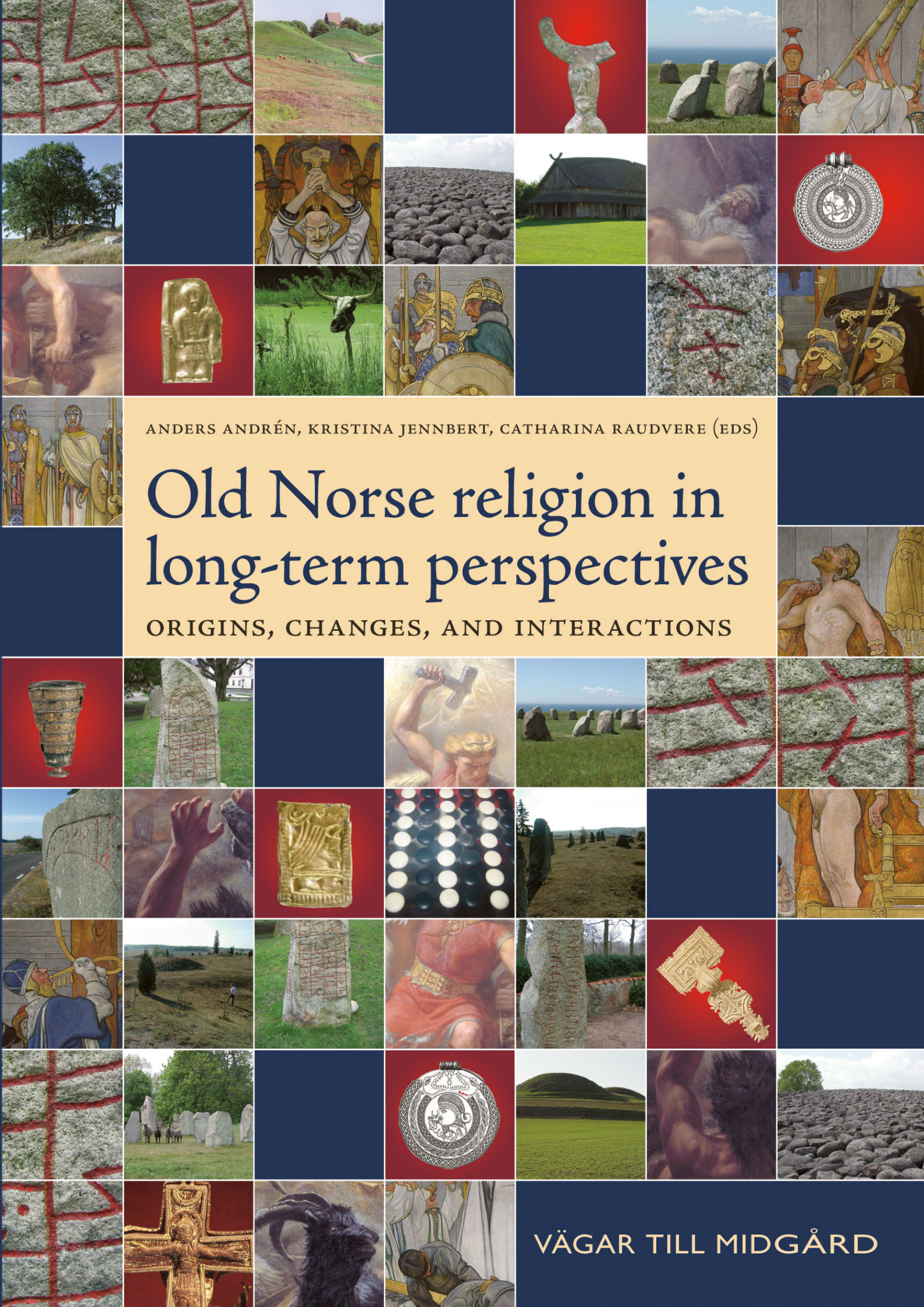




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Old Norse religion in long-term perspectives

