Articulating Stone

The Material Practice of Petroglyphing

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ABSTRACT The present text elaborates on the material and processual aspects of making petroglyphs during the early Bronze Age in Northern Europe. The focus is set on the relations between materiality and the 'chaîne opératoire' rather than in terms of representation, symbolisation or style. It is argued that patchworks, unfinished motifs, re-cuts and hybrids are more interesting ways to understand the complex relations between the social and the ritual aspects of petroglyphing. The approach is illustrated by a horizontal stratigraphy of the Hemsta panel in the parish of Uppland, in southern Sweden. Here a sequence of at least three separate phases of activity is distinguished. The study emphasizes the changing importance of space, depth and size in the process of making and arranging the motifs – suggesting that the development is a part of a social and ritual turbulence resembling the process of hybridity.

Images of the material

In recent decades a number of archaeologists, anthropologists and social scientists have shifted perspectives in which the human and the material are being conceptualised. The 'material turn' in the Humanities and the Social Sciences has resulted in an increased emphasis on what the material does to us rather than how humans deal with things (Latour 2005; Webmoor 2007; Fahlander 2008a; Knappett & Malafouris 2008; Olsen 2010). Much of the discussion focuses on the question of material agency, that is, pointing out how certain material objects can work as extensions of human agency (e.g. smoke alarms, speed bumps, or automatic doors) and even 'replace' human actors, such as in the case of barbed wire eliminating the need of a shepherd (Latour 2005:77). In archaeology and anthropology, this power to evoke social effects has been discussed in relation to a variety of subjects, e.g. elements of the natural environment (Fahlander 2003), Roman pottery (Gosden 2005), Mayan roads (Normark 2006) or olive oil (Meneley 2008). Despite the obvious similarities to material culture, such symmetrical perspectives have only been employed to a lesser extent when it comes to imagery (cf. Hamilton et al. 1996:281-307; Latour & Weibel 2002). One influential example is the work of Alfred Gell (1998), especially his study of the imagery of the

Kula canoes in terms of semi-conscious mind-control. Gell argues that the lavish decoration carries a 'secondary agency', prolonging the general intentions to achieve a good deal (1992:44). Considering the great powers Gell attributes to art and imagery it is no surprise that his arguments have been adopted in rock art research (e.g. Tilley 2008:47; Bradley 2009:53; Ling & Cornell 2010).

However, aside from this potential to 'harbour' agency, imagery, like any other materiality, may also have unforeseen effects beyond the intentions of the producer. Images can 'grow legs' as Thomas Mitchell puts it; they can be misunderstood, misused and have unintentional effects (1996:73). Such aspects in the lives of images are certainly interesting to pursue – especially considering the long life of certain imagery of the past. Such a perspective partly displaces the role of intention, context, meaning, symbolism and representation and instead emphasizes 'what an image really wants'. For instance, in what ways can imagery affect the production of new images? How do their biographies intersect with other practices and ways of thinking? What are the effects of the practice of depicting, illustrating and making images? How was social life affected by the accumulation of images? In order to pursue such questions of 'the materiality of the imagery' this text elaborates from a relational perspective on Bronze Age petroglyphs in terms of materiality and handicraft. In this case, the materiality of the rock is intensively mixed and intertwined with the actual crafting procedure and thus advocates an integrated perspective. The study focuses on the elements of the imagery as actants, discussing how displacements in quantity, size and depth may be as important for understanding the craft as the motif itself. Since petroglyphs are produced over quite long time spans, I will mainly focus on small scale and local developments rather than pursuing general issues of Bronze Age rock art. This 'microarchaeological' approach is illustrated by a horizontal stratigraphy of the Hemsta panel, a small site of petroglyphs outside the city of Enköping, about 100 kilometres north-west of the Swedish capital of Stockholm (Fig. 1).

The materiality is the message

It might seem contradictory to discuss the materiality of petroglyphs since in a strict sense they constitute a void; but of course, the medium, the rock, is an essential aspect in order to understand both the practice and the roles of the imagery in the social structuration process. In Bronze Age rock art studies, various iconological perspectives have dominated the research which emphasizes the understanding of the motifs in relation to their primary and secondary contexts. For instance, on a regional level several scholars pointed out the importance of the landscape to understand the petroglyphs, such as the close association with water and the shoreline (e.g. Nordenborg Myhre 2004; Ling 2008; Gjerde 2010). Others have considered the materiality of place, that is, the particular context or ambience surrounding the petroglyphs (e.g.

