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Showmen and Fighters – Bronze Age Rock Art and Weaponry in Scandinavia

Introduction

Rock art is one of archaeology's most important sources for the Bronze Age in Scandinavia (ca. 1800/1700–550 BC). Over 500,000 cupmarks, 20,000 boats, 7,000 animals, 5,000 anthropomorphic figures and more are a window into the thoughts, ideals and ideologies of their makers (**Fig. 1**). Rock art is multi-vocal, imbued with intentions, biases and subject to competing interpretations. Since some institutions and ideologies were widely shared,¹ rock art has the potential to inform about the societies of Bronze Age and Early Iron Age Europe.

It has long been recognized that some form of warrior ideal and maritime ideology is represented in the petroglyphs, which Johan Ling interpreted as a social institution, and which he called 'maritime warriorhood'.² However, it is yet unclear what made a maritime warrior, what this identity entails, which social expectations had to be met by those seen as maritime warriors, and which role the rock art played. Some general discussions about social institutions including warriors brought interesting results on the involvement of warriors in trade networks.³ However, a joint consideration of rock art depicting warriors and the weapons themselves has rarely been attempted, so that the local context of these maritime warriors remains under-explored. One exception is Jarl Nordbladh's study on arms and armour in Scandinavian rock art.⁴ He observed that swords seemed to be often worn by the side in a sheath, while spears were more often held in the hand. His conclusion was that spears are "active" (**Fig. 2a**), whereas swords are in "passive" positions (**Fig. 2b**). In Nordbladh's view that meant that spears were

used in actual fights, while swords were not actively used, but instead carried around for display.⁵ Thus, the paradigm was created that at least Early Bronze Age swords were mainly used for showmanship and to signify status.⁶ Real fighters seemed absent from Bronze Age Europe. Spears were largely ignored in the decades following Nordbladh's article. This has changed in the past ten years, after the important role of spears was brought into view by studies on their use-wear.⁷ With significant advances in both, the study of rock art and the use of weaponry, it is time to re-address the relationship between weapons, warriors and the warrior ideal.

Rock art

New methods, new results

In the past years, photogrammetry and laser scanning have become standard methods for recording rock art in three dimensions.⁸ These techniques record entire surfaces without selection bias and store depth information. Older techniques such as rubbings and tracings were incapable of providing both of these advantages.⁹ The resulting models can be studied using a limitless array of lighting and viewing angles, and highly precise visualizations created through post-processing techniques. This has revealed new motifs and aspects even on rock art panels that have been continuously documented for about 150 years.¹⁰ A recent case study discovered 13 new boats, 7 new human figures, 5 new animals, 2 new foot- or shoe-soles, and 68 new cupmarks on the "Runohällen" panel in Gerum (Tanum), Sweden, which was first documented by

¹ Harding 2007; 2018; Harrison 2004; Kristiansen/Larsen 2005.

² Ling 2014; Ling/Toreld 2018.

³ Earle *et al.* 2015; Kristiansen/Suchowska-Ducke 2015; Vandkilde 2014.

⁴ Nordbladh 1989.

⁵ Nordbladh 1989.

⁶ Fontijn 2005; Harding 2007; Mercer 2006.

⁷ Anderson 2011; Horn 2013; 2018a.

⁸ Bertilsson *et al.* 2017; Horn *et al.* 2018.

⁹ Horn *et al.* 2018.

¹⁰ Bertilsson *et al.* 2017; Ling/Bertilsson 2017.

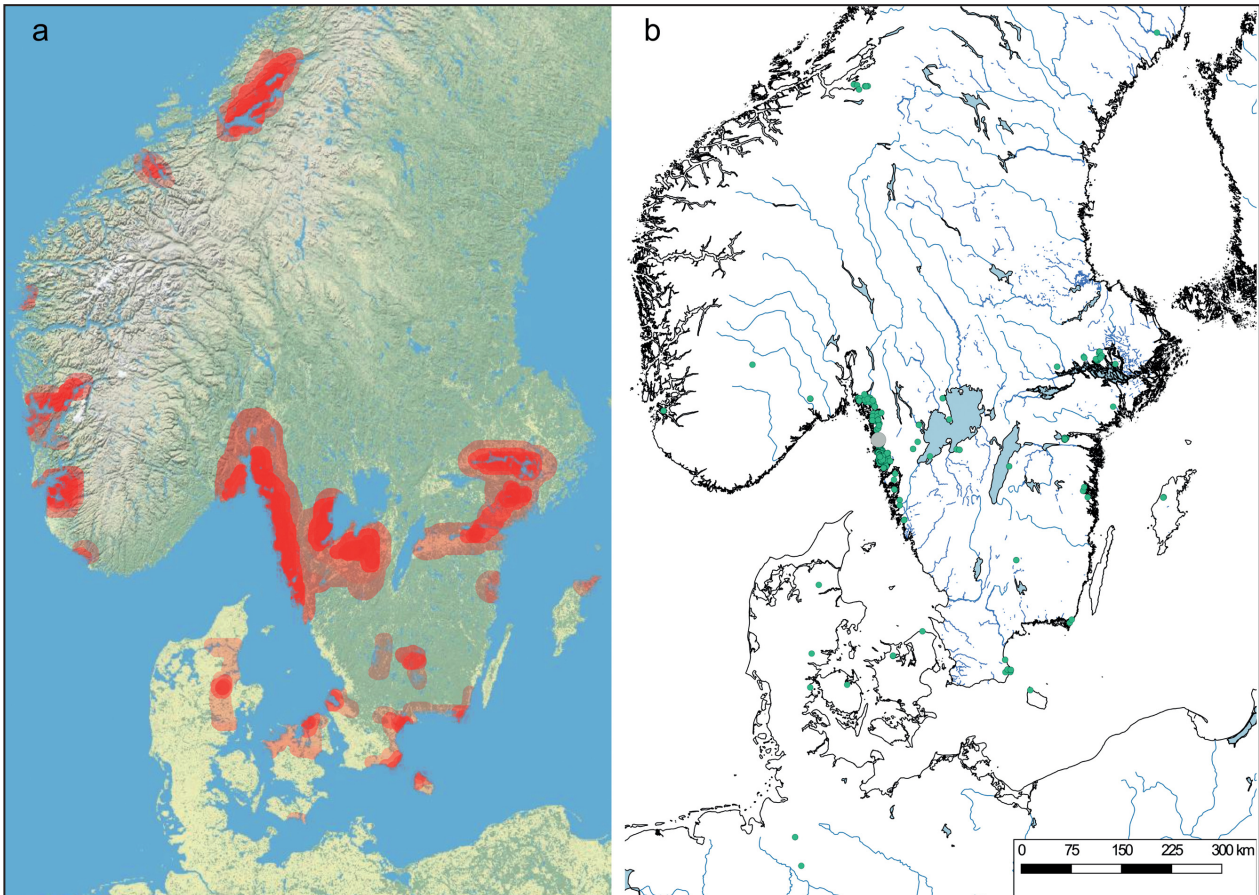


Fig. 1 a Distribution of hotspots for figurative rock art in Southern Scandinavia; b Distribution of human figures in Southern Scandinavia (a: after Nimura 2015; b: map by C. Horn)

Axel Emanuel Holmberg in 1848. Apart from that, the representation of depth in the new documentation techniques facilitated the identification of a motif as a Late Bronze Age socketed axe, which was relative to the main direction of the carvings depicted upside down.¹¹

Renegotiating older motifs – cupmarks

Recent studies have also demonstrated that individual motifs and their meaning were not stable throughout time as has been previously assumed. The advantages of the 3D recordings including the new visualization possibilities enabled superimpositions to be investigated in hitherto unknown detail through the analysis of the structure and morphology of carved lines, carving techniques and the typology of the depicted artefacts.¹² Using such an approach, it was possible to suggest that a warrior armed with shield, spear and sword in

Finntorp (Tanum) emerged through the constant renegotiation and transformation of a motif that originally only consisted of two cupmarks (Fig. 3a). Both were ground into the rock or at least smoothed over in the final step of their production, while the all other features were pecked into the rock.¹³

Multiple case studies support this assumption by demonstrating that cupmarks had been frequently reused to depict heads in Scandinavia.¹⁴ They are relatively easy to distinguish from other rock engravings by their greater depth, rounded shape and their differing production techniques. This was already recognized albeit not theorized, discussed and/or interpreted in the documentations of Åke Fredsjö. Fredsjö marked the heads of many human figures as cupmarks in his tracings in Bottna,¹⁵ Kville¹⁶ and Svenneby¹⁷ (Fig. 3b). The

¹¹ Horn/Potter 2019.

¹² See also Díaz-Guardamino Uribe/Wheatley 2013; García Sanjuán *et al.* 2017; Jones *et al.* 2015.

