established networks was created and maintained. Behind these patterns, competition for political control, increased influence and development of power is clearly visible. The local political elite in southern Scandinavia probably controlled the supply of imported goods and manipulated the distribution as a principal means in the political struggle for power. This was the start of developing political power and the emergence of paramount chiefs in Southern Scandinavia.

The changes that are visible in the archaeological material from southern Scandinavia seem in large part to have been influenced by fundamental political changes far outside the region's own frontiers (Kristiansen 1998a; Jensen 1997). The strongly established and well maintained trade networks from north to south were communication arteries of utmost importance to the political and economic structures that seem prominent. Bronze, precious metals and finished goods became important elements in the local political struggle, but more important were ideas on strategies for consolidation and acquisition of power. The Late Bronze Age in Scandinavia, as well as in central Europe, was influenced by the eastern Hallstatt which to a large degree manifested itself in periods V and VI in the last phase of the Bronze Age (Kristiansen 1998a; Jensen 1997). One of the most apparent implications of this change lies in an increasing and more varied local economic stimulus and activity. This implies that the local economy needed to be strengthened for the production of a surplus that could function as barter for import.

Military power, warriors and warrior ideology were the most important tools with which to create a political organization in prehistory (Earle 1987, 1991, 1997; Demarest and Conrad 1992). It seems as though the power of the chieftain always emerged from military leadership. The leader institution in itself was created by the ability to lead a war, and the foundation of power was built on the ability to acquire and keep supporters. Control of the economy was strongly connected to the political institution of the chiefdom. Economic control underpins the possibility of financing

military power, but also ideological investments that support the institutional power. However, the economy of a society will fluctuate. In this debate, it is central to understand the economic variation that exists in different societies and the income to be derived from the land based on the natural environment and historical conditions. Some societies changed and acquired an increasingly complicated political structure with complex administrative organizations. The control over the economy in a society implies practical control of the work and everyday life of people, including the surplus that a single household produces that becomes the property of the institutional power and its collected surplus. The autonomy of the individual and the family nucleus had to be sacrificed at the expense of loyalty to a larger political and social unit. This sacrifice was not made voluntarily. Consequently, key elements of success were long-term and gradual changes and adjustments to the new world order in which control of central economic factors was legitimized in the ideology under pressure from terror and military use of power (Earle 1997).

In Østfold and Bohuslän one way to do this was placing a symbolic structure, launching a visual campaign in this landscape. The question is thus: how were symbols a part of controlling political territory? Or is it as simple as that? Therefore, I will present some theoretical approaches to how landscape could have been understood by people in the Bronze Age and how complicated the understanding of landscape actually is.

In modern social science, landscape has been debated extensively, and different culturally specific understandings of the landscape have been emphasized. The landscape was universal, and the same everywhere for all human beings; it was cross-cultural, a neutral dimension. «*Space was quite literally nothingness, a simple surface for action, lacking depth*» (Tilley 1994:9). The landscape came to be considered as neutral in value and thus assumptions about power structure or political or economic dominance were not incorporated into the interpretation. «*The alternative view starts from regarding space as a medium rather than a container for action, something that is involved in action and cannot be divorced from it*» (Tilley 1994:10). Landscape space is created socially and culturally; the landscape thus differs from culture in time and place. Tilley writes that to speak meaningfully of landscape, one must understand only that landscapes exist and all have a different content and meaning (Tilley 1994:10).

A landscape is generated socially and culturally and is subject to constant change. Everyday use changes its cognitive and physical content and appearance. It is open to interpretation, change and transformation. In general, landscape changes as do language and society. The physical landscape is always connected to the cognitive one through links, points or places. These can be visible and pronounced or by contrast, they become visible and acquire a meaning only with the help of cultural codes. Symbols attached to the landscape act in close relation to the active cognitive structures that are always present in the landscape. Tilley's model suitably demonstrates the most important changes that have taken place during the last decades in the analysis of landscape. The understanding of the landscape in the Bronze Age as it was once understood is impossible to reconstruct. These structures are lost, but it is important to understand how central the cognitive aspect of landscape could have been. The rock art could have been part of constructing the cognitive aspect of the

landscape or interact with the myths in one way or another. Through the visual and symbolic structures the mythical and religious level in landscape could have been expressed and materialized. To that notion we could add a political level. Power relations in prehistory were often legitimized in supernatural and cosmological structures.