Goldhahn 2002; Jones 2006; Coles 2011). On the micro-level, some have focused on the 'canvas'; the rock-face itself and its properties in terms of colour, cracks and fissures (e.g. Bradley et al. 2002; Wahlgren 2004; Tilley 2004).

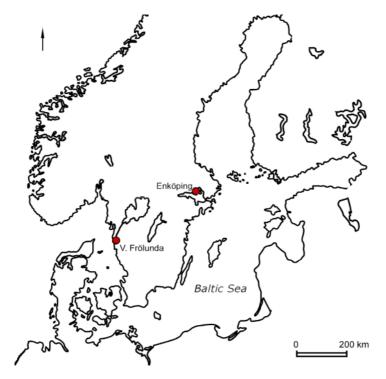


Fig. 1. Map of southern Scandinavia with the location of the sites mentioned.

However, notwithstanding the level of scale and generalisation, the search for a 'proper context' tends to lock the understanding of imagery into smaller or larger 'frames'. This prevents us from understanding how local issues are related to the big picture in various ways, and to recognise how different spheres of life are rather entangled, criss-crossing conceptual boundaries. Thus, the traditional interpretative focus on context has been questioned in the last decades by archaeologists, geographers and anthropologists who instead explore various non-representational and relational perspectives (e.g. Fahlander 2003; 2008b; Jones 2004; Cochrane 2005; Ingold 2006; Henare et al. 2007; Anderson & Harrison 2010). A main inspiration to the relational approach is found in actor-network theory and the notion of a 'flat' ontology which tries to bypass the kind of binary thinking that has plagued rock art research (e.g. real – ideal, mobile – sedentary, Bronze Age – Neolithic, material – immaterial, general – particular, local – global, death – fertility, ritual – social, etc).

Instead of seeking such a priori order 'waiting to be unveiled, decoded, or revealed' (Anderson & Harrison 2010:19) non-representational theories emphasize the relational aspects of social and material actants; e.g. materialities (artefacts and natural), humans, deities and animals. For instance, the different images pecked in rocks do not primarily need to represent something ideal or real, but may in fact be both depending on the circumstances (cf. Cochrane & Russell 2007; Alberti and Bray 2009).

From a non-representational perspective we may approach the petroglyphs as a meaningful practice – but not necessarily as a communicating or narrating device. Instead of investigating primary or secondary intentions behind the motifs we can focus on material qualities, sizes, elements and techniques and discuss the ways in which images are integrated and important parts in social structuration. The materiality is clearly of importance in this case (cf. Sognnes 2001:16; Bradley et al. 2002). Although similar images have been both painted and carved in other materials, the choice of medium for petroglyphs has certain qualities that may be as important as the motifs themself. There are great differences between pecking an image in stone compared to carving the same image in other materials (cf. Conneller 2011; Cummings 2012). The material aspects of the rock 'offer' - in Gibson's terms (1979) - three major affordances: to begin with, it is a hard material, which means that it takes time to peck images into stone. This implies that images are not randomly scribbled down, but that the size, depth, level of detail and style are carefully considered. A second aspect is the static nature and immovability of the rock, which together with its material qualities suggests a sense of endurance and promise of eternity. Thirdly, by being a resilient matter it may to a certain extent prohibit intentional or unintentional destruction. These aspects are all profoundly intertwined with the actual craft of making petroglyphs and thus endorse an integrated perspective.

Working with rocks

Even though the focus in rock art has generally been put on the pictorial content, it has been suggested that the actual practice of making petroglyphs may have been the primary purpose (e.g. Moberg 1969:13; cf. Bradley 2009:63). Such a perspective does not necessarily imply that the visual result was unimportant, but rather adds yet another dimension to our understanding of why the images were made on rocks. Moreover, the resilient aspect of the rock also suggests that the petroglyphs can be discussed in terms of time and energy investment. From such a perspective, one large boat may thus be equal to two smaller ones and vice versa. It also implies that re-cutting a previous motif may be regarded as equal to pecking a new image because it represents basically the same effort.

