### ENGRAVED BIOGRAPHIES

# Rock Art and the Life-Histories of Bronze Age Objects

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This article deals with engravings depicting sometimes life-sized Bronze Age metal objects from "closed" burial contexts and "open-air" sites in northern Europe. These rock art images have mainly been used for comparative dating with the purpose of establishing rock art chronologies, or interpreted as a poor man's" substitute for real objects that were sacrificed to immaterial gods and goddesses. In this article, these rock art images are pictured from a perspective that highlights the mutual cultural biography of humans and objects. It is argued that the rare engravings of bronze objects at scale 1:1 are best explained as famous animated objects that could act as secondary agents, which sometimes allowed them to be depicted and remembered. Moreover, two different social settings are distinguished for such memory practice: maritime nodes or third spaces where Bronze Age Argonauts met before, during or after their journeys, e.g. places where novel technological and/or famous objects entered and re-entered the social realms, and burial contexts where animated objects sometimes was buried at the end of their life-course.

Keywords: Rock art, animated objects, cultural biographies of objects, Bronze Age, burial practice, northern Europe.

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Figure 1. Map of southern Scandinavia marking some of the areas mentioned in this article. A. Bohuslän; B. Scania; C. Gotland; D. Östergötland; E. Södermanland; F. Uppland; G. Hadeland; H. Rogaland; I. Jutland.

### INTRODUCTION

During the last few decades rock art research has gone from being perceived as a peculiar subdiscipline that few cared about to become a major research field within interpretative archaeology. New theories and ontologies are used to address novel questions about old art and it is all happening at a pace that makes keeping up with the latest publications a job rather than a pastime (e.g. Bahn *et al.* 2008, 2012; Domingo Sanz *et al.* 2008; Goldhahn 2008a; Goldhahn *et al.* 2010; Jones *et al.* 2011; Back Danielsson *et al.* 2012; Cochrane & Jones 2012; McDonald & Veth 2012; Smith *et al.* 2012; Schaafsma 2013; Gillette *et al.* 2014). What the future has planned for rock art research has never been more unpredictable. All we can say is that the past is changing.

That said, archaeologists are terrible at predicting even the near future, so in this article, I will return to one of the many problems and possibilities I encountered in writing my book "The Hand of Death – an Essay about Bronze and Rock Smiths" (Goldhahn 2007, translated here). One of the chapters dealt with some of the rare finds of figurative rock art discovered in Bronze Age burial monuments in northern Europe (Figure 1). Back then, I found it hard to comprehend that some of the engraved rock art motifs from these closed contexts echoed the bronze objects that where found deposited with the deceased (Goldhahn 2007, 243–278). Why should one depict an object that was placed with the deceased? I still struggle for an answer, and the following is an attempt to reconsider and reinterpret this relationship from a cultural biographical perspective. Before we enter that discourse I would like to take the opportunity to exemplify the relationship between the depicted and real bronze objects for the reader.

### "WHAT YOU SEE IS WHAT YOU GET"

The first example of the relationship comes from what has been called "the richest Middle Bronze Age burial from Norway" (Johansen 2000, translated here), the Rege mound from Rogaland (Myhre 1981). The burial monument in question was 20 metres in diameter and 3 metres high, and it covered an ingeniously built stone cist that was 2 metres long, 0.6 metres wide and 1 metre high (Figure 2). Here, a woman had been laid to rest, adorned with numerous bronze objects dated to Montelius period II, c. 1500–1300 BC (Figure 3): two spiral earrings, two bracelets, a tutulus, a dagger, a fibula, a belt-plate, and some tubes that belonged to a corded skirt such as those from Ølby and Egtved in Den-

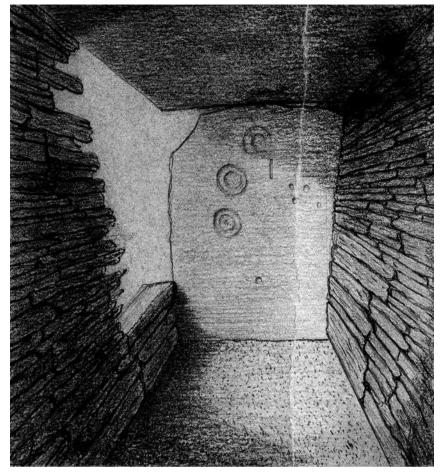


Figure 2. The Rege stone cist with its rock art. Source: the Archive at the Archaeological Museum in Stavanger, Norway.

mark (e.g. Fossøy & Bergerbrant 2013). Key to this inquiry is that the decoration of the belt-plate is built up around concentric circles. The head of the deceased had been placed to rest at one of the end slabs of the cist that had been decorated with concentric circles and cup marks (Nordenborg Myhre 2004). Through their size and shape, some of the engraved figures echo the belt-plate with its ornaments. Following the same line of thought, some of the cup marks on this slab might depict the tutulus that the deceased woman once wore (Figures 2–3).

The same relationship between engraved rock art motifs and bronze objects can be found in the burial monuments at Sagaholm in Småland in Sweden, and Anderlingen in northern Germany. The only object that may have been found in the Sagaholm barrow is a fragmented

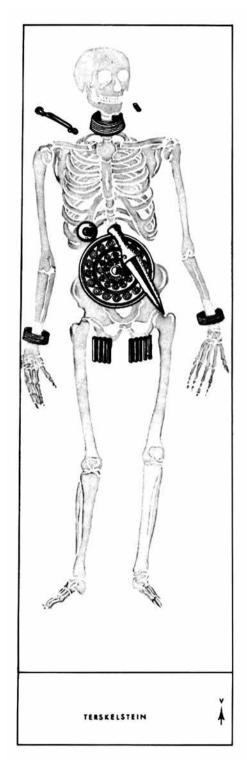


Figure 3. Drawing of the objects from the Rege mound. Source: Myhre 1981.

bronze spearhead, an object that might be depicted on slab 22 (Goldhahn 1999:60–62). The relationship between the engraved motif and real objects is more evident in the Anderlingen case. Here a scene with three human motifs is depicted on the end slab of a stone cist that was found in a barrow (Capelle 1972). One of the human images raises an axe over her head (Figure 4), an axe that clearly resembles the palstave from Montelius period II (Figure 5), which was found deposited with the deceased in the cist (Hesse 2006; Goldhahn 2007:269).

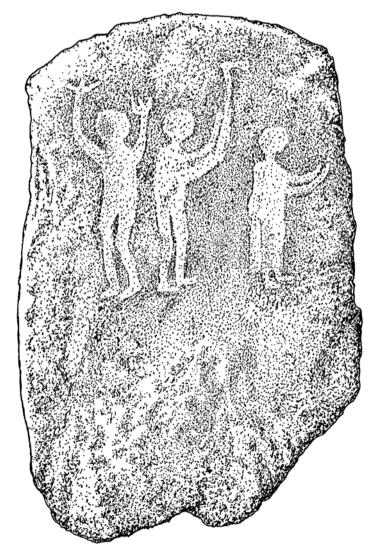


Figure 4. The rock art from the burial at Anderlingen, northern Germany. Source: Capelle 1972.

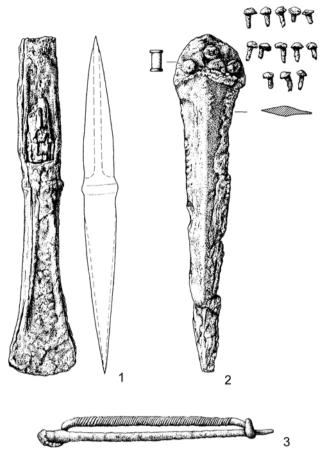


Figure 5. The artefacts from the burial at Anderlingen, northern Germany. Source: Hesse 2006.

A chief example of this practice is the famous Bredarör cairn from Scania in Sweden, one of the most impressive burial monuments in northern Europe (Goldhahn 2009, 2013a). Here no fewer than 48 rock art motifs have been pecked, hammered and ground into eight slabs that were part of a centrally placed stone cist that measured about 3.5 × 1.5 metres (Figure 6). The cairn itself was about 75 metres in diameter and 2–3 metres high; and it seemed to be continuously used for deposition of human bones from the second half of Montelius period II to the first half of period V, c. 1400–800 BC (Goldhahn 2013a:559–578). The rock art images from Bredarör on Kivik are renowned for depicting several bronze and gold objects, as well as scenes where people of different genders seem to be involved in some kind of procession or rite. The lion's share of the scholars that considered these images agree that the

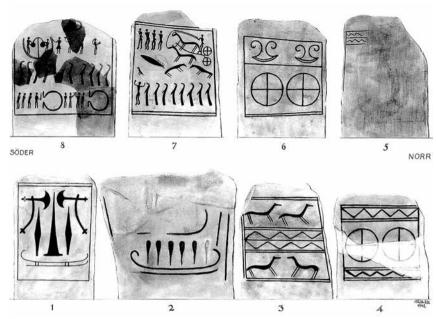


Figure 6. The engravings from Bredarör on Kivik documented by Harald Faith-Ell in 1942. Now in ATA in Stockholm.

rock art depicts essential parts of the burial ceremony which took place around the creation of the monument (Goldhahn 2009, 2013a:1–368).

Of special interest is that some of the objects that were found in the decorated cist in 1748, as well as those found during the 1931 excavation, including parts of a dagger or sword and a bronze bowl, seem to be depicted on slabs 7 and 8 (Figure 6). The relationship between depictions and real objects is also supported by other finds and sources. Nils Brocman was told that two "Norwegian axes" had been found at the Bredarör cairn, which might been the bronze axes depicted on slab 1 (Goldhahn 2013a:53–92). Moreover, on slabs 3 and 7, there are some animal motifs that most scholars interpret as horses. Arthur Nordén (1932, 1942), among others, has argued that the horses depicted on slab 3 are shown sacrificed during the burial ritual on slab 7 (Figure 6), a reading that gains some support with finds of horse bones from the area around the cist that are contemporary with artefacts and the deceased deposited in the cist (Goldhahn 2013a:559–578).

The most conspicuous case of this practice originates from Mandbjerg Høj, a burial mound from the Viborg area in Jutland in Denmark (Glob 1969:71, No. 82). In the mid 19th century, this mound was said to have been 25 metres in diameter and 3.5 metres high, but it was later destroyed. The first notice of the demolition originates from around

1857; soon thereafter, a granite boulder with 18 engraved circles and five double-lined ovals was discovered (Figure 7). According to the information at the National Museum's archives in Copenhagen, this boulder was found in the eastern part of the mound (Glob 1969:239). When a smaller archaeological excavation was undertaken in 1880, a second and third granite boulder with engravings were found in the southern and northern parts of the mound. The former had four engraved circles and the latter, which was more elaborate, had 13 circles, some with double and some with triple lines as well as three double-lined ovals (Figure 7).