For a better understanding of how economy and ideology could have function together I will mention an example from Kauai, Hawaii at the time James Cook came to the island (Earle 1997). At that time the islands saw a political change, which probably could best be described as a development from chiefdom to a kingdom. The main sources for boosting the economy were an increase in the production of taro. The construction of irrigation canals was traditionally organized by the local chiefs; the farmers had to do the actual work, but once finished, they were rewarded. Two circumstances are central in the organization of the increasing production: (1) the local family groups who cultivated the land did not need the surplus; they cultivated what was needed for their own subsistence without the irrigation canals. Consequently, although they did the work, they did not create and maintain the irrigation systems on their own initiative. (2) An increasing production and intensification of the cultivation of taro was, however, desirable from the point of view of the chiefs. Through development and maintenance of irrigation canals in combination with intensive cultivation, it was possible to increase the surplus by up to 70 % (Spriggs and Kirch 1992:161 in Earle 1997:78). The change in this tradition had to been legitimized in the ideological sphere.

The clay plains in Østfold and Bohuslän constituted a landscape of high economic value, a landscape that had taken generations to cultivate and open up. Precisely this wide and valuable land area was marked with rock carvings in the thousands. The rock carvings were situated in an open landscape, where the carved figures, the symbols, appeared to advantage (Fig. 3.9). It was here they were visible and could be seen by people passing by. The combination of an open cultivated landscape and the visibility of the exposed rock carvings is the central point in understanding them.

The common political structure in Northern European Bronze Age was a pattern of smaller chiefdoms. At a certain time this situation started to change and larger units developed, based on warrior ideology and warfare. Political expansion had to rely on military forces and the chiefs had to support a larger band of warriors in their service. It was extremely expensive to equip a warrior; they needed weapons and gear in addition to supplies and other types of expenses, raising the total costs substantially. Those chiefs who managed to have an army could do so because they were able to find new sources for increasing their wealth. Extensive areas with grassland and the transformation of forest into pasture, combined with investment in cattle breeding, could have been the main sources for expanding the economy in Østfold and Bohuslän. But these expansions did not come without conflicts. The land was not free; it was probably owned by others—and war had to be part of that strategy. This could have been the background for the rock art and the landscape as a part of an area characterized by occupied territory and undefined rights to land. Therefore control of the new valuable grazing facilities afforded not only military

Fig. 3.9 Rock art site at Skjellin in Østfold. Photography done at night with artificial light and long shutter time (Photo by author and Jørn Bøhmer Olsen)

power, but more importantly—legitimated the ownership of land. Ideology was such a strategy, and the petroglyphs could have been a part of it.

Ideology is easily recognized on Kauai in Hawaii. The chiefs in Hawaii created a major power structure in which symbols, landscape and ceremonies played a central role: «*Materialization was accomplished through an interesting set of physical forms—an elaborate ceremonial cycle, symbolic objects of personal display, monumental temple constructions, and most important a cultural landscape of intensively farmed and physically marked space. The religious cosmology as practiced ceremonially identified the ruling chiefs as gods on earth*» (Earle 1997:169). The chiefs and the warrior aristocracy created an ideological shield around the institution and role of the leader through a series of activities. The connection between the chief and the God(s) was central but the connecting link between these two was a critical passage in the ritual organization. «*The chiefs* […] *orchestrated an elaborate ceremonial cycle that established the cosmic order as related to earthly existence*» (Earle 1997:169). The way in which this ideological imposition is carried out through politicizing of symbols and public rituals is illustrated by Valeri (1985) and later cited by Earle (1997) «*Practically every important pragmatic action [was] associated with and regulated by a ritual counterpart*» (Valeri 1985:154 in Earle 1997:169).