ORIGINS, CHANGES, AND INTERACTIONS

VÄGAR TILL MIDGÅRD

Old Norse religion
in long-term perspectives
Origins, changes, and interactions

An international conference in Lund, Sweden, June 3–7, 2004

*Anders Andrén, Kristina Jennbert
& Catharina Raudvere (eds)*



NORDIC ACADEMIC PRESS

Published with the financial support
of The Bank of Sweden Tercentenary Foundation

Nordic Academic Press
Box 1206, 221 05 Lund, Sweden
info@nordicacademicpress.com
www.nordicacademicpress.com

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Technical Editor: Åsa Berggren
Typesetting: Lotta Hansson
Cover: Jacob Wiberg
Cover images: M. Winge: "Tors strid med jättarna"
and C. Larsson: "Midvinterblot" with permission
from the National Museum, Stockholm.
Photos by: Bengt Almgren, the Historical Museum, Lund,
Kristina Jennbert, Department of Archaeology and Ancient History, Lund,
Mimmi Tegnér, Malmö Heritage and Åsa Berggren, Malmö Heritage.
Printed by: Preses Nams, Riga 2006
ISBN 10: 91-89116-81-x
ISBN 13: 978-91-89116-81-8

Grinding processes and reproductive metaphors

Titti Fendin

In this paper I will briefly discuss the role of grinding and grinding stones in prehistoric societies with the focus on their ritual aspects. As an archaeologist dealing with prehistoric grinding I have noted that grinding tools in archaeological contexts are often either excluded from the archaeological documentation or not interpreted in cultural and ritual terms. They are in fact rather common as archaeological artefacts. Grinding tools occur in graves, in wetlands and in hearth pit areas. They occur together with cup marks and engraved pits at rock carving sites as grinding hollows both in bedrock and as solitary rock specimens. Grinding stones also occur in ceremonial house structures as in Puebloan ritual milling rooms. In the rooms massive quantities of flour were ground as preparation for ceremonial functions such as weddings and the frequent *katsina* ceremonies (Adams 1999). Grinding tools can also be found in settlements; in postholes, in hearths both inside and outside the house, in wells and in stone settings.

From my point of view grinding and ideas about grinding were probably essential in the creation of identity during prehistory. Strong ideas of transformation and reproduction are generally connected with grinding. Ritual actions involving grinding as well as their physical manifestations may be seen as important for social reproduction. Through these rituals social and existential values connected to grinding could be united, reflected and re-created. My aim here is to focus on these ideas and on the metaphorical aspects related to grinding. Another important issue is how grinding and early metalwork are related. Have the transformative and reproductive aspects associated with early metalwork in prehistory anything to do with the transformative and reproductive aspects associated with contemporary grinding? In other words, was there a relationship of social, technological and spiritual values between grinding and metal production during the European Bronze age and Early Iron Age? If so, how does it show in the archaeological contexts?

Grinding and metallurgy

On a south Scandinavian Pre-Roman site at Hemmeslöv in northern Scania a complex setting of cremation burials, charcoal- and stone-filled pits and stone settings was excavated in 1997 (Fendin 2002; Strömberg and Arcini 2002). The excavation area was situated in natural layers of red soil with iron oxide and ore. Slag and grinding stones, as whole specimens and fragments, were found in large numbers in the cremation burials and hearth pits. Grinding stones were also found in

stone settings. The grinding stones, mostly hand stones, can be characterized as multifunctional with signs of reuse that can be connected to early metalwork activities in hearth pits and the red soil layers. A small stone setting contained half of a worn out saddle quern. This was turned upside down in a central position. Hand stones, reshaped and reused, were then placed round it. The grinding surface of the saddle quern shows traces of some sort of organic material containing soot and probably fat.

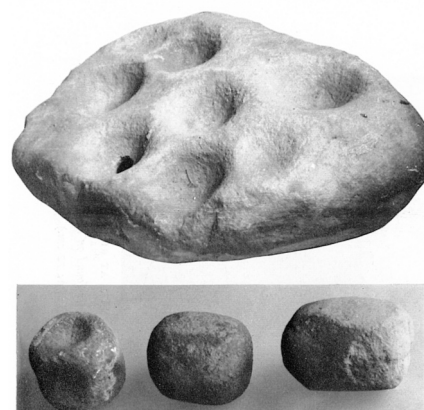


Figure 1. Stone mortar and pestles of granite from Pre-Roman (eighth and seventh century BC) Spanish silver-mining community at Riotinto. After fig. XXIV in Blanco and Luzon 1969).