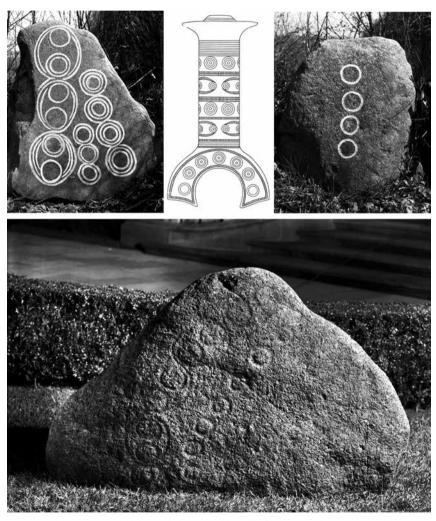


Figure 7. The engraved slabs and the sword handle from Mandbjerg Høj. Photo: National Museum of Denmark, Copenhagen; the documentation of the sword handle, source: Glob 1969.

The excavation also revealed a centrally placed stone cist that was oriented south-east to north-west and contained a bronze sword with gold ornaments dated to Montelius period II (Glob 1969:239).

According to Peter Vilhelm Glob (1969:71, 239), a fourth boulder with nine engraved motifs was reported but is no longer preserved. Based on the orientation of the central cist and the available information about the find spot of the first three decorated stone boulders, it seems that Mandbjerg Høj had a stone kerb with at least four decorated boulders which were probably placed at the cardinal points of the burial monument.

The engravings from Mandbjerg Høj are a good example of the abstract rock art that is commonly found in closed burial contexts during the Middle Bronze Age in northern Europe. Like other examples, the engraved motifs have their counterparts in the lavish abstract ornamentation found on contemporary bronze metalwork (Goldhahn 2007:269–278). The relationship between the abstract rock art from Mandbjerg Høj and bronze objects becomes more intriguing because the ornamentation found on the sword handle with gold inlay from the stone cist in the mound is decorated with almost identical ornamentation to that on the boulders (Figure 7).

Based on my knowledge and understanding of Bronze Age societies, I found it difficult to comprehend why a bronze object or, as in the case of Mandbjerg Høj, parts of its ornamentation, placed in a burial with the deceased should be depicted and replicated on one or more of the slabs in the monument. It feels as if somebody was overemphasizing things, or perhaps stating the obvious.

It will be argued here that the intimate relationship between finds of bronze objects and depictions of similar bronze objects in Bronze Age burial contexts in northern Europe is a unique phenomenon from a global perspective, and that many of the examples, such as the Rege, Sagaholm, Anderlingen, Mjeltehaugen, and Bredarör on Kivik burials, are exceptional from a local, regional and inter-regional perspective. It could therefore be argued that the social practice discussed here must be consider vital for our understanding and interpretation of the lifeworlds of Bronze Age people (e.g. Kristiansen & Larsson 2005). But how should it be interpreted?

We know from several well-documented cases that monumental Bronze Age burials were plundered (Jensen 2002); and judging from the robbers' determination and the assortment of objects that were retrieved, as well as those left behind, it seems this happened shortly after the burial ceremony ended while the memory of what was deposited and where was still sparkling fresh among the descendants (Randsborg

1998). If plundering was a concern among the participants in the burial rituals, making an engraving of the object could be a way to make a lasting record of the burial ceremony, and the sorts of objects that were deposited with the dead. However, this interpretation feels somewhat strained and misleading, not least if we consider the already stated fact that the making of rock art was a rather unusual part of burial practices during the Bronze Age (Goldhahn 1999, 2007, 2013a). If this were a common cultural practice, we would know of hundreds or even thousands of burials with rock art with depicted bronze objects; however, this is not the case, so we must seek another explanation.

Rock art in burial contexts is enthralling; and it is clear from the cases cited above that we cannot explain all these thought-provoking assemblages with notions such as eschatology and cosmology (e.g. Goldhahn 1999, 2007, 2008b, 2009, 2010, 2012, 2013a; see also Widholm 1998; Syvertsen 2003, 2005; Kaul 2004; Skoglund 2006; Linge 2007). To engrave, grind, hammer, carve or otherwise generate concrete or more abstract rock art imagery on or in close relationship to a burial monument was probably motivated by numerous factors; and, of course, we ought to try to free our minds and embrace all possible, conceivable and imaginable rationalizations behind these practices. That said, it is hard to grasp why someone should spend hours and days fetching slabs, preparing them, hammering out or otherwise adding the engravings (Goldhahn 2008b), just to depict some objects that would later be deposited with the deceased. How can that make sense?

### LOOKING BACK TO GO FORWARD

The question of how to comprehend depictions of Bronze Age objects has long been asked within rock art research in northern Europe. Not least of all, it was vital to the founding and formation of comparative dating methods. This method was first developed in the late 18th century during the impassioned debate that followed the discovery of the Bredarör cairn on Kivik in Scania in 1748. When Nils Wessman first published the rock art in an article in 1762, he suggested a dating of the burial and its rock art to the Roman period, an interpretation that was soon contested by Nils Brocman who suggested that the monument ought to be dated to the time of Christianization, around AD 1000. Both interpretations rested on historical sources. In 1780, in choosing between the suggested dates, Anders Forssenius and Sven Lagerbring focused on the similarities between the war chariot depicted on slab 7 (Figure 6) and chariots on Roman coins found in the vicinity to advocate Brocman's

original dating. To strengthen their argument, they plotted all the finds of Roman coins on a map. In doing so, they introduced the comparative dating method within archaeology in general and rock art research in particular (Goldhahn 2013a:53–92).

When the second documented debate on the dating of north European rock art occurred in the early 1840s, a debate that was triggered by the rabble-rouser Sven Nilsson in Lund, Christian Jürgensen Thomsen's

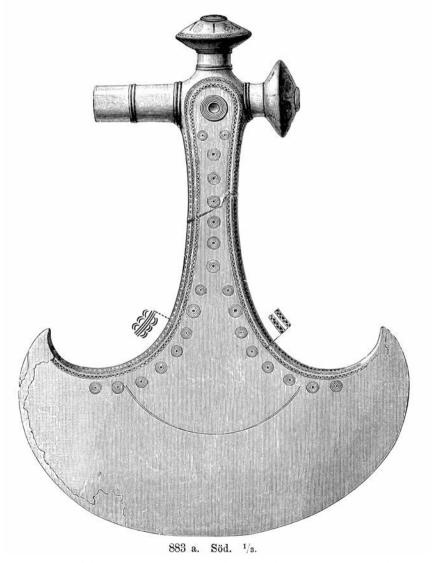


Figure 8. One of the ceremonial bronze axes from the Skogstorp deposit in Södermanland. Source: Montelius 1917.



Figure 9. Plaster casting of engraved sword at Ekenberg in Östergötland (left) that Hildebrand compared with a real Bronze Age sword (right) found in Sweden. Source: Hildebrand 1869.

Three-Age System had already been formulated and published (Gräslund 1987; Jensen 1992). Despite that, the comparative dating method played a rather insignificant role for the suggested chronology of open-air rock art of either the Stone Age (Brunius 1868) or the Iron Age (Holmberg 1848). Instead, it was, once again, historical sources and "the brutishness" or "the degree of culture" of the depicted motifs of humans, boats and implements that were used as arguments (Goldhahn 2005, 2012, 2013a:93–117; Kaul 2012). However, all participants in this heated debate agreed that the axes from slab 1 in Bredarör on Kivik depicted ceremonial bronze axes like the one that was known from the deposit from Skogstorp in Södermanland (Holmberg 1848:8, 14–16; Brunius 1868:138–149, cf. Figures 6 and 8).

The comparative dating method was re-introduced by Bror Emil Hildebrand in 1867 when he made some plaster copies of sword engravings at Ekenberg in Östergötland (Hildebrand 1869). Based on the great similarities of these depictions and real Bronze Age swords at the National Historical Museum in Stockholm (Figure 9), Hildebrand came to the conclusion that it was Bronze Age weaponry that were depicted, a conclusion that is often cited as the first correct dating of the rock art

assemblages of northern Europe (e.g. Mandt 1991; Fredell 2003; Nordenborg Myhre 2004; Ling 2008; Goldhahn *et al.* 2010, among others). This might not be entirely true because, according to my reading of Hildebrand's "ground-breaking" and often celebrated article, it is clear that he could not come to any final conclusion as to whether the Bronze Age weaponry depicted was made by Saami Stone Age savages or by German-speaking nobles from the Iron Age (Hildebrand 1869:431–432).

Nevertheless, the re-introduction of the comparative dating method during the late 19th century established the most common way to use depicted objects within rock art research in northern Europe, namely, as a tool to establish rock art chronologies. This is especially true for the rock art found along the Swedish east coast where depictions of bronze weapons are particularly common (Goldhahn 2013a:143–178), such as in south-east Scania (Althin 1945; Moberg 1970; Welinder 1974; Burenhult 1980), Östergötland (Nordén 1925; Lindblad 2011), Gotland (Broström 1990), Södermanland (Schnittger 1922) and Uppland (Kjellén 1976; Kjellén & Hyenstrand 1977; Coles 2000; Lindblad 2011; Ling 2013).

The oldest rock art motifs of Bronze Age weaponry are commonly life-sized (1:1 scale), and the axes, swords and spears are replicated so truthfully that it is easy to identify the objects depicted (Figure 10). This has led to the comparative dating method becoming the foundation of established rock art chronologies in northern Europe. This is, for example, manifested in the works of Gunnar Ekholm (1921), Arthur Nordén (1925), Sverre Marstrander (1963), P. V. Glob (1969), Gro Mandt (1972, 1991), Stig Welinder (1974), Göran Burenhult (1980), Bertil Almgren (1987), Kalle Sognnes (1987, 2001), Einar Østmo (1992), Flemming Kaul (1998), Åsa Fredell (2003), Johan Ling (2008, 2013), and David Vogt (2011), among others.

Bronze Age weapons are among the most captivating rock art motifs, but far from being the only objects depicted in this media. For instance, the obvious resemblance between the Hjortspring boat, dated to around 350 BC, and rock art boat motifs, such as those from Litsleby in Tanum parish in Bohuslän in Sweden (Coles 2005; Ling 2008), are so painstaking that it is clear that the engravings depict real vessels (Crumlin Pedersen & Trakadas 2003). The same is true for boat images depicted on bronze objects (Kaul 1998; Bradley 2008), and rock art depictions of shields (Coles 1999), cloaks (Almgren 1962; Goldhahn 2005), wagons (Johanssen 2010), and other objects (e.g. Kaul 1998, 2004; Fredell 2003; Franck 2004; Vogt 2011).