An energy-expenditure perspective on the petroglyphs also opens up possibilities for 'comparing' single motifs or whole panels or sites similar to how Tainter (1978)

once compared burials in terms of energy investment. On the one hand, such an assessment makes sense from a ritual perspective, in which the effort of making images on rock is equivalent to a votive-offering (Pinch & Waraksa 2009; cf. Malmer 1989:18). On the other hand, from a social perspective, such a practice can in a similar way be viewed in terms of competitive practice between individuals or groups. From the latter outlook we may need to add time as a factor (how fast one could make a motif), and also aspects such as quantity, size, location, originality and aesthetics in a way that is similar to how modern graffiti works (e.g. Gottlieb 2008; cf. Aldhouse-Green 2004). There is, however, little point in discussing the possible reasons behind the making of petroglyphs on a general level. Considering the many different social and material contexts in which they appear, and the long history of the tradition, it would be pointless to single out one reason that is valid for all regions and time periods (cf. Goldhahn 2006:71).

We need not, however, choose ritual perspectives over social ones. Instead, it is more interesting to discuss certain particular instances where one perspective may be more prominent than the other – as well as circumstances where they seem to intersect. In order to narrow and focus the discussion I will consider a few particular examples (i.e. patchworks, unfinished motifs, re-cuts, and hybrids) related to the craft of making petroglyphs.

Patchworks, unfinished motifs, re-cuts & hybrids

One interesting category concerns later additions and transformations of older motifs. A panel in the parish of Hemsta, outside Enköping, contains one such example of an animal and a boat that have been conjoined into what seems to be an intentional hybrid (Fig. 2a). Such combinations are relatively common in the circumpolar hunter rock art tradition. For instance, Sjöstrand (2011:123) suggests that the transformations of boats to elks and vice versa at Nämforsen are primarily the result of 'interaction' with previous carvers. It is indeed an interesting hypothesis, especially considering the relatively high frequency of boat-animal hybrids in those contexts. The merging of different motifs may hint at a grammatical relationship whereby the conjoined unit becomes something other than a boat-elk. Another interesting category of re-use of previous motifs is one that may be discussed in terms of 'short-cuts'. Consider, for example, a boat motif (Boglösa 416) that apparently has made use of a natural groove in the rock instead of hammering out the hull (Fig. 2c). This and other similar uses of the natural cracks and fissures in rocks have in some cases been interpreted as narrative traits to illustrate movement etc. (e.g. Bradley et al. 2002; Goldhahn 2005b:592; Tilley 2008). However, viewed from a practice-oriented perspective, such instances nonetheless represent less energy investment and may qualify as short-cuts. Another type of later modification concerns possible re-cuts of older images. These

are also difficult to prove, but it has been argued that the varying depth of certain individual motifs in some cases was caused by them being renewed (cf. Nordbladh 1980:11). At Hemsta there is a possible example of a boat of which a part of the keel has been pecked much deeper than the rest (Fig. 2b). As such, it may thus be an example of both re-cutting and an unfinished project. Wahlgren has argued for the use of re-cuts as a narrative tool by which certain motifs of a panel can be switched 'on' and 'off' (2002:185, cf. Malmer 1989:10; Nordenborg Myhre 2004: ch. 6). But of course, re-cuts may also be interpreted from a practice-oriented perspective as a way to save time and effort.



Fig. 2. Examples of possible patchworks, unfinished motifs, re-cuts and hybrids (all from Hemsta, outside Enköping). Top right: (2a) A boat joined with an animal (photo: F. Fahlander). Top left: (2b) A boat motif showing signs of re-cutting? (photo: F. Fahlander). Lower left: (2c) A possible 'cheat' or shortcut, using a natural groove for the hull? (Kjellén id: 416.2ACBHemsta). Lower right: (2d) A detached row of crew-lines of an unfinished boat? (photo: F. Fahlander).