¹³ Horn/Potter 2018.

¹⁴ Cf. Horn 2016.

¹⁵ Fredsjö 1975.

¹⁶ Fredsjö 1981.

¹⁷ Fredsjö 1971.

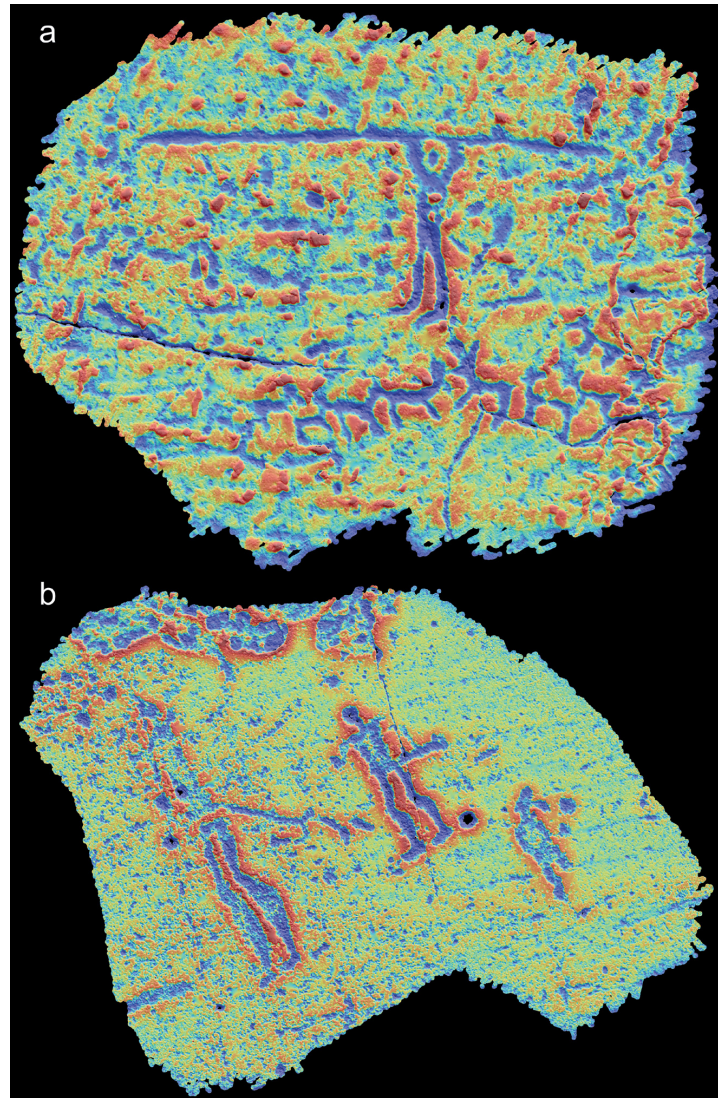


Fig. 2 **a** An active warrior with spear (RAÄ Östra Eneby 18:1); **b** A passive warrior with sword (RAÄ Tanum 262:1) (both visualizations made from laser scan data by H. Zedig and O. Ivarsson)

independent observation of boat crews that used cupmarks for heads and of rows of cupmarks illustrates the possibility that boat motifs as in Valeby (Bottna), Sweden, could have been made by placing a boat directly under an older row of cupmarks (Fig. 3c).

Reusing weapon petroglyphs

Studying a photogrammetric model of the super-sized warrior (“spear god”) in Litsleby (Tanum), Sweden, Ulf Bertilsson suggested that the figure was a later addition to an older individual spear petroglyph.¹⁸ This observation was supported by the chronology of the boats superimposed by the

figure, a typological comparison of the metalwork, and the relative position of the individual engravings. The youngest boat superimposed was dated to the Nordic Bronze Age period III (ca. 1300–1100 BC). This means that the human had been made at the latest during period III. After a larger typological study, the finely engraved spearhead was identified as a Valsømagle-type spear dating to period Ib, i.e. 1600–1500 BC.¹⁹ Hence, there is a discrepancy of at least 300 years between the spear and the earliest possible dating of the human figure (Fig. 3d). The spear tip was perhaps updated once with a spearhead of the type Hulterstad, dated to period III, which means that the update could have been made when the human figure was engraved.²⁰

¹⁸ Cf. Bertilsson 2015.

¹⁹ Vandkilde 1996.

²⁰ Jacob-Friesen 1967.

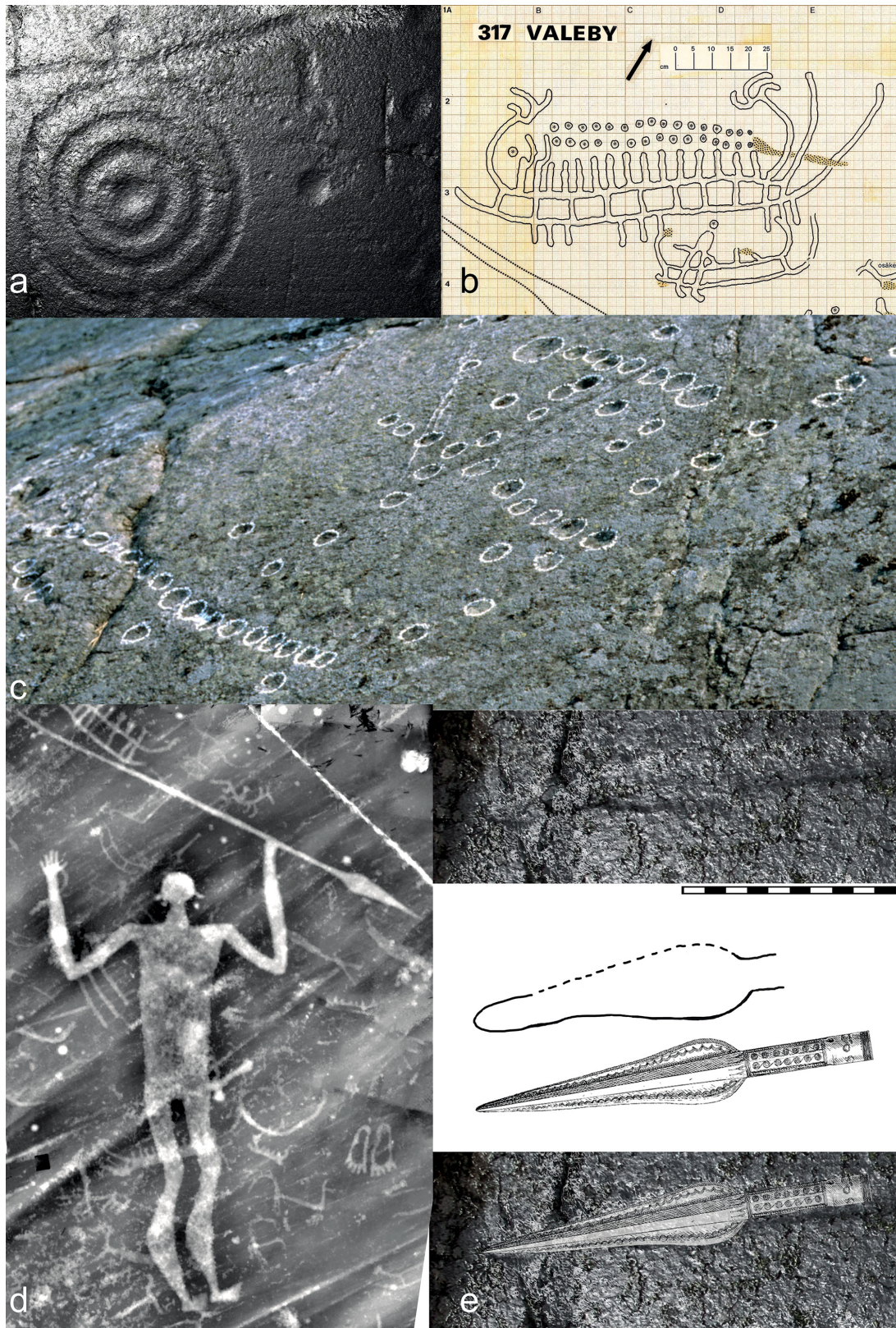


Fig. 3 **a** Head and shield of the large warrior from Finntorp (RAÄ Tanum 89:1). The head and the shield boss are similar to the other cupmarks in the snapshot; **b** Åke Fredsjö documented cupmarks as circles with a star at the center (RAÄ Bottna 43:1); **c** Rows of cupmarks on a panel in Stale (RAÄ Bokenäs 443:1); **d** Large warrior with spear in Litsleby (RAÄ Tanum 75:1); **e** Comparison of the spearhead from Finntorp to a type Valsømagle spear (a: taken from Reflectance Transformation Imaging by R. Potter and C. Horn, b: drawing by Å. Fredsjö; c: photo by S.-G. Broström; d: visualization made from a photogrammetric model by U. Bertilsson and C. Horn; e: from Horn/Potter 2018)

