

Fertility and the Repetitive Partition

Grinding as Social Construction

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Abstract

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In an agrarian reproduction system, grinding and grinding tools represent various forms of reproduction linked together through the transformative ability of grinding. It seems that grinding as *action* brings different aspects, seen as metaphors, to the social context. These are central for the understanding and perception of grinding and grinding tools as socially defined conditions – especially when they occur in contexts interpreted in ritual terms. The methodological and empirical problems associated with grinding stones as archaeological source material have led me through interdisciplinary studies to search for alternative interpretations and new angles of approach to understand what constitutes grinding contexts. As a part of my thesis work I have studied three metaphorical grinding aspects that are important for the elucidation of the grinding action: cyclicity of time, sexual reproduction, and transformation or change. Each theme includes various concrete expressions such as fragmentation, rhythm, body and stone/tool. In this article I discuss some of them.

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Introduction

Fire and cross, and packs of wild beasts, the wrenching of bones, the mangling of limbs, the grinding of my whole body, evil punishments of the devil – let these come upon on me only that I may attain Jesus Christ. Ignatius of Antioch AD 110 (Walker Bynum 1995, p. 28)

What instruments and methods should we use to understand grinding as social phenomenon in prehistory? Is it possible at all to understand for a modern archaeologist, or do we today perceive grinding in a completely different way from people in prehistory? In my opinion, there are points of contact between past and present that are worth discussing. Above all, there is of course the archaeological grindstone material as intact or broken specimens of reciprocating grindstones in many

archaeological contexts. There is also the historical tradition of general attitudes to and projections of grinding, which is vital for how we describe and perceive grinding as a social construction in our modern Western society. Historical texts, like the one quoted above, tell us about grinding as a social phenomenon in history but how do they correspond to prehistoric grinding and grindstone technology? In historical value systems, metaphorical aspects of grinding are represented in general attitudes and projections, both conscious and unconscious, that are important for our perception of grinding as action in society. Generally the historical grinding concept is loaded with negative associations (Fendin 1994; Lidström Holmberg 1998) – the grindstones being regarded as “mere stones” – but among them is a sense of dissonan-

ce that tells us that the value of grinding is complex and diversified. It was this dissonance and its application to prehistoric grinding that first caught my interest in “the grinding concept”. The dissonance tells you that a historically low-valued idea can nevertheless carry strong elements of power. Grinding in history is both a low-valued concept and a strong expression of transformation (Fendin 1994).

Both the archaeological material and the theoretical framework of grinding are diversified and sometimes full of contradictions. This complexity, in my opinion, creates opportunities to search for new angles and approaches to the archaeological interpretation of grinding in prehistory. First a careful study of the different metaphors of the grinding process are, I think, one way to examine the question of grinding as social construction in prehistory. Another issue concerns the place as a forum for social reproduction seen through the grinding process. Is it possible to see cycles of reproduction as functions, actions and material in the different grinding contexts? Which stages of the grinding process are present in each context? What sort of actions, represented by different surfaces, can be associated with each grindstone? Can different grinding metaphors be traced on the various types of grinders? If so, is there a connection between grinding metaphors and place? In other words: is it possible to see certain grinding metaphors represented at certain places? These are challenging questions for further work. This angle of approach seems to demand the integration of the theoretical and abstract framework of grinding metaphors as socially constructed concepts with spatial and functional analyses of grinding material and their contexts. I will focus more on this subject in my thesis on grinding as social construction with the emphasis on south Scandinavian Bronze Age contexts.

This article, however, deals principally with some essential grinding metaphors, namely: fragmentation, transformation/time, body and stone/tool. I will start by briefly viewing some problems of interpretation that concern the identification, classification and terminology of grinds-

tones. This is followed by a short outline of research history of grindstones in ritual contexts as an introduction to the subsequent section, which mainly deals with different grinding metaphors and the idea of grinding as *actions*. The last section should be seen as a small attempt to use historical texts with metaphors that seem to have some validity for grinding.

What is a grindstone?

The feelings of dissonance mentioned above concern grinding metaphors. As far as I can see, there are also problems for archaeologists with the identification of the stones as grindstones, but also perhaps a lack of attention to the complexity of the grinding process. These problems can be formulated in two simple but major questions: what is a grindstone and what is grinding?

Let us first state that the grindstone is fundamentally a unit of two in a reciprocal position: the upper stone and the lower stone. Each stone has many traditional names (e.g. Lidström Holmberg 1998), but in this text the unit is consistently termed: “grinders” or “grindstones”, and if separated; the “upper” or the “lower stone”. The person who grinds, if mentioned, is named “grindee” (Hersh 1982).

