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Saddle Querns and Gendered Dynamics of the Early Neolithic in Mid Central Sweden

Introduction

As this paper is included in the final publication of the Coast to Coast project, I would like to start by making a brief summary of my forthcoming thesis. A basic theme for the thesis is to confront a common idea of querns as uncomplicated objects that directly “speak” for themselves. In the thesis, I discuss and analyse querns as technological objects, and focus upon social quern practises and social structures within Mesolithic and Neolithic sites in mid central Sweden. Artefacts and site contexts, phytolith analysis, petrographical analysis of querns, use-wear analysis and ethnographic narratives are threads that hopefully cooperate and confront each other to make theories and things a dynamic inseparable pair (Wylie 2002).

I analyse a shift in quern technology that seems to coincide with shifts of Mesolithic ways of life into Neolithic existence in mid central Sweden (Lidström Holmberg 1998). The shift to saddle quern design seems to be accompanied by changes both in function and context, i.e. notions of how to use querns economically, socially and ritually. As the use and production of saddle querns seems to be innovative within an older quern-technology tradition, I use this relationship to discuss how old traditions relate to and/or transform into new ones. A vital question is how and why querns were used to negotiate these changes. Particularly interesting is how people confront and structure their existence. A study of social organisation cannot be done without an analysis of its elements, i.e. encounters and interactions between gendered groups of peoples, and how they create order in daily life (Goffman 1992). Embodied relationships, as a consequence of people meeting, living and doing particular activities together, are seen both as a force and as an outcome of socially structured life.

A vital question is what the shift into other saddle quern practises accomplished. Does it indicate a distinct break from Mesolithic traditions, or does a Mesolithic social world continue to operate within a changing world? The relationship between past and present is crucial for trying to understand change, differences and similarities in time (Hastrup 1987: 259). Overall important questions are: what do people think and do when they are part of a changing world, and how is change manifested in daily life? What happens if the traditional logic of things is challenged? Do people break with myth and traditions, or do they hold on to them or else reinvent them as “tradition”? Is the pattern of the archaeological material possible to interpret as a negotiation of an old social order as it confronts new logic of interactions? Alternatively, do in fact new practises mark and express the implementation of new traditions? These and similar questions are topics for the thesis and will not be further elaborated upon within this paper.

Aim

The aim of this paper is twofold. First, it discusses the practical making of quern design from the Late Mesolithic into the Early Neolithic in the central parts of Sweden. I challenge prevalent assumptions of querns as uncomplicated utilitarian objects formed through use alone. In particular, saddle-shaped querns are analysed as products of formal gestures or design, sometimes beyond what seems to be required by practical necessity.

Secondly, it addresses some social practises associated with querns, and how these practises may be used as an entrance to explore some vital aspects of internal social order in early Neolithic existence. It is argued that the symbolical practises of saddle querns mark and manifest embodied differences and relationships. The vital relationship between the utilitarian and the symbolical values of quern practises is also highlighted. By focusing upon quern tools as objects with multiple meanings, I discuss how early Neolithic peoples separated, negotiated and manifested notions of gender relations.

Negligence of querns

To think from things is something very specific for archaeology as a discipline (Wylie 2002). Artefacts recovered from past human lives have been sorted, classified, analysed, categorised and used in archaeological interpretations. From an early date, objects manufactured by flaking and chipping have been thought of as archaeologically valuable. Flaked objects are linked to ideas of technological practices that use raw material to produce certain kinds of things. Accordingly, prehistoric flaked objects have been possible to understand as potential commodities. A commodity may be described as a thing with values that extend beyond its use-value, i.e. by having cultural status or exchange value (Kopytoff 1986: 64).

In contrast, querns and other stone tools used for grinding plant foods are often neglected by archaeologists, even though querns, too, have been flaked (Curwen 1937; Zvelebil 1994; Lidström Holmberg 1998). Querns have been seen as less valuable to the archaeologist and have subsequently been less extensively analysed than flaked lithic artefacts, even in parts of the world that display vast amounts of quern tools (Fullagar 1998: 15). The negligence of querns is not a new one. In the 1930s, the British archaeologist Cecil Curwen was impressed by the need for better contextual information of common objects, such as querns. He argued that querns, just because they are common, seem to be less interesting to the archaeologist than other archaeological objects (Curwen 1937: 133).

Over sixty years later, a lack of interest in quern tool practises largely still remains. To explore the reasons for this, I investigated whether, when and how Mesolithic and Neolithic querns can be understood technically and socially. I soon discovered that archaeologists often judge simplicity in form as a negative archaeological value. Grinding tools are often seen as natural stones, instead of as meaningful cultural artefacts. The nature/object relationship is a burden for interpretation of quern tool practises. A web of unsupported assumptions, linking querns and grinding practises to nature, non-technology, non-progress, non-intentionality and non-male, have cooperated in making quern artefacts anonymous and naturalised. As a side effect, they are also often understood as unimportant and static (Lidström Holmberg 1998; Lidström Holmberg in press). One aim of my thesis is to challenge and change these assumptions.

When navigating among the existing “quern tool-making and using literature”, most of which originate from the American southwest, Australia, Africa and the Near East, it soon became evident that although querns are materially visible, they are seldom thought of as having been media of sociality. The history of technological development of watermills and mechanised querns was published early in pioneer works on quern tools and milling. These works focus upon the development of watermills and mechanised querns, linking them to technological and human evolutionary progress (Bennet and Elton 1898; Curwen 1937; Storck & Teague 1952). Although some social and ritual aspects of certain American milling tools were noted already in the late nineteenth century (Bennet & Elton 1898), it is evident that the analytical framework for analysis of quern tools has been remarkably static. Still today, analysis of quern practises is largely focused upon functional use related to subsistence and human socio-economic development (Kraybill 1977; Hersch 1981; Adams 1999: 476; Odell 2000). Some social aspects of quern practises have, after all, been discussed within archaeology during recent years, although mostly outside Scandinavia, e.g. social aspects of manufacture (Haaland 1995; Schneider 1996; De Beaune 2000), production and complex long-distance exchange routes (McBryde 1997), and querns as transformational metaphors linked to gender (Hodder 1990). In spite of the early archaeological interest in querns, the roles of querns as social objects embodied with multiple values, as well as metaphorical aspects of grinding activities remain (Lidström Holmberg 1998; Fendin 2000).