Another archaeological example of grinding tools with relation to metal work can be seen in the large amount of mortars and pestles from a Pre-Roman Spanish silver-mining community at Riotinto (eighth and seventh centuries B.C.). The various granite pestles, cubic or cylindrical in shape, correspond perfectly to the pits in the mortar slab (figure 1). They were probably used for crushing or pulverizing minerals for the smelting process (Blanco and Luzon 1969). The tools at Riotinto seem to have been rather specialized, in contrast to the traditional multifunctional use of grinding stones. Other types of grinding stones were also used in early metalwork, as can be seen in several finds from Favogna in northern Italy. Grinding stones – in the shape of saddle querns – were used for crushing copper-iron ore in a very early copper smelting furnace, dated 1400 BC (Hauser and Nothdurfter 1986; Demetz 2000). Grinding tools were used for crushing minerals for the smelting process but were also involved in the production of moulds. Archaeological investigations from a temple in the Greek town of Kiton show that recycling of moulds took place there during the middle Bronze Age (1200

BC). Already used moulds were crushed and used as temper in the production of new moulds (Karageorgis and Kassianidou 1999). A large number of grinding tools – in the form of mortars, saddle querns, basin-shaped trough grinders and revolving hand querns – were found at the prehistoric mining communities in Bir Umm Fawakir in eastern Egypt. The tools that were used for crushing and grinding of minerals reflect the extensive mining of various rocks (such as granite) and minerals (especially gold) under a long period from 1300 BC and with special emphasis to the Roman period in the first century AD (Meyer 1995).

Grinding in prehistory basically concerns the ideological bonds between the material practice of everyday life, based on agricultural production, and a spiritually charged world of ideas based on reproduction symbols (Barrett 1989). According to this, grinding and grinding tools can be connected with ideas of transformation and reproduction in prehistory (David 1998; Fendin 2000, 2005). The social position of metal artefacts in prehistory was probably also strongly influenced by these ideas (Barrett 1989). Ritual actions with grinding and metallurgical production were thus essential for social reproduction in prehistory. In these rituals, social and existential values of grinding and metallurgy can be both united and reflected as well as recreated. Grinding tools and grinding process are generally associated in history with female identity and are also integral parts of many female initiation rites (Lidström Holmberg 1998). Anthropological studies from Tanzania show that the smelting process in metal production and its associated metaphors of reproduction and transformation also played an active role in young women's puberty rites (Schmidt 1996; David and Kramer 2001). There are in fact some striking resemblances between prehistoric metal production and grinding that could be of significance. Besides their reproductive and transformative qualities they were also time-consuming processes where functions as roasting, crushing and grinding were vital for the final result. Both used quarried stone as raw material. They could both be said to have a special relation to fire with reference to the hearth as a social focus. In metal production, roasting and smelting were executed in the furnace or kiln. Roasting of grain before grinding took place in the hearth and when it was ground indirectly as bread in the baking oven. Both also dealt with the shaping of objects – grinding tools as well as the ground media – by the reciprocal work. The objects in the metallurgical process get their shape in the mould, on the anvil and by edge-sharpening with the aid of grindstones and whetstones (Haaland 1995; Schneider 1996; Englund 1999; Karageorgis and Kassianidou 1999; David 2000).

Grinding tools and multifunctionality

As an archaeologist dealing with documentation of grinding tools you soon become aware of the difficulties of distinguishing traces of different functions and understanding their chronology from a complex working surface or, worse, from small fragments. There could be bruises, small circular traces, impressions and notches together with marks probably from rejuvenation at the surface and edges – all in different phases of the working process. And if you turn the stone upside down there could be a whole medley of other traces – perhaps