We take it more or less for granted that grain was one of the basic foods and that grinding was one of the essential processing technologies in most agrarian societies, also in prehistory. One of the “indicators” of agriculture in the archaeological record is by tradition grindstones. They are primarily associated with the domestication process at settlements in Neolithic societies, especially from a functional-economical view (e.g. Hersh 1982; Wright 1993). However, one question pops up when we are confronted with the record of grindstones at south Scandinavian Bronze Age settlements. Are there really enough grindstones to complete this picture of an essential process technology in prehistory? If not, what is the reason? It could of course be the fact that grindstones never played any special role in people’s lives in prehistory, and perhaps the rather few recorded

examples at settlements are the only ones that ever existed? On the other hand, there are a lot of grindstones in poor functional condition at settlements, for instance, in hearths, cooking pits or stone settings. They could be fragments with small remains of worked surfaces that derive from grinding. They are often not referred to any special tool category and sometimes they are not identified at all. The explanation is of course the difficulty of identifying them due to their poor state, but the problem is also related to insufficient knowledge of grindstone prototypes and grinding technology. This will of course influence the record of grindstones at an individual place but will also affect the image of grindstone representativeness in the Scandinavian Bronze Age in general.

The more or less blurred and stereotyped images of grindstones in our mind are not enough for the identification of a diversified corpus of archaeological grindstones – particularly in view of the fact that grindstones are generally found in fragmented parts, perhaps highly burnt or otherwise in a poor condition that makes identification difficult. We must realize that these pieces of stone were once whole and functional grindstones, representations of the grinding process.

The connection between historically and anthropologically known activities in the grinding process and the different surfaces on the grindstones are just hypothetical and will so be. In fact the only thing we can say with a fair amount of certainty is that the different forms, surfaces and conditions of the prehistoric grindstones are the results of human grinding activities. Perhaps it is also possible to give the stones an approximate dating. It means that the debate about grinding in prehistory always will lack proof in absolute terms. Archaeologists tackling grindstones as archaeological material have so far used ethnographical and anthropological analogies, preferably from North America, Australia and North Africa, to learn about the grinding process, such as possible grinding motions and the technical conditions of the grindstones. Some of them have also performed experiments such as use-wear analyses and repli-

cas of archaeologically found grindstones and compared the results with the examples of ethnographic analogies and the archaeological material (Adams 1988; Clark 1988; Haaland 1995; Hard *et al.* 1996; Lidström Holmberg 1993; Molleson 1989; Nelson & Lippmeier 1993; Schlanger 1991; Schneider 1996; Cane 1989; Smith 1988; Tomka 1993; Wright 1993, 1994). Many ethnographical sources tell us that grindstones as pounding and grinding implements have been used in the processing of food (Hersh 1982, pp. 421 f.). We can scarcely talk of one static, non-changing way of grinding by hand through prehistory. There is both archaeological and historical evidence of the development of different grinding techniques reflected in material culture all over the world (e.g. Kraybill 1977; Smith 1988; Curwen 1937; Bartlett 1936). Therefore it is not unlikely to expect that this development, at least to some degree, had also taken place in Scandinavian societies during prehistory. The grinding process comprises different phases of action involving the two reciprocal grindstones. Those actions are roughly dehusking through pounding and crushing, followed by coarse grinding to a certain fraction level, and finally a finer fraction grinding to pulverize for meal. Intermediate stages of action may be seen. Each step in the process leaves different marks at the surfaces of both reciprocal grindstones. The archaeological identification of grindstones sooner or later leads to questions concerning the origin of these surface marks. Which grinding techniques as regards forms, surfaces and species of rock can be traced in the individual grindstones? Another fundamental identification problem is how to distinguish the upper from the lower stones. The combination of upper and lower stones is connected to the manner in which they were utilized (e.g. Bartlett 1933, 1936; Woodbury 1954; Hersh 1982) and therefore important for our understanding of the grinding process. There may be several different functional types of both upper and lower stones, and one must be aware that it is not an easy task to match them correctly, especially if they are fragmented.

To obtain the best grinding result must have

required the use of various grinding techniques, including the exchange of upper and lower stones with different coarseness during the grinding process (Bartlett 1933, 1936). Even if we hypothetically could say, with support from ethnographical and experimental studies, that grinding probably was a complex and diversified process technology in prehistory, there are still more questions than answers left. How did grindstone technology develop? What smaller actions constituted the prehistoric grinding process and how did the grindstones relate to those actions? What social values lie in each step of action? These are just some of the questions. Many of these problems show the complexity of grinding in prehistory and also the need for modulated models.