A major reason for neglecting querns as valuable to interpretations of social and cultural issues is, as I see it, a widely held notion that querns are common and not produced to become a certain tool. A quern is seen as any two stones brought together for grinding certain foods. They are usually seen as uncomplicated female household objects, i.e. they are associated closer to nature (Lidström Holmberg *in press*). This is the classic dichotomy nature: culture has long been used to categorise people, things and social practises within a simplistic either/or argument and within a cultural evolutionary framework. It can be argued that this dichotomy, in combination with simplicity in tool form, has affected our appreciation of querns in a negative way. It is a paradox then that querns, and the persons (read: natural

women) assumed using them have been understood as closer to nature than culture, even though querns were involved in grinding domesticated plants, thereby transforming nature into culture (Hodder 1990; Lidström Holmberg in press). A grinding tool shaped through use is not thought of as a potential commodity by us as archaeologists. It is not defined as a valuable item as it is not understood as having been shaped or produced through technology. By definition, we do not acknowledge it as something intentionally produced and used to become a certain material and cultural thing (Lidström Holmberg in press). Human intentionality is linked to accounts of human reasons and purposes (Giddens 1992: 364). As querns are understood as non-intentional in spite of use, the quern-user is also seen as less technologically and mentally involved with the object. This in turn has profound consequences for social interpretation as the majority of the quern actors are assumed to female, doing daily household duties.

The notion of quern grinding tasks as a female practise is based on ethnographical works without sufficient reason to assume this for prehistory in general (Hodder 1990; Mc Bryde 1997). The most problematic thing is, however, not the female-material attribution *per se*, but the simplistic assumption that the grinding of food between “natural stones” was something females did for functional reasons only. The social practises of querns are understood as repetitive, unskilled and “biological-natural” female labour. They are definitely not linked to cultural questions or cultural progress, although the presence of querns have been used as an archaeological indicator of progress and female production of querns is ethnographically described (Haaland 1995: 164f, 1997: 379f; Schlanger 1991: 481).

The anonymity, and naturalisation of querns, as a female implied object, may rhetorically be compared with the traditional scientific anonymity of hunter-gatherers (Sassaman 2000: 148). Querns as well as hunter-gatherers have been prone to negative historical narratives linked to the constructed classic dichotomy of nature-culture. Both have been perceived as closer to nature than culture, i.e. querns are used objects but not made products in a western capitalist sense, just as hunter-gatherers are consumers of nature but not food “producers”. Actors using querns and foragers using the environment have been thought of in a natural rather than cultural relationship (Ingold

1993a: 437). The object, as well as its users, is thus given a passive role in relation to the making of technological and creative cultural worlds (Lidström Holmberg in press).

Quern design attributes

Quern tools for grinding plant foods and pigments have been recorded from Palaeolithic sites onwards. Already during the Magdalenian period in France, technological and social specialisation in grinding pigments is expressed by small, manufactured mortars and pestles (De Beaune 2000: 118ff). Consequently, a specialised technology of grinding is well documented in sites preceding the Early Neolithic. No straightforward connection can thus be made between specialised quern tool design and social evolutionary progress.

Before arguing for some specific Mesolithic and Neolithic quern design features, I will just briefly discuss some concepts used. The word “quern slab” refers to the lower stone in a pair of tools used for grinding. The “quern handstone” is the upper part in a pair of grinding tools. The word quern or “quern set” is used when discussing both parts as a functional unit. With the use of “design”, I wish to highlight that both traits of production and use are important aspects by which I classify variability in quern tool shape. As language often reflects the way we think of and around things, I have argued for a re-naming of grinding stones, a word commonly used in Swedish archaeology, to querns or quern tools (Lidström Holmberg in press). By using the word quern throughout this article, I wish to strengthen the idea of querns as social and cultural artefacts, thereby making it easier for us to set multiple questions in motion (see Ingold 1993a: 440). As quern tool design explicitly consists of both making-tool-technology and using-tool-technology, I aim to reinforce the dual importance of using and making practises in the shaping of social relations within a social world. Quern tool technology, both the making and tradition of using querns, serves as an embodied materiality through which people reproduce notions of their social world. For the same reason, embodied quern traditions also serve as a point of departure in the negotiation of new relations and new meanings (Edmonds 1990: 56).

As quern tools are often seen as morphologically homogenous, it

is important to draw attention to some specific attributes or materialised gestures by which to identify their variability (Mauss 1979: 97f). To help recognise and observe grinding tools as artefacts, I focus on some common use-and production features visible to the trained observer (Lidström Holmberg 1993: 40ff).

The following major technological design features are used to classify quern artefacts:

1. Preform morphology
2. Lithic reduction as a form of shaping (knapping, pecking, abrading, polishing, grip features of handstone)
3. Tools used in shaping
4. Use-wear characteristics (cross-section, gloss, striations, ruggedness, possible residues of ground materials)
5. Maintenance or reworking (by knapping, pecking and polishing)
6. Intensity of use (use-wear related to thickness of quern parts, more than one grinding surface)
7. Evidence of re-use and/or multiple use
8. Estimation of stages of life cycle. This category involves all the above listed traits.