The category of 'unfinished' motifs is also interesting in the sense that they may hint of the sequence in which the different elements were cut – especially if we can assume that the most important aspects also set the frames for the whole composition of a motif. One interesting element is the so-called crew-lines in the boat-like images. What the vertical lines on these particular motifs are supposed to represent has been debated, the most common interpretation is a crew of paddlers, but it has also been suggested that they refer to construction details of a catamaran or outrigger canoe (Elgström 1924; Kjellén & Hyenstrand 1977:64). At Hemsta there are a few examples of what seems to be 'crew-lines' without a hull or keel (Fig. 2d) as well

as several cases where the depth of the lines differs from that of the hull. Do such instances suggest that these lines were the first to be pecked? If that is indeed the case, it then follows that the number of lines may actually determine the length of individual boats. It also suggests that they are a more important aspect of the boat motif than one would expect.

Incomplete motifs are also interesting because they may indicate the possibility of material hybrids. The example of crew-lines 'without a hull', for instance, may once have been complemented with paint or some other sticky substance? Whether the petroglyphs have been painted (Tilley 1991:138) or 'filled' with substances (Yates 1990) is a recurrent theme in rock art research, but complementary use of different materials to compose a motif is rarely discussed. Of course, this kind of ex nihilo argument is problematic since no such instances are known. The notion is, however, actually supported in a three-dimensional scan of an 'incomplete' animal motif on a panel (VF 68) at Västra Frölunda, south of the Swedish city of Gothenburg (Fig. 3).

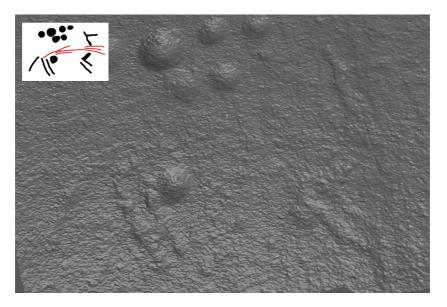


Fig. 3. An animal motif without a body, a possible material hybrid of rock and paint? The scratching (red) superimposes the neck of the animal and is thus a later disturbance (3D-data processed in RapidForm 2004 by the author).

The animal consists of a pecked tail, neck and head but appears to lack a body that would join the limbs together. The depth of the other limbs refutes the possibility that the body has simply weathered away and it is very likely that the motif is unfinished since the body is less likely to be the last to be pecked since all other limbs stem from

it. However, when the panel was subjected to laser scanning, the detailed 3D-image revealed traces of horizontal scratching on the area around where the body should have been cut (Fahlander 2008c). This suggests that the animal indeed once had a body that at a later stage was erased. However, it is obvious that the body was never cut into the rock, but is more likely to have been made of paint, clay or another sticky material, which at a later point had been scratched away. The possible occurrence of material hybrids is indeed interesting. They provide a link between different rock art traditions and put the category of seemingly incomplete motifs in perspective.

Patchworks, unfinished motifs, re-cuts and hybrids are all important aspects when discussing the material and practical side of petroglyphs. However, to be of any analytical use they need to be studied in relation to other aspects and not as singular instances. I will therefore conclude this discussion by addressing one example of how a relational perspective can be helpful in order to establish horizontal stratigraphies of individual panels. A time-line allows us to discuss the 'chaîne opératoire', that is, how subsequent motifs relate to the materiality of the rock as well as earlier motifs. It facilitates a more detailed platform from which we can discuss possible relations between the material, the social and the ritual, as well as between the local and the regional.

Sequencing difference, displacements and change

That many rock art panels are the result of a cumulative development is today widely recognised and only a few minor panels can be argued to constitute an intentional composition made by one person at one point in time. The varying styles, erratic alignments and several cases of superimposing motifs suggests that most panels are the result of the recurring efforts of several individuals over time (Goldhahn 2006:71; cf. Fahlander 2012). Both Moberg (1965:32) and Nordbladh (1980:28) have compared the process with the horizontal development of burials grounds. Precisely as new graves needed to be related to previous ones, each new motif needed to relate in some way to the previous ones and the available area. This implies that it is possible to establish a time-line from the very first to the last motifs of a particular panel. Such a horizontal stratigraphy would allow us to discuss changes and displacement in practice over time and thus establish differences for further interpretation. As a practical example of how such a stratigraphy may prove informative I will discuss the local development of a special panel on the Hemsta outcrop (Fig. 1).