Grindstones in ritual contexts

One major problem of interpretation is grindstones in contexts that seem functionally odd for us. This may be either intact or broken specimens in wetlands, in graves, in hearth areas or in post-holes. What was the reason for depositing them there at all? Many of these contexts are interpreted in ritual terms. It seems as if grindstones in not directly functional situations express something extraordinary with reference to their special properties as grindstones. One of these odd contexts with remarkable grindstones was a small fen at Hindby, outside Malmö, excavated by Malmö Museums from 1989 to 1991. The archaeological artefacts and the different layers were dated by C14 analyses and typological criteria to the period from the Mesolithic to the Late Bronze Age, with the emphasis on the Late Neolithic and Early Bronze Age. Spread all over the small fen surface and in the layers underneath was a remarkable composition of bone, both human and animal, bone implements, flint daggers and axes (Nilsson 1995). Most striking for me, though, was the over a hundred more or less worn out grinders, mostly upper stones. Each stone had several smaller surfaces: circular, oval or irregular, with signs of knapping, abrading or rubbing. Some of the stones were almost covered with a variety of wear pat-

terns. One could almost visualize the immense actions that must have taken place on the stone surfaces. But what actions, ritual or not, were they, and what values do they represent in the actual prehistoric society? And why the distinct selection of upper stones and in such bad functional condition?

Grindstones in ritual contexts are not a new archaeological phenomenon. There is in fact a historical tradition of understanding grinders as social objects and as tools of transformation whose values differ from the solely functional and economic. One of the best-known examples is found in Ian Hodder's *The Domestication of Europe* (1990), where he deals with grinding stones as ritual and social metaphors in a Turkish Neolithic tell: Çatal Hüyük. The idea of grindstones as ritual metaphors in archaeological texts can be traced back at least to the late nineteenth century. Bennett and Elton suggest in their comprehensive history of querns (1898) that North American ancient rock mortars were holy and collectively used grinders but also containers of holy rainwater. Another of their many examples is the grindstones with engravings and sculptured faces on the stone surface, understood as symbols relating to the body, and to nourishment and fertility (ibid.). The Swedish archaeologist Carl Wibling claimed in a report from 1903, concerning an investigation of the Bronze Age barrow "Drottninghögen" near Helsingborg in Scania, that grinders in certain ritual places and grave contexts can be seen as sacrificial. The grindstone can be seen as "a symbol of the fertility of man and earth, of agriculture and its protector; the god of the sun" (Wibling 1903, my translation). There are also more recent works that studies grindstones in ritual contexts, e.g. Per Karsten's dissertation *Att kasta yxan i sjön* from 1994, which deals with grinding tools as conceivable wetland sacrifices. Another example is Cecilia Lidström Holmberg's forthcoming dissertation about Neolithic grinding and grinding tools as metaphorical traces of the past. In a couple of works by Anders Kaliff (e.g. 1997) grinding stones from Late Bronze Age and Early Iron Age cremation graves are treated from an eschatological

point of view as gifts of transformative ability linked to Bronze Age cosmology.

Metaphors for the grinding as *action*

Is it at all possible to refer social values of grinding from our own modern society to values in pre-history? And if so, how can we proceed? I will answer this questions with another one. How could we possibly describe the grinding process if we do not refer to our own perception of grinding? Metaphors, as images, attitudes and projections, are vital in the creation of values and therefore central to our understanding of society. Projections of grinding are not fixed through history, but some of them seem quite long-lived. They carry vital information about grinding as a social construction in systems of social reproduction, irrespective of their negative or positive approach. When studying metaphorical aspects in different texts it is inevitable that one is influenced by one's historical baggage of associations, implicit assumptions and projections. However, old and new aspects are, in my view, able to give new approaches to material culture and ideas. Using metaphors is of course not without problems considering the varying conditions of the source material. One vital point is the fact that the old historical sources are rather meagre. One must also be aware that the meaning of metaphors is not constant through history. It is rather that they have been transformed or renewed in some way (Andrén 1993). Both the composition and the emphasis on certain subjects can reveal the writer's view of them as particularly important, important enough to write them down. It is also worth paying attention to the more unconsciously created points of tension, confusion, fallacy and self-contradiction in the texts (Walker Bynum 1995, p. xvi).

The common view of the concept metaphor is historically that of a figure of speech and trope (Entzenberg 1998, p. xviii; Tilley 1999, pp. 3 f.). But the concept "metaphor" has various meanings. The Greek word *metaphora* means that something been carried or brought from a place to another.