The study of cross-sections is a crucial point for classification of quern tools. Firstly, because it may distinguish querns used for plant food grinding from tools used for polishing of e.g. axes. Secondly, because cross-sections connect the upper and lower part of the quern set. The use-wear on the surface of the handstone always reflects the use-wear of the grinding quern surface (Lidström Holmberg 1993, 1998; Adams 1999). A concave cross-section of a quern-slab is maintained by a short pebble quern handstone. These quern tools also display both grinding and pounding use-wear. On the other hand, a flat or slightly convex cross-section is maintained by an elongated or loaf-shaped handstone (Lidström Holmberg 1998). Use-wear studies conducted through experimental work show that pebble handstones could not create use-wear patterns characteristic of convex saddle-shaped grinding slabs. In addition, it seems that saddle quern handstones have not been used for pounding and that they have probably been manufactured for grinding use on one particular slab only. The experiments further suggest that the saddle quern design is ef-



Fig. 1. An oval, slightly bowl-shaped quern slab found at Lund, a Late Mesolithic site north of Örebro. (After Holm 2001: 12. Photo Jenny Holm)

fective for grinding dry or slightly roasted cereal grains (Lidström Holmberg 1993). Thus, material ground on a saddle quern can be thought of as different from that processed on concave, or bowl-formed quern types.

Mesolithic quern slabs

The existence of plant food quern tools in Mesolithic contexts in Europe and Scandinavia has previously been argued for (Welinder 1977, Mikkelsen 1984, Zvelebil, 1994, Lidström Holmberg 1998). These querns generally consist of concave quern slabs with short, rounded handstones displaying both pounding and grinding use-wear. Zvelebil strongly argues that Mesolithic plant use has been neglected among archaeologists, and that plant quern tools are in fact common at Mesolithic sites in Europe (Zvelebil 1994). During the Late Mesolithic in central Sweden, two major categories of quern sets can be identified: 1) Concave, bowl-formed quern slabs shaped by flaking and used with pebble handstones and 2) Cobble quern slabs without flaking used with small handstone pebbles.



Fig. 2. A pebble grinding tool from the Mesolithic site Myskdalen, Östergötland. The tool (F58) has been analysed for remains of siliceous microfossils. Original size 10x15 cm. (After Risberg *et al.* 2002. Photo Eva Olsson)

The concave, bowl-formed category of quern slabs are generally rounded in plan and have concave use-wear features. The sides of a bowl-shaped slab sometimes have a preform stage formed by flaking (Welinder 1977: 27). An example of this quern design has been identified at Lund, a Late Mesolithic site north of Örebro (fig. 1). The site has been dated to 4230-4000 cal. BC 1-sigma by one ^{14}C -analysis (Ua-25950) (Holm 2001b).

The second category of Mesolithic quern slabs, based on use-wear morphology, is natural cobblestones without any preform stage. Cobble stones used as quern slabs may be about 10 cm wide and 15 cm long, similar to the ones identified at the Mesolithic site Myskdalen in the province of Östergötland (fig. 2). The site is dated to 4800-4300 cal. BC 2-sigma (Ua7594-Ua7600) (Risberg *et al.* 2002: 13). By means of quern size and use-wear, combined with the use-wear residues recovered, it can be argued that these quern tools may have had a multiple use e.g. for grinding minerals or shells from shellfish (Risberg *et al.* 2002: 20). Another explanation may be a grinding practise linked to the preparation of edible algae (Persson 1999: 63).

A third category of Late Mesolithic quern slabs has been argued



Fig. 3. Two quern-parts that make up a characteristic Early Neolithic saddle quern tool-set. The loaf-shaped quern handstone in front is here separated from its “mother”, the saddle-shaped quern slab. Originally the quern slab was found in situ with the handstone lying on top. Note the nicely pecked hand stone sides and beak-shaped ends. Original quern handstone length 35 cm and saddle quern slab length 56 cm. Top: a replicated copy showing the quern parts united. Photo Ulf Bruxe.

for by Mikkelsen in relation to Norwegian contexts (Mikkelsen 1984: 93f). Flat and thin pieces of hard sandstone or quartzite were found at the Late Mesolithic site Frebergsvik in Vestfold, Norway (fig. 3). The slabs display a very smooth and slightly curved wear. The suggested handstones that go with these slabs are rounded pebbles. Due to a contextual correlation between the polished slabs, pebble handstones and stone axes, Mikkelsen argues for a multiple function where the slabs were used both for polishing axes, and for grinding wild seeds or ochre for paint (Mikkelsen 1984: 93).

Mesolithic pebble handstones

When wanting a handstone for food grinding, Mesolithic peoples searched for a small rounded pebble stone with a comfortable grip, of suitable raw material, size and weight; at least this seem to be their

selective principles following my criteria. However carefully and culturally chosen, the Mesolithic handstone is not an item modified on purpose. They are not preshaped by any of the lithic reduction techniques, such as knapping or pecking. The grip is not made more comfortable, and no other investment into tool design has been made.

Small, hand sized quern handstones have been found in abundance in mid central Sweden, at least from Middle Mesolithic to Early Neolithic contexts (Welinder 1977: 27f, Mikkelsen 1984: 94f, Hallgren *et al.* 1997; Hernek in prep. 2002; Apel *et al.* 1997; Artursson in press). Pebble handstones generally display one or two used surfaces with flat or slightly convex use-wear marks of grinding and rubbing. Not a few handstones also display crush-marks, which imply a multi-functional use of these tools. It may well be that a person had their own “favourite” handstone that was used in multiple tasks, thereby producing a tool with multi-functional use-wear. Pebble handstones with very smooth and shiny use-wear trace may also be indicative of hide-processing tasks, as suggested by use-wear analyses conducted by Adams (1988).

To sum up, it is concluded that Mesolithic querns include round or oval handstone pebbles, used with circular, reciprocal and pounding body motions. The practise can be defined as multi-functional, and it creates a more or less concave quern slab use-wear feature, often with both grinding and pounding use-wear marks. The pebble handstone is defined as a tool formed through use rather than by intentional production. No particular investments in modifying pebble handstones before use have been thought necessary.