That said, rock art specialists seldom discuss the reasons why these bronze objects were depicted at all. The nemeses Bertil Almgren (1960,

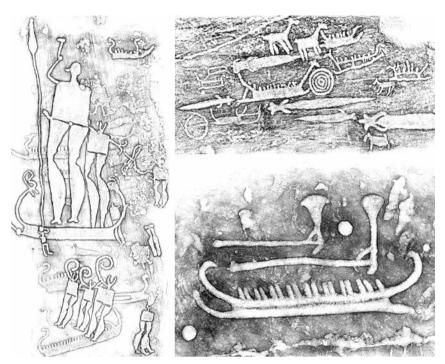


Figure 10. Depiction of bronze objects from different open-air rock art sites in Sweden originally made at scale 1:1: To the left: Tanum 248 in Bohuslän; top right: Östra Eneby 23 in Östergötland; bottom right: Simrishamn 23 in Scania. Frottage by Dietrich Evers, now in SHFA (The Swedish Rock Art Achieves, Tanumshede). Not to scale.

1962) and Mats P. Malmer (1981) agreed, and God knows that they seldom did, that the objects depicted in the rock art media on the "periphery" of the Scandinavian Bronze Age cultures acted as substitutes for sacrifices of real objects that were made in the "centre"; an interpretation that later on was nourished by the fellow-travellers of the processual paradigm (e.g. Larsson 1986; Kristiansen 1987, 1998, cf. Sognnes 1987, 2001). However, whether treated as chronological markers or seen as substitutes for real sacrifices, rock art depictions of objects were viewed as means to other ends; and, it is clear, at least to me, that we ought to search for new paths to comprehend these assemblages.

### BIOGRAPHIES OF ANIMATED OBJECTS

The careful representations of bronze objects must have served other purposes than just to depict certain typological traits or act as a poor man's substitute for real sacrifices. As the cases from Rege, Sagaholm, Anderlingen, Bredarör on Kivik, Mandbjerg Høj, and other burials with rock art reveal, the images most certainly represent specific objects that were deposited with the deceased. Even though this behaviour might puzzle me, it is clear that it was not just any objects that were depicted. Somehow, the rock art motifs and the objects in the burial are linked to each other, but how should that be interpreted?

One way to approach these engravings is through a flat ontology and a relational materialistic perspective (e.g. Latour 2005; Olsen 2010; Hodder 2012) that considers the mutual biographies of objects and persons (e.g. Kopytof 1986; Hoskin 1998; Joy 2009). From the Old Norse mythology and sagas, for instance, we are informed that both mortal and immortal beings own named objects that were endowed with magical properties which enabled them, as it seems, to act as "secondary agents" (e.g. Gell 1998, see also Malinowski 1922; Munn 1986; Weiner 1992; Godelier 1999; Ingold 2000; Mauss 2002). Many of the magical objects belonging to the immortals in Old Norse mythology had names and biographies that were told and retold over vast areas in northern Europe (Davidson 1996; Lindow 2002). Odin, for instance, was personified by several magical items created by dwarfs, such as Gungnir, the spear that never misses its mark, which was made by the sons of Ivaldi, and Draupnir, meaning "dripping", a gold arm-ring made by Sindri, which had the magical property of renewing itself into eight new arm-rings every ninth night. Other named magical objects that made their way to eternal fame are Thor's magical belt Megingjörð, his iron gloves Járngreipr, staff Gríðarvölr, and his hammer Mjöllnir, Heimdallr's trumpet Giallar-Horn and sword Hofuð, Balder's funeral boat Hringhorni, and Freyr's magic ship Skidbladnir, etc.

Historical sources inform us that it was the mythological origin of these objects combined with their biographies that created their reputation and magical power (Davidson 1994; Gansum 2004; Hedeager 2011; Androshchuk 2014). A telling example is the story of how Sigurd Völsung – or Siegfried – slew the dragon Fafnir. To do so, he used a sword that had been passed down from Odin through the hands of his father, Sigmund. Odin's sword *Gram*, also known as *Balmung*, was originally made by the dwarf Reginn; and it was said to be so sharp that even if it were lowered into running water it could cut a tuft of wool that drifted down-stream onto the sword's edge. The sword had a long and complicated biography, which is only partly known to us. We do know that it had been broken in a battle and that it was later re-forged by Sigurd. Apparently he did a good job for, after he finished his work, it could be used to cut an anvil in half and, apparently, kill the evil dragon Fafnir.

Tales like the one about Sigurd Fafnisbani and his animated weapon are not unique (e.g. Davidson 1994; Lund 2009; Hedeager 2011). For instance, there are hundreds of named swords and weapons in the Old Norse literature (Barnes 1972, 1982; Androshchuk 2014:194–202), which suggest that stories like the one about Sigurd and his heirloom were rife. Moreover, there are clear archaeological indications that some of the most famous mythological objects, such as Freyja's golden necklace *Brisingamen* (Arrhenius 2009), were re-created by mortals and used as display items by the élite of the Late Iron Age societies. This practice might have existed to underline certain families', kins' and clans' ancestral connection to immortal gods (Steinsland 2011), and possibly also so that the object could be used as ritual paraphernalia when myths were reenacted (Herschend 2001). This is evidently also the case when it comes to famous swords among mortals (Davidson 1994; Androshchuk 2014).

During the Late Iron Age swords were treasured and, aside from land, may have been among the most expensive things a man could own (Davidson 1994; Androshchuk 2014). In the Laxdæla Saga (1969), for example, we learn that the sword that Höskuldr received from King Hákon the Good of Norway, was worth half a mark of gold, equal to 16 dairy cows, a considerable sum. Swords meant wealth, and as Melheim and Horn (2014:6) recently argued, these weapons took on the histories of real persons, their lives and death, and, more importantly, the memory practices associated with them (e.g. Kristiansen 2002; Pearce 2013). That said, it was more often the fame and magical properties imbued in these weapons that made them sought after. In his thought-provoking study of Iron Age sword crafting, Terje Gansum has demonstrated that bones from animals, and possibly also from humans, were needed and used to transform iron into steel. So, when swords are accorded their own personhood, are given names and ascribed magical properties, we might be seeing the result of swords inheriting ancestral spirits through factual and mythical creation processes (Gansum 2004).

Moreover, animated objects with renowned biographies, bestowed by ancestral spirits and powers, are probably the explanation behind the common habit of "plundering" monumental Iron Age burials in prehistoric times (Myhre 1994, 2004), a cultural practice that is also known from the Middle Bronze Age (Randsborg 1998). One example is the remarkable story of how Olaf Haraldsson (995–1030), better known as Olaf II of Norway, claimed to be spiritually connected to, or even a reincarnation of, Olaf Gudrødsson. The latter, Olaf Gudrødsson was a legendary king of the House of Yngling. Following Gunnhild Røthe's (1997) appraisal of the literary sources, first and foremost *Flateyjarbók* and Ó*láfs saga Helga*, Olaf Gudrødsson was worshiped after his death,

and was, therefore, given the name Geirstaðaálfr (Davidson 1943:101– 102, 138–139). According to some chronicles, he died around AD 934. About 60 years after his death, Olaf Geirstaðaálfr visited a man called Hrani in a dream. Hrani was told to break into his burial monument. cut his head off, and take possession of his sword Bæsingr, a ring and his belt, and to give these exquisite objects to Queen Ásta. The magical properties that were embodied in these objects were needed when she would give birth to Olaf II of Norway. The motivations behind the opening of Olaf Geirstaðaálfr's burial mound to reclaim part of his grave goods are mostly blurred to us. There are some academic disputes regarding whether this was a deceit by Olaf Geirstaðaálfr, so that he could be reincarnated, or if the mound opening was a way for Olaf II of Norway to ritually "kill" the House of Yngling's claim and pretension to the throne of Norway (Røthe 1997, cf. Steinsland 2011). In any case, this practice was legitimated through the named and animated sword Bæsingr.

A conclusion from these examples from the Old Norse mythology and sagas could be that certain objects had the power to become animated and act as secondary agents (Gell 1998; see also Olsen 2010; Hodder 2012). From the animated finds and contexts from Bronze Age metal

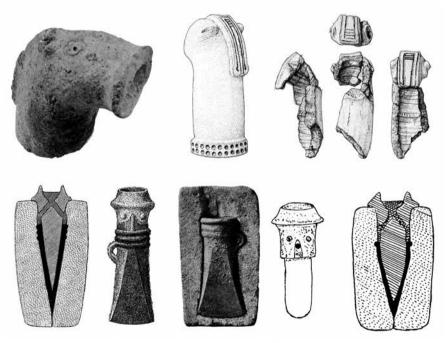


Figure 11. Animated tuyères and soapstone moulds from Bronze Age "workshops" used to create bronze objects with potential to be animated. Source: Goldhahn 2007.

workshops (Figure 11), and the enigmatic iconography on bronze items and other ritual paraphernalia that were crafted during this epoch (e.g. Kaul 1998, 2004), there is very little impetus to believe that this phenomenon was a Late Iron Age invention (Goldhahn 2007, 2013b; see also Pearce 2013; Melheim & Horn 2014). As a consequence, I argue that the rock art depictions of bronze objects that we encounter across northern Europe during the Bronze Age had lived an extravagant life, that they were famed and had a biography of their own, maybe even that they were believed to be imbued with magical properties which inspired people to depict and remember them; these were objects that had become – animated.

## ROCK ART AND THE LIFE-HISTORIES OF BRONZE AGE OBJECTS

A striking phenomenon with rock art weaponry motifs is that they seem to have been made in a time and place when the depicted objects were novel (Figures 2–10). Often it seems to coincide with the introduction of metallurgy and the formation of a value system based on the new technology. When the later was established, depictions of weapons at 1:1 scale seem to end. This phenomenon is not only evident in northern Europe, it is also documented at Stonehenge (Abbott & Anderson-Whymark 2012; Parker Pearson et al. 2013) and Kilmartin in Scotland (Jones et al. 2011) in the British Isles, in Brittany in France (Twohig 1981), Galicia in the Iberian Peninsula (Bradley 1997; Fábregas & Rodríguez-Rellán 2012), and in Valcamonica in northern Italy (Priuli 2002; Anati 2004; Beavan 2006). New astounding technologies and devices, and the novel value systems that followed in their footsteps, seem to trigger depictions and engravings. It is fascinating to consider that similar social and cultural processes can be demonstrated in so-called contact rock art in North America (Keyser 1992, 2004; Sundstrom 2004), South Africa (Ouzman 2003; Challis 2009, 2012) and Australia (McNiven & Russell 2002; Veth et al. 2008; Paterson & Wilson 2009; May et al. 2010), but in a colonial cultural context and at a much later stage in history.

