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Applying cartosemiotics to rock art

an example from Aspeberget, Sweden

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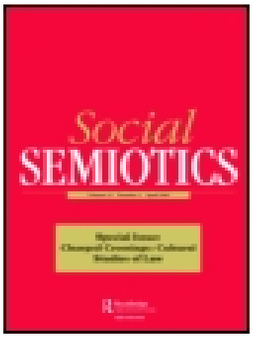

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Applying cartosemiotics to rock art: an example from Aspeberget, Sweden

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ABSTRACT
This study aims to shed new light on the petroglyphs found at the site of Aspeberget 12 at the World Heritage site of Tanum, Sweden, from a semiotic perspective. We demonstrate the semiotics of power inherent in the arrangement of the petroglyphs. We start by describing the site in an archaeological way, in order to give an overview of the empirical material used in this case study. Against the backdrop of the overview, we introduce our analytical tools with reference to cartosemiotics, cultural semiotics and, Charles Sanders Peirce's theory of signs. We suggest, in a tentative conclusion, that Aspeberget 12, as a type of "map", displays a clear "Ego-culture" and a possible journey. We also suggest that the visual narratives at Aspeberget 12 represent the authority of the Ego-culture and its development. Details of the figurative images such as ships, axes and spears might have been displayed as markers of the high technological standard of the Ego-culture, and thus of power.

KEYWORDS
Cartosemiotics; cultural semiotics; iconicity; signs; petroglyphs; Swedish rock art

Introduction

In northern Europe, rock art can be found from Scania in the south to Alta in the north, and from Trøndelag in the west to the White Sea in the east. In this vast area about 30,000 sites with petroglyphs have been registered, about 20% of them with figurative images, and the rest consisting of non-figurative configurations such as cup marks and cupules (Goldhahn and Ling 2013). As to the motifs of the figurative images, we may discern representations of human figures (e.g. warriors, hunters), footsoles, prey and domestic animals (e.g. elk, reindeer, bulls, deer), wagons, ploughs, instruments (e.g. lures), weapons and tools (e.g. bows, swords, axes), sun crosses and other symbols, and a large number of ships. Moreover, the constellations and renderings of these figures are often vivid and dynamic, suggesting various forms of social (inter-)action, such as hunting activities, combat, and sexual pursuits.

Traditionally, these images have been dichotomized into an older northern "hunter-gatherer" tradition and a younger southern "agrarian" tradition. This view has been questioned in recent research as the southern tradition is today regarded as the outcome of

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maritime, rather than agricultural, rituals. From this perspective both traditions reflect seasonal activities such as large game hunting in the north and long-distance trade carried out by people in the south, and it has been argued that the southern tradition, to some degree, was influenced by the older northern one (Ling and Rowlands 2015). The practice of making rock art in northern Scandinavia started around 9000 BCE and continued to the birth of Christ (Gjerde 2010), while in southern Scandinavia the rock art tradition started around 1700 BCE and ended around 200 BCE (Ling 2008).

In southern Scandinavia, the region with the highest density of rock art is Bohuslän. In this study, we discuss the Aspeberget 12 site in northern Bohuslän, one of roughly 20 panels located at the Aspeberget hill at the World Heritage site of Tanum, Sweden. Today, the site is situated in an agricultural landscape, but due to shore displacement processes the site was close to the sea in the Bronze Age (1700 to 500 BCE). Some parts of the hill were just by the shoreline in the early Bronze Age. Even though the panel under study was separated from the sea by a strip of dry land, the sea was nearby and it was part of a seascape (Ling and Rowlands 2015, 90). Indeed, based on the landscape reconstruction and the many ship images which are found on the rock art panels it has been suggested that the Aspeberget hill functioned as a maritime aggregation site in the Bronze Age (Ling 2008, 117–123).

Against the backdrop of an archaeological discussion, later in this paper we will introduce our semiotic analytical tools: in this case, with reference to cartosemiotics, cultural semiotics and Charles Sanders Peirce's theory of signs. We suggest, as a tentative conclusion, that Aspeberget 12 might be a type of "map", displaying a clear Ego-culture, its authority, and a possible journey. Ego-culture is contrasted to Extra-culture, the Other with whom the Ego-culture is in a relation of closeness, and to the Non-culture where distance and even animosity prevails.