Recently, Bertilsson expanded on his work and was able to demonstrate that in Kalleby (Tanum) and perhaps in Tuna (Bälinge) spears were added to earlier carvings of individual spears. In Kalleby, the spear was also identified as type Valsømagle. Under one of the cupmarks in Finntorp a spear was added, which was followed by later additions of a shield, a sword and anatomical features. The spearhead itself was updated perhaps three times. The first spearhead's proportions also resemble those of type Valsømagle. Against this proposal Bertilsson suggests that the first spears engraved in Finntorp are the small triangular spearheads that may have had parallels in flint, for which he suggests a dating in the Bell Beaker phase.²¹ While this is quite possible, the dating remains problematic. A comprehensive study of flint spearheads is still lacking, and since flint tools were used well into the Early Bronze Age,²² it still does not suggest a Bell Beaker dating of the spears in Finntorp. One of the objects that Bertilsson²³ depicts as a comparison is possibly a thick flint point of the Funnel Beaker culture, which would pre-date his proposed chronology.²⁴ Furthermore, Bertilsson's suggestion that the deepest carvings should be the oldest would go against the conventional methodology in the study of superimpositions, which assumes that the deeper images are more recent. The observations in Litsleby also rely upon this method.²⁵ For these reasons, it should be maintained that the largest and most shallow spearhead in Finntorp is the oldest and that the closest parallel is the type Valsømagle (**Fig. 3e**), while admitting that it is less clear than in the cases of Litsleby and Kalleby.

Drawn swords

In Brastad (Lysekil), Andreas Toreld discovered 24 figures with round bodies and swords in the hand.²⁶ These figures reveal an interesting spectrum of abstraction in their swords. While some swords are well-defined with widening blades and a round pommel, some are simple lines without details. Based on the typological markers of their blades

and the pommel, these swords have been dated to period II of the Nordic Bronze Age (**Fig. 4a**).

Another sword held in hand and even employed in combat was discovered by Bertilsson and Ling on the famous Fossum panel (Tanum).²⁷ The constellation in question was previously interpreted as an axe, but basing on the form of the handle and the connection to the proposed blade the reinterpretation was made possible. The blade was also used by a perhaps later superimposed human figure, in which the line of the blade serves as a sword sheath and a phallus configuration (**Fig. 4b**). The pommel and handle have their closest possible parallels among full-hilted swords dated to period II of the Nordic Bronze Age.

The sword from Fossum is itself just a simple line, like some examples found in Brastad. This and the lack of a pommel on some swords in Brastad opens a venue to study old documentations and perhaps discover more drawn swords. In Brastad, some swords look like elongated or extended arms. One such example could be a figure in Kville, which has a sword sheath and a stick-like extension (**Fig. 4d**). Although the form of the proposed sword is very abstract and non-descript, the motif can be interpreted as a warrior who has just drawn his sword. Another figure in Brastad might be holding a sword, outstretched in front of the body. In Bro a human figure was discovered holding a simple line with a curved end, which would fit with the form of the scimitars found in Rørby, Denmark. The figure also appears to be holding a circular feature that could be interpreted as a shield (**Fig. 4c**). The scimitar is dated to period Ib of the Nordic Bronze Age, while metal shields emerge in Scandinavia during the Late Bronze Age.²⁸ However, in Ireland leather shields have been discovered that date to a similar period as the scimitars, i.e. 1600–1500 BC. Although no such shields have been discovered locally, the long-standing and strong connections to the British Isles²⁹ may point to the possibility that similar shields existed in Scandinavia.

In Halland, at Hagbards Galge (Hagbard's Gallow) a decorated stele has been recently scanned by the Swedish Rock Art Research Archive (Svenskt Hällristnings Forsknings Arkiv).³⁰ This

²¹ Bertilsson 2018.

²² Goldhammer 2015.

²³ Bertilsson 2018.

²⁴ Ebbesen 1992.

²⁵ Bertilsson 2015.

²⁶ Toreld 2012.

²⁷ Bertilsson *et al.* 2017.

²⁸ Uckelmann 2012; Vandkilde 2014.

²⁹ Vandkilde, 1996; 2017.

³⁰ Brunius 1839; Lundborg/Bergström 1989.

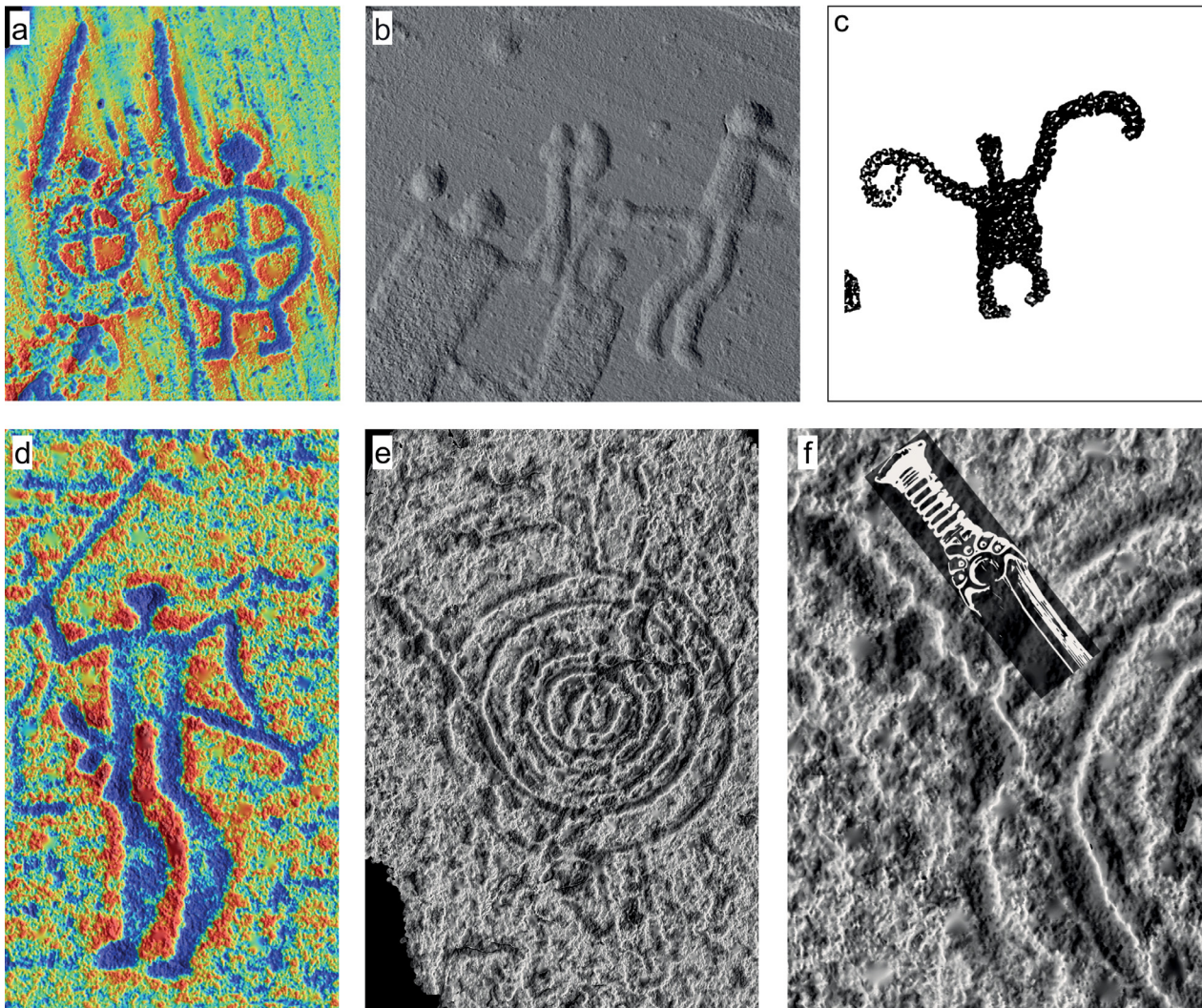


Fig. 4 a Brastad (RAÄ 139:1); b Fossum (RAÄ Tanum 255:1); c Störreberg (RAÄ Bro 14:2; d Allestorp (RAÄ Kville 50:1); e Hagbard's Gallow Stone 3 (RAÄ Asige 17:3); f Detail from e with comparison to a period II sword (a and d: visualizations made from laser scan data by H. Zedig and O. Ivarsson; b: from Bertilsson/Ling 2017; c: from a tracing by A. Toreld and T. Andersson; e-f: visualizations made from laser scan data by R. Potter and C. Horn)

revealed that the previously known concentric circles³¹ form the shield of a warrior figure. Apart from what could be an animal in front of the warrior's head there is one other new feature, which is long, wide and surprisingly deeply engraved. It intersects with the two outer concentric circles of the shield. The smoothness of this feature means that it was most likely made by the human hand. One end forms perhaps the point after which the line thickens. The narrower section in the middle part was caused perhaps by exfoliation (Fig. 4e). The shape parallels that of a full-hilted Bronze Age sword. The flat-oval shape of the pommel, the shallow curvature of the hilt, and the hilt-blade transition resemble period II swords (Fig. 4f). The concentric circles clearly cut the proposed sword,

which may mean that the warrior figure is younger than the sword. The interpretation that the superimposition had been made some time after the initial carving by a second individual may find support in the different nature of the motifs, the different styles of depiction, and the techniques that were used to engrave both features.