A common thread in these rock art assemblages is that the new technological devices are so remarkable and truthfully executed that, despite the limitation of reproducing objects in the stone medium (Figure 10), these objects are so well depicted that it is easy to identify and date them (e.g. Hildebrand 1869; Ekholm 1921; Nordén 1925; Althin 1945; Marstrander 1963; Moberg 1970; Welinder 1974; Kjellén 1976; Kjellén & Hyenstrand 1977; Burenhult 1980; Malmer 1981; Coles 2000; Franck

2004; Ling 2008, 2013; Lindblad 2011; Vogt 2011, see also Keyser 1992, 2004; Wesley 2013). Sometimes the contexts of the depicted objects and the real finds even seem to coincide. One such case is found at Foxa da Vella at Leiro Rianxo in Galicia where daggers and halberds were engraved in the vicinity of the known find spot of a hoard with the same contents (Bradley 1997:60–61). Analogous "hoarded" daggers were engraved nearby on the panel O Ramallal at Campo Lameiro (Bradley 1997:203). The similarity between these assemblages is not only shown in the synchronic chronology and the resemblance between the rock art images and real objects, but also through the way these objects were arranged on the panel and in the hoard (cf. Comendador Rey 1999; Fábregas *et al.* 2009; Fábregas & Rodríguez-Rellán 2012; Rodríguez-Rellán & Fábregas 2013).

If Bradley's interpretation holds, the weaponry reproduced at Foxa da Vella would have been engraved just before the objects were taken out of circulation. This might lead us to suggest that the depiction of the weaponry at Foxa de Vella, and elsewhere, may have been a way to show that the objects were taken out of the social spheres of the circulation of gifts and counter-gifts between mortals (Mauss 2002, also Malinowski 1922; Weiner 1992), or between mortals and the immortals (Godelier 1999: Fontiin 2002)? However, if that were actually a rooted cultural practice linked to the deposition of objects, we would expect to find hundreds if not thousands of depicted objects throughout Galicia, the Iberian Peninsula, and the European continent. Once again, this is not the case. So, rather than linking this practice to a specific regular, social and ritual context, in this case the deposition of bronze metalwork, a more plausible interpretation might be to consider these practices in relation to certain animated objects with life-histories and biographies of their own.

To my knowledge, there are no clear spatial relationships between rock art and hoards with bronze objects in northern Europe like the one that Bradley considered from Foxa de Vella (cf. Nordén 1925; Lindblad 2011). That said, the burial rock art discussed earlier in this paper suggests that some objects could gain a reputation on their own which allowed them to be depicted where they where "buried", and, in these rare cases, the engravings and the place of deposition coincide. These instances seem to be connected to the last stage in the objects' lifecourse. The burial contexts further seem to suggest that it might be the enmeshed mutual biographies of the deceased and the engraved objects that triggered these practices.

There are some interesting traits in the open-air rock art media in Northern Europe in general, and specific to the assemblage of depictions of life-size bronze objects, that may direct us to an interpretation that the objects that are engraved in the stone media also had an animated biography. Larger accumulations of Bronze Age figurative rock art are found at coastal locations along the Scandinavian Peninsula (e.g. Burenhult 1980; Malmer 1981; Kristiansen 1987; Coles 2000; Nordenborg Myhre 2004; Ling 2008, 2013; Nimura 2012). This is underlined by the fact that the most common figurative motif is boats. Traditionally, these accumulations of rock art have been interpreted as "ports of trade" or "nodes of communication" (e.g. Malmer 1981; Larsson 1986; Kristiansen 1987, 1998; Kristiansen & Larsson 2005), or as "third spaces" (Nordenborg Myhre 2004; Ling 2008, 2013), i.e. places where long-distance travellers could meet before, during, and after their pursuits to "refigure" their gender and social persona (cf. Malinowski 1922).

It is in these maritime settings we find the depictions of bronze objects made at a 1:1 scale (Figure 10). This would be the place where new technological devices were introduced into the social realm for the first time. Moreover, it would also be the setting where tales about the hardship, joy, adventure, and splendour of these journeys on the unpredictable and dangerous sea were told for the first time. Battles fought on the journey away or home would be announced and discussed; epic tales about duels among mortals would be told and retold; traded goods and war bounties would be divided; novel astonishing objects would be introduced, handed around and admired. Moreover, these were the places where the mutual biographies of people and animated objects would be formulated, moulded and merged; and at these places, rock art seems to be both the medium and the message (Figure 10).

Generally speaking, most depictions of axes, swords and spearheads at open-air sites belong to common types, making it hard to identify specific objects in the way that the closed burial contexts suggest. We also meet other challenges when we encounter open-air rock art. Besides the fact that the stone medium sets some interesting limits as to how accurately an object can be depicted, the more open, negotiable contexts also mean that the same images, and the memory practice that were embodied in them, could be reworked, altered and changed over and over again. The reason for this is found in the medium itself. When an engraving is newly made, the strokes from the hammer stone will leave white marks that "shine like quartz" (Goldhahn 2007:159-206). As a consequence of the physical deterioration by wind, snow, and rain, and the possible growth of lichens, the images will start to fade from the moment they were made (Figure 12). This natural process can be stopped by retouching the images. Following Katty Wahlgren (2004), the acts associated with "switching on and off rock art images" were an active

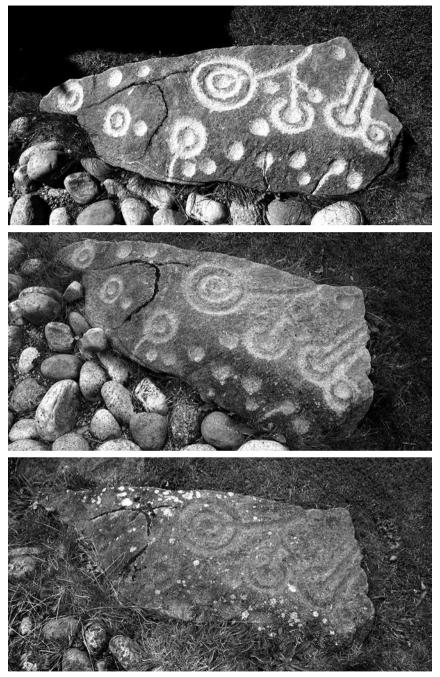


Figure 12. Rock art experiment at Kilmartin House, Scotland. When the rock art was new – or "switched on" – the motifs shined like quartz; three years later they had been "switched off" by the weather and lichens, and they started to get grey and dull. Photo from 2003 (top), 2004, and 2007 (bottom): Joakim Goldhahn.

memory practice and a vital and an important part of the many meanings attached to this media. So, rather than viewing this as a negative source-critical dead end, it should be addressed as a positive point of departures for our analysis. However, this is also a challenge when it comes to the dating of much rock art in the world in general, and, in particular, the rock art assemblages from the Bronze Age in northern Europe.

### THE SPEAR-BOATS AT ÅBY

A telling example of these different but related memory practices from open-air sites, and some of the challenges that we face in comprehending this medium, is found at the famous rock art site at Åby in Tossene parish in Bohuslän (Sweden), RAÄ Tossene 73. The images that interest me in this context are two boat figures that, among other things, convey two spearheads and an axe-like motif each (Figure 13). The similarities between the boat images are strengthened through the fact that one human in the crew is exaggerated in each vessel. In one case the human image carries the axe-like motif in its hand, in the other case this motif is attached to the hull of the boat. The human on the latter boat seems to be holding something else in her hand. Both vessels are adorned with slightly different animal heads at stern and aft, and both have long keel extensions (Figure 13).

These "spear-boats" can be dated through several methods. The adorned stern and aft is a common trait on boat images from Late Bronze Age razors that are found in easily dated contexts (Kaul 1998), and the altitude of the panel itself can give a *terminus post quem* through analyses of the shore displacement in the Bohuslän area (Ling 2008). Following Kaul's (1998) chronology, a dating of the animal heads on the boat images to Montelius period V is evident, *c.* 900–700 BC. However, the long keel extensions on the boats, and the animal heads seem to be engraved by another technique: they are less deeply pecked, which suggests that these details were added later as a part of a memory practice associated with the particular boat images and their emplacement.

After a closer examination and assessment of the pecking techniques, followed by an analysis of the elevation of the panel and a comparison with some of the more than 10,000 boat images found in Bohuslän, Ling (2008) suggests that it is feasible that both boat images were made in the Middle Bronze Age period I or II, c. 1700–1300 BC (personal communication, 6 May 2014). However, the altered pecking techniques also suggest that the prolonged keel extensions, which are a typical trait of the Late Bronze Age period IV (Kaul 1998), were added later. This shows

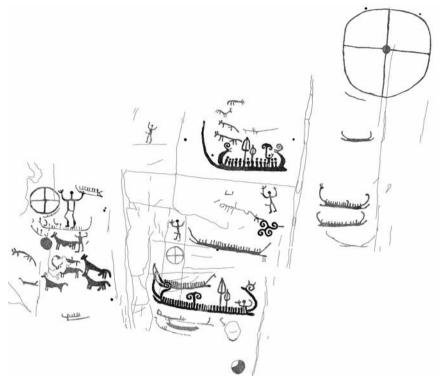


Figure 13. Tracing made by Tommy Andersson and Andreas Toreld of part of the rock art panel RAÄ 73 in Tossene parish in Bohuslän. Not to scale. Source: www.hallristning.se.

that these rock art images were "switched on and off" several times as an active part of the memory practice that was attached to this place and its growing numbers of engravings.

What actually interests me about these boat images is the very uncharacteristic broad and leaf-shaped spearhead images, which most probably are reproduced at 1:1 scale (Figure 13). Similar leaf-shaped spearheads were not made locally or regionally during the Early, Middle, or Late Bronze Age in northern Europe (Baudou 1960; Aner & Kersten 1973–; Vandkilde 1996). Known spearheads with this form all seem to have been "imported" to northern Europe during the first part of the Late Bronze Age (Thrane 1975). A case that comes to mind is the spearhead originating from northern Italy or Hungary found in the spectacular hoard from Borbjerg on Funen in Denmark, dated to period IV (Ørsnes 1958). A bronze spearhead with a similar form, origin and date has been found at Gategården in Bärfendal parish in Bohuslän (Herner 1998), situated only 8 km north-east of the engraved spear-boats at Åby in Tossene parish (Figure 14). Unfortunately there is little contextual information about

this fragmented leaf-shaped spearhead, other than that it was found in a pit together with a "hammer and nipper of iron" (Herner 1998:26, translated here). However, the resemblance between the depicted spearheads on the boats at Åby, and the broken spearhead from Gategården are overwhelmingly striking, which in the light of this discussion suggests an intimate relationship between these phenomena and contexts.