The concept of a "map" may not seem obvious; but recent research tends to stress the maritime character of the south Scandinavian rock art and its relation to long-distance travel (Ling 2008, 2013). The ship is a dominating feature in many rock art sites; this is also the case for Aspeberget. Long-distance travel at sea depended upon geographical knowledge; in this context, the concept of the map is very much germane. Before initiating the semiotic discussion, the site will be discussed from an archaeological perspective with a focus on the biography of the Aspeberget 12 site and how the images are related to contemporary material culture.

Methods, materials and discussion: the biography of the Aspeberget 12 site

The Aspeberget 12 site has an extended biography covering a major part of the Bronze Age (Fredell 2003, 130–136). The panel develops over time and its character changes accordingly. The composition of the motifs and their individual visual details can be tied to various time periods, due to similarities and differences in their expressions. Therefore, the concept of map, as studied here, might not perhaps be applicable to the whole of the Bronze Age. To investigate this further, a detailed discussion of the Aspeberget biography is important.

Recently, the task of establishing Scandinavian rock art chronology has been made easier, thanks to a variety of studies. A substantial part of south Scandinavian rock art is representational and was inspired by contemporary material culture; this makes it possible

to compare objects depicted in rock art with objects and other kinds of depictions known from the archaeological record (Ling 2008; Ling and Bertilsson 2015; Bertilsson 2015; Bengtsson 2013; Skoglund 2016; Horn and Potter 2017). For example, objects depicted in rock art have been compared to datable metal objects and rock art ship images have been compared to similar images depicted on artefacts dated to one of Montelius' six periods (Kaul 1998) – see below. A systematic survey of rock art panels and their relation to shore displacement processes has been conducted in northern Bohuslän and Uppland. Based on this study it is possible to identify the earliest possible date for images made close to the Bronze Age shoreline (Ling 2008, 2013).

Based on the conclusions drawn in these studies it is possible to analyse the Aspeberget 12 site and identify different phases in the development of the panel. As noted above, the Aspeberget panel consists of motifs produced during different periods of the Bronze Age (Fredell 2003, 130–136). The Scandinavian Bronze Age is divided into six periods which cover roughly 200 years each and these periods will be used in the discussion below. The four phases relevant for our study are highlighted in Figure 1.

Montelius period I, 1700–1500 BCE

The earliest phase of the panel dating to Montelius period I consists of the larger ship with semi-circular in-turned prows, which is situated in the upper part of the panel (Ling 2008,