Discussion: swords and spears in rock art

From the data it may be possible to identify a concern of Bronze Age rock carvers with older motifs. Cupmarks and older individual weapons were used to newly construct warriors and some other figures. This phenomenon seems to occur on several spears that date very early in the Early

³¹ Broström/Ihrestam 2016.

Nordic Bronze Age (period Ib). Although individual sword petroglyphs are known for example from Ekenberg in the Östra Eneby rock art area in Norrköping, Sweden,³² no similar process can be recognized. It seems that warriors – including their swords – were newly engraved from period II onwards, with the possible exception of Hagbard's Gallow.

With that it seems that early spears were carved more often and in a wider geographical spread than similarly early swords. Period I swords occur outside Scania only along the eastern coast of Sweden, which may be linked to the distribution of the petroglyphs. Three of the five swords in this region had been deposited within a 50-km radius around Östra Eneby, which has the largest number of contemporary sword petroglyphs. Compared to this, contemporary spearheads have a much wider distribution.

This seems to change with period II, when swords find a wider distribution in Sweden. At the same warrior carvings with swords emerged. At the end of period II and the transition to period III, warrior images may be applied to earlier spear petroglyphs, which are also sometimes updated as suggested by the process in Finntorp and perhaps Litsleby.³³ This is a hypothesis that needs to be tested by new research using rock art and metalwork data. In any case, something happened with warriors, swords and spears during the Early Bronze Age. Since we can identify “real” types and find links in the distribution of rock art and physical finds, further hints may be gleaned by studying the contemporary bronze metalwork.

The spears and swords of period I and II

Material, definition, and comments

The distribution maps indicate that swords are mostly absent in Sweden, whereas they occur in significant numbers on the Cimbrian Peninsula and the Danish Isles. During period Ia and the transition to period Ib spears can be found in Sweden and on the Cimbrian Peninsula. In the Swedish northeast of the distribution spears occur as the local type Ödeshög.³⁴ During period Ib new

spearhead forms were introduced and adopted widely, so that they became common throughout southern Scandinavia. Only after that, in period II, were swords widely distributed in Sweden.³⁵ From that perspective it is fitting that spears appear in rock art more frequently in period Ib and swords from period II onwards. This raises several questions: Did anything change in the human-object-relationships? What changed that caused these weapons to gain new significance? How were these weapons used in period I and II?

Since these questions relate to the use of objects, a source-critical approach to metalwork wear analysis has been chosen, which includes the consideration of corrosion and find contexts.³⁶ The samples for wear analysis of weapons of period I consisted of 154 spears and 50 swords.³⁷ This has recently been expanded to include 15 Late Neolithic halberds as well as 46 daggers, 172 spears, 72 swords and also 10 knives dating mostly to the Early Nordic Bronze Age periods I–III.³⁸ In the following, the period III objects will not be discussed. The definitions of wear traces used here follow the norms detailed in other publications.³⁹ In this article the wear traces are already interpreted, which will be explained briefly.

Combat wear can be split into two categories. One category is wear marks that may have been caused by thrust and/or stab motions, while the other category originates more likely from slash and cut manoeuvres. Through the directionality of the movement of the blade carrying out such attacks different parts of the weapon are more exposed, and, therefore, more likely to take damage. Slashes and cutting motions, on the other hand, are a greater threat to areas below the tip and the immediately following area (**Fig 5a–c**). Thrust and stab motions expose the areas around the tip to a greater risk of being damaged than the lower parts of the cutting edges and blade body (**Fig. 5d–f**). As a cautionary comment, the author understands that the data becomes tenuous, if it is split up according to object type and chronological position. For that reason, any interpretation made in the

³² Burenhult 1980.

³³ Bertilsson 2018; Horn/Potter 2018.

³⁴ Horn 2015; Jacob-Friesen 1967.

³⁵ Horn 2017; Kersten 1935.

³⁶ Dolfini/Crellin 2016; Horn/Holstein 2017.

³⁷ Horn 2013.

³⁸ Horn 2018a; Horn/Karck, in print.

³⁹ Anderson 2011; Bridgford 2000; Gentile/van Gijn 2019; Horn 2013; Molloy *et al.* 2016; Molloy 2017; O'Flaherty *et al.* 2008.

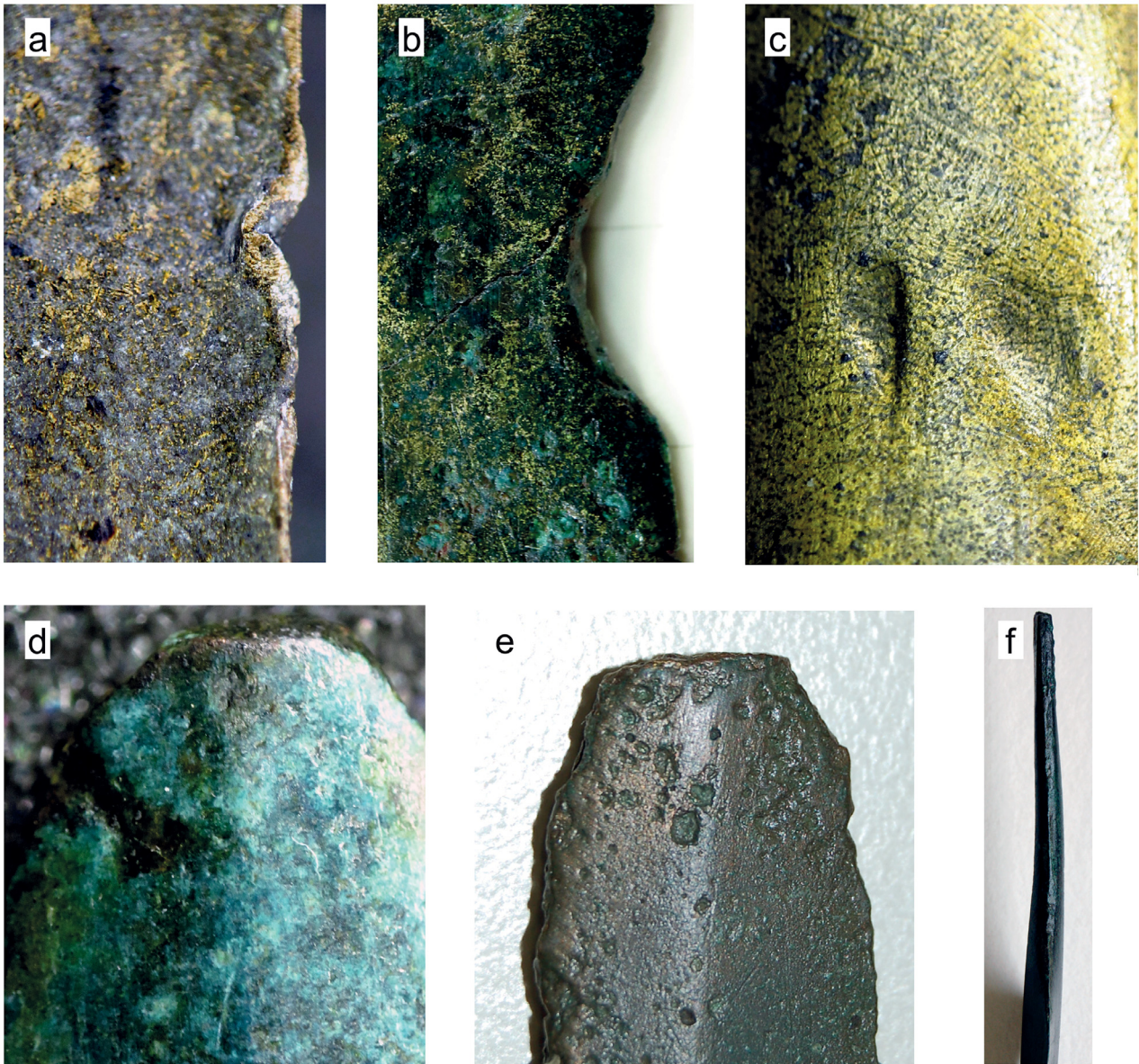


Fig. 5 **a** Notch with displaced material ($\times 150$, LMSH KS923); **b** Indentation with a fissure ($\times 60$, LMSH KS7367); **c** Two blowmarks ($\times 60$, LMSH KS11145.2); **d** Pressured tip ($\times 60$, LMSH KS2948); **e** Tip broken and lost (MUFB Im1155); **f** Hilt with curved deformation (LMSH KS2947) (all images by C. Horn)

following should be regarded as indicating possibilities that need further testing. The Late Neolithic halberds have been included to contextualize the later developments in weapon use.