It is obvious from these examples that some depicted bronze objects embody long and interesting biographies. Sometimes, as in the case of the spear-boats from Tossene 73 in Bohuslän, the same could be said about the rock art images that were made and remade many times, maybe as a way to renegotiate the memory practices that were attached to them, i.e. their cultural biography. The same phenomenon of refiguring is also evident if we consider some of the burial rock art mentioned above, not least Bredarör on Kivik (Goldhahn 2013a), and this also goes for well-known ritual paraphernalia from the Bronze Age, such as the bronze discs from Trundholm on Zealand in Denmark and Nebra from Halle in Germany (Goldhahn 2013b). In my book, the similarities between the biographies of different objects, the different media they appear in, and their contexts, urges us to acknowledge that these phenomenon were related and part of the same social and cultural processes.



Figure 14. Fragmented spearhead found at Gategården in Bärfendal parish. Source: Herner 1998. The spearhead still measures 250 × 90 mm. Note the pronounced ridge on the spearhead and compare how this part is enhanced on the spearheads depicted on the boats in Figure 13.

### THE VESTBY HOARD

A striking phenomena with the depictions of bronze objects from openair rock art sites is their maritime context and their close relation to boat images. This suggests that it was the mutual biography of objects and Bronze Age Argonauts that enabled certain objects to gain in reputation, power and, in the end, become animated and "act" in ways that sometimes allowed them to be engraved on rock panels.

In the case of the spear-boats and the bronze spearhead found at Åby and Gategården in Bohuslän, it is clear that it – sometimes – was exotic objects with a long cultural biography that most of the time is unknown to us, that were associated with these practices. Sometimes, however, we are able to get a glimpse of the many journeys that the object made during its life. One such case is the Vestby hoard, which has recently been reinterpreted by Julie Lund and Lene Melheim (2011) from a cultural biographical perspective.

The hoard from Vestby was found in Hadeland in Oppland in southeastern Norway in the mid 1920s. It consists of a necklace with tin-plated bronze beads, a large bronze pin, a finger ring (now lost), three bronze neck rings with boat ornaments on their end-plates and two bronze figurines that, at first glance, seem to be goats but which also show some resemblance to horses and deer (Figure 15). The hoard is dated to the end of the Bronze Age, period VI, c. 700–500 BC; but as Lund and Melheim (2011) so elegantly demonstrate, some of the objects were already antiques when they were deposited.

Lund and Melheim's (2011:443, 453–455) analysis reveals that the objects in the Vestby hoard originate from several different parts of northern Europe. The necklace has its origin in the Halstatt area in southern Germany, the pin resembles a find from western Norway, the animal figurines probably originated in central Europe, and the neck-rings in south-western Sweden or Denmark. The first investigators of the Vestby hoard concluded that all the objects were "imported" to Norway. Lund and Melheim (2011:453–455) are more open to a local origin and crafting for some of the objects. This interpretation is grounded in the fact that the clay core in one of the neck rings contained minerals which originate from "a mountainous region" (Lund & Melheim 2011:453): "Considering the fact that the ship decoration points towards Scandinavia, it seems possible that the neck rings were produced in the Hadeland area, alternatively in nearby Sweden", and they are open to the idea that the local copper oxide ore was used (cf. Melheim 2012; Ling et al. 2013, 2014).

From the analyses of the metal in the objects and of the techniques used to manufacture them, it is evident that what at first glance seems to



Figure 15. The Vestby hoard. Photo: Eirik Irgens Johnsen. Published with the kind permission of the Cultural Historical Museum, Oslo University.

be a homogeneous object or an assemblage, in fact could have a complex heterogeneous cultural biography (see also Frieman 2012 for other similar cases). The three neck-rings, for example, were typologically identical, but different techniques were used to produce each of them. X-ray analyses of the animal figurines showed that different parts of their bodies had been joined together using iron rivets. Moreover, different copper sources were used in different body parts. The bodies of the animals have their closest parallels in finds from central Germany. The heads show some clear resemblance to the animal figurines from the Faardal hoard from Viborg in Jutland in Denmark, which are usually dated to period V (Glob 1961). We know that similar animal heads in bronze circulated in other parts of Scandinavia, for instance, in Scania in the southernmost part of Sweden (Goldhahn 1999:168). However, as the analyses of the animal figurines show, the different parts of the animals had different origins and age, and probably also different stories and biographies attached to them. Lund and Melheim (2011:442-443): "The heads had originally been made for and used in one context, and then circulated for more than two centuries before being united with the bodies."

Merging different body parts to create a new entity, or entities, shows that both the content and the many meanings that were attached to certain objects were fluid and could be altered and changed through the intricate memory practices that were attached to the handling of the objects, that is, through their cultural biography. It goes without saying, then, that the careful gathering of different objects with different origins, histories and biographies, and the deposition together must be consid-

ered as a deliberate act where the whole was greater than the sum of its parts (Figure 16). Lund and Melheim (2011:447) argue: "Each stage in the biography of objects, is associated with humans, whose own biography is interwoven with the history of the artefacts. In this sense the history of persons is embedded in the objects."

Lund and Melheim present a thought-provoking interpretation of the Vestby hoard, and at first there seems to be little to add to it. Following the train of thought presented in this paper, it could be argued that it was similar kinds of objects to those from the Vestby hoard that could gain power, a biography, and become animated, and, maybe also engraved. The latter is, of course, speculative by nature. However, the "goat-horse-deer" animals from the Vestby hoard, with their long and twisted horns (Figure 17), are literally such unique animal figurines that they would be easy to detect *if* they were materialized in stone. The only images I have come across, after studying the north European Bronze Age rock art assemblage for more than 20 years, that resemble these

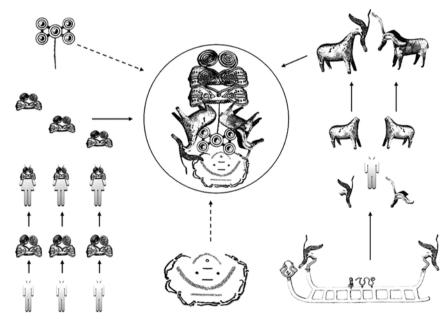


Figure 16. "The whole is greater than the sum of the parts." Sketch of the Vestby objects biographies as interpreted by Lund and Melheim (2011, 457): "A new totality was created by the particular arrangement of the Vestby hoard. Each of the objects carried references to the cosmology of their time and each had a specific biography. Through the act of deposition these intrinsic values were linked to the place. Thus, an accumulation of biographies took place, which also involved the biographies of the many persons involved in the production, ownership, use, and deposition of the objects." Source: Lund & Melheim 2011, published with their kind permission.

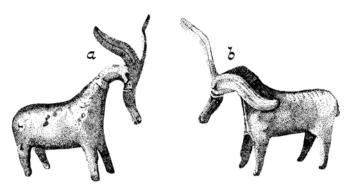


Figure 17. The animal figurine from the Vestby hoard. Source: Johansen 1981.

animal figurines come from RAÄ 13 in Svarteborg parish in Bohuslän (Figure 18), a place that the "ageing" animal figurines probably had to pass on their path from their origins to their place of deposition at Vestby in Hadeland (see Figure 1).

The four animal images from Svarteborg are depicted with pronounced horns that demonstrate some evident conscientious resem-

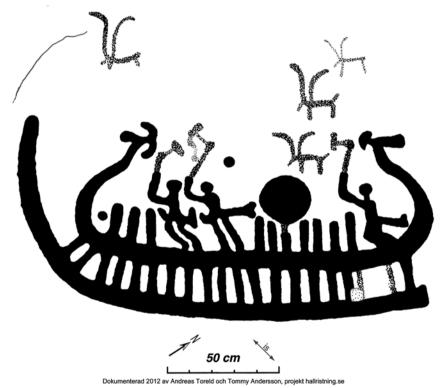


Figure 18. Tracing by Tommy Andersson and Andreas Toreld of the rock art panel RAÄ 13 in Svarteborg parish in Bohuslän. Source: www.hallristning.se.

blance to the bronze figurines from the Vestby hoard (Figures 15–18). To my knowledge, these rock art motifs are the only one of their kind, which may indicate that it is the specific animated objects from Vestby that are depicted (cf. Kaul 1998, 2004; Fredell 2003; Franck 2004). The images are placed above a fully armed boat with warriors equipped with axes in their hands. The boat is adorned with animal heads at stern and aft, and the boat also seems to carry a sun symbol (Figure 18). According to the local and regional rock art chronology developed by Ling (2008:79–84, 102–105), the boat image should be dated to period V, which seems plausible *if* it was the animal figurines from the Vestby hoard that are depicted on this panel (cf. Figures 15–18).

### ENGRAVED BIOGRAPHIES

This article has tried to develop some new perspectives about the reason for engraving objects in stone media during the north European Bronze Age. I have tried to demonstrate how a relational materialistic perspective and a focus on the mutual cultural biographies of humans and objects can reveal new information about the meaning and significance of the phenomenon that we, for want of a better term, call rock art.

Based on the resemblance between rock art engravings and artefacts found in closed burial contexts (Figures 2–7), I have argued that these images depict animated objects with a biography of their own, bestowed with an agency that enables them to act as secondary agents. Judging by their contexts, it seems that the engravings were made at the end of their life-course, probably after they died or were ritually killed, and just before they were burried and commemorated. The context of this rock art further suggests that it was the mutual cultural biographies of humans and objects that triggered these practices.

Though we find similar depictions of artefacts in other contexts, most notably at maritime nodes or third spaces (Figure 10), it can be argued that the open-air panels and closed burial contexts are related to different phases of the engraved objects' life-histories and cultural biographies. It seems as if the former contexts are related to when Bronze Age Argonauts and their animated objects entered or re-entered the social realms, while the latter seem to be related to when they died and were about to leave the mundane life-worlds. By widening this interpretation further and exploring more rock art contexts in time and space, it might be possible to distinguish new and other phases of the mutual cultural biographies of humans and depicted objects. An obvious starting point for such analyses would be to assess how depicted humans and objects

relate to each other in different contexts, and how they interact in the media of rock art (Figure 10).

Considering Lund and Melheim's interesting analyses of the Vestby hoard, we find more similarities than differences between the memory practices that were associated with different media. The careful gathering of objects in this hoard, which possessed its own cultural biography, is replicated, for instance, in the depictions of scenes with ritual paraphernalia and depicted animated objects on rock panels (Figure 10). This urges us to re-evaluate the strong and well-maintained boundaries between certain subfields within archaeology in general, and, in particular, within Bronze Age research (e.g. Goldhahn 2007). A starting point for a similar reassessment could be to admit that different kinds of objects had different life-courses that enabled them to act and re-enact as secondary agents in different contexts and medias. As a consequence, we ought to try to capture and merge these contexts to a fuller, richer, and thicker description so that we can start to explore the whole range of mutual cultural biographies of humans and objects in the North European Bronze Age.