Pebble handstones as markers of continuity

When studying pebble handstones with use-wear, it seems that pebble-grinding technology stretches from the Mesolithic into the Neolithic. Nothing indicative of technological change, e.g. contextually, regionally, investment in size, modification or increase in numbers, is easily observed by analysing the materiality of pebble artefacts. Investments into more specialised and diverse artefact types are otherwise represented at Late Mesolithic Ertebølle sites, dated to c. 5400-3900 cal. BC (Price 2000: 267). Subsequently, it is interesting to note that Late Mesolithic technological investments seem

to include a physical constant of material pebble handstone design into the Neolithic. This does not, however, exclude change in meaning and value of these objects within a social context.

It has been suggested that pebble handstones and plant food grinding practises may be seen as a “pre-adaptation”, or progress into a Neolithic farming practise (Mikkelsen 1984: 94). The suggestion is problematic as it refers to a straight-line evolutionary progress. As both pebble handstones and mortars were in use already in Palaeolithic times, although perhaps for different functions, it could be suggested that this “prerequisite” for farming is a Palaeolithic device (De Beaune 2001). Therefore, instead of seeing pebble handstones as objects indicative of change, I would like to see these objects as indicators of some sort of continuity in a changing material world. They are objects of the past in the Neolithic present.

Saddle querns as markers of change

The entrance into the Neolithic period in mid central Sweden is observed as a change in materiality and presumably also of social life. The socio-material changes include both a change and investment in quern design as well as new ways of materially embodying intrasite space. A saddle-shaped quern slab and an elongated, loaf-shaped quern handstone make up this characteristic quern tool-set (fig. 3). Tools of this particular design are now known from several, but not all, Early Neolithic Funnel Beaker sites in mid central Sweden. During the Early Neolithic, most of the sites studied were located near, but not directly at the shore of the Litorina Sea (now the Baltic Sea).

Grinding cereals does not necessarily require a technological change from pebble handstones and bowl-formed quern slabs to saddle quern sets. However, intensification of plant grinding, and/or procuring new foods, often results in investments in new tool design and/or increase in tool numbers (Adams 1999: 476). Reasons why investments in quern design were seen as interesting is not the major topic for this article. However, economical, functional, ideological and symbolical reasons seem to be inseparable. The saddle quern design shows a uniform way of manufacturing and modifying. In contrast to the Mesolithic quern, both parts of the saddle quern have been flaked and pecked into a desired shape.

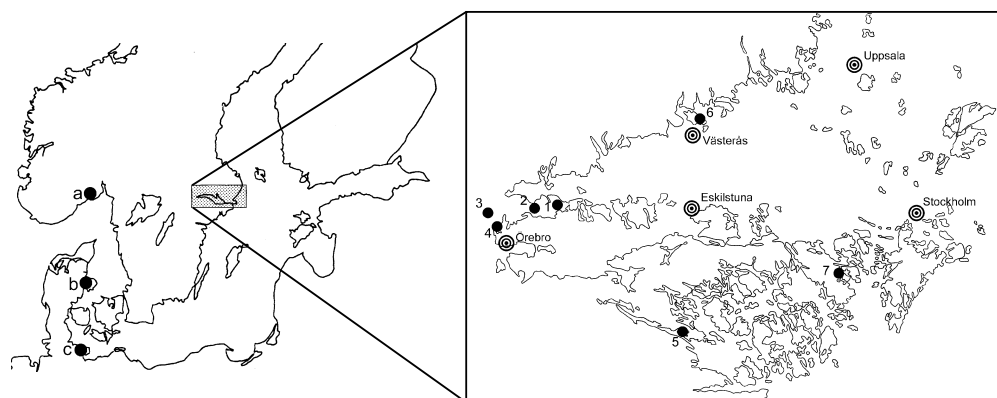


Fig. 4. Maps marking the area of the study, and the location of the mentioned sites in relation to the Early Neolithic coastline. a) Frebergsvik; b) Barkaer; c) Wangels. 1) Skogsmossen; 2) Skumparberget; 3) Hjulberga; 4) Lund; 5) Östra Vrå; 6) Fågelbacken; 7) Pärälängsberget. Drawing by Alicja Grenberger after digital map by Leif Andersson, Geological Survey of Sweden.

The making of Early Neolithic saddle querns in mid central Sweden

There might not be a technical virtuosity involved in the making of these non-rotating querns, but they have indeed been carefully produced (Lidström Holmberg in Press). In the following paragraphs, I will discuss the character of Early Neolithic saddle quern stone working in mid central Sweden.

Little is known about Stone Age quarrying and production of quern tools in Scandinavia. Debris from quern tool production has so far not been recognised at Early Neolithic sites in Sweden, with one exception. This may be due to a combination of factors such as amorphous flakes of e.g. sandstone that may be difficult to see with an untrained eye. In addition, it is difficult to find flakes from quern manufacturing if we think of querns as “non-flaked” tools. Consequently, the practical making of saddle querns in this article is based on quern preforms and flake scars visible on quern artefacts. A schematic production sequence has been outlined, in comparison with information based on ethnographical descriptions of quern-manufacturing practises.

However, the use of saddle querns and other quern tools, as well as questions of manufacturing have been analysed in relation to Neolithic early farming societies in Turkey, Greece and the Near East

(Kraybill 1977; Hersch 1981; Wright 1991). These studies may be used to discuss querns in relation to early farming and change. Steps in quern production, especially of querns made from sandstone, have also been described in cooperation with indigenous groups in North and South America (Schneider 1996; Adams 1999), Australia (Cane 1989, McBryde 1997, Mulvaney 1998), and Africa (Haaland 1995, 1997). These modern analogies may be used to create a wider platform, or alternative experience for interpretation, in particular for the relationship between gendered peoples and their various ways of making, using and embodying querns. I would like to stress a use of analogies that search for variation and complexity in human embodied material practise (Wylie 1985).