Here I could use the aesthete Claes Entzenberg's (1998, pp. xi, xxi, 147) definition of metaphor as the relational meaning, "inseparable from the dynamic, very sense-making processes related to different context-specific interpretations, which provide the key to both content and placement". The metaphors can then be used as an interpretative resource that creates meaning as activators of the contexts. This is also valid for grinding metaphors and their relation to the grinding context. I will stress, however, that I am aware of the complexity of the use of metaphor definitions in general, and likewise the question of using analogy or metaphor. This is the subject of a multivocal and diversified general scholarly debate (e.g. Wylie 1985). I will not at this level of writing go further into this complex issue; my role here will therefore be more of a survey and discussion. My choice of Entzenberg's definition of metaphor is not final. I prefer rather to see it as a starting point. As far as I can see, there is a vital point in the definition with reference to the grinding process and the grinding context. I will emphasize grinding as ways of acting, hence the grinding process consists of a series of smaller actions. It could, for instance, be dehusking by breaking and crushing, or pulverizing by fine fraction grinding. The grinding metaphors are all significantly involved in these grinding actions. I will develop this topic later in the text.

Back to the grindstones in functionally odd contexts that I mentioned initially. The relation between the grindstones, or rather the representations of acting and the context, are of great importance if we want to approach the values of grinding in certain contexts. We cannot see the functional connections between the grindstones and the context today, but this not rule out the possibility of functional connections in prehistory.

There is a small possibility that some context-specific values occur in no other places. They are unique to that certain place, which will strictly speaking make archaeological comparisons with other contexts in time and space difficult. But the grinding as *actions* seen as metaphors could also

be the key that actually connect different contexts rather than separate them, and could therefore be useful for the archaeological interpretation of grinding in various contexts.

Grinding as *action*

Grinding in general can be described as a socially determined action, e.g. seen in systems of social reproduction in prehistory. Systems of social reproduction are characterized by their interacting relations between cycles of fertility, biological reproduction and food consumption. Grinding and grindstones are both representations of action and material culture in such systems. The relations reproduced through material culture are present as a medium for people to carry out their actions. Therefore material culture can be seen both as the basis for and the consequence of action (Barrett 1989). The state of grindstones found in archaeological contexts – the design, its functional use wear, or non-functional traces of damage before or after deposition – is related to these actions. In this connection I underline the image of grinders as the unification of a pair. Another emphatic point for understanding their participation in systems of reproduction is to see the grinding unit as a stone/tool dialectic concept.

Perhaps one can say in a slightly poetical sense that the upper stone contains the “memory” of the hands that grabbed it through thousands of grinding motions. Hands also renewed the form of the lower stone by the pecking of edges and surface during the grinding process. It was probably the hands of a woman, because hand grinding is related through history to women’s labour (e.g. Haaland 1999; Lidström Holmberg 1998; Fendin 1994), even if we cannot wholly exclude that grinding somewhere was a manly task. The fundamental cultural principles in society are so to speak embodied as engendered actions, thoughts, and perceptions expressed in the reproductive practices of everyday life (Bourdieu 1977, 1990; Treherne 1997, p. 118). Grinding as socially determined action may be seen as a form of identity or process consisting of various stages or a flow of

smaller actions. Those reproduced relations and the actions (irrespective of their definition as ritual or not) are expressed through the material culture which could be metaphorically interpreted.

It seems that grinding *as action* brings certain metaphorical meanings and thematic aspects to the grinding context. Grinding as food-processing activity by using grindstones is assumed to be an everyday action. Grindstones brought from their ordinary functional grinding settlement context to ritually termed contexts such as wetlands, hearth areas or graves need tools for interpretation. How can we understand their presence? A major problem of interpretation has so far been to define archaeological material as ritual or not, and there are various criteria to set the classification limits between ritual and profane contexts.

I think it is worth seeing that even ritual can be interpreted as *action*. Something takes place in ritual because of the action, and the action may be grinding. One main reason for using ritual as *action* is of course the fact that grinding so literally is *action*. Even if I choose here to see ritual as *action*, it does not mean that this is the only way to conceive of the term. In fact, there is a diversified and long-lived debate concerning how to define ritual as social expression (Bell 1992). I will not enter deeply into this discussion here. The human ability to ascribe an integrative function to metaphors is particularly obvious in the ritual actions. When the action rises above the ordinary context it can gain new meaning (Bell 1992, p. 42; Rappaport 1999, p. 27). Perhaps the many grindstones in wetlands could be seen as representations of everyday action that gained new meaning from the ritual actions?