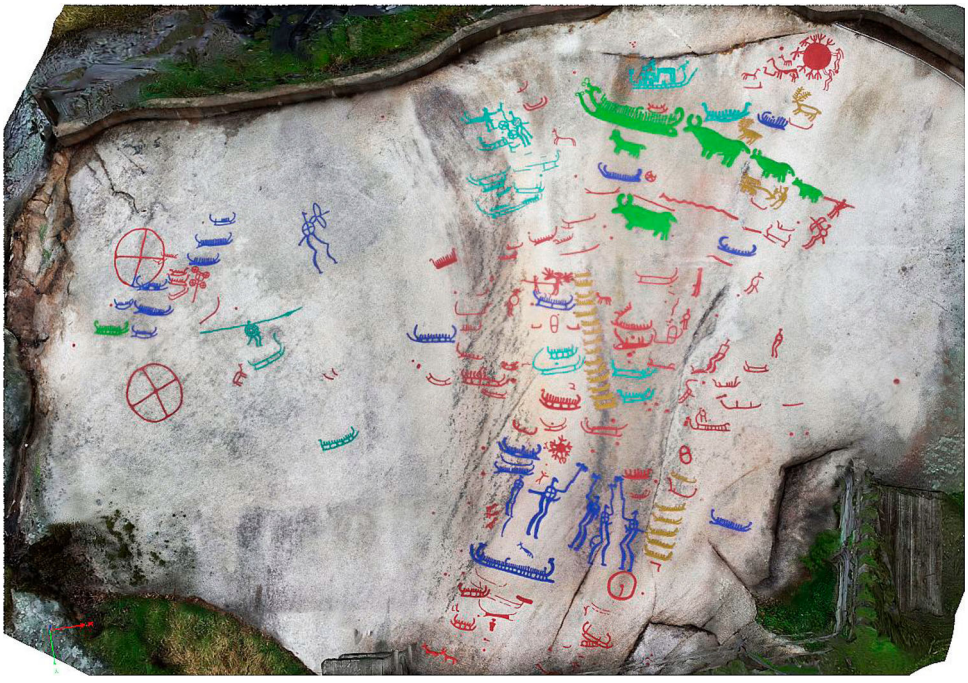

Figure 1. The chronological development of the Aspeberget 12 site. Different colours represents different phases, see text for further explanations. Green: Montelius period I, 1700–1500 BCE; Dark blue: Montelius period II, 1500–1300 BCE; Light blue: Montelius period III-IV, 1300–900 BCE; Brown: Montelius period VI and the earliest Iron Age, 700–200 BCE; Red: Images not possible to date. Image: Tomas Persson based on orthophoto (SfM) made by Swedish Rock Art Research Archives (SHFA Id14185) (www.shfa.se).

102, 105). In close association, and aligned to this ship, is a row of three bulls; another two bulls are found just below the ship. As noted by Johan Ling and Mike Rowlands, bulls are quite often associated with ships dating to Montelius period I and an early phase of period II (Ling and Rowlands 2015, 96). In this specific case a similar date for the ship and the surrounding bulls is further strengthened by the picking technique, as both the hull of the ship and the bodies of the bulls are very deeply carved. To the far left on the panel is another smaller ship with semicircular in-turned prows that also dates to this period. So this phase consists of at least two ships and five bulls.

Montelius period II, 1500–1300 BCE

In-turned – but not semicircular – prows, both in the fore and in the stem, characterize ships dating to Montelius period II (Ling 2008, 102–105). These are represented in various parts of the panel. Three ships are found on the top of the panel; to the left is another group of six such ships; and in the middle and lower parts of the panel we find another six ships with in-turned prows. Furthermore, on the bottom of the panel there are four people with axes in their hands. A characteristic of these axes is that the metal blade incorporates slots for the wooden handle – i.e. these are shaft-hole axes. In the Nordic Bronze Age shaft-hole axes appeared only in Montelius period I and II (Montelius 1917; Ling and Bertilsson 2015). Another significant detail is that the body of the axe head is smaller at the rear side of the handle, and in one case we can see how this smaller part of the axe ends in what seems to be a knob. The best match to this particular arrangement are shaft-hole axes dating to Montelius period II, which typically end in a knob at the back of the axe head. Such axes have been found as stray finds and in hoards. They appear in some elaborate hoards like the famous Stockhult hoard in Scania and the Kylinge hoard in Blekinge (Rydbeck 1926). This indicates their special status (Kristiansen 2012).

A characteristic of the axe bearers on the Aspeberget panel is their height in comparison to a majority of the human images on the panel. Also important is the fact that their torso is made up of a wheel cross – i.e. a circular image divided by a cross. A person with similar size and design is standing next to the axe bearers, suggesting that this human image belongs to the same phase. A similar observation can be made concerning the archer in the left part of the panel. This person is linked to the axe bearers by having a similar height and a torso consisting of a wheel cross. The dating of the archer is doubtful; but a dating to Montelius period II seems to be the most likely alternative.

This phase, then, consists of at least 15 ships, four axe bearers, the person standing next to the axe bearers and possibly the archer in the left part of the panel.

Montelius period III–IV, 1300–900 BCE

This phase consists of ships with everted bowed stems, sometimes ending in an animal head (Ling 2008, 103–105); or ships with less pronounced stems and similar to the ones found below the Hjortekrog cairn which is dated to period IV (Widholm 1998).

Ships of this type occur in the upper part of the panel where they are spatially associated with humans and animals depicted on a smaller scale than the ones from the

previous periods. These kinds of ships also appear in smaller numbers on other parts of the panel.