Saddle quern slabs

The label “saddle-shaped quern slab” refers to the form of its upper surface, which resembles a saddle. The sides of the saddle-shaped slab are often carefully pecked into shape. The back of the slab, i.e. the side resting on the ground, is sometimes pecked into a rounded form, but generally left without further modification. The slab is twice as long as it is wide. The convex cross-section increases through the friction of use, but may also be rejuvenated by pecking into a more flat surface when needed. The convex cross-section distinguishes saddle-shaped slabs from so-called bowl-formed grinding slabs (Lidström Holmberg 1998). A well-used example of saddle quern design was found in an upright position within a hearth pit at Pärilångsberget in the province of Södermanland (fig. 3). The site was situated close to the seashore of the Late Mesolithic-Early Neolithic, in the centuries around 4000 cal. BC (Hallgren *et al.* 1995).

The production of saddle quern slabs starts with the technician finding a suitable boulder or a quarried block of stone with a flat top (fig. 5). The next step is to take two or three large flakes from each end of the slab to form a pointed, elliptical shape.

The reason for this is probably to make it easier and more comfortable for the quern user to place the slab between the knees. The subsequent step is to shape a flat surface and straight sides by flaking and chipping. So far, it seems that the flaking may involve direct techniques with a hard hammerstone. However, no implement have

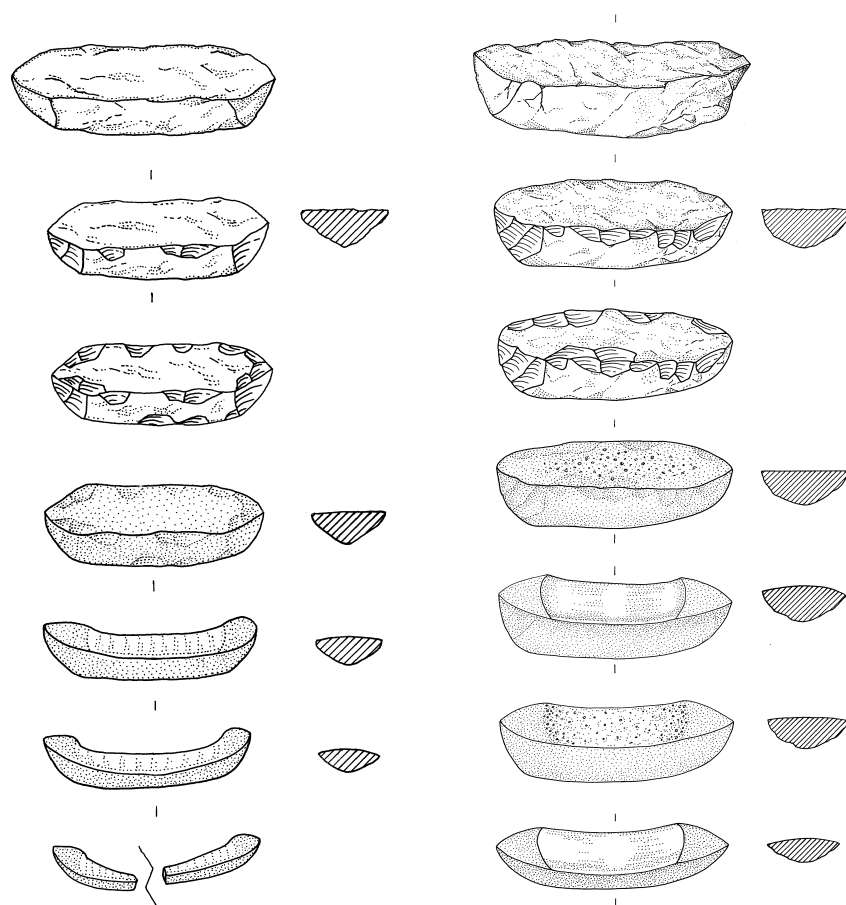


Fig. 5. Schematic production sequences and life-stages of saddle quern slabs (left), and loaf-shaped quern handstones (right). The first preform stage include shaping by flaking (top), followed by pecking and re-pecking of worn out grinding surfaces. Note that both quern parts evolve convex cross-sections through use-friction. Drawing by Alicja Grenberger.

hitherto been identified as having been used in modifying querns. The final procedure of initial modification is often to peck the sides into a smooth shape, reducing some flake scars. Following this schematic routine of production, the debris left from the final slab production might hypothetically consist of 4-6 large flakes from the end of the slab, together with coarse, amorphous medium sized flakes and small chipping flakes from all sides around the slab. If these flakes are found through excavations, they may be good indicators of on-site quern slab production.

Most Early Neolithic saddle quern slabs have more or less pointed ends. However, a different trapezoidal quern design manufactured by the same techniques has been noted in two examples, one from the province of Närke (Holm 2001a), and another from Ångermanland (Runesson 2003). These quern slabs share saddle quern slab characteristics, i.e. a slightly convex cross-section, flat use-wear along the sides and a rugged centre of the grinding surface. The trapezoidal quern seem to be produced in a similar way to saddle querns, but the trapezoidal shape of the ends differs from other Early Neolithic saddle quern slabs that I have analysed. A highly preliminary idea is that these trapezoidal querns may belong more to the Middle Neolithic than the Early Neolithic social world.

Loaf shaped handstones

The design of Early Neolithic loaf-shaped handstones is uniform and shares some characteristic traits. A certain quern “look” and comfort seem to have been sought by quern makers and users. As the name suggests, the loaf-shaped quern handstones resemble “poorly leavened loaves of bread” (Florin & Schell 1950: 13). Primarily, a loaf-shaped handstone is worn on one side only. The use-wear traits indicate a back and forth grinding motion without shifting position of the handstone. It primarily implies a singular use rather than a multifunctional use-practise. Loaf-shaped handstones never display any use-wear on their ends. The convex and carefully pecked back of the handstone is not altered by friction. In addition, it often displays micro-morphological phenomena such as gloss possibly emanating from the hands of the prehistoric user (Bauche 1986: 55). The handstone is normally longer than the saddle-shaped slab is wide. In time, the ends of the handstone become more curved and “beak-shaped” through friction (Adams 1988: 310ff; Lidström Holmberg 1993: 41). The preforms are remarkably similar to one-ridged preforms for porphyrite axes with triangular cross-sections, suggesting that these two different approaches to modification, and possibly the technicians, may be intertwined.