Discussion of the wear marks

The rather equal distribution of damage on Late Neolithic halberds suggests that they were used as all-around weapons, including in equal parts slashing/cutting and thrusting/stabbing motions (**Fig. 6**). While the Ödeshög type spears keep the Neolithic traditions, the Torsted type spears show a tendency towards slashing/cutting. The early swords may have followed the all-around style.

The presence of the swords that continued older fighting traditions created perhaps the time-space in which experimentation with the Torsted type was possible. Intriguingly, the different spear types could represent different local groups because of their geographical separation.

During period I swords are rather short, closer in length to later daggers (**Fig. 7**).⁴⁰ The term 'sword' is used in a relative sense, designating the longer blades of a chronological phase. If the swords of a subsequent phase become on average longer, then the required minimum length of blades identified as swords increases. No clear separation ex-

⁴⁰ Oldeberg 1974.

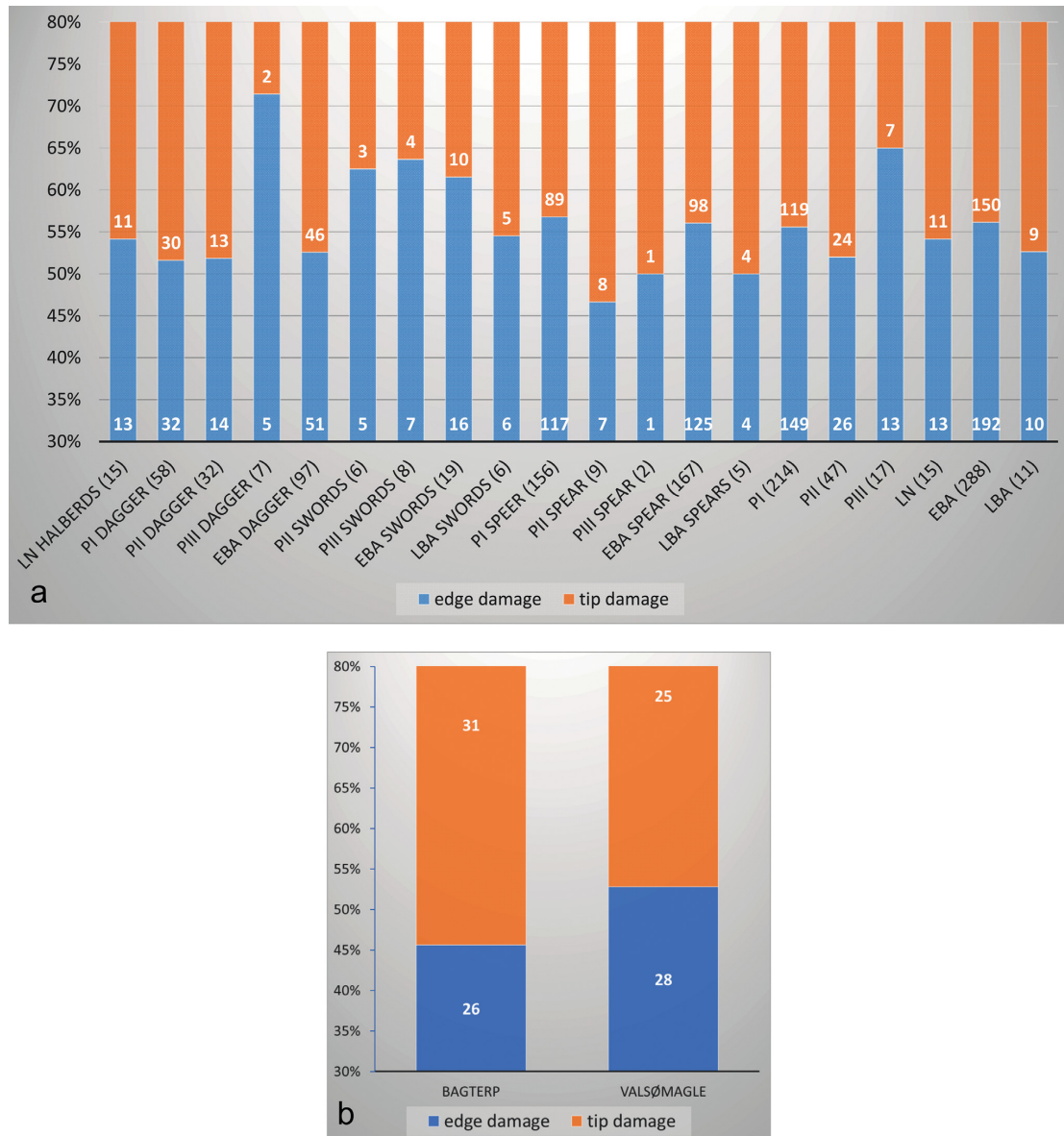


Fig. 6 a Comparison of edge damage vs. tip damage separated by weapon type and chronology; **b** Comparison of edge damage vs. tip damage on the spear types Bagterp and Valsømagle (diagrams by C. Horn)

ists between swords and daggers during period I. In period II, the average blade length increases, which makes the distinction between swords and daggers more recognizable (Fig. 7). Intriguingly, the period II daggers keep the damage pattern of the period I swords, thus providing external evidence of their relationship (Fig. 6). They fulfil the role of an all-purpose weapon. Swords and spears have diverging damage patterns. Swords have a larger amount of wear indicating slashing and cutting motions. Conversely, spears show a trend towards thrusting/stabbing combat movements (Fig. 6). The continued presence of wear on the cutting edges demonstrates that spears were still not a weapon used exclusively for throwing. This separation can possibly be seen as a trend towards

a specialization of combat roles of the two weapon forms (Fig. 6). Similar to the very beginning of the Bronze Age, the presence of one all-purpose weapon, in this case the daggers, may have been a contributing aspect driving the specialization tendency among other weapon forms. This may have been linked to morphological changes, such as the lengthening of sword blades that facilitated a better usability in slashing/cutting motions. Such processes may be both an outcome of the specialization tendency and a new impulse to develop it further.

There is an earlier faint specialization tendency among the period Ib spears of the types Bagterp and Valsømagle, which may further support this argument. The shorter Bagterp spear may have



Fig. 7 Size comparison between a Nordic Bronze Age period I sword (MEG B 17620) and a later example (LMSH KS 8016a) (all images by C. Horn)

been used more frequently in thrusting/stabbing motions. Conversely, on Valsømagle spearheads there is a greater presence of damage indicating slashing/cutting motions. Since the Valsømagle spears are longer, this seems to repeat the interplay between longer and shorter weapon forms observed between spears and swords. This will also have benefitted from the presence of the period I swords fulfilling the role of all-purpose weapons.

Rock art, metalwork and context

The proposition that the beginning separation of swords and spears may have given sword fighters a temporary advantage is intriguing. In any case, it may have been the beginning separation between swords and spears that convinced people on the other side of Skagerrak and Kattegat to adopt swords more fully into the local culture, because this expanded the possibilities to create an advantage in fighting. However, innovations, as so many scholars have argued, need a certain critical mass to succeed, which can lead to a cascade of following innovations.⁴¹ For the swords during period I, this critical mass seems to be absent in Sweden. Fighters may have preferred fighting traditionally within a frame of combat that was already satisfied by other weapon forms, i.e. the various spears. If fighting developed using the Valsømagle type spears, then this acceptance may have been facilitated by the familiar morphology of the weapon. That may have started social developments, which left their mark in the form of the early petroglyphs depicting individual spears.

Apart from expanding combat possibilities, swords may have acquired a different social role by the time during their wider introduction into Sweden. This might be indicated by their depositional contexts. Compared to period Ia swords were used significantly more often as grave goods (Fig. 8a). In contrast, spearheads discovered in burial contexts increase only marginally. This suggests a shift in attitude towards these objects. Communities may have now considered it suitable to give such a weapon to a deceased individual rather than sacrificing it presumably as a gift to the gods or other entities (Fig. 8b). This means that in death an individual was marked as a warrior and perhaps imagined as fighting in the after-

⁴¹ Fokkens 2008; Hansen 2014b; Rogers 2010.