The metaphor themes that are central for the understanding and perception of the grinding and the grinding tools are: time as cyclic, sexual reproduction, and transformation or change. These are also constitutional elements in systems of reproduction. Each grinding theme may be seen from the following aspects: fragmentation, rhythm, body and stone/tool (Fig. 1). Both the themes and aspects are closely linked to each other or rather integrated in dynamic and complex forms. Possi-

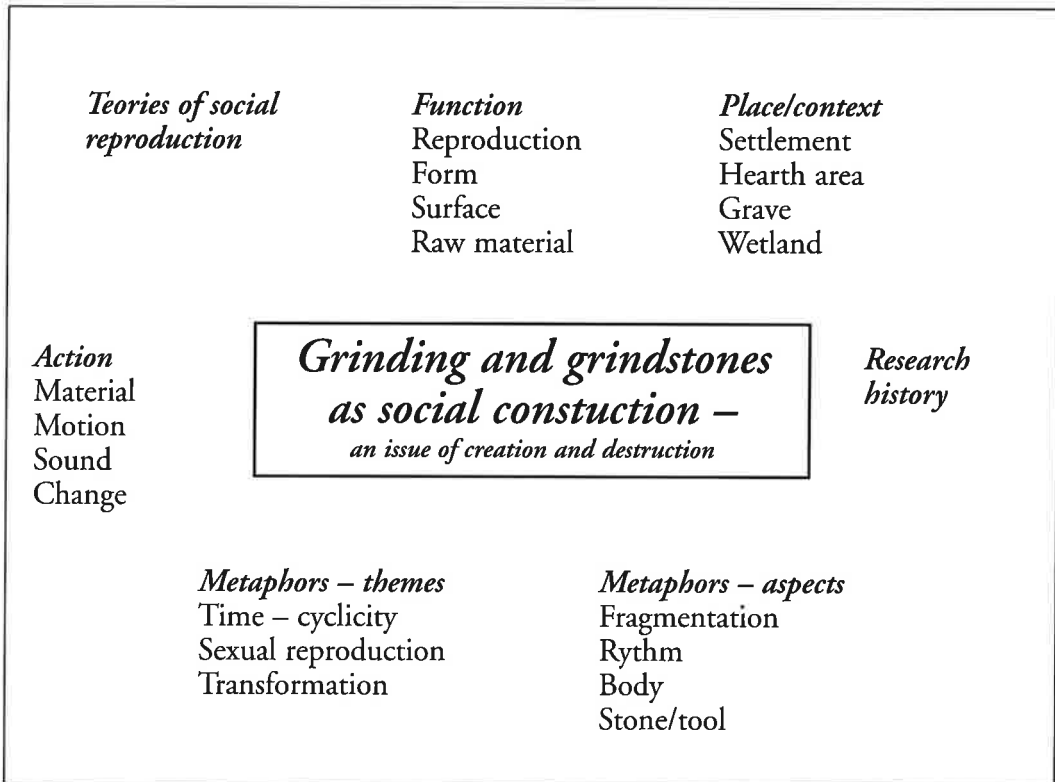


Fig. 1. A scheme of some constitutional elements in the interpretation of grinding as social construction.

ble meanings of grinding reside in the interactions of those relations. The fragmentation (deterioration) aspect, for instance, is represented in all the themes, but also in all of the other aspects. I will try to account for this complexity below. I will at the same time emphasize that the different representations of metaphors and their relation to the grinding process should primarily be seen as suggestions that need further investigation.

Transformation and time

One central message of the projections through history is that grinding is a highly transformative action. The transformation metaphor concerns existential values in most societies all over the world. Transformation is also a key word in the grinding process because of the grain and its change from grain to meal and from meal to bread, and the grindstones are also involved and transformed as a result of that process. It would not be too

unlikely to suggest that the transformation metaphor of grinding in prehistory could have had some meaning, whatever it was. Transformation is the power to change form and to cross boundaries. Universally social transformation actions, e.g. rites of passage, are connected with the biological crises of life, birth, sexual maturity, reproduction and death. The rite of passage includes three consecutive elements; before, at, and past the threshold. These stages are commonly seen as symbolic death and rebirth into the new status (*Encyclopaedia Britannica Online*, "rite of passage"). Many of these rituals concern plant transformations in processing and consumption of liminal food (Hamalikis 1999, p. 40). The processing of grain involves several cycles of reproduction (Barrett 1989), such as sowing, growing, harvesting, threshing and sieving. There is also grinding in the form of breaking, crushing and powdering. Finally there is baking or cooking and eating. Each step in the process also contains a physical movement from

one cycle of reproduction to another, e.g. cutting the living corn from the ground, bringing sheaves of corn from the field to the threshing place and so on. This means that several boundaries of reproduction cycles are crossed in the processing of grain and this could involve a sort of conflict (Grove 1982; Braithwaite 1982; Barrett 1989). When the reproductive boundary of the cycle is crossed, a state of chaos has to be overcome through various rituals before order is restored. Rituals may be seen as a method to keep the cycles of reproduction together. Another mediating link present in each of the cycles of reproduction is grain. Both rituals as action and grain as a ground medium are parts of the grinding action. Grain transforms several times during the grinding process. The shells are dehusked, and then crushed and pulverized.