The favoured preform shape for the making of quern handstones are natural pieces with plano-convex or triangular cross-sections (fig. 5). The reduction sequence includes the removal of 2-6 flakes from

each end of the preform to attain the desired loaf-shape. The flaking and pecking all around the sides further shape the preform. The flake scars of the upper part of the handstone preform are often reduced by pecking and smoothing into a shape more comfortable to grip. This was probably done by a small finishing implement, such as a hammerstone displaying use-wear of both smoothing and pecking (e.g. Hayden & Nelson 1981: 892).

The comfort of Neolithic loaf-shaped quern handstones has been recognised by Liversage, who acknowledges them as conveniently chipped for gripping (Liversage 1981: 144). The removal of edge flakes to create a comfortable grip can be interpreted as a technical investment into quern handstone design in the Early Neolithic. So far, this specific manufacture of handstones has not been found in the Mesolithic quern material. A dexterous investment to make a handstone comfortable to grip and use is useful for interpreting and measuring grinding intensity, as also suggested by Adams (Adams 1999: 484). The investment of a tool handgrip is also interesting in terms of embodiment, as improvement of use-attributes can be related to the bodily gestures of the user and the way the quern tool was brought into action.

The stone-sliding-against-stone contact between the quern handstone and the quern slab produces, in time, a typical smooth grinding surface. However, a very smooth surface is not suitable for effective cereal grinding. To increase grinding capacity, the surface must be roughened by means of re-pecking the surface with a hammerstone. A rough surface for effective grinding has been preferred by Neolithic quern users (Lidström Holmberg 1993). This may imply that saddle querns as objects primarily were intended to function for cereal grinding and that this required certain surface attributes, which does not exclude that other materials may have been processed.

Different stages of re-pecked quern slab surfaces have been observed in the Early Neolithic material (Lidström Holmberg 1993, Liversage 1981: 144). The re-pecking practices of grinding surfaces have been ethnographically described. In the 1970s, the American archaeologist Lilian Hersch interviewed elderly Turkish women about grinding and quern maintenance (Hersch 1981: 428). The result of the study showed that the women remembered roughening their quern slabs with a hammerstone approximately once a year. The quern slabs

continued to be used until worn through, which reportedly could take anything from two to ten years, with six years being most common. The grinding intensity reported mentioned two women using two different saddle querns approximately five to six hours per day for three days. The grinding work resulted in one sack of flour that lasted one family one month (Hersch 1981: 429).

This surface improvement by pecking is not as evident in the scarce Mesolithic material from mid central Sweden. It is possible that grinding tools used for plant food, other than cereals, do not require the creation of particular surface modification. The difference in surface attributes between Mesolithic and Neolithic querns may mean two different processing practises that result in two separate artefact categories (see Mulvaney 1998: 88).

Raw materials for saddle quern production

Flakes from quern manufacture have not been identified at central Swedish sites, with one possible exception at the Skogsmossen site (fig. 4). The absence of flakes related to quern production is probably not only connected to problems of recognition, but also to the possibility of production off-site (see Haaland 1995). In addition, the raw material used for making saddle querns is often porous and thereby easily loses visible flake-characteristics due to post-depositional factors.

The Early Neolithic producers of saddle querns in mid central Sweden selected specific raw materials for their production. Favoured raw materials for the making of saddle quern slabs seem to have been muscovite rich meta-volcanic rocks, arcose sandstones and granites. Other raw materials such as amphibolites have been identified, but are not as representative. Raw materials chosen for hand quern production may be grouped into two major categories: muscovite rich meta-volcanic rock and coarse arcose sandstones. The porous raw material for quern making is contrasted against harder raw materials such as the quartzite and quartzitic sandstones used for making polishing tools.

The use of rocks with a high amount of shiny muscovite has historical and prehistorical parallels. Micaceous schist with enclosed harder mineral crystals has long been used for its good grinding quali-

ties. In western Norway, micaceous schists from quarries at Hyllestad have been used for extensive quern production. The raw material was hammered out directly from the outcrop by the use of chisels. Micaceous schist from these quarries was widely distributed in Scandinavia and Europe during later prehistoric periods, from the migration period (*c.* 550 AD) through to modern times (Baug 2002). The use of muscovite rich raw material with its shimmering brilliance may have been selected both for its functional and symbolical qualities.

At the time of writing, saddle quern parts from six Funnel Beaker sites, from the provinces of Närke and Västmanland in mid central Sweden are being examined through petrographical analysis. Debris from possible quern production is also included in the analysis. The aim of this project is to obtain a wider knowledge of the production and consumption of saddle querns. Is it possible to locate the sources for the extraction of raw material? Did people who lived close to each other use similar or the same raw materials? Were querns consumed locally, and were they to some extent locally or regionally exchanged?

Saddle querns outside mid central Sweden

Interestingly, saddle querns of the design described above have so far not been clearly identified at sites located along the Swedish West Coast or around the lake Vänern (Persson, personal communication). The contrast to the amount of Early Neolithic saddle querns in mid central Sweden is striking. The main question is what this lack of saddle querns represents. Is it a regional variation in plant food processing or subsistence strategies? Is it a different way of using querns socially, or is it a problem of recognising the actual artefacts? Well-used loaf-shaped quern handstones are not always easily observed and identified unless knowing what traits to look for (fig. 6).