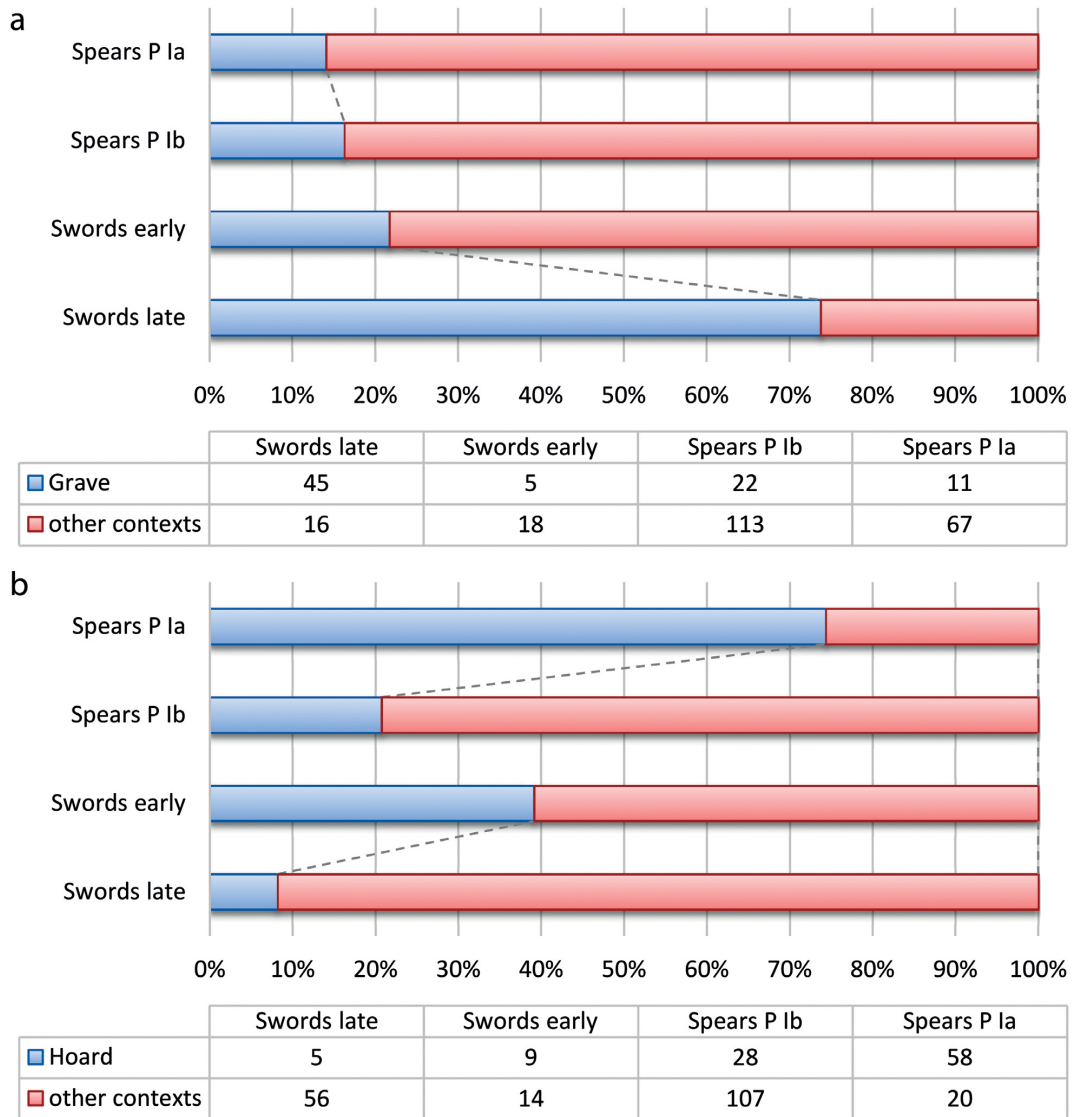


Fig. 8 Number of graves (a) and hoards (b) with spears and swords in different periods (graphics by C. Horn)

life or at least carrying this identity over into that realm. The wear marks on both weapon forms indicate that actual fighting was involved in acquiring and maintaining that status. For reasons yet to be explored, the sword allowed for a better representation of this elevated status.

Active swords, killing scenes and suspense

Another piece in the puzzle of the relationship of warriors, weapons and their depiction in rock art is the dichotomy between “active” and “passive”. While the new finds from Brastad and elsewhere have increased the number of “active”, i.e. drawn swords, and will likely in the future be a guide to more discoveries, Nordbladh’s original propo-

sition still holds true: most swords in Scandinavian rock art are depicted sheathed.⁴² Most of the spear-bearers also have a sheathed sword. However, the results presented here and by others strongly support that swords were frequently used weapons and did not have only a representative role.⁴³

The “active/passive” argument is problematic in another way. Spears with short handles are almost absent in Scandinavian rock art. It is unlikely that spears with a long shaft could have been sheathed. That means that spears had to be carried even when not actively used. It is, therefore, not at all clear that all carried spears were “active”.

⁴² Nordbladh 1989.

⁴³ Bunnefeld 2016; Horn 2013; 2018a; Kristiansen 1984; 2002.

Conversely, as we have seen in Kville,⁴⁴ the depiction of a sheath cannot be automatically equated with a “passive” sword, because in this case the sword is drawn in the hand of the figure.

Nordbladh’s observation that all killing scenes are carried out by spear still holds true.⁴⁵ Even among the newly discovered sword-bearers of Brastad, the killing scene that was on the panels is carried out with a spear.⁴⁶ It seems that only scenes that depict the actual moment of stabbing are interpreted as killing scenes.⁴⁷ However, this view may miss the point. In most combat scenes, the fighters are placed in front of each other with raised weapons, for example spear vs. spear and axe vs. axe on the large Vitlycke panel (**Fig. 9a–b**), axes vs. sword on the Fossum panel (**Fig. 4b**), sword vs. sword in Brastad (**Fig. 9c**), spear vs. spear (vs. axe) in Bro Utmark (**Fig. 9d**), etc.

There are two possible explanations for this. The first is a practical issue. Rock art is often a compromise between richness in detail and clarity of expression forced by bringing scenes that were perhaps imagined in three dimensions into a two-dimensional plane. If rock art was about conveying messages to perhaps multiple recipients, it needed to be readable and the carver needed to ensure they did not lose track of what they were engraving. Fighting and killing with a sword is done closer than fighting with a spear. A spear allows the bodies of the fighters to be placed farther apart (**Fig. 9e**). Thus, it is very difficult to depict the content using only swords (or axes) so that it remains discernible. Furthermore, most drawn swords are just a simple line that is in itself ambiguous. This line is widely open to a variety of interpretations, for example, as a stick or a paddle. The fact that very few had been recognized until the discoveries in Brastad highlights this issue.

The second explanation is linked to the potential narrative content of rock art scenes. In a current project, Peter Skoglund and his colleagues have convincingly argued that the Scandinavian petroglyphs could be part of pictorial story-telling.⁴⁸ The difficulty is that most rock art is mono-

scenic.⁴⁹ Åsa Fredell called this “a moment frozen in time” implying a before and an after.⁵⁰ It has been argued that single images cannot tell stories;⁵¹ however, it is worth remembering that rock art is thought to support a story told and is not the story itself. The moment frozen in time in the combat scenes under discussion may be the moment in which something is about to happen, just before a strike is carried out (**Fig. 9a–d**). Inevitably, this leaves more possibilities open for the outcome than does depicting the killing itself (**Fig. 9e**). The listener may not have known what happens next or may have chosen to suspend their disbelief that the story is already settled. It creates a moment of uncertainty that leaves the outcome of the story not immediately clear: success, failure or surprise all hang in the balance. This uncertainty is necessary to create suspense, which contributes to the tellability of a narrative. Tellability is what makes a story exciting, memorable and meaningful.⁵²

The two interpretations are complementary; placing petroglyphs can be highly precise, thus creating, adding to and transforming scenes.⁵³ Engravers may have attempted to keep the scenes readable and freeze the moments in time at the pinnacle of the stories attached to the images.