The rituals were focused to a large degree on economic and political matters and the stage management was totally controlled by the power elite. Thus, "*the aims of ritual action* [were] *always very mundane", in such a way that both the secular and sacral sphere were always united in "chiefly practice*" (Earle 1997:169). In other words, all the actions of the chief seemed to stem from a relationship with a divine order and against the background of a predetermined scheme of action made accessible only by the chiefs. Only with such a practice was it possible to legitimize actions that could have great consequences for society and the individual inhabitant in the archipelago; despite war, famine and casualties, the institution of chiefdom remained. The wars and the political scenario were elevated to an evil not imposed on the society by secular political actors but rooted in the kingdom of God and the hereafter.

The landscape in Hawaii was brought under ritual and political control, a goal which was central to the economic exploitation of the landscape. The ideological transformation of the landscape in Hawaii was achieved through a series of constructions by the chiefdom, namely agricultural facilities, paved roads and religious structures. The ceremonial constructions can be traced through a long time period in the history of Kauai, but they were not erected regularly throughout the time period. Investments in construction in some phases were extensive and in others absent. The largest and most intensive phase of construction occurred in a period that coincides with the most political changes. The constructions are seen in the context of the growth and consolidation of the complex chiefdoms, and the need for ideologizing and increasing ritual investments is striking. «*That construction* […] *was significant at the emergence of complex chiefdoms as a means to institutionalized power, but after materializing the emergent ideology in the monuments, the Hawaiian chiefs did not need to continue their construction on such a large scale*» (Earle 1997:179). It is clear how the increasing ritual activity occurred ahead of extensive and fundamental changes in the dynamics of power in society. Ideological investments in order to increase the authority of the chief and mark and stimulate the collective atmospheres in the society coincide with a start-up of controversial political ventures.

In Østfold and Bohuslän the rock art represents the mark of the ruler; they—in one or another way—represent the new political elite that had gained control of the area. Every single person that walked the tracks through the pastoral area and saw the petroglyphs was concerned about their meaning. To understand more precisely how symbols convey a message in the public space, and how that could be important for understanding of rock art, I will present some general lines in the theory that is called social semiotics.

Social Semiotics, Landscape and the Science of Signs

The term social semiotics was defined by Saussure and semiotics embraces the phenomenon that everything in a society can be seen as types of communication, organized through principles corresponding to linguistic and textual forms. These

must be understood in relation to basic fundamental rules and principles. Such phenomena are studied today in a series of academic disciplines ranging from psychology, sociology, social anthropology, to philosophy, linguistics, literary studies, art and film studies, etc. (Hodge and Kress 1988). Social semiotics can thus be said to be not a subject of its own, but rather a fragmented discipline that can be used as a theoretical and analytical method for the interpretation of communication in society in general.

Semiotics offers a systematic, extensive and comprehensive analysis of communication phenomena and how these are related to a large spectrum of different expressions and media. Semiotics has thus developed into more than a linguistic tool of analysis and is today closely related to the way in which communication between social and cultural conditions function in the society, hence the term "social semiotics". The role of signs and symbols in society and how these are politically and ideologically charged was researched within structuralism and post-structuralism by the French anthropologists and philosophers such as Lèvi-Strauss (1966), Foucault (1972), Derrida (1978), Barthes (1973) and Ricoeur (1989).