Contrary to Zvelebil's suggestion (1994), a common idea held by archaeologists working in Denmark and Europe seems to be an understanding of querns as innovative for Early Neolithic farmers. However, it is not always clear whether statements about querns include querns in general and/or saddle quern design in particular. In Denmark, Liversage (1981) discusses statements of saddle querns and axe polishers as representing new artifact categories. He states that querns appear at the beginning of the Neolithic period, and have no

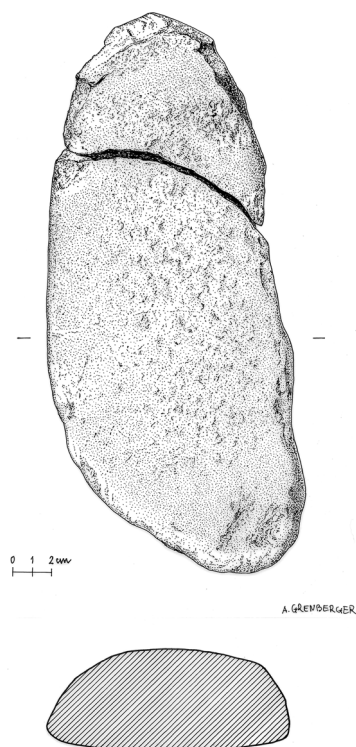


Fig. 6. A small Early Neolithic saddle-shaped quern slab. Note the characteristic slightly convex cross-section. Drawing by Alicja Grenberger.

antecedents in northwest Zealand during the Mesolithic Ertebølle culture (Liversage 1981: 142). In addition, he suggests that querns may give some “clues as to the source of the Neolithisation of the region”. Gronenborn (1999: 141) specifies that tools for processing domesticated plants, sickle blades and saddle querns have not been found in Mesolithic contexts in southern central Europe. Bogucki (2000: 202) states that ground-stone implements, such as querns, appear in central Europe for the first time in connection with the earliest farmers. In addition, Bogucki also argues that raw material selection was a central part of grind stone tool production among early European farmers (Bogucki 2000: 202).

In Schleswig-Holstein, the site of Wangels has produced absolute datings, assigning it to the final part of Ertebølle, *c.* 4100 cal. BC and to the beginning of Funnel Beaker Culture, ending *c.* 3900-3800 cal. BC (Hartz *et al.* 2002: 325, fig. 21.1). Here, a few bowl-shaped quern slabs of coarse granite were identified in the soil of the shoreline. Cereal grains, one identified as Emmer wheat (*Triticum dicoccum*), were

found from a Funnel Beaker pottery sherd at the same site. The authors interpret the querns as evidence of domesticated crop processing (Hartz *et al.* 2002: 328). Following my argument, it may be suggested that a use of bowl-shaped querns might imply a processing of cereals using an already existing Mesolithic quern technology.

Interconnecting axes and quern handstones

As mentioned earlier, certain shape-attributes of loaf-shaped handstones seem to interconnect the making of some particular axes with triangular features. At the Funnel Beaker site Skumparberget 2 in the province of Närke, preforms of axes and chisels of porphyrite and greenstone were found. The preforms have been divided into two types dependent on morphological and technological attributes: 1) preforms with two ridges and 2) preforms with one ridge. The two-ridged type has a four-sided cross-section, intended for making thin-butted axes. The one-ridged form is suggested for making triangular adzes with Lihult features (Apel *et al.* 1997: 28ff). The so-called Lihult core axe tradition is usually associated with Mesolithic peoples living on the Swedish West Coast. One major characteristic of these axes is their triangular cross-sections (Nordqvist & Lindgren 1997: 57ff). These one-ridged preforms display morphological similarities to the quern handstones, e.g. the one-ridged triangular shape and to a certain extent the coarse flaking technique.

A possible relationship between the making of loaf-shaped quern handstones and triangular adzes/axes with Lihult features is intriguing. This technological relationship will be further examined in the thesis, discussing possible gendered technicians, gendered relationships and technological traditions in action.

The dagger-axe-quern from Barkaer

The visible similarity in flaking techniques and cross-section between certain axes and loaf-shaped handstones may be exemplified by a particular “dagger-axe” found at Barkaer in Denmark. The Early Neolithic site Barkaer, located northeast of Aarhus in Jutland has been reinterpreted from a settlement with long houses, to a settlement overlain by long barrows with wooden tombs. The site is dated to the



Fig. 7. An artefact re-interpreted as a loaf-shaped quern handstone produced by initial flaking, from the Early Neolithic site of Barkaer, Jylland, Denmark. The artefact was found *in situ* together with a Funnel Beaker pot and sherds of a collared flask. Original length 33 cm. (After Glob 1949: 15)

Early Neolithic (Glob 1949, Liversage 1992). During the excavations of Barkaer, carried out by Glob during the 1930s and 1940s, he noticed that axes with a triangular cross-section were the dominant axe type found at the site. Glob calls these objects “dagger-axes”, and describes them as flint blades, about twenty-two to twenty-six cm in length, hafted like axes (Glob 1949: 12).

Based on the curved form and the technique, he interprets a similar but different artefact as being a “votive dagger axe” (fig. 7). The “votive dagger axe” is described as a thirty-three cm long dagger axe, produced from one half of a quern handstone (Glob 1949: 12, 15: fig.10). The “votive dagger axe” was found *in situ* together with an Early Neolithic Funnel Beaker and sherds of a collared flask. The objects were deposited on the floor of one of the long “houses” situated in the south area of the site (Glob 1949: 13).

Although this object differs from the other dagger axes, Glob acknowledges it as a produced item. It is manufactured by rudimentary knapping technique that gives a curved and slightly asymmetrical design characteristic of “real” dagger axes. A combination of factors such as artefact size, the curved form, triangular cross-section, and coarse flaking technique suggests that this “votive dagger axe” most probably is a manufactured quern handstone, and not a quern stone made into a dagger axe. The length of the “dagger-quern”, thirty-three

cm, has its analogies among many loaf-shaped quern handstones found at Swedish Funnel Beaker sites. In addition, the ritual context “speaks” of querns as something beyond the utilitarian. The last part of this article will discuss some aspects of different symbolical and ideologically embodied practises associated with saddle quern parts.