The area south-east of Enköping comprises a cluster of petroglyphs that originally were situated close to the shoreline, approximately 20-25 metres above the present sea level (Plikk 2010). The petroglyphs in this area comprise all of the common figures (cup marks, boats, human figures, animals and abstract figures) of which the majority can be dated to Bronze Age periods I to V (Ling 2012:86). One especially

interesting site with petroglyphs is the Hemsta panel (Boglösa RAÄ 131:1), which was a rocky islet, situated within a shallow cove during the Bronze Age (Fig. 4). The altitude above sea level (25.2 m.a.s.l.) suggests that this rock was submerged until the end of the third millennium BC when it gradually became visible above the surface. The outcrop comprises a number of boat motifs, human-like figures, animals and a few 'encircling' formations (e.g. the so-called 'chair' at Hemsta). The majority of the petroglyphs, or at least the boat motif, seem stylistically to belong to the Early Bronze Age although a few may in fact be older (Kjellen & Hyenstrand 1977:105; Ling 2012).

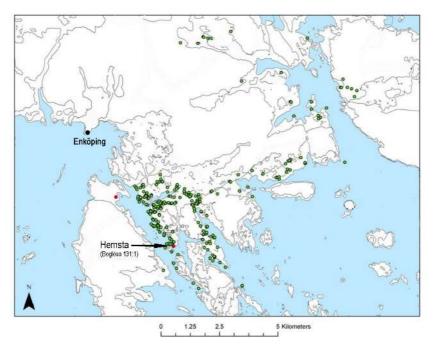


Fig. 4. The location of the Hemsta panel with adjusted water level (c. 20 m above present level). The dots represent panels with figurative motifs in the area (adapted and modified based on Wessman 2011). The pattern of pecked panels is indeed suggestive and is by no means randomly distributed.

The general dating methods based on style and altitude above sea level are, however, only helpful to a certain extent. They are only able to offer an approximate date of the period when the site was in use, but it does not help us to establish a sequence between individual motifs (the difference in altitude between the lowest and the highest-placed petroglyphs at Hemsta is only about a metre). The same goes for stylistic differences, which are too general to be applicable on such a detailed scale (for example, there are at least 15 different types of boats pecked on the Hemsta

outcrop alone). Instead, we can employ some of the previously discussed craft and material related aspects of the petroglyphs in order to establish a sequence of events. In this case I will focus on the uppermost and possibly most prominent part of the site, which comprises a number of boats of varying sizes and styles, as well as a few animal figures and cup marks (Fig. 5).

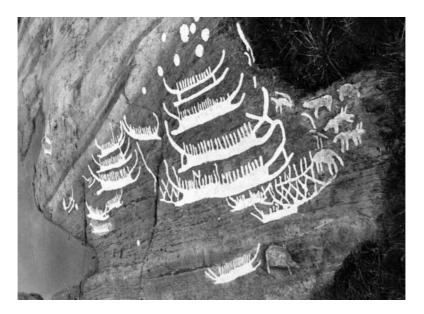


Fig. 5. Part of the Hemsta outcrop, Boglösa 131 (Photo: Kjellén, id: 131.1LICBshHemsta).

A horizontal stratigraphy of the Hemsta panel

What is immediately striking in Kjellén's photo, the punctum of the panel in the words of Barthes (2000:27), are the two columns of deep pecked large boat motifs stacked on top of each other (Fig. 5). But looking in more detail we find at least three or four different types of boats, of which some clearly superimpose others. It is interesting to note that Kjellén (1975), Kjellén & Hyenstrand (1977), Coles (1995; 2000), and Broström (ms.) have interpreted the same panel differently over the years (compare Fig. 5 and Fig. 6). A three-dimensional scan would certainly provide more information about carving depth and alternative interpretations of certain details, but the panel is, however, currently painted which eliminate any closer examinations with the aid of laser scanning or photogrammetry. In this example, I have used the most recent interpretation made by Broström (ms), which seems most detailed and accurate. When appropriate, I have also consulted the documentation of Coles (1995:58; 2000:18) and additional photos from Kjellén's archive.