One of these humans is holding a shield characterized by dots arranged in a circular manner. The arrangements of the dots are likely a reference to one of the two main types of metal shields in use in the Bronze Age, namely, the Yetholm shield. In Britain, where the majority of these shields are found, they are associated with the Penard period (*c*.1300–1125 BCE) which corresponds to Montelius period III (Cowie, O'Connor, and Uckelmann 2016, 177).

A shield with different ornamentation appears in the left part of the panel. Concentric circles characterize this shield, a reference, perhaps, to the other dominating shield type in the European Bronze Age: the Herzsprung. The exact date of this type of shield is the subject of some debate, but a dating to Montelius period III and IV is not unreasonable (Uckelmann 2011, 2014). This person also has a spear attached to the body. The spear is difficult to date, but is probably Early Bronze Age (Horn, 5 April 2017). Just below the person with a spear and a shield is a ship dating to period IV. At the bottom are three bird images. These motifs were probably added in period IV when the bird motif gained a significant role in the Nordic metalwork.

To sum up, this phase consists of a number of ships and two human images having shields, one of which also has a spear. Three bird motifs also belong to this period.

Montelius period VI and the earliest Iron Age, 700–200 BCE

Even though the Aspeberget 12 site holds images from a large part of the Bronze Age, ships typical of Montelius period V characterized by a "wavy" and sometimes elaborate animal head are lacking. In addition, people holding swords with winged shapes, which are typical of this period, are also lacking. Thus, there is little clear evidence of activities during period V, while the panel seems to have been reused again at the very end of the Bronze Age and the earliest Iron Age. To this phase we can attribute the two rows of almost equally sized ships on top of each other which have a design typical of Montelius period VI and the Pre-Roman Iron Age (Ling 2008, 105).

In the upper right corner one can find a bow ard, which is a composite plough where it is possible to replace the ploughshare, and similar wooden ards have been found in Denmark, for example (Glob 1951). These kinds of ards replaced the crook art around 800 BCE (Skoglund 2008). The ard should thus be dated to late period V or later. Consequently, the person manoeuvring the ard is probably of a similar date.

On the panel there are animals with elaborate horns undoubtedly representing deer. The deer motif seems to be a rather late phenomenon in the rock art of Bohuslän, dating to 800–500 BCE, i.e. late Montelius period V or VI (Fredell 2010, 65).

Thus, this phase consists of a rather large number of ship images, a person ploughing a field and two deer motifs.

Images that cannot be dated

There are a number of images lacking datable features. These include the two larger wheels or wheel crosses in the left part of the panel. One of these is cut over two ships

dating to Montelius period II, but the time distance between the ship image and the wheel is unknown.

To the middle (right part) of the panel, several human images cannot be dated due to lack of chronologically significant features. There are two distinctive features on the panel in the shape of sun-discs with associated threefold images directly linked to them. The one at the top also has four associated human images. Unfortunately, it is not possible to give any accurate dating suggestions for these motifs.

Spatial patterns

The above discussion indicates that the motifs on the panel were made during a period of 1500 years. Moreover, the details of the motifs, their arrangement on the panel, display social practices. We will further analyse these below. Even though this complicates any attempt to interpret the panel, we argue that it is possible to identify different phases, to characterize them and to find out how later phases relate to already existing phases in terms of social practices.

The first features on this panel were added in Montelius period I and the key images are the larger ship on the top surrounded by five bulls. The bulls are depicted as possibly entering the ship and, presumably, the artisan, by combining a herd of bulls and a ship, wishes to give the viewer an idea of a ship that is not on the open sea but rather lying on the beach.

There are several examples of bulls and ships in combination dating to this period in northern Bohuslän (Ling and Rowlands 2015). It has been argued that the shape of the horns is reflected in the outline of the ship and furthermore that the combination of bulls and ships might refer to a ritual where the strength of the bull is transferred to the vessel before embarking.

It is also possible to take a more practical standpoint and argue that when making longer journeys by boat there is a need for food to be taken aboard the vessels. Thus, the bulls might serve as a metaphor for supplying the ship with provisions in preparation for the journey, since cattle were a very important feature of early Bronze Age agriculture (Holst and Rasmussen 2013). Note that there is no reason to assume that livestock was brought onto ships, which were likely too small and unstable. Arguably, the addition of bulls to the ship refers metaphorically not only to food, but to notions like “home” and “embarkation”.