The grinding action and the repetitive grinding motion are conceived in Western tradition as heavy, time-consuming, monotonous and boring (e.g. Bennett & Elton 1898, p. 39; Fendin 1994). Grinding is clearly a time-consuming activity, but is it boring? I think there is a possibility to perceive grinding in other ways. It does not rule out that grinding actually was conceived as time-consuming and boring even in prehistory. My aim is to search for new values that could help us with the archaeological interpretation of grinding. Grinding, instead of being a tedious activity, could be an activity associated with, for instance, the creation of time. The creation of time is embodied in the grinding action through the repetitive grinding motion backwards and forwards, or in the circling grinding motion as in basin-shaped grinders. The motion creates a rhythm that can be held steady through singing (*Kulturbistoriskt lexikon* 1981). The repetitive grinding rhythm is also transferred into a loud and suggestive grinding sound reproduced to the surround environment.

The image of time is further expressed in the fragmentation of both the upper and the lower stone. This means that the 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. This that must

have been obvious to people grinding in prehistory. Besides the actual grinding, the gradual decomposition of the stones can also be seen in the necessary process of regular repecking of the grinding surface. Another central grinding aspect with connections to time is fragmentation.

Fragmentation

Fragmentation may be seen as breaking, crushing and powdering in the various stages of the grinding process. The fragmentation aspect is of course present in the ground medium – e.g., seed, nuts or other materials – but it is also represented in the abrading of the grinders as they grind down during the process – an inevitable effect, a process in the process. When the grinders are worn out and finished as grinders, parts of grinders, perhaps in new contexts, are still expressions of fragmentation.

It seems that fragmentation with strong connections to concepts such as transformation and time, but also to body, has been deeply involved in discussions concerning the conditions of life and death through history (see Walker Bynum 1995). 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 new life. Fragmentation may be seen as the gradual disintegration of life, the inexorable process of time exemplified by grinding and destruction through fire or by breaking the worn-out grinders. But fragmentation can also be an act that creates conditions for fertility, new life through the manipulated release of the encapsulated. The breaking of the hull of the grain is the first step in the making of meal. Figure 2 shows the various “life stages” of a lower stone, from the symbolic birth to death and perhaps to the rebirth in new forms after deposition. The figure is an extension from figure 12 in Joan Schneider’s article in *Journal of Field Archaeology* concerning the production of milling implements at Antelope Hill in Arizona (1996, p. 307).