By studying different qualities such as superimpositions, style, size, depth, alignment, possible hybrids as well as how the different motifs relate to each other and the natural rock face it is possible to identify at least three different phases of activity on the panel (illustrated by different colours in Fig. 6). It is, of course, a tentative suggestion which omits some motifs while emphasizing others. It is also important to note that this example by no means aspires to capture the full developments at the site. There is much other imagery on the same and other sites parallel to this particular panel. The aim is rather to emphasize how the particular – when studied in detail – can be revealing about more general developments.

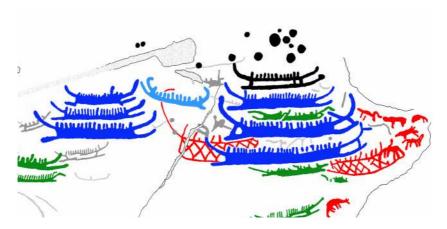


Fig. 6. Part of the Hemsta outcrop and the sequence of phases coloured in red, blue and green (Boglösa 131). Motifs that are indeterminable with regard to the sequence are in grey and black indicating differences in depth (Image based on original gray-scale documentation by Broström, from Ling 2012:49).

The starting point for the stratigraphy is the superimposing elements. Although it is difficult to determine by objective means which motif overlaps the other (Forsberg 1993:201-2), in this case it is evident that the largest boat (blue) – as well as one (or two) of the smaller boats (green) beneath it – superimpose the two shallower pecked boats with hatched hulls (red). These latter examples are clearly different from the others in terms of both technique and style. Boat motifs with hatched hulls are scarce; there is another one a few metres away on the opposite side of the rock, and single examples are found in the Norrköping area (Wahlgren 2004:163) and in Bohuslän on the west coast of Sweden (Baltzer 1881:pl49:2; cf. Elgström 1924:289). Considering the varying contexts in which they appear, hatched hulls seem not to be a chronological feature (cf. Kjellén & Hyenstrand 1977:51ff; Burenhult 1980:52f). The hatched boats at Hemsta also differ from the others in other ways: they have an unusual shape of both the 'stern', which is

almost straight with no keel or rudder extension, and the front, which culminates in a 'pointy', single extended 'prow'. Furthermore, they are shallowly pecked in thin lines (perhaps they became superimposed because they were barely visible?). The prow of the left one also extends over the natural crack in the rock, which subsequent boats never do. The one farthest to the right is also conjoined with an animal figure (cf. Fig. 2a). These examples suggest that both boats and probably the animals belong to the earliest phase of the panel. In fact, the diverging style together with the case of joint boat-animal motifs may indicate a Neolithic date (cf. Ling 2012:52).

The next phase of petroglyphs comprises the two columns of large boats (blue). According to Ling's chronology, they are of a typical Early Bronze Age style (2012:75). As previously mentioned, the largest boat in the right column superimposes the hatched ones and is thus clearly of later date. Because of their similar style, size and special formation in columns, the six (or more?) large boats with hammered out hulls are grouped together into one phase. An interesting aspect of this phase is the solid and distinct impression of the motifs. If anything they articulate a sense of domination and order compared with the other smaller and less organised boats. What is also striking is that they seem to cover as much area as possible within the frames of the natural cracks and previous petroglyphs. In fact, there is no better place to place them if you want to make them big and impressive. This phase also introduced the stacking of ships, which are a common feature at both Neolithic and Bronze Age rock art sites (Fahlander 2012). A few metres away on the rock there is a column of seven boats stacked on top of each other. It is also interesting to note that a number of smaller (green) boats cluster in pairs below the larger blue ones in what seems to be an intentional formation (cf. Coles 2000:57ff). These boats differ in several respects from the blue ones and therefore constitute a third phase. Like the large blue boats, at least one of them superimposes a red, hatched one, and must thus be a later addition. That these are later than the large blue boats is evident from the one crammed in between two blue boats. The angle of the prow has clearly been adjusted in order not to interfere with the previous boats. The boats of this phase are generally small, of varying alignment and distinguished by the compact, almost square style, with a flat hull, long pointed prows and extended keels. Kjellén and Hyenstrand (1977:105) suggest that the extended keels and prows possibly make them stylistically more recent than the large blue ones, which would perhaps indicate a break in continuity in the use of the panel.