In Montelius period II the larger ship on the bottom of the panel and the four axe bearers appear. These kinds of axes are quite rare in the archaeological material dating to period II. They appear primarily in hoards and as single finds in Denmark and southernmost Sweden, while they are absent in Bohuslän (Kindgren 1999). They are present in the famous Stockhult hoard from Scania where they occur with exotic objects such as two unique male figurines. Furthermore, a recent re-documentation of the rock art in the Kivik cairn, also in Scania, has revealed that five non-hafted axes of this kind are positioned aboard a ship on slab No. 2 (Toreld and Andersson 2015; Bertilsson et al. 2017, 293). Due to the unique combination of images appearing on a stone inside a monumental cairn measuring 75 metres in diameter, the Kivik cairn has been interpreted as having been designed for someone in the very upper stratum of society (Randsborg 1993; Goldhahn 2013). For the above reasons, the appearance of these kind of axes at Aspeberget suggests qualities of “foreignness” and “exclusivity”.

In period II the majority of the ships in the western part of the panel appear. The ships all move in the same direction and are in close proximity to each other as if representing a fleet of ships. Close by the ships is another vehicle of transportation, namely a four-wheeled wagon of uncertain date. Altogether this part of the panel seems to refer to the notions of "travelling" and "transit" (Figure 2).

In Montelius period II each of the three different compositions described above thus had its own character and seemed to have referred to rather different kinds of notions such as "home", "foreignness" and "travelling". A key question, of course, concerns whether these different parts of the panel stood by themselves, or if they were meant to be viewed, and understood, in relation to each other. The latter of course, is a prerequisite for studying the panel in terms of being a map.

The larger period II ship at the bottom of the panel resembles the period I ship on the top of the panel. Out of the many ships displayed on the panel this is the only ship which equals the larger period I ship in size and in the number of persons aboard the ship. It is situated below the period I ship and, presumably, this ship – by its position, shape and size – refers back to the older ship on the top of the panel.

Orientation is another way of grouping and relating different images to each other. The images on the top are oriented towards the left. The fleet of ships to the left on the panel, on the other hand, is positioned between the two other compositions and orientated towards the right, thus relating itself (by its position) both to the upper compositions of bulls and the lower composition of axe bearers. At the bottom of the panel there is another situation. In the lower part of the panel, images are directed both towards the right and towards the left, thereby including both the ships and the human images.

The consistency with which the directionality of images was used to display different patterns on the panel indicates that the orientation of motifs was a conscious decision. The various orientations in use create a sense of directionality and help to link images in various parts of the panel to each other. Arguably, much more random directionality can be expected if images are unrelated.

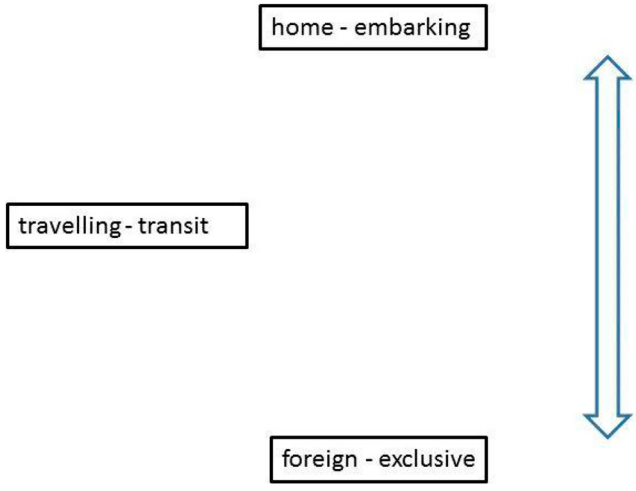

Figure 2. A simplified model of the three main parts of the Aspeberget 12 panels and their reference to possible different concepts. Image: Peter Skoglund.