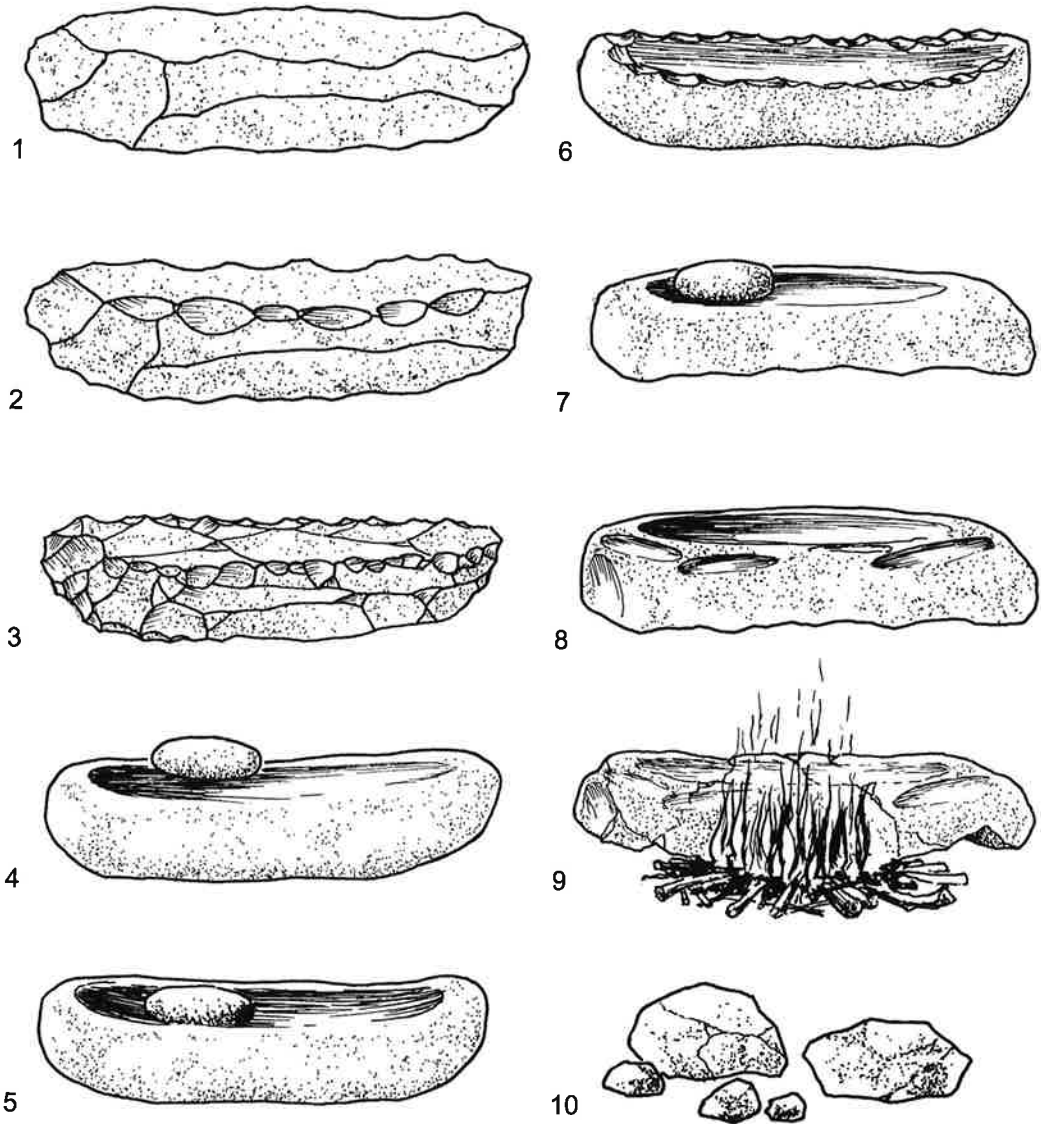


Fig. 2. An example of the various "life" stages of the lower stone in the grindstone unit – from symbolic birth to death and perhaps rebirth in new forms after deposition. The figure is an extension from figure 12 in Joan Schneider's article concerning the prehistoric production of milling implements at Antelope Hill, Arizona, in *Journal of Field Archaeology* (1996, p. 307). Illustration: Staffan Hyll.

1) Quarrying or collecting raw material and shaping prototype. 2) Further shaping. 3) The finishing pecking of form. 4) Grinding. 5) Grinding wears surface basin-shaped, smooth and unusable. 6) Planing and re-pecking grinding edges and surfaces. (5 and 6 repeated several times until surface is totally worn down). 7) Turning upside down, grinding on the opposite surface until this too is worn down. 8) New and various functions, e.g. abrading, cutting, pecking on smaller surfaces all around the stone. 9) Roasting on the former grinding surface. 10) Depositing fragments.

Body and stone/tool

The grinders are both stones and tools, and this is a vital key to the understanding of their role in prehistory. Attempts to “emancipate” grindstones have generally focused on their identity as tools and ignored their roles as stones. I am more inclined to think that this attitude reflects our modern view of what both tools and stones were in prehistory rather than any prehistoric reality. Grinders are both stones and tools, and it will be more useful for archaeologists to see them as a stone/tool dialectic embodying metaphorical expressions. In my opinion we must assume the possibility that stones were not necessarily socially subordinated tools in Bronze Age society. An important argument for this is that one of the characteristics of grindstones is that they are transformed in a similar way to the ground medium: both the ground medium and the grindstones are fragmented and worn down in the same process. The reciprocating stones grind in a literal sense as the grain also goes to pieces. The special properties of the stones correspond to grinding ability (Hersh 1982).

What has the human body to do with grindstones and grinding? It is of course obvious that grinding by hand is a very labour-intensive and highly physical action (Fendin 1994; Haaland 1999, p. 401) with various parts of the body involved. There are the knees for kneeling on the ground, sometimes instead the buttocks to sit on, the feet to balance with, the straight back to lean over the lower stone, the arms to push and the hands to grab the upper stone or to feed the stones with more grain. Even the human voice can be involved by singing grinding rhymes. The whole body actually participates in the striking, rocking or circling motions that are grinding.

The idea of body as central in all forms of social communication is the subject of an academic discussion in many social disciplines (e.g. Spicker 1970; Douglas 1970; Laqueur 1994). Both the human body and the bodily actions may be seen as medium for communication (Firth 1973, pp. 226–8). According to the sociologist Anthony

Giddens and others, the body is central in the creation of social identity; it represents a medium for unity and continuity in time and space (Giddens 1984, 1991).