badly burnt after a spell in the hearth before the burial in a pit. This functional complexity tells us something important about how grinding stones were once used in prehistory. It can be seen in the variety of tool forms, working surfaces, and in the intermediate stages from pounding to fine grinding. Crushing and grinding are in fact not only functions for grain-processing activities. Grinding tools were used for crushing and grinding organic as well as non-organic material (Adams 1988, 1999; Nelson and Lippmeier 1993; Wright 1994; Fullager and Field 1997; Del Pilar Babot and Apella 2003). They are – as I mentioned – used for metalwork, but also for various other things such as grinding of cereals and vegetables (Kraybill 1977; Hersch 1981; Babot and Apella 2001), pottery clay grinding, pigment grinding, sherd grinding for temper (Gould 1968; Kraybill 1977), grinding of burnt bones and shaping bone (Babot and Apella 2001; Del Pilar Babot and Apella 2003), woodwork (Smith 1988), hide rubbing (Adams 1988), bead making (Kirkbride 1968; David and Kramer 2001) etc. In other words, they had general applications in many areas in prehistoric societies.

This multifunctionality occurs in various shapes all over the world in prehistory: as grinding hollows, basin hollows, pestles, hollow complex and mixed facet complex, but also handstones, mortars, grinding slates, pounders, querns, basined trough grinders, grinding groove complexes and many others (Bennet and Elton 1898; Curwen 1946; Kraybill 1977; Hersch 1981; Horsfall 1987; David and Kramer 2001). The two reciprocal stones can be seen in a variety of tool-form combinations; a mortar could for instance be used with different pestles and a grinding slab with several kinds of handstones, grinding hollows with both handstones and pestles and so on (e.g. Hole et al. 1969). The tool kit also consists of the special stone for rejuvenation of the working surfaces of the two stones for maximum attrition efficiency (figure 2) (Haaland 1995; David and Kramer 2001).

The diversity of tool shape and complex worked surfaces

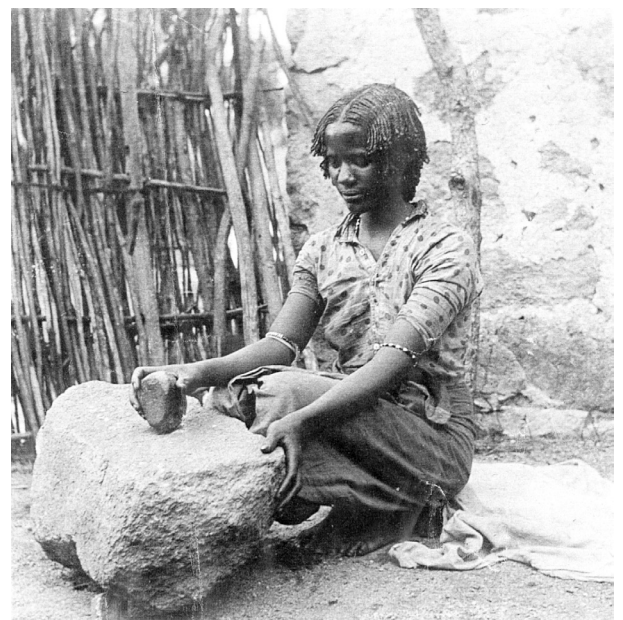


Figure 2. Rejuvenation of a saddle quern. A woman from Gheleb, Eritrea, pecks the grinding surface for more efficient grinding. Photo: Richard Sundström, 1905–1915.

underlines that multifunctionality and reuse are in fact key words when dealing with grinding tools. This is, I would say, important because it concerns both tool technology and metaphors connected to grinding. Metaphors of grinding multifunctionality also include the process from raw material to worn-out tools. It may be expressed as life stages, as symbolic birth, for instance as the collection of stone material in a river bed, and as symbolic death, for example in form of a deposition of the grinding stone in graves or in other ritual contexts (Fendin 2002). Evidence of this can often be seen in various archaeological structures, both as whole or worn-out specimens and as fragments. To sum up, a main quality of grinding tools is their adaptable properties, which must have been of great importance in prehistoric societies. Apparently the multifunctional character of grinding tools must have involved great adaptation to different kinds of contexts. Hence it seems meaningful to view the multifunctionality of grinding and its metaphors as a separate prehistoric category with its own terms and implications.