The structure established in period II was elaborated in later periods by the addition of new images. Some of these fit very well into established structures, such as the addition of a man ploughing a field close to the five bulls and the addition of the spear holder close to the archer in the left part of the panel. However, by the addition of a number of new motifs throughout the Bronze Age and the earliest Iron Age, the spatially well-defined clusters of three sets of images in various parts of the panels became blurred. Henceforth, we will concentrate on Montelius period II, since the map structure seems more evident in this period. The map concept discussed below is thus based on images with a dating to Montelius periods I and II marked by green and dark blue colours in Figure 1.

Applying a semiotic concept of a map to Aspeberget

A reasonable assumption regarding representational pictures is that they are meant to be interpreted also by someone other than the artist, a "receiver" of the pictorial "message" (Janik 2014). That is, they are not private but should be seen in the light of a social context. Constrained by the archaeological chronological and spatial analysis above, it is possible to propose theories about the display of the pictures, using comparison with more familiar pictorial phenomena. For example, taking as a starting point the assumption of a directedness in the organization of the motifs and images on the panel makes it possible to treat the panel as representing a journey, or a map. The suggestion to look at the panel as some form of map, in turn, unlocks ways of inferring interrelatedness (orientation and relations based on spatial closeness) between motifs on the panel. This approach makes it possible to test new ways to understand, at least partly, what the panel may represent. As an analytical tool, we will therefore use a semiotic model of maps, elaborated within the field of cartosemiotics and cultural semiotics (Rédei 2007; Ljungberg 2015). However, the question of whether it is a map of geographical space "which actually exists", or a plan which "is intended to exist" (Charles Sanders Peirce in Stjernfeld 2000, 365) must remain open, beyond the scope of this essay. Analysing the panel as a map does not imply that the panel worked as a modern-day chart, representing "coordinates" that exist in an actual territorial reality and which aid orientation, recognition, and ultimately planning, in that very territory. Indeed, maps did not always function in this sense. Medieval maps, for example, often did not represent "reality" as we understand the function of maps today (Ljungberg 2015, 762). Rather, they could represent ideas necessarily lacking a factual basis, e.g. mythical lands. Maps could thus rather be more related to storytelling than to navigation.

Following Ljungberg's (2015) cartosemiotic interpretation, we exemplify our case study of Aspeberget 12 with the historically very different view of maps, here represented by the Hereford *Mappa Mundi* (approximately from 1300 AD) – one of the most detailed and best preserved maps from medieval England. The map can be said to display the culture and worldview of England at the time. While we are aware that the Hereford *Mappa Mundi* and the Aspeberget panel differs in many respects, such as the time frame for their respective creation, the number of artists involved, and so on, we still think that a comparison is fruitful.

The Hereford *Mappa Mundi* is dominated by the Mediterranean and, in the middle of the circular map we see Jerusalem. Strong Christian motifs are represented in the top part of the map, e.g. the Garden of Eden and Christ in Majesty. The map (which is made of

vellum, 1.59 × 1.34 metres) displays cities, rivers and other geographical information, as well as people and animals (see e.g. Flint 1998; Terkla 2004). Foreign people, like the Blemmyes, were, according to contemporary beliefs, warriors with no heads. Their facial features, such as eyes, appear on their chests. More importantly, the Blemmyes were located in Africa and far out towards the map's edge (http://www.themappamundi.co.uk/).

The cultural coordinates of such maps are susceptible of semiotic analysis. Within a framework of cultural semiotics, the "indigenous" culture is defined as the "Ego-culture", the culture best known and most appreciated (Sonesson 2000; Rédei 2007). From the centre of this culture we define other cultures as (1) being close to our own (the "Extra-culture"), in the sense of intelligibility, value, and geographical closeness. In that way the latter stands in an indexical relationship to the Ego-culture from the point of view of the Ego-culture. Or, (2) it can be far from our own culture (being "Non-culture"), in the sense of its lacking intelligibility or value for us and often being geographically remote. In this way the Non-culture is in a symbolic mode (in a Peircean sense). The construction of its meaning depends on arbitrariness. This arbitrariness also defines its relationship to the Ego-culture, from the point of view of the Ego-culture (Rédei 2007, see Figure 3). The Blemmyes on the Hereford *Mappa Mundi* are a good illustration of people representing the Non-culture (hostile and warlike) and thus being "alius" to the Ego-culture, in this case English culture in the fourteenth century. Their bodies have a near arbitrary resemblance to those of the Ego-culture in lacking the most-prized part: a head.