Both the different parts of the human body and the bodily actions, when expressed metaphorically, may be seen as body symbols. There is also a rich area of research concerning the transference of body symbols to items associated with the body (Ellen 1977, pp. 357 f.). Grindstones as body metaphors are connected to the human body in general as a medium for interactions in systems of social reproduction (Hamilakis 1999, p. 41). There are, for instance, several similarities between the grindstones and the human body regarding sexual reproduction and the biological process of ageing. Some of them are mentioned here. One of them is that the two reciprocating grindstones can be seen as two reciprocating human bodies, male with female, or female with child. The relation between the two grinding stones – two opposites that make a unit – expresses in metaphorical words the dialectics of the bodies of the two sexes or the relation between different generations, as in the example above (e.g. Robbins 1993, p. 188; Lidström Holmberg 1998). Other examples of the similarities between grindstones and the human body are the ground grain and the grindstones. Without pointing out any special reference, I believe there are plenty of connections in Western historical tradition between ground grain as bread and the human body. One well-known example is the bread of the Holy Communion as the body of Christ.

But there could also be connections between the ageing of the human bodies and the subversive fragmentation processes that are essential in the grinding process. There are also similarities to the breaking of worn-out grindstones. Both the grindstones and the human body worn-out as a result of time and heavy grinding work.

In the next section I will give an example of how metaphorical aspects in some historical texts participate in the creation of values that can be relevant for interpretations of the grinding concept.

Fertility and repetition

I have chosen the examination of some historical concepts in some early Christian texts. Caroline Walker Bynum is a specialist in medieval religion and culture who has analysed texts and images from early Christianity (AD 200) to the Middle Ages (1336) with the emphasis on body history, resurrection in terms of burial, social hierarchy, gender, digestion, fertility and selfhood (Walker Bynum 1995, p. xviii). All these socially defined aspects are, as I see it, relevant for grinding as socially determined action in general. In her study she shows that aspects of identity through history are expressed in concepts such as fragmentation, time, body and transformation. The body concept can be seen as a concept of self, "in which physicality was integrally bound to sensation, emotion, reasoning, identity" (*ibid.*, p. 11). Walker Bynum states the ancient origins of the resurrection concept and shows that, despite great changes in the perceptions of soul and body, resurrection as material and structural continuity shows a remarkable persistence through history. The resurrection of the body is a universal phenomenon in history that is always connected to extraordinary power which is "necessary to create and recreate, to reward and punish, to bring life from death" (*ibid.*, pp. 22, 11, 2).

In the early Christian texts, human identity is seen as a union of soul and body. The resurrection of the body/soul is described as a state of alteration and as a result of decay; as assemblages of fragmented parts – together a metaphor of extraordinary fertility. According to Athenagoras (c. 200 AD) that "all reality is corporeal. Even soul is composed of very fine material particles ... to be changed is to exist in a different form" (*ibid.*, pp. 35, 36).

In these early Christian texts time is described as decay, expressed in the fragmentation concept as an organic metaphor, a gift of fertility. The writers use an old and long-lived metaphor for the resurrection of the body – the Pauline metaphor of the seed (I Cor. 15: 5). The image of the seed is an image of radical transformation: from death

to new life in a new body. From the years around AD 200 the fragmentation concept received a new meaning. Decay was now seen as a biological threat to the body/soul understood as absorption or digestion – still an expression of change but now a basic threat to identity. Resurrection as material continuity will now be the solution for identity by exchanging process for changelessness (Walker Bynum 1995 p. 27, 57). The image of decay as a threat lodged in the body is still used as a persistent mental legacy.

I am aware that the texts above should be seen in the light of a systematic Christian strategy towards religious unity in Europe. But I would emphasize that it is Walker Bynum, not I, who states the connections between the different metaphors and their ability to be long-lived. The grinding metaphors that I have mentioned seem to me to have more than one connection with the metaphors interpreted by Walker Bynum. When fragmentation as decay, for instance, can be seen as threat it is not far to suggest that this also has some validity for the fragmentation process of grinding. Of course, these expression of the Christian metaphors in the old texts could have been transformed as a reaction to earlier metaphors. I do not dispute that. One vital point with the interpretations of Walker Bynum is, as I see it, the ability of the metaphor to be displaced slightly and gain new meaning through history. This means that the fragmentation concept could bear meanings that today are fundamentally changed. My aim is to search for new approaches to grinding beyond the negative images of grinding attitudes and projections. This means that I have no intention to "glamorize" grinding; instead I want to investigate whether there could ever have been other values. I believe that one point of certain interest in the interpretations of Walker Bynum is that she shows the complexity and the richness of each metaphor and their possible changes over time. This has validity, especially in the light of grinding as social construction concerning the creation of identity now and in prehistoric societies.

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