Status, social power and warfare

In the discussions of prehistoric warfare and armed conflict, an often recurring argument is that the lack of a central authority leads to a general unwillingness to fight and that prevents prehistoric conflicts from becoming all too lethal.⁵⁴ In a recent cross-cultural study, Luke Glowacki and Richard W. Wrangham formulated the cultural rewards war-risk hypothesis.⁵⁵ They argue that apart from evolutionary advantages there must be something more to motivate participation in high-risk endeavours such as warfare, and that material gains are not enough to explain that participation. The hypothesis suggests that gaining social status such as honorific names, titles or

⁴⁴ Ling 2014.

⁴⁵ Nordbladh 1989.

⁴⁶ Ling/Toreld 2018; Toreld 2012.

⁴⁷ Ling 2014; Nordbladh 1989.

⁴⁸ Ranta 2016; Ranta *et al.* 2019; Rédei/Skoglund/Persson *et al.* 2018; Skoglund 2010.

⁴⁹ Fredell 2006; Ranta *et al.* 2019.

⁵⁰ Fredell 2006.

⁵¹ Speidel 2013.

⁵² Ochs/Capps 2001; Wolf 2003.

⁵³ Horn *et al.* 2018; Horn/Potter 2018.

⁵⁴ Keegan 1994; Peter-Röcher 2007.

⁵⁵ Glowacki/Wrangham 2013.

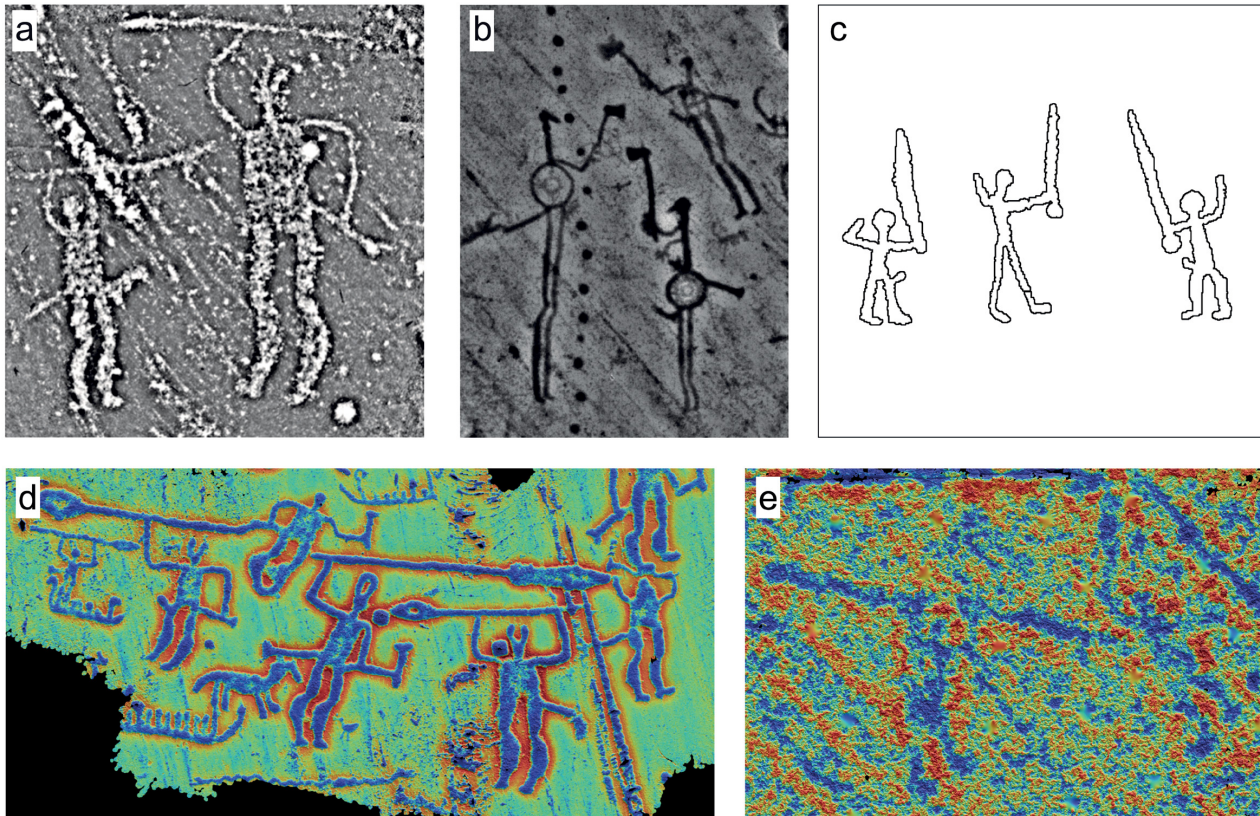


Fig. 9 a Fight spear vs. spear (RAÅ Tanum 1:1); b Fight axe vs. axe (RAÅ Tanum 1:1); c Fight sword vs. sword (RAÅ Brastad 129:1); d Fight spear vs. spear vs. axe (RAÅ Tanum 192:1); e Kill scene Brastad (RAÅ Brastad 617:1) (a–b: visualizations made from photogrammetry by R. Potter and C. Horn; c: after Toreld 2012; d–e: visualizations made from laser scan data by H. Zedig and O. Ivarsson)

special insignia may be an additional and even more significant motivating factor. Status increase occurs more often than any other motivating factor among the studied groups, which lends support to that thesis.⁵⁶ Stories and myths can help to keep such a system stable, ensuring that the relevant segments of society, for example young men, will continue to pursue social ideals such as becoming high status warriors.⁵⁷

If status gain motivates participation in war and is linked to considerable socio-economic improvements, then it may become a major reason for war itself. Richard J. Reid, who studied warfare in 19th century Africa, provides an example of this. Young members of East African tribes could earn the right to wear a special hair-do after they had killed a certain number of enemies, a right which in turn allowed them to marry.⁵⁸ Members of the tribal and chiefly societies of South America increased their social and military rank every

time they killed an enemy.⁵⁹ Similarly, the Big Men of Melanesia increased their standing in society every time they participated in warfare.⁶⁰ Even normal men could benefit socially. They could obtain the status of *aoulatta*, if they showed bravery in a fight and engaged enemies in close combat contrary to usual custom. Status increased with every killed enemy.⁶¹

The last example demonstrates that bravery is another important aspect that Glowacki and Wrangham mention only in passing.⁶² Bravery or heroism can serve to heighten social gains by differentiating oneself from the rest of the group. Such war heroism is often discussed in terms of sexual selection, but it may have also helped in increasing general power over group members. E. M. Redmond reports that warriors could attain heroic stature through killing enemies and by being wounded in daring fights, which was the

⁵⁶ Glowacki/Wrangham 2013.

⁵⁷ Lévi-Strauss 2014.

⁵⁸ Reid 2007.

⁵⁹ Redmond 1994.

⁶⁰ Lemonnier 1991.

⁶¹ Godelier 1987.

⁶² Glowacki/Wrangham 2013; cf. Lehmann/Feldman 2008.

key to reach elite status.⁶³ The ethnoarchaeological focus of Redmond's study provided evidence that weapons were part of the burial goods of such high status warriors.⁶⁴ This was determined by local religious beliefs and customs. However, it represents an intriguing parallel to Early Bronze Age Scandinavia, where we see high status warriors buried with their weaponry.

Fighters and showmen

Nevertheless, how does rock art tie into the process of achieving status/social power as a warrior? The use-wear evidence indicates that both spears and swords were used in combat. The deceased in Over-Vindinge with a period I spear tip in his pelvis⁶⁵ and the hundreds of dead individuals in the Tollense valley in northern Germany put spotlights on the lethality of such encounters.⁶⁶ Weapons in rich graves under impressive burial mounds and engravings of weapons carried by enlarged human figures on boats, engaged in agriculture, intercourse, etc. demonstrate the link of weapons to higher social status. Svend Hansen discussed the link of pictorial representations and depositions of weaponry to heroic warriors from the perspective of technological innovations.⁶⁷ Fighters could only enjoy the benefits of increasing their status if they stayed alive, so it is arguably fitting that warriors sought to increase the chance of success and survival by driving technological inventions. This would have allowed individuals in Scandinavia to continue increasing their status through fighting, perhaps during water-borne raiding activities.⁶⁸

The presence of toilet articles such as razors and tweezers in high status burials together with weaponry has been used to argue that male warriors took care of their appearance, perhaps being clean shaven or having an extravagant hair-do. This concern with the "warrior's beauty"⁶⁹ was meant for public display, i.e. Bronze Age warriors potentially had to be good showmen. During period I, the sword became part of this "warrior

appearance package". Other appearance aspects may have contributed, such as an improved physique and stature, changed body techniques and shared codes of conduct.⁷⁰ This may have set warriors visibly apart from others and may have been deliberately fostered by Bronze Age warriors as part of the performance of their identity and status.