Grinding metaphors

The grinding stones spoke in rage: "What torture you caused us! Crush, crush, dawn and dusk our faces went crush, crush, crush. Now you are not men, it's our turn to grind you." (*Popol Vuh*, 37ff)

The grinding metaphors stand for changing but strong ideas of the values of grinding. The various metaphors can never be fully demarcated, as Henrietta Moore (2000) states. They are in other words hard to define clearly. Several expressions of values are connected to reproduction, expressions that reflect existential values that seem to have been central in ideas of grinding over a very long time. They are all characterized by the two principles in the grinding process, namely the whole and the fragments, both of which have strong connections to the overall themes: creation and destruction. Aspects of these principles and themes are:

- Transformation
- Body as fundamental for social and cosmological order
- Time as fundamental for social and cosmological order

The body, for instance, is essential in the grinding process in many ways. Ethnohistorical as well as experimental studies emphasize that grain grinding with a non-rotating tool like the saddle quern is a very intense physical action in the repetitive motions backwards and forwards, combined with striking, or in the circular grinding motions in the basin-shaped trough grinding stones. This is probably one of the hardest and most time-consuming processing techniques (Bennet and Elton 1898; Curwen 1946; Cane 1989). Grinding motions are generally rhythmical. The rhythm could be held steady through singing, as in this example from Zuni Indians in the early twentieth century:

As there are eight mills in this house, there are 16 grinders. An aged woman, said to be the only one living who knows the two original grinding songs by heart, sits before the mills and leads the grinders in the song... (Stevenson 1904; Mobley-Tanaka 1997)

These repetitive and suggestive body motions, perhaps many hours behind the quern, must have had some sort of impact both on the grinding people and on others. The rhythm as well as the sound may have been of great importance, especially in rituals involving grinding. The repetitive grinding rhythm is transformed into a loud and suggestive sound reproduced in the surrounding environment. In the Old Testament the grinding sound is mentioned several times as an expression of the ever-proceeding daily life. The grinding sound probably engendered a sense of trust that day-to-day life, the basis of society, would go on. Grinding and grinding tools can also be seen as symbols of prosperity and fertility connected to certain places (Adams 1999). When the quern is moved from the site the focus of fertility is also moved.

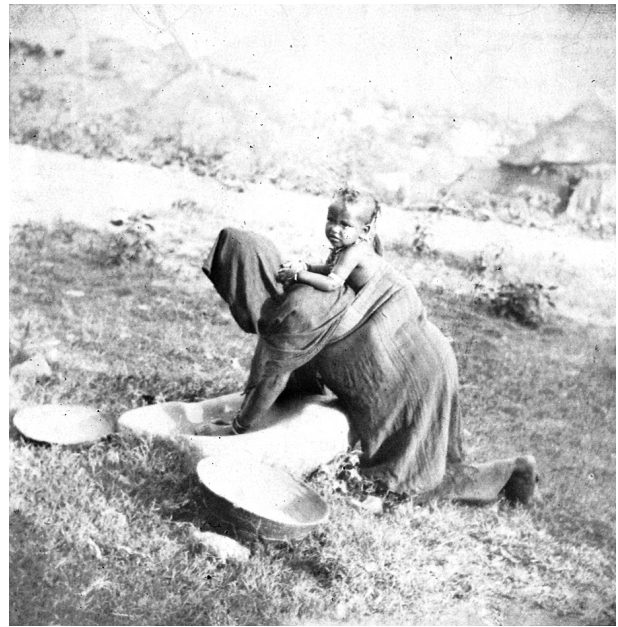


Figure 3. Mother and child from Gheleb, Eritrea, grinding at a basin-shaped grinding tool. Photo: Richard Sundström 1905–15.

The human body as a symbol of reproduction and ageing is also present both in ideas about grinding and in the terminology. The two reciprocal stones in a tool kit, two opposites that make a unit, express in metaphorical terms the dialectics of the bodies of the two sexes or the relation between generations, as between mother and child (figure 3) (Lidström Holmberg 1998). But there are also connections between the ageing of the human body and the subversive fragmentation processes that are essential in the grinding process (Fendin 2000). This includes both the tools and the ground media. The stone is traditionally a metaphor for strength and endurance, as can be seen, for instance, in stone representations in grave contexts (Kus and Raharijaona 1998). But stone tools in the destructive grinding process seem to stand for the reverse – as an expression of deterioration. The reciprocal stones literally grind themselves to pieces during the grinding process. In this process they both change in shape and reduce in size at the same time. The wear from the stroke of the handstone is visible on the lower grinding stone and vice versa. The crushing and grinding could be seen as controlled methods to accelerate the natural fragmentation process of decay. In a metaphorical sense it means that destruction is the condition for fertility and