A matter of size?

In addition to the three basic groups of boats there are two further distinct motifs that call for attention. One is the boat (light blue) between the two columns of blue boats, and the other is the contour-pecked boat (black) on top of the right stack. In the first case it is obvious that size and space are important parameters, which may

possibly overrule formal stylistic aspects of the motif. The available rock surface has large unused areas, but still many petroglyphs are crammed together, like the case of the green boat between the blue ones in the right column. The way its keel and alignment have been adjusted is one of many indications that superimposing has been avoided. With the exception of the shallow pecked hatched boats natural cracks in the rock have also generally been 'respected'. The boat placed between the two columns of stacked boats (light blue) is indeed a prime example of this. It is crammed into the available space and the angle of the hull and alignment is clearly adjusted to maximize its size (best visible in Fig. 5). In this case, the slightly rounded hull is most likely due to the attempt to maximize the size in relation to the available area. In most other respects this motif is similar to the blue ships (although facing the opposite direction and with slightly more inward-turned prows) and is thus probably a late addition within the same phase. We may therefore begin to suspect that there is more to the seemingly random distribution of boats than first meets the eye. The way the motifs relate to each other, as well as their size and place on the rock, seems typically more important than the style and shape of its elements.

The contour-pecked boat (black) on top of the right column may support this impression. It is a confusing example since it in one way so clearly relates to the other blue boats, yet is still of a different style. At other sites, like Nämforsen, contour-pecking is generally regarded as a chronological trait (Forsgren 1993:224), but in this context, this type of boat is placed in the same period (I) as the large (blue) boats with hammered-out hulls (Ling 2012:85). It may be tempting to cluster this boat with the other contour-pecked boats (grey) on the left of the panel. They are probably older than both the blue and the green ones because they seem to be superimposed by the larger ones. The one on top of the column is, however, clearly a different type in style, depth and size and in terms of craft and energy investment, which altogether suggests that the style of the hull is not primarily a chronological aspect here. One explanation may be that it is in fact a half-finished motif, i.e. that the hull was hammered-out as a late stage in a process. However, considered together, the two boats are actually likely to be part of the basic idea of stacking boat motifs on top of each other. However, in the case of the left one, there simply is not any room to fit it on top of the other three. There are two further aspects to consider here: the first is the difference in size from the largest at the bottom to the smallest on the top. In the case of the right column this may be due to the available area between the cracks in the rock, but this is not the case of the left column. There are few clues for us to understand why they differ in size in this manner, but the formation suggests that the sequence begins with the largest boats at the bottom. In the case of the left column, the final number of ships does not seem to have been taken into account. This interpretation is also consistent with similar concerns and adjustments made at other sites with stacked boats, such as Boglösa 73:1, situated a few kilometres north of Hemsta.

Relating or representing?

It would probably be a mistake to completely dismiss the importance of style when relating the different motifs to each other. Style and form are certainly chronological variables to some extent, but the point I wish to make is that we need to consider other aspects as well. Aside from what the boat-motifs are supposed to represent (emblemic— assertive style, or real — ideal construction details), the materiality of the rock itself indicates that there is indeed a ritual dimension of the practice. For instance, if we set aside the asymmetrical ontology in which the human and material are separated, we may consider the prospect of a relational ontology in which certain materialities (objects, animals, images etc.) may be 'animated' and charged with certain powers (Ingold 2006; Hill 2010). Perhaps it is possible to 'trap' something within an image; by producing it you have captured, imprinted, and appropriated something (cf. Burenhult 1980:92)? Such a hypothesis is supported by what seems to be an 'untouchable' status of the boat motifs. For instance, the boat motifs at Hemsta (except for the red) are adjusted to the natural cracks and fissures in the rock in order to be 'intact'. From a ritual perspective this makes sense since a votive offering is generally a communicative ritual, performed in order to establish a durable relationship between the individual and the deity (Pinch & Waraksa 2009; Teske 1980:112). The materiality of the rock offers both a suitable resistance (representing the offering) as well as a promise of durability. Such an aspect is also sustained by the study of the boat motifs at Hemsta, which seem to seek an ultimate impact (size and quantity) without interfering with previous 'sacrifices'.