Finally, it is my opinion that the practices we have considered here, depictions of objects in closed burial contexts, and life-size engravings of objects on open-air rock art sites at maritime nodes, were exceptional and even rare phenomena in the Bronze Age. Neither of these can be considered to be common cultural practices. There were literally 10,000 objects that were deposited in burials *without* being depicted, and there were probably hundreds more objects passing the ports of trade, nodes and third spaces, *without* earning them the right to be depicted on the rocks. It might be argued that these facts speak in favour of the interpretation advocated here; that it was renown animated objects with a cultural biography that are depicted in the stone media.

The avenue of interpretation above indicates that an all-embracing holistic approach that focuses on the mutual biographies of humans and objects, which apparently are materialized in different media and contexts, can help to raise new questions for our pursuit to explore past and present social realms. One way to achieve this is to focus our analyses on engraved biographies.

### **ACKNOWLEDGEMENTS**

This article was written when I was a visiting fellow at Australian National University and its School for Archaeology and Anthropology from Mars 2014 to February 2015. I wish to thank Iain Johnston, Catherine Frieman and Sally K May for comments that improved my arguments

and interpretation. Most of the four anonymous reviewers made valuable comments that I appreciate and that helped improve the text. All errors and shortcomings are mine alone. I also want to thank the following persons and institutions for generously letting me use their images and documentations: Tommy Andersson, Julie Lund, Lene Melheim and Andreas Toreld, and ATA in Stockholm, the Swedish Rock Art Archives at Göteborg University, the Foundation for Documentation of Bohus County Petroglyphs, the Museum of Bohus County in Uddevalla, the National Museum of Denmark in Copenhagen, and the Archaeological Museum in Stavanger, Norway.

#### REFERENCES

- Abbott, M. & Anderson-Whymark, H. 2012. Stonehenge Laser Scan Archaeological Analysis Report. London: English Heritage Research Report Series 32–2012.
- Almgren, B. 1960. Hällristningar och bronsåldersdräkt. Tor 6, 19–50.
- Almgren, B. 1962. Den osynliga gudomen. In: Svenska Arkeologiska Samfundet (Ed.). Proxima Thule: Sverige och Europa under forntid och medeltid. Hyllningsskrift till H.M. Konungen den 11 november 1962. Pp. 53–71. Stockholm: Svenska Arkeologiska Samfundet.
- Almgren, B. 1987. Die Datierung Bronzezeitlicher Felszeichnungen in Westschweden. Uppsala: Acta Musei Antiquitatum Septentrionalium Regiae Universitatis Upsaliensis 6.
- Althin, C.-A. 1945. Studien zu den Bronzezeitlichen Felszeichnungen von Skåne I–II. Lund: Gleerups Förlag.
- Anati, E. 2004. The Civilisations of Rocks: Valcamonica, a History for Europe. Capo di Ponte: Edizioni del Centro.
- Androshchuk, F. 2014. Viking Swords: Swords and Social Aspects of Weaponry in Viking Age Societies. Stockholm: The Swedish History Museum, Studies 23.
- Aner, E. & Kersten, K. 1973-. Die Funde der Älteren Bronzezeit des nordischen Kreises in Dänemark, Schleswig-Holstein und Niedersachsen Bd 1-20. Neumünster: Wachholtz Verlag.
- Arrhenius, B. 2009. Brisingamen and the Menet Necklace. In: Freeden, U., Friesinger, H. & Wamers, E. (Eds). Glaube, Kult und Herrschaft: Phänomene des Religiösen im 1. Jahrtausend n. Chr. in Mittel- und Nordeuropa. Pp. 219–230. Bonn: Akten des 59. Internationalen Sachsensymposions und der Grundprobleme der Frühgeschichtlichen Entwicklung im Mitteldonauraum, Dr. Rudolf Habelt GmbH.
- Back Danielsson, I.-M., Fahlander, F. & Sjöstrand, Y. (Eds.) 2012. *Encountering Imagery: Materialities, Perceptions, Relations*. Stockholm: Stockholm Studies in Archaeology 57.
- Bahn, P. G., Franklin, N. R. & Strecker, M. (Eds.) 2008. Rock Art Studies. News of the World 3. Oxford: Oxbow Books.
- Bahn, P. G., Strecker, M. & Franklin, N. R. (Eds.) 2012. Rock Art Studies. News of the World 4. Oxford: Oxbow Books.

- Barnes, M. 1972. Sverdnavn. In: Granlund, J. & Andersson, I. (Eds). *Kulturhistorisk leksikon for nordisk middelalder fra vikingetid til reformationstid* 17. Pp. 544–547. Copenhagen: Rosenkilde og Bagger.
- Barnes, M. 1982. Våpennavn. In: Granlund, J. & Andersson, I. (Eds). Kulturhistorisk leksikon for nordisk middelalder fra vikingetid til reformationstid 20. Pp. 282–285. Copenhagen: Rosenkilde og Bagger.
- Baudou, E. 1960. Die regionale und chronologische Einteilung der jüngeren Bronzezeit im Nordischen Kreis. Stockholm: Stockholm Studies in Archaeology 1.
- Bertilsson, U. 1987. The Rock Carvings of Northern Bohuslän. Spatial Structures and Social Symbols. Stockholm: Stockholm Studies in Archaeology 7.
- Bevan, L. 2006. Worshippers and Warriors: Reconstructing Gender and Gender Relations in the Prehistoric Rock Art of Naquane National Park, Valcamonica, Brescia, Northern Italy. Oxford: BAR International Series 1485.
- Bradley, R. 1997. Rock Art and the Prehistory of Atlantic Europe: Signing the Land. London: Routledge.
- Bradley, R. 2008. Ship Settings and Boat Crews in the Bronze Age of Scandinavia. In: Goldhahn, J. (Ed.). *Gropar och monument: En vänbok till Dag Widholm*. Pp. 171–184. Kalmar: Kalmar Studies in Archaeology IV.
- Broström, S.-G. 1990. Hällristning på Fårö: Rapport över dokumentation av hällristning RAÄ nr 379 i Fårö s:n på Gotland utförd 1999 av Botark. Tumba: Botark.
- Brunius, C. G. 1868. Försök till förklaringar öfver Hällristningarna med femton plancher. Lund: Berlinska Boktryckeriet.
- Burenhult, G. 1980. *Götalands hällristningar*. *Del I*. Stockholm: Theses and Paper in North-European Archaeology 10.
- Capelle, T. 1972. Felsbilder in Nordwestdeutschland. *Acta Archaeologica* XLIII, 229–238.
- Challis, S. 2009. Taking the Reins: The Introduction of the Horse in the Nineteenth-century Maloti-Drakensberg and the Protective Medicine of Baboons. In: Mitchell, P. & Smith, B. (Eds). *The Eland's People: Essays in Memory of Patricia Vinnicombe*. Pp. 104–107. Johannesburg: Witwatersrand University Press.
- Challis, S. 2012. Creolisation on the Nineteenth-century Frontiers of Southern Africa: A Case Study of the AmaTola 'Bushmen' in the Maloti-Drakensberg. *Journal of Southern African Studies*, 38 (2), 265–280.
- Cochrane, A. & Jones, A. M. (Eds.) 2012. Visualising the Neolithic Abstraction, Figuration, Performance, Representation. Oakville, CT: Oxbow Books
- Coles, J. M. 1999. Bronze Age Shields in Reality and Reflection. In: Gustafsson, A. & Karlsson, H. (Eds). *Glyfter och arkeologiska rum en vänbok till Jarl Nordbladh*. Pp. 453–463. Göteborg: Gotarc Serie A3.
- Coles, J. M. 2000. Patterns in a Rocky Land: Rock Carvings in South-West Uppland, Sweden. Uppsala: Aun 27.
- Coles, J. M. 2005. Shadows of a Northern Past: Rock Carvings of Bohuslän and Østfold. Oxford: Oxbow Books.
- Comendador Rey, B. 1999. Los inicios de la metalurgia en el Noroeste de la Península Ibérica. Coruña: Museo Aqueolóxico, Monografias 11.
- Crumlin-Pedersen, O. & Trakadas, A. (Eds.) 2003. *Hjortspring a Pre-Roman Iron- Age Warship in Context*. Roskilde: The Viking Ship Museum in Roskilde.

- Davidson, H. R. E. 1943. The Road to Hel: A Study of the Conception of the Dead in Old Norse Literature. Cambridge: Cambridge University Press.
- Davidson, H. R. E. 1994. The Sword in Anglo-Saxon England: Its Archaeology and Literature. Woodbridge: Boydell Press.
- Davidson, H. R. E. 1996. Viking and Norse Mythology. Rev. ed. London: Chancellor.
- Domingo Sanz, I., Fiore, . & May, S. K. (Eds.) 2008. Archaeologies of Art: Time, Place and Identity. Walnut Creek, CA: Left Coast Press.
- Ekholm, G. 1921. Studier i Upplands bebyggelsehistoria II. Bronsåldern. Uppsala: Uppsala Universitets Årsskrift 1921.
- Fábregas Valcarce, R. & Rodríguez-Rellán, C. 2012. Images in their Time: New Insights into the Galician Petroglyphs In: Jones, A. M., Pollard, J., Allen, M. J. & Gardiner, J. (Eds). Image, Memory and Monumentality: Archaeological Engagements with the Material World. A Celebration of the Academic Achievements of Professor Richard Bradley. Pp. 249-259. London: Prehistoric Society's Research Paper 5.
- Fábregas Valcarce, R., Rodríguez-Rellán, C. & Rodríguez Álvarez, E. 2009. Representacións de armas no interior de Galicia (Comarca de Deza, Pontevedra). Unha reflexión sobre a distribución e cronoloxía destes motivos. *Gallaecia* 28, 49–68.
- Fontijn, D. R. 2002. Sacrificial Landscapes: Cultural Biographies of Persons, Objects and 'Natural' Places in the Bronze Age of the Southern Netherlands, c. 2300–600 BC. Leiden: Analecta Praehistorica Leidensia 33/34.
- Fossøy, H. S. & Bergerbrant, S. 2013. Creativity and Corded Skirts from Bronze Age Scandinavia. *Textile: The Journal of Cloth and Culture* 11 (1), 20–37.
- Franck, J. B. 2004. Helleristninger og realia. In: Milstreu, G. & Prøhl, H. (Eds). *Prehistoric Pictures as Archaeological Source/ Förhistoriska bilder som arkeologisk källa*. Pp. 211–212. Göteborg: Gotarc Serie C. Arkeologiska Skrifter 50, 179–189.
- Fredell, Å. 2003. Bildbroar: Figurativ bildkommunikation av ideologi och kosmologi under sydskandinavisk bronsålder och förromersk järnålder. Göteborg: Gotarc Serie B. Gothenburg Archaeological Thesis 25.
- Frieman, C. J. 2012. Going to Pieces at the Funeral: Completeness and Complexity in British Early Bronze Age Jet Necklace Assemblages. *Journal of Social Archaeology* 12 (3), 334–255.
- Gansum, T. 2004. Role the Bones from Iron to Steel. *Norwegian Archaeological Review* 37 (1), 41–57.
- Gell, A. 1998. Art and Agency. Oxford: Oxford University Press.
- Gillette, D. L., Greer, M., Hayward, M. Helene & Murray, .W. B. (Eds.) 2014. *Rock Art and Sacred Landscapes*. One World Archaeology 8. New York: Springer.
- Glob, P. V. 1961. Kultbåde fra Danmarks bronzealder. Kuml 1961, 9-18.
- Glob, P. V. 1969. *Helleristninger i Danmark*. Odense: Jysk Arkæologisk Selskabs Skrifter VII.
- Goldhahn, J. 1999. Sagaholm hällristningar och gravritual. Umeå: Studia Archaeologica Universitatis Umensis 11.
- Goldhahn, J. 2005. Från Sagaholm till Bredarör hällbildsstudier 2000–2004. Göteborg: Gotarc Serie C. Arkeologiska Skrifter 62.
- Goldhahn, J. 2007. *Dödens hand en essä om brons- och hällsmed*. Göteborg: Gotarc Serie C. Arkeologiska Skrifter 65.