Two different traditions connected to the theory of the function of signs and symbols as linguistic structures can be distinguished. The first one has its roots in the semiotics of the American logician C.S. Peirce, developed fragmentarily at the end of the 1800s and published from 1931 to 1958 (Prucel and Bauer 2001). According to Pierce, signs can be part of a sign system in three different ways: icon, index and symbol. Icon implies that the relation between signifier (the form of the expression) and signified (that which is expressed) is fixed, that is, the sign shows likeness to that which is symbolized, for example a horse is a horse. Index implies a causal relationship between signifier and signified, for example smoke means fire since smoke usually occurs as a result of fire. Symbol means that the relationship between signifier and signified is arbitrary and unmotivated, at least at the outset even if the inherent meaning is momentarily chosen and no logical passage exists from expression to content (Hawkes 1977; Hodge and Kress 1988; Prucel and Bauer 2001).

It is the contrast between these signs that is important for the interpretation. The examples are many, but to mention a few: traffic signs, the Christian cross, the lions and the eagles in coat of arms. On the other hand, not all symbols are chosen arbitrarily, with an arbitrary and unmotivated relationship between signifier and signified, some symbols can be seen to have a "transparent syntax". Traffic lights showing red means stop. This is not arbitrary and unmotivated, since the colour red releases in the deeper structures of the human psyche an instinctive reaction to danger. The choice of the eagle and lion as symbols for nations and states is also not a random choice, since these species symbolize strength and authority within a cultural tradition (Hodge and Kress 1988).

The other tradition is founded by the Swiss linguist Ferdinand de Saussures, Structural Linguistics, based on a lecture manuscript published in 1915 (Hawkes 1977; Hodge and Kress 1988; Prucel and Bauer 2001). Structural linguistics was further developed in France in the 1950s and 1960s by Claude Lévi-Strauss to include a theory of society and a method for interpretation. Under the new name of

structuralism, ideas were advanced on how language systems became ruling mechanisms behind the organization of all social aspects. Semiology was gradually re-christened semiotics and subsequently social semiotics and the theory acquired a wider role as a tool for analyzing social communication in societies. Later intellectuals such as Barthes (1973), Derrida (1978); Ricoeur (1989); Foucault (1972); Lacan (1977) and Althusser (1971) further developed semiotics.

Semiotics gradually became the study of how primary linguistic forms are also found in the material culture such as food, clothes, images, sound and music, etc. All of these could be understood as sign systems and be related to social and cultural codes, grammar and strategies deeply anchored in the existing social and cultural systems. The use of symbols in societies became strongly focused on the negative forces of society that controlled the symbols, especially, the economic forces. It was the capitalists in society that seduced the population with symbol systems, through ideological "mystification" (Althusser (1971), Barthes 1973 and others). Later, this was much criticized (see Giddens 1981, 1984).

The whole basis for semiotics and other communication theories is the principle of «message/reception». A message is conveyed and received and the infrastructure that makes communication possible is called a logonomic system (Hodge and Kress 1988:2–5). The concept logonomic system is constructed from the Greek *logos-thought* or thought system and *nomos*—control system. A logonomic system is a set of rules and conventions that decide the conditions for production and reception of meaning: who can convey a message, how it is to be received/understood and by whom. Logonomic systems determine how social semiotics is to be practiced in relation to the production of a set of statements (rules connected to the conveying of a message) and a receiving regime (rules connected to reception of a message) (Hodge and Kress 1988:4). A traffic light can be used to illustrate the theoretical example. The transition from red to green represents the semiotic statement; the traffic lights, the traffic rules and driving patterns is the logonomic system created by the national authorities to achieve increased road safety. The individual driver receives the statement. The logonomic system is never hidden; it is highlighted and emphasized with significant authority and power. However, both message and the manner in which it was conveyed are often far more complex that this example. The single sign, the smallest atom of semiotics often occurs in structures in which many signs are connected in order to give a fuller and more precise expression. This complex sign structure is called a *text*. The concept *text* derives from the Greek *textos*, something that is woven together (Hodge and Kress 1988:6).