But, of course, arguments can be made for both a ritual interpretation and a social one. The superimposition of the hatched boats, for instance, must be regarded as an intentional iconoclash. The dominant impression of the large boats 'takes over' the surface in a way that suggests a competitive scenario in which some previous petroglyphs are erased or 'killed' (cf. the animal at the Frölunda panel). This suggests that ritual and social aspects of petroglyphing are intertwined and perhaps even inseparable. It does not necessarily imply that the carvings are 'a bit of both'. Rather, they articulate more of one than the other according to fluctuating local circumstances.

Bruno Latour has argued that images often produce interesting social effects the moment when they transgress the division between representation and reality (2002; Weibel & Latour 2007). The complex variations of the Hemsta panel may thus be an example of both ritual and social competition that over time have unforeseen consequences in each field. For instance, what happens when a ritual communication is 'intercepted' by others – perhaps without the knowledge of its original intentions? Like archaeologists of today, different communities of the past might have tried to interpret, 'crack the code', imitate, but also attempt to cover up or destroy the imagery of the Other. It is easy to imagine a fluctuating relationship between the ritual and social articulation over time between different groups.

The stacking of boats in the Hemsta example is consistent with such a scenario in the way that they 'lock' the area and prevented new additions from being made. This aggressive tendency is not present at all in the next phase, when smaller (green) motifs are added to the previous scene (cf. Coles 2000:63). In a way they give the impression of relating to the previous large motifs similar to the way in which secondary burials were sometimes added to prominent grave mounds.

We may thus begin to see the contours of a social background to the displacements of the petroglyphs at Hemsta. It is easy to picture how different 'communities of practice' in the flux between Neolithic and Bronze Age lifestyles aggregated at the shallow cove for a variety of reasons. It would not be surprising if such a state of hybridity was to some extent articulated on the rock panels (Fahlander 2012). The materiality of the rock, its permanence and hard but durable medium, certainly play a significant role in such a process.

Conclusion: Displacements in material enunciation

The imagery of the Other is always tricky to handle because it often 'talks back' to us in quite a direct manner, sometimes even surpassing the rhetorical power of the written text (cf. Berger 1972). This is certainly the case of the south Scandinavian Bronze Age petroglyphs, which have spawned a wide range of more or less plausible ideas as to their inherent meaning and symbolic content. In this text I have tried to bypass the fallacies of the traditional iconological and interpretative approaches and have instead explored the material and practical aspects of petroglyphing from a non-representational perspective. By studying the petroglyphs as material articulations we may be able to discuss the social circumstances in which they were crafted, leaving to one side the problem of what they may represent or depict. Images are tricky in this way because it is often too easy to let the apparent content of an image direct the way a particular articulation is understood. For instance, the number of 'antagonistic' scenes (e.g. 'armed' or 'phallic' human figures) occur much less frequently in the Enköping area than on the Swedish west coast (Wessman 2010:105). Looking at the figurative and narrative dimensions of the Upplandic petroglyphs it is thus easy to get the impression that it was a less conflict-ridden area. However, the iconoclash of the panel at Hemsta and other localities in the vicinity with similar arrangements of boat stacks (e.g. Boglösa 73:1) suggests the opposite. This is but one example of how a focus on the materiality of the image tells a story that is different from iconographical and representational approaches. Viewing the development of the Hemsta panel as a series of material articulations allows us to discuss both ritual and social aspects as interwoven in the practice while simultaneously avoiding some of the dichotomist thinking in rock art research.

The non-representational approach applied here also seeks to 'unpack' the south Scandinavian tradition from the Bronze Age 'black-box' by focusing on relationality before context. It also hints at a much more heterogeneous and hybrid background – at least in the earliest phase – which may not necessarily need be related to a continental Bronze Age culture alone, but also includes aspects of the so-called northern tradition of petroglyphs. Instead of approaching the petroglyphs from Enköping as a Bronze Age cultural expression, they seem upon closer examination to be a much more complex phenomena articulating a rather unstable and changing social situation in which different individuals and groups are involved (Fahlander 2012; cf. Sognnes 2001:125). Such an approach allows for a wider perspective in which the local is seen in relation to the regional rather than being parts of a whole.

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