For Peirce, the map proper contains a "dynamical object" which represents the "reality" that we associate with "geographical facts" and an "immediate object" which intrinsically represents the way we mentally imagine a map in our thoughts, our worldview (Ljungberg 2015, 762). The Hereford *Mappa Mundi* might be said to illustrate the latter most prominently, in the same vein that we might perhaps assume that Aspeberget 12 does.

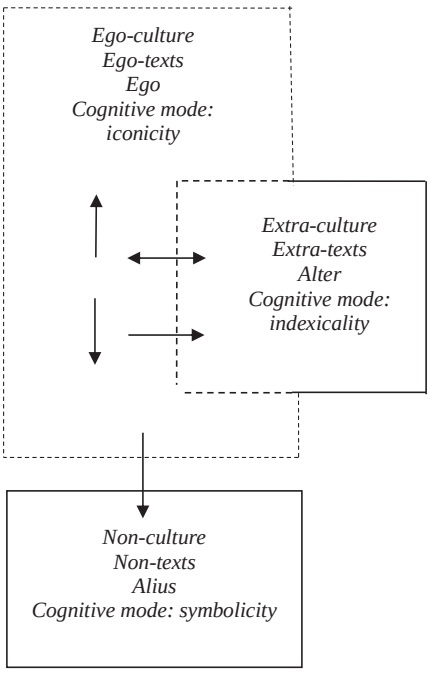

Figure 3. The revised dialogic model [Den dialogiska modellen] (Rédei 2007).

In Aspeberget 12 the ship on the top of the panel and the surrounding bulls are deeply carved, which gives some prominence to them. Semiotically, we could interpret this feature as iconic, reproducing key qualities, i.e. the prominence in style represents the prominence of the Ego-culture – the culture from which perspective (worldview) this panel was constructed; that is, the prominence of the Ego-culture tends to be "exaggerated"). In fact, the Ego-culture is by definition iconic. This is illustrated in Figure 3, where the Ego-culture is larger than the other cultures which are subordinate to the Ego-culture. Consequently, the Extra-culture – the one closest to the Ego-culture – is larger than the Non-culture, which illustrates the fact that the Extra-culture is more prominent than the Non-culture from the point of view of the Ego-culture. The Ego-culture might find some parts of the Extra-culture important enough to let it have some influence. An example of this is translations of texts from the Extra-culture (the source) to the Ego-culture (target). Thus, the Extra-culture may expand into the Ego-culture, which is marked with broken lines defining the Extra-culture from the Ego-culture in Figure 3. According to the model, the artefacts produced in the Ego-culture are always the most important terms of prominence, visually sometimes expressed through exaggerated size.

Notwithstanding this, Hereford, where the *Mappa Mundi* is presumed to have been constructed (at least partly, although there seem to be different suggestions at this point in research, see e.g. Flint 1998; Terkla 2004), has not been given any prominence in the form of size and shape. The focus, instead, seems to have been placed on Jerusalem (The importance of this place for medieval Christian culture is well known). There is a prominence of an indexical nature that distinguishes Hereford. This spot on the map is interestingly effaced, due to, one assumes, the "pointing fingers of Herefordians or pilgrims" (https://www.themappamundi.co.uk/mappa-mundi/). This illustrates the high value of the *Mappa Mundi* in the Herefordian culture, since visitors seemingly used it as a sort of compass to orient themselves in the world, at the same time marking the centre of it, the Ego-culture, by putting their fingers on the spot where Hereford is to be found (http://www.themappamundi.co.uk/mappa-mundi/). Or, at least, the effaced spot mirrors the value assigned to one's current geographical position. The prominence of the larger ship and the five bulls on the top of Aspeberget 12 can also be said to be indexical, since their prominence is a direct imprint of the effort put into the carving. Thus, although the petroglyphs on the panel are predominantly iconic in their nature, the indexical elements are important in giving these the prominence characterizing the ship and the bulls as being parts of the Ego-culture. It is with the Ego-culture that narratives typically start, hence such narratives embody "authoritative representations of how the world works – as well as how it should work" (Jasanoff 2015, 6).