- Goldhahn, J. 2008a. Hällbildsstudier i norra Europa trender och tradition under det nya millenniet. 2nd ed. with English summary. Göteborg: Gotarc Serie C. Arkeologiska Skrifter 64.
- Goldhahn, J. 2008b. From Monuments in Landscape to Landscape in Monuments: Death and Landscape in Early Bronze Age Scandinavia. In: Jones, A. (Ed.). Prehistoric Europe: Theory and Practice. Pp. 56–85. Global Archaeologies Series. Oxford and New York, Blackwell.
- Goldhahn, J. 2009. Bredarör on Kivik: A Monumental Cairn and the History of its Interpretation. *Antiquity* 83, 359–371.
- Goldhahn, J. 2010. Rock Art for the Dead and Un-dead: Reflections of the Significance of Hand Stones in Late Bronze Age Scandinavia. *Adoranten* 2009, 95–103.
- Goldhahn, J. 2012. In the Wake of a Voyager. Feet, Boats and Death Rituals in the North European Bronze Age. In: Jones, A. M., Pollard, J., Allen, M. J. & Gardiner, J. (Eds). Image, Memory and Monumentality: Archaeological Engagements with the Material World. A Celebration of the Academic Achievements of Professor Richard Bradley. Pp. 218–232. London: Prehistoric Society's Research Paper 5.
- Goldhahn, J. 2013a. Bredarör på Kivik en arkeologisk odyssé. Kalmar: Kalmar Studies in Archaeology 9.
- Goldhahn, J. 2013b. Rethinking Bronze Age Cosmology a North European Perspective. In: Fokkens, H. & Harding, A. (Eds). *Handbook of European Bronze Age*. Pp. 248–265. Oxford: Oxford University Press.
- Goldhahn, J., Fuglestvedt, I. & Jones, A. (Eds.) 2010. Changing Pictures: Rock Art Traditions and Visions in Northern Europe. Oxford: Oxbow Books.
- Goldhahn, J., Wikell, R., Broström, S.-G. & Ihrestam, K. 2012. Bronsålderns hällbilder i Tjust. *Tjustbygden* 2011, 35–68.
- Gräslund, B. 1987. The Birth of Prehistoric Chronology: Dating Methods and Dating Systems in Nineteenth-century Scandinavian Archaeology. Cambridge: Cambridge University Press.
- Hedeager, L. 2011. Iron Age Myth and Materiality: An Archaeology of Scandinavia AD 400–1000. New York: Routledge.
- Herner, E. 1998. Föremålskatalog. In: Kindgren, H. (Ed.). *Bronser: Bronsåldersfynd i Göteborgs och Bohus län*. Pp. 9–69. Uddevalla: Bohusläns museum.
- Herschend, F. 2001. Journey of Civilisation: The Late Iron Age View of the Human World. Uppsala: Occasional Papers in Archaeology 24.
- Hesse, S. 2006. Der Grabhügel mit Bildstein von Anderlingen: Forschungsegeschichte, Grabungen, Rekonstruktionen. *Archäologische Berichte des Landkreises Rotenburg (Wümme)* 13, 5–49.
- Hildebrand, B.-E. 1869. Till hvilken tid och hvilket folk böra de Svenska Hällristningarne hänföras? *Antiquarisk Tidskrift för Sverige* II, 417–432.
- Hodder, I. 2012. Entangled: An Archaeology of the Relationships between Humans and Things. Malden, MA: Wiley-Blackwell.
- Holmberg, A. E. 1848. Skandinaviens hällristningar, arkeologisk afhandling. Stockholm: P. G. Berg.
- Hoskins, J. 1998. Biographical Objects. London: Routledge.
- Ingold, T. 2000. The Perception of the Environment: Essays in Livelihood, Dwelling and Skill. London: Routledge.

- Jensen, J. 1992. Thomsens museum: Historien om Nationalmuseet. Copenhagen: Gyldendal.
- Jensen, J. 2002. Danmarks oldtid: Bronzealder 2000–500 f.Kr. København: Gyldendal.
- Johannsen, J. W. 2010. The Wheeled Vehicles of the Bronze Age. *Acta Archaeologica* 81 (1), 150–250.
- Johansen, Ø. K. 1981. Metallfunnene i østnorsk bronsealder. Oslo: Universitetets Oldsaksamlings Skrifter, Ny Rekke 4.
- Johansen, Ø. K. 2000. Bronse og makt. Oslo: Andresen & Butenschøn.
- Jones, A. M., Freedman, D. & O'Connor, B. (Eds.) 2011. An Animate Landscape: Rock Art and the Prehistory of Kilmartin, Argyll, Scotland. Oxford: Windgather Press.
- Joy, J. 2009. Reinvigorating Object Biography: Reproducing the Drama of Object Lives. World Archaeology 41 (4), 540–556.
- Kaul, F. 1998. Ship on Bronzes: A Study in Bronze Age Religion and Iconography. PNM Studies in Archaeology and History 3:1/2. Copenhagen: National Museum.
- Kaul, F. 2004. Bronzealderens religion studier af den nordiske bronzealders ikonografi. København: Det Kongelige Nordiske Oldskriftselskab.
- Kaul, F. 2012. Lennart Åberg og den tidlige forskningshistorie omkring bronzealderens helleristninger. Aarbøger for Nordisk Oldkyndighed og Historie 2010, 67–96.
- Keyser, J. D. 1992. *Indian Rock Art of the Columbia Plateau*. Seattle: University of Washington Press.
- Keyser, J. D. 2004. Art of the Warriors: Rock Art of the American Plains. Salt Lake City: University of Utah Press.
- Kjellén, E. 1976. *Upplands hällristningar*. Stockholm: Kungl. Vitterhets Historie och Antikvitets Akademien.
- Kjellén, E. & Hyenstrand, Å. 1977. Hällristningar och bronsålderssamhälle i sydvästra Uppland. Uppsala: Upplands Fornminnesförenings Tidskrift 49.
- Kopytoff, I. 1986. The Cultural Biography of Things. In: Appadurai, A. (Ed.). *The Social Life of Things*. Pp. 64–91. Cambridge: Cambridge University Press.
- Kristiansen, K. 1987. Centre and Periphery in Bronze Age Scandinavia. In: Rowlands, M., Larsen, M. & Kristiansen, K. (Eds). Centre and Periphery in the Ancient World. Pp. 74–85. Cambridge: Cambridge University Press.
- Kristiansen, K. 1998. Europe before History. Cambridge: Cambridge University Press.
- Kristiansen, K. 2002. The Tale of the Sword Swords and Swordfighters in Bronze Age Europe. Oxford Journal of Archaeology 21 (4), 319–332.
- Kristiansen, K. & Larsson, T. B. 2005. The Rise of Bronze Age Society: Travels, Transmissions and Transformations. Cambridge: Cambridge University Press.
- Larsson, T. B. 1986. The Bronze Age Metalwork in Southern Sweden. Aspects of Social and Spatial Organization 1800-500 B.C. Umeå: Archaeology and Environment 6.
- Latour, B. 2005. Reassembling the Social. Oxford: Oxford University Press.
- Laxdæla saga. 1969. Harmondsworth: Penguin Books.
- Lindblad, R. 2011. Hällristningsyxor och deponerade yxor i bronsålderns Östergötland och Uppland. *Fornvännen* 106 (4), 281–289.
- Lindow, J. 2002. Norse Mythology: A Guide to the Gods, Heroes, Rituals, and Beliefs. Oxford: Oxford University Press.