Illuminated advertising is a central contemporary actor in the battle for the symbolic urban space, but the use of visual techniques for communication in space is not new. In older European cities there are layers and layers of symbolism that have used the same techniques and codes as advertising. The churches and Gothic decoration are one example; public buildings from more recent eras are another. Good examples of the use of symbols connected to strategies for marking and making visible exist in the urban context. The city space is strongly infected by different symbolic codes with clear conflicts of interests. Churches and cathedrals with elaborate architectural decoration stand in contrast to the royal or governments

buildings such as parliaments and palaces. The forces of private capital are represented by high rise office buildings in steel and glass, illuminated advertising and shop windows. The size of the building, its decoration and grandiosity surpass the practical, appropriate and functional needs. The symbolic content is seen as more important. The pyramids in Egypt and Central America, the Great Wall of China or Versailles in France, are all examples of architectural constructions in time and space built in relation to kings or emperors—the power of the king and the greatness of the nation.

As a general conclusion, a logonomic system can operate in such a way that the semiotic action can be conveyed from sender to recipient. Communication in the public space is often politically charged, but both the powerful and the less powerful use signs in visual strategies to make them visible and in order to attain political and economic goals. Visibility and presence through symbols is an essential political technique. The political elite are often the dominating power and most visibly present in the public space, but not always. Counter-strategies in a power struggle will also try to use symbols in the same way as the established groups. Urban graffiti has been seen as a successful symbolic counter-strategy in urban space; through spray painted art, powerless groups can make themselves visible. This phenomenon is not unlike rock art and is debated by Jeff Ferrel in his book Crimes of Style: Urban Graffiti and the Politics of Criminality (Ferrell 1996). Political ideology is more important in times of unstable power situations, conflict and counter-strategies; thus, more is invested in symbols during such periods. Therefore it seems likely that the strongest visual markers exist in conflictive and unstable societies

Silent and Powerful

Those who made the rock art invested an enormous amount of time and effort into it; therefore, it must have been important—if not, it would not have been made. The rock art in Southern Scandinavia shows some symbols that are most likely of supernatural origin, but more dominant are motives of military significance. They are motifs that show the chief's most important reasons for coming into power—military support - warriors, chariots and ships. To these could be added motives that probably represent their ideology in one or another way.

The symbolic and visual strategies connected to political and territorial legitimacy occur in different forms and on different scales, but the underlying psychological and strategic techniques are comparable. It is part of the same strategy: to make visible the greatness and influence of the political elite in the landscape and in society. The symbolic discourse that is attached to space is almost always a bearer of a political and ideological content connected to an economic and political structure. The landscape always has a third dimension, a cognitive and symbolic field. The exploitation and manipulation of this dimension through a massive symbolic strategy could put the landscape under far stronger political and ideological control than the use of physical power. These symbols were present in the landscape all the