Considering the potential need of warriors for showmanship to improve their status, the shift in Swedish rock art from individual spear depictions to depictions of individuals with swords and the simultaneous increase of swords burials may be significant. Throughout the Bronze Age, spears and the previously important archery gear⁷¹ appear less frequently in graves. This happened despite the fact that both were still important in warfare.⁷² Both spears and archery allowed fighters to keep opponents at a distance. The same is not possible with swords, especially the short period I examples (Fig. 7). Fighting with swords, therefore, perhaps took place at very close quarters. This increased the risk of injury, which made fighting with swords arguably more dangerous than fighting with spears or bows. This higher risk-taking may have been translated into bravery and may have been exhibited deliberately. That would have provided a chance for individual warriors to stand out among their peers. The chance to stand out with the promise of increasing social standing may have been what eventually appealed to warriors settling in Sweden, when they took up the innovation of the sword.

As with any human group, when modelling the abilities of Bronze Age fighters along a normal distribution there will be a few individuals surpassing most others (Fig. 10). These are the peak performers in the group for the task that was modelled.⁷³ They stand out relative to the rest of the group's performance, regardless where the average lies. Although there is no way of supplying evidence for this hypothesis, it can be assumed that this was also the case for the abilities of fighters simultaneously alive during the Bronze Age. Among this group we may find individuals,

⁶³ Redmond 1994.

⁶⁴ Redmond 1994.

⁶⁵ Kjær 1912.

⁶⁶ Harding 2018; Jantzen *et al.* 2011; Jantzen *et al.* 2014.

⁶⁷ Hansen 2014a; 2014c.

⁶⁸ Horn 2018b; Ling/Cornell 2017.

⁶⁹ Frieman *et al.* 2017; Treherne 1995; Vandkilde 2018.

⁷⁰ Horn 2014; Ling/Cornell 2017; Malafouris 2008; Mauss 1992; Molloy 2008; 2012; Molloy/Grossman 2007; Warnier 2011.

⁷¹ Sarauw 2007.

⁷² Horn 2013; Jantzen *et al.* 2011; Jantzen *et al.* 2014; Lidke *et al.* 2018.

⁷³ O'Boyle/Kroska 2017.

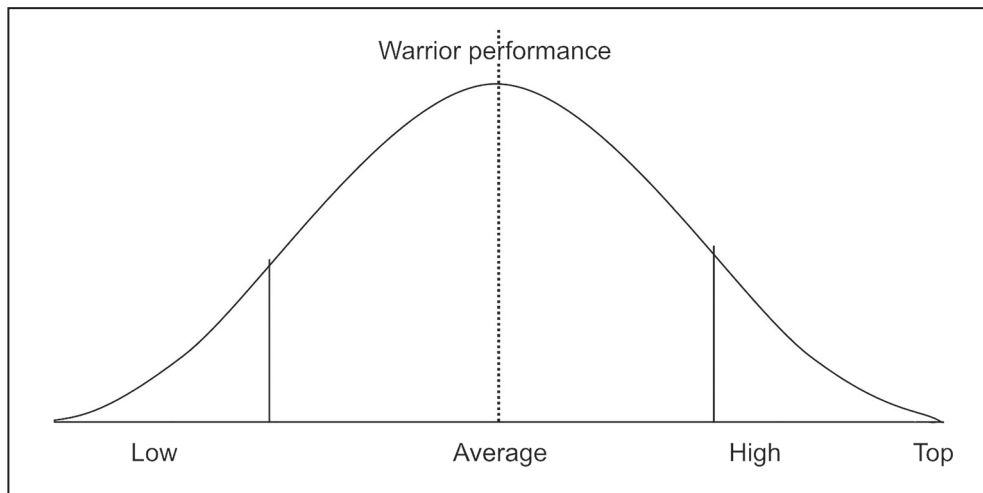


Fig. 10 Normal distribution of warrior performance (graphic by C. Horn)

whose deeds may have surpassed others, and thus were perceived as heroic by their contemporaries; after their death they may have been transformed into stories, larger narratives and myths.

Such stories of revered warrior heroes may have caused a variety of reactions, for example, secondary burials at the site of their presumed grave, sacrifices in or close to such burials, a changing ideology towards an increasingly important role of the individual, and more. Exploring the idea that some forms of heroism existed during the European Bronze Age should be addressed by future research. The social institutions of warfare, warriors and warrior elites arguably existed during the Nordic Bronze Age.⁷⁴ The narratives told on the rocks may have circled around deceased individuals who were strongly tied to these social institutions.⁷⁵ However, since the images depict local material culture and possess a local style of expression, these tales might not have been imported from somewhere else. Already existing images of weaponry may have been incorporated into the images to aid the story by visualizing or clarifying specific moments. However, pre-existing images were perhaps not only seen as a story-telling device, but may have been seen as actual representations of the weapons of heroes. This may have caused the idea to “complete” the scenes in order to bring them closer to the time at which the stories were imagined to have taken place. This seems to be an attempt to link the present with the past, for example, by using cupmarks as heads, updating weaponry, or attaching warriors to previous weapon petroglyphs. Perhaps

a fitting analogy are the Homeric tales that were written during the Iron Age and depict Bronze Age heroes.⁷⁶ The purpose may have been ritualistic in nature, or to impart certain ideals to future generations, or maybe sometimes even just to tell a good story.

Conclusions

Returning to the weapons and the petroglyphs that were the starting point of this paper, some points raised by Nordbladh can be confirmed.⁷⁷ Rock art seems to have been about showmanship, enhancing the stature of warriors and making narratives more exciting that involve warriors. However, the use-wear demonstrates that this cannot be translated into a “purely for show” function of the depicted weapons. Identifying presumably active and inactive depictions of spear and swords is much more difficult, because there are many filters that affect our observations, e.g. the abstractness of the images, the need for some clarity, and real-life constraints, i.e. a spear cannot be sheathed. Even so, most of the killing scenes are carried out with spears. However, other scenes may have enhanced the suspense in scenes with sword fighters by showing events just before they happened. The stories told may revolve around revered warriors, who earned and improved their status through actual fighting (and killing). Such activities may have fed into evolving heroic tales about showmen and fighters.

⁷⁴ Kristiansen/Larsson 2005; Vandkilde 2016.

⁷⁵ Melheim 2013.

⁷⁶ Bennet 1997; Morris 1997.

⁷⁷ Nordbladh 1989.

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Christian Horn, Showmen and Fighters – Bronze Age Rock Art and Weaponry in Scandinavia

In the archaeology of Scandinavian Bronze Age rock art, there is a long-standing debate over the function and role of the engraved weapons and warriors. The question can be boiled down to: Are the depicted warriors actual fighters, or are they showmen merely portraying an identity to gain status and power? One of the proposals was that spears are active because they occur in killing scenes and swords are passive because they are mostly depicted sheathed. Discussing recent rock art research on the transformation of petroglyphs, their narrative structure as well as new discoveries of weapon depictions, and confronting this with results from use wear analyses on similar weaponry, this paper sets out to argue that the answers to this problem may not be as straight forward as previously proposed. Instead it is proposed that while there is a concern with showmanship relating to a warrior identity in Scandinavian rock art, it is based on real combat, fighting, and killing. Rock art was used to enhance the stature of warriors and to make narratives more exciting that involve warriors.

Christian Horn, Selbstdarsteller und Kämpfer – Bronzezeitliche Felsbildkunst und Waffen in Skandinavien

In der Archäologie der bronzezeitlichen Felsbildkunst Skandinaviens gibt es eine langjährige Debatte über die Funktion und Rolle der eingravierten Darstellungen von Waffen und Kriegern. Die Frage geht im Wesentlichen darum: Sind die dargestellten Krieger tatsächlich Kämpfer oder bloß Selbstdarsteller, die eine Identität annehmen, um Status und Macht zu erlangen? Ein Vorschlag war, dass Speere aktiv sind, weil sie in Tötungsszenen vorkommen, Schwerter hingegen seien passiv, da sie überwiegend in der Scheide dargestellt sind. Indem neue Forschungen zur Transformation von Petroglyphen, ihrer Erzählstruktur sowie neue Entdeckungen von Waffendarstellungen diskutiert werden und dies den Ergebnissen der Analyse von Gebrauchsspuren auf ähnlichen Waffen gegenübergestellt wird, wird in dem Artikel argumentiert, dass die Antworten auf dieses Problem vielschichtiger sind als früher angenommen. Stattdessen wird vorgeschlagen, dass das vorhandene Element der Selbstdarstellung in Hinblick auf Kriegeridentität auf tatsächlich ausgetragenen Gefechten basiert, die zu Verletzung und Tod führen konnten. Die Felsbildkunst diente dazu, die Gestalt des Kriegers zu erhöhen und Erzählungen über ihre Taten spannender zu machen.