new life (Bynum 1995). This process from death to life can be seen in many myths of creation as partition of body, for instance, in the myth of Mithras. The sacrifice is transformed here to food through the ritual crushing of the soma plant with the holy mortar and pestle (Lincoln 1986). Metaphorical ideas of grinding as transformer can also be applied to processes in nature, as the historical images of the eternal grinding motions of the sea that grind salt or sand. For instance in the Old Norse story of the quern of Grotti or in expressions like *strandmal*; the Scandinavian word is an old term for the smoothly ground stones on the seashore. The sea here is the symbol of both deterioration and transformation.

Ritual grinding as an expression of social and religious order

At European rock carving sites depictions of Bronze Age metal weapons and items can be seen with representations of bedrock mortars and grinding hollows, but also cup marks. The metallurgical presence at these sites has been subject of many archaeological discussions with reference to social and religious order. The occurrence of grinding in these ritual contexts is rarely noticed, however, and is therefore often excluded from this discussion. This leads me back to the issue of metallurgy versus grinding in prehistory and their archaeological representations. Of special interest to me here is the encounter of an ancient grinding process technology – maintained and developed over thousands of years and with everlasting and reproductive qualities – and the young metallurgical process technology of copper and bronze production. To change and use things from one area of reproduction to another in society could be seen as a sort of conflict (Barrett 1989) What happened to the female-associated processing tools and their social values when they were brought from one social position into another, like the male world of metal production? Did the multifunctional identity of grinding tools change in some way when they met this new technique? In that case how can this change be seen archaeologically?

Social complexity in Bronze Age Europe use to be connected with metal production. But social complexity can also be seen as a result of intensified agriculture and processing of agricultural produce to make it possible for an elite to achieve economic tribute (Ruiz Taboada and Montero 2000) as well as spiritual control. At Fuente Alamo and Gatas in southeast Spain, large amounts of grinding tools have been found at some mountain sites, central places from the Bronze Age. The tools indicate that grain was once processed in these sites instead of in the lowlands as earlier. Moving and intensification of these processing activities to central places were parts of a social and economic strategy to maintain and strengthen the social order in a stratified society. In the centralized society an increase in food processing as well as the supply of raw materials – as stone quarries for tool production and mineral deposits for simple metal handicrafts – could be seen as a manifestation of both wealth and control (Lull 2000). Yannis Hamilakis (1999) shows that both processing and consumption of food were integral parts of various transformation rituals in luxury feasts in the Mediterranean Bronze Age. Such feasts of extravagance, with consumption of food and drink for the elite, were probably essential for the social and religious order in the Late Bronze Age societies in Europe.

Metal items such as hooks and vessels with symbolic pictures of animals show that the consumption had close connections to ritual practice (Gomez de Soto 1993). Another example of possible grinding in ritual Bronze Age contexts are the specimens of grinding tools at Scandinavian rock carving sites. According to the Swedish archaeologist Lars Bengtsson (2002), they are suggested to have been used in libation ceremonies for the production of beer. He referred his ideas to grinding hollows on stones in Minoan culture areas, interpreted as *kernoi* libation vessels, probably in a ritual scenario.

A conceivable, but somewhat later, Scandinavian archaeological parallel to central places with accumulations of grinding tools as material expressions of abundance and social control in the landscape is perhaps the Early to Late Iron Age central place of Uppåkra, south of Lund in Scania. A great number of artefacts – among them numerous grinding tools – were found in various contexts, many of them with a clearly ritual character. The grinding tools have not yet been closely investigated (pers. com. Birgitta Hårdh, Dept. of Archaeology and Ancient History, Lund University; Larsson this volume) and their role at the place is therefore still unclear. Were they also integral parts of a social and religious order where intensified processing could be seen as ritual manifestation of wealth as worldly and spiritual control?

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