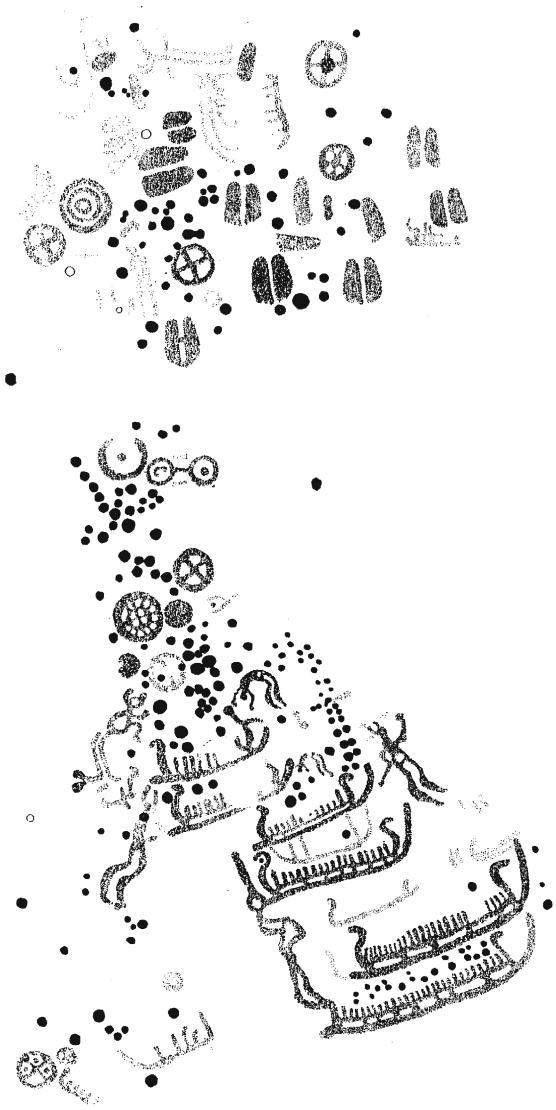

Fig. 3.10 Skjellin in Østfold (Tracing by author)

time—symbols that silently reminded the passerby of an important message (Fig. 3.10). In southern Scandinavia rock art could have been a way to legitimize territorial claims in an area that developed very fast and became an important economical source during a time with many conflicts, locally and interregional.

However, I argue that this theoretical approach has a wider and more general validity, and is applicable at other places and about different rock art styles. In this particular case, the background for the rock art in southern Scandinavia seems to be

related to economic and political structures. Rock art is, in my opinion, culturally specific; it is therefore not possible to generalize and context is the most important element in the interpretation. Therefore I will end with some reflections about social semiotics and rock art from a different cultural environment.

I have been interested in the rock art of the US Southwest for a long time, an area that is very different from South Scandinavian environment, culture and history. My first thoughts when I visited sites there were that these sites mark "strong places" in the landscape. It seems that much of the rock art there is situated in very visible spots and these places must have been of special significance. On the other hand, the diversity of site situations were also striking and it seems difficult, particularly for a foreigner, to understand the context. What were these heights out in the desert, with large, black boulders covered with figures? Or the steep cliffs depicting masks and large anthropomorphic figures? Do they tell about mythological, spiritual or historical places in the landscape, or could this marking be of ethnic significance and represent the territory of a specific tribe? Was it marking borders between territories? Or a particular hunting ground and therefore the rock art style also became bearer of a political strategy? The large diversity of styles that is present in the Southwest and its distribution in the space means that style must have played an important role as bearer of cultural significance and important codes. Polly Schaafsma, who has worked with identifying and different styles in this area, writes: "*We have also seen that art styles, once we can identify them, are sensitive indicators of cultural relationship, of systems of communication and exchange, both temporal and geographical*" (Schaafsma 1980:344). Rock art style was probably an important part of the communication, in one way or another, to members of their own community. It could have told about identity to the passerby; it could have said: this is our land. What that message could have conveyed is important understanding of the landscape. Peter J. Pilles and Ted Vaughan write more in detail about the Yavapai mythology as it is recorded in the Red Rock country near Sedona in central Arizona, an area with hundreds of rock art sites:

> "Yavapai religious traditions are closely associated with the Verde Valley and especially with the Red Rocks country. The most important of these traditions relate to their origins, the activities of their most important culture heroes, and association of supernatural and various events with specific places and areas" (Pilles and Vaughan 2003:5).

The rock art's visual, permanent expressions could have been binding together mythological landscapes, physical landscapes, political landscapes and their oral, unwritten and collective tradition. Rock art and its different styles could have materialized the oral tradition and materialized the cognitive layer into the physical layer. In that way the landscape became a bearer of the society's collective memory, and therefore also it's right to live and rule in that territory. Rock art style could have conveyed a message that was strictly political and its main purpose was to inform passersby, foreigners, or trespassers that this path is entering our land. When this symbolic structure was active back in prehistory, any person would know the code that the petroglyphs signify; it was part of the common knowledge in the society. The rock art was a silent sender of a message.

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