The Extra-culture may be represented in Aspeberget 12 by the ships and the archer in the left part of the panel. These ships are clearly grouped together as a fleet, indicating a larger group of people coming together in contrast to the more dispersed pattern of ships surrounding the bulls. The archer is directed towards the Ego-culture, perhaps indicating conflict and opposing groups of people. However, there is nothing in this composition of ships and the archer that indicates any foreign material culture; yet the form and design of the ships and of the bow reflects a material culture shared over large areas. Plausibly, this part of the panel therefore represents the Extra-culture – an area it was necessary to travel through in order to reach the Non-culture, for instance in a situation of aggression or war.

At the bottom of the panel are another four characters with axes in their hands, representing warriors in the shape of four axe bearers. It is not clear, however, that all these characters represent "the other" – the enemy – since they are both prominent, and there seem to be two sides in the ongoing activities, of which one can very well represent the Ego-culture. The axes, nevertheless, likely stand for hostility in this case. They also represent exclusiveness and something foreign since they are not known in the local archaeological record (Kindgren 1999). Thus, there are indications that this group of images – at least partly – represents a Non-culture. Elements of prominence in the depiction of the Non-culture may also be a way for the Ego-culture to "exaggerate" the strength of the Non-culture and thus, for example underline the achievement of the Ego-culture in a case of victory.

The number of ships and their prominence, as discussed above, might have yet another function in connection with the Ego-culture: as technologies operating "as performative scripts" that organize and make visible the worldview of the Ego-culture, its values, wishes and "social imaginaries" (Jasanoff 2015, 12). These latter aspects are most clearly expressed in the later periods of the Bronze Age, Montelius period VI and the earliest Iron Age, 700–200 BCE. In this period we may observe a number of almost identical ships placed on top of each other, which might indicate the wish to display power, wealth and skill. These features are not in an obvious way related to the map concept, but rather display manifestations of power. As stated above, the map concept seems more applicable to Montelius period II.

Conclusions

The panel at Aspeberget 12 is a visual representation of something that was important to the culture in which it emerged, and maps, in the sense of modelling spatial relationships, have arguably been important to humans for as long as they have made journeys. Therefore this visual representation, with its maritime setting and the many ship images, could possibly represent ideas connected to maps and travels. Even thought details on the Aspeberget panel are specific, the number of ships links it to the majority of the panels in South Scandinavia where ships predominate. This fact indicates a possible theme of journeys, which were arguably a central part of Bronze Age society.

The organization of the motifs, the motifs in themselves representing the life of the Ego-culture, as well as the interrelationship with the Extra-culture and the Non-culture seem to have some similarities to the organization of the motifs of the medieval Hereford *Mappa Mundi*. The petroglyphs of the panel of Aspeberget 12 seem to have been carved by a distinct Ego-culture, expressed in the sense of some images being more prominent than others in terms of the size, depth and placement of the rock carvings, reflecting, iconically, the self-perceived importance of the craftspersons' culture. In conclusion, we find the semiotic notion of Ego-culture and its expressions a promising way to identify local power relations even when seeming "invisible" at first sight, as in the remoteness attendant on studying historically distant cultural phenomena such as Bronze Age rock art. "Ego-culture", as used here, can help us explain differences in size and carving depths found within panels, as well as the organization of motifs, and is likely applicable to many panels in the Scandinavian rock art record.

We also believe that contemporary research in Science and Technology Studies might be applicable to representations of historical technologies, as technology on good grounds might be assumed to have served the authorities in their fight and claim for power, to form and "set" the world view of its subjects and to demarcate the limits of cultures others than that of the Ego-culture. Maps, as visualized master narratives, have historically been important tools for representing the power of the Ego-culture and its social imaginairies at *the expense of* other cultures. Of course, further studies are necessary to validate the applicability of these ideas to other rock art panels. However, we are inclined to conclude that at least the Aspeberget 12 site lends itself very well to a cultural semiotic study that extracts the markers, or coordinates, of the Ego-culture in terms of power and value – and its position in relation to the culture of the Other, close or more distant (Extra- and Non-culture).

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