- Ling, J. 2008. Elevated Rock Art Towards a Maritime Understanding of Bronze Age Rock Art in Northern Bohuslän, Sweden. Göteborg: Gotarc Serie B, Gothenburg Archaeological Theses 49.
- Ling, J. 2013. Rock Art and Seascapes in Uppland. Oxford: Oxbow Books.
- Ling, J., Hjärthner-Holdar, E., Grandin, L., Billström, K. & Persson, P.-O. 2013. Moving Metals or Indigenous Mining? Provenancing Scandinavian Bronze Age Artefacts by Lead Isotopes and Trace Elements. *Journal of Archaeological Science* 40, 291–304.
- Ling, J., Hjärthner-Holdar, E., Grandin, L., Billström, K. & Persson, P.-O. 2014. Moving Metals II: Provenancing Scandinavian Bronze Age Artefacts by Lead Isotope and Elemental Analyses. *Journal of Archaeological Science* 41, 106–132.
- Linge, T. E. 2007. *Mjeltehaugen fragment frå gravritual*. Bergen: Arkeologisk institutt, Universitetet i Bergen, UBAS Hovedfag/master 3.
- Lund, J. 2009. Ästed og vadested: Deponeringer, genstandsbiografier og rumlig strukturering som kilde til vikingetidens kognitive landskaber. Oslo: Acta Humaniora 389.
- Lund, J. & Melheim, A. L. 2011. Heads and Tails Minds and Bodies: Reconsidering the Late Bronze Age Vestby Hoard in Light of Symbolist and Body Perspectives. *European Journal of Archaeology* 14 (3), 441–464.
- Malinowski, B. 1922. Argonauts of the Western Pacific: An Account of Native Enterprise and Adventure in the Archipelagoes of Melanesian New Guinea. London: Routledge & Kegan Paul.
- Malmer, M. P. 1981. A Chorological Study of North European Rock Art. Stockholm: Kungl. Vitterhets Historie och Antikvitets Akademien, Antikvariska Serien 32.
- Mandt, G. 1972. Bergbilder i Hordaland. Årbok for Universitetet i Bergen 1970, 1–247.
- Mandt, G. 1991. Vestnorske ristninger i tid og rom: Kronologiske, korologiske og kontekstuelle studier I–II. Bergen: Bergen Universitet.
- Marstrander, S. 1963. Østfolds jordbruksristninger Skjeberg. Oslo: Instituttet for Sammenliknende Kulturforskning Serie B 53.
- Mauss, M. 2002. The Gift: The Form and Reason for Exchange in Archaic Societies. London: Routledge.
- May, S. K., Taçon, P. T. C., Guse, D. & Travers, M. 2010. Painting History: Indigenous Observations and Depictions of the 'Other' in Northwestern Arnhem Land, Australia. *Australian Archaeology* 70, 29–37.
- McDonald, J. & Veth, P. M. (Eds.) 2012. A Companion to Rock Art. Oxford: Wiley-Blackwell.
- McNiven, I. J. & Russell, L. 2002. Ritual Response: Place Marking and the Colonial Frontier in Australia. In: David, B. & Wilson, M. (Eds). *Inscribed Landscapes: Marking and Making Place*. Pp. 27–41. Honolulu: University of Hawai'i Press.
- Melheim, A. L. 2012. Reconsidering a Periphery: Scenarios of Copper Production in Southern Norway. In: Anfinset, N. & Wrigglesworth, M. (Eds). *Local Societies in Bronze Age Northern Europe*. Pp. 89–107. Oxford: Equinox Publishing.
- Melheim, L. & Horn C. 2014. Tales of Hoards and Swordfighters in Early Bronze Age Scandinavia. The Brand New and the Broken. *Norwegian Archaeological Review* 2014, 1–24.
- Moberg, C.-A. 1970. Comments on Rock Carvings in Østfold, Skjeberg. *Norwegian Archaeological Review* 1970 3 (1), 98–102.

- Munn, N. 1986. The Fame of Gawa. Cambridge: Cambridge University Press.
- Myhre, B. 1981. Sola og Madla i førhistorisk tid. Stavanger: AmS-Småtrykk 10.
- Myhre, B. 1994. Haugbrott eller gravplyndring i tidlig kristen tid. In: Hansen, J. I. & Bjerva, K. G. (Eds). Fra Hammer til Kors 1000 år med kristendom. Brytingstid i Viken. Pp. 68–85. Oslo: Schibsteds Forlag.
- Myhre, B. 2004. Undersøkelse av storhauger på Borre i Vestfold. In: Larsen, J. H. & Rolfsen, P. (Eds). *Halvdanshaugen arkeologi, historie og naturvitenskap*. Pp. 203–226. Oslo: Universitetets Kulturhistoriske Museer, Skrifter 3.
- Nimura, C. 2012. Rock Art and Coastal Change in Bronze Age Scandinavia. In: Back Danielsson, I.-M., Fahlander, F. & Sjöstrand, Y. (Eds). *Encountering Imagery: Materialities, Perceptions, Relations*. Pp. 117–132. Stockholm: Stockholm Studies in Archaeology 57.
- Nordén, A. 1925. Östergötlands Bronsålder. Linköping: Henric Carlssons Bokhandels Förlag.
- Nordén, A. 1930. Kiviksgraven och andra fornminnen i Kivikstrakten. 3rd ed. Stockholm: Kungl. Historie Vitterhets och Antikvitets Akademin, Svenska Fornminnesplatser 1.
- Nordén, A. 1942. Kiviksgraven och andra fornminnen i Kivikstrakten. 4th ed. Stockholm: Kungl. Historie Vitterhets och Antikvitets Akademin, Svenska Fornminnesplatser 1.
- Nordenborg Myhre, L. 2004. Trialectic Archaeology: Monuments and Space in Southwest Norway 1700–500 BC. Stavanger: AmS-Skrifter 18.
- Olsen, B. 2010. In Defense of Things. New York: Altamira Press.
- Ørsnes, M. 1958. Borbjerg-fundet. Aarbøger for Nordisk Oldkyndighed og Historie 1958, 1–107.
- Østmo, E. 1992. Helleristninger i et utkantstrøk: Bidrag til skipshistorien fra nye jernaldersristninger på Dalbo i Bærum. Oslo: Varia 24.
- Ouzman, S. 2003. Indigenous Images of a Colonial Exotic: Imaginings from Bushmen Southern Africa. *Before Farming* 1 (6), 239–256.
- Parker Pearson, M., Marshall, P., Pollard, J., Richards, C., Thomas, J. & Welham, K. 2013. Stonehenge. In: Fokkens, H. & Harding, A. (Eds). Handbook of European Bronze Age. Pp. 159–178. Oxford: Oxford University Press.
- Paterson, A. & Wilson, A. 2009. Indigenous Perceptions of Contact at Inthanoona, Northwest Western Australia. *Archaeology in Oceania* 44, 99–111.
- Pearce, M. 2013. The Spirit of the Sword and Spear. Cambridge Archaeological Journal 23, 55-67.
- Priuli, A. 2002. Valcamonica: Valley of Prehistory. Capo Di Ponte: Priuli Edizioni.
- Randsborg, K. 1998. Plundered Bronze Age Graves: Archaeological and Social Implications. *Acta Archaeologica* 69, 113–138.
- Rodríguez-Rellán, C. & Fábregas Valcarce, R. 2013. Beyond the Borders: Some Thoughts on Galician Rock Art. In: Sanches, M. J. (Coord.). 1<sup>a</sup> Mesa-Redonda. Arte Rupestre da Pré-História e da Proto-História: paradigmas e metodologías de registro. Pp. 239–248. Santiago de Compostela: Trabalhos de Arqueologia 54.
- Røthe, G. 1997. Fra Olav Geirstadalv til Olav den hellige. In: Frost, T. (Ed.). Gokstadhøvdingen og hans tid. Pp. 25–42. Sandefjord, Sandefjordmuseene.
- Schaafsma, P. 2013. Images and Power: Rock Art and Ethics. New York: Springer.

- Schnittger, B. 1922. En hällristning vid Berga-Tuna i Södermanland. *Fornvännen* 17, 77–112.
- Selinge, K. G. 1989. Västergötland. Hällristningar och hällmålningar i Sverige. In: Janson, S., Lundberg, E. B. & Bertilsson, U. (Eds). Pp. 131–146. Stockholm: Forum.
- Skoglund, P. (med bidrag av S.-G. Broström & K. Ihrestam) 2006. *Hällristningar i Kronobergs län: Motiv, myter och dokumentation*. Lund: University of Lund Institute of Archaeology, Report Series 97.
- Smith, B., Helskog, K. A. & Morris, D. (Eds.) 2012. Working with Rock Art: Recording, Presenting and Understanding Rock Art Using Indigenous Knowledge. Johannesburg: Wits University Press.
- Sognnes, K. 1987. Bergkunsten i Stjørdal 2: Typologi og kronologi i Nedre Stjørdal. Trondheim: Gunneria 56.
- Sognnes, K. 2001. Prehistoric Imagery and Landscapes: Rock Art in Stjørdal, Trøndelag, Norway. Oxford: BAR International Series 998.
- Steinsland, G. 2011. Origin Myths and Rulership: From the Viking Age Ruler to the Ruler of Medieval Historiography: Continuity, Transformations and Innovations. In: Steinsland, G., Sigurdsson, J. V., Rekdal, J. E. & Beuermann, I. (Eds). Ideology and Power in the Viking and Middle Ages. Scandinavia, Iceland, Ireland, Orkney and the Faeroes. Pp. 14–68. Leiden: Brill Academic Publishers.
- Sundstrom, L. 2004. Storied Stones: Indian Rock Art in the Black Hill County. Norman: University of Oklahoma Press.
- Syvertsen, K. I. J. 2002. Ristninger i graver graver med ristninger. In: Goldhahn, J. (Ed.). *Bilder av bronsålder ett seminarium om förhistorisk kommunikation*. Pp. 151–183. Lund: Acta Archaeologica Lundensia, Series in 8°, 37.
- Syvertsen, K. I. J. 2005. Rogalands ristninger i graver som transformerende og stabiliserende faktorer i tilværelsen. In: Goldhahn, J. (Ed.). Mellan sten och järn: Rapport från det 9:e nordiska bronsålderssymposiet, Göteborg 2003-10-09/12. Pp. 503–520. Göteborg: Gotarc Serie C. Arkeologiska Skrifter 59.
- Thrane, H. 1975. Forbindelser med Europa nord for Alperne i Danmarks yngre broncealder (per. IV-V). København: Nationalmuseets Skrifter, Arkæologisk-Historisk Rekke 16.
- Twohig, E. S. 1981. The Megalithic Art of Western Europe. Oxford: Clarendon Press.
- Vandkilde, H. 1996. From Stone to Bronze: The Metalwork of the Late Neolithic and Earliest Bronze Age in Denmark. Aarhus: Aarhus University Press.
- Veth, P. M., Sutton, P. & Neale, M. (Eds.) 2008. Strangers on the Shore: Early Coastal Contact in Australia. Canberra: National Museum of Australia.
- Vogt, D. 2011. Rock Carvings in Østfold and Bohuslän, South Scandinavia: An Interpretation of Political and Economic Landscapes. Oslo: The Institute for Comparative Research in Human Culture/Novus Forlag.
- Wahlgren, K. H. 2002. Bilder av betydelse: Hällristningar och bronsålderslandskap i nordöstra Östergötland. Stockholm: Stockholm Studies in Archaeology 23.
- Wahlgren, K. H. 2004. Switching Images On and Off: Rock Carving Practice and Meaning in the Bronze Age Life-world. In: Milstreu, G. & Prøhl, H. (Eds). *Prehistoric Pictures as Archaeological Source/ Förhistoriska bilder som arkeologisk källa*. Pp. 149–165, 209–211. Göteborg: Gotarc Serie C. Arkeologiska Skrifter 50.
- Welinder, S. 1974. A Study of the Scanian Rock Carvings by Quantitative Methods. Meddelanden från Lunds Universitets Historiska Museum 1973/1974, 244–275.

- Wesley, D. 2013. Firearms in Rock Art of Arnhem Land, Northern Territory, Australia. *Rock Art Research* 30 (2), 235–247.
- Widholm, D. 1998. *Rösen, ristningar, riter*. Lund: Acta Archaeologica Lundensia, Series in Prima 4°, 23.