Gender and embodiment

The historical importance of the body and its relation to sex, gender and cosmology cannot be denied. The body can be said to be one central arena for the creation of social identity and for engaging with the world (Laqueur 1990). However, this by no means implies that the body, gender or sex are fixed categories or anything that can be found anywhere (Gilchrist 1999). Gender is not a thing, it is about relationships created through and by people who meet or live together within varied social settings. People constantly negotiate and redefine categories such as child, adult, man, woman and female, male. These categories are consequently not static or given in nature. Instead, they are all unstable, as they are not expressed, manifested or activated in the same way in time or in space. The body, sex and gender are culturally constituted (Engelstad 2001: 267ff). A gender relation is a cultural story where people live lives with different bodily experiences, cosmological histories and myths, traditions and norms (Gilchrist 1999: 146ff). The same person may experience a varied set of cultural expectations and obligations throughout the course of life. Similar to material symbols, each person may experience multiple genders throughout life (Moore 1994: 40). The way society looks upon body identities also varies through ageing.

Being a person has two important sides, embodied experiences and socialisation. Using the concept of gender as an analytical tool and as a real dynamic, it might be said that gender is constructed both in terms of socialisation and upon bodily experiences, feelings and self-interests when it comes to becoming an embodied person (Moore 1994: 38). Gender is acquired, projected from others and bodily experienced as the body you live (Lidström Holmberg in press). It is performed through things and repetitive actions, and shaped and/or controlled through socialisation (Lidström Holmberg in press). Altogether, this is what makes gender relations a dynamic cultural situa-

tion that must be investigated and not assumed. It is within this theoretical framework I will try to explore some embodied and gendered quern practises of Early Neolithic peoples. These peoples made, modified and used saddle querns and, at the same time, they probably also made something of themselves in the process.

Saddle querns as embodiment of gender

Over forty loaf-shaped quern handstones and saddle quern slabs were found during the excavation of the Funnel Beaker site Skogsmossen (Hallgren 1997: 90f). The site was partly excavated in 1995 and 1997, and included the remains of a house surrounded by activity areas with Funnel Beaker material debris. A small fen located some twenty-five metres east of the house has been used for deposition of things interpreted as votive offerings (Hallgren 1997: 72f). The fen revealed large amounts of Early Neolithic finds, e.g. Funnel Beaker ceramics, saddle quern slabs and fully functional quern handstones, polishing tools and thin butted axes, some of which had been objects of deliberate destruction (Hallgren 1997: 63ff). A statistical analysis of eighteen ¹⁴C-samples from organic remains on Funnel Beaker sherds suggest that the settlement was occupied and re-occupied during 400 years of the Early Neolithic, 3850-3300 cal. BC (Hallgren 2000: 180). The materiality, as well as the archaeological socio-spatial patterning of things within the living space, displays a striking continuity through this timespan.

Within the Skogsmossen site, it is possible to visualise a rather distinct structuring linked to a spatial separation of saddle quern slabs from quern handstones on one hand, and saddle querns from axes on the other. The area close by the house displays a different material patterning compared with the area by the hearths. The axes of flint and greenstone are found close by the house, while all quern slabs are found c. 15 metres north of the house (Hallgren 2000: 176). Another contrast is the separation of quern handstones from quern slabs (fig. 8). Loaf-shaped quern handstones are found in a straight east-west orientation across the southern part of the fen. The quern slabs are deposited in a north-south direction within the same fen. The distinction between east-west and north-south is somewhat cosmologically mirrored within the living area where all quern slabs are found

north of the house, and axes/axe production close by the house. Three stone-packings with raised posts further seem to enhance a separation between the house area and the hearth area (Hallgren 2000: 177). A most interesting patterning of social space is expressed by the distribution of quern handstones that seems to blur, or transcend the “border” of the otherwise rather distinct spatial separation.

At Skumparberget, a similar internal order or separation of querns from axes can be exemplified (Sundström & Apel 1998; Hallgren 2000: 182). The site is dated to around 3500 BC, and was situated c. 2 km away from the coast during the Early Neolithic. Here, a house seems to “divide” the living area into a western and an eastern part. Saddle querns, pebble handstones and ceramics are found by the hearths west of the house. Areas of lithic production and sherds from collared flasks are found to the east and southeast, but not immediately by the house (Sundström & Apel 1998: 158f). The contrast of artefact categories is similar to Skogsmossen. In one aspect, there is a major difference, and that is the two artefact categories in relation to the house. At Skogsmossen, the house is more closely related to the one kind of material than the other. At Skumparberget, the house can be seen as more of a “centre” for both categories of materials.

Which possible frameworks can relate to the internal order of quern practises at Skumparberget and Skogsmossen? To express order through the practises of things can be seen as a human wish to confront, bring order and negotiate within that created order of life, whether conscious or not. This implies that we are not that different from Early Neolithic peoples according to this aspect. We all use things to manifest and create order in our worlds, but it differs how we do it. In the Early Neolithic period, some aspects of the ordered life seem to express themselves through quern practises used as symbolic contrasts.

Cooperation and separation, unity and division

The material contrast between different things at the Early Neolithic sites mentioned can be seen both as a social negotiation of gender roles, and as an ideal reproduction of ideal gender roles within the Funnel Beaker society. The negotiation embodies separate gendered practises at the living site, but hold on to cooperative, collective and

perhaps cosmological gender ideals. The separation of material remains is visible through the spatial contrasts of quern slabs and axe production, each located in separated areas within both sites.

At Skogsmossen, these gender dynamics may be materially manifested by the spatial separation of the two parts of the saddle quern. This distinct separation of axes from querns is not seen when studying the spread of quern handstones. The quern handstones transcend the imagined line of contrast, as they are found both close to the house and around the hearths. This can be understood as a material negotiation of gender practises at the site. It implies that although the material spatial separation of things conveniently can be interpreted as either female or male gendered working areas, the handstones manifest that this assumed division is not static but rather negotiated.

Another possible material symbolical manifestation of this daily gender negotiation may be the mixed deposits of axes and quern handstones found within the three large stone packings with raised poles that seem to divide the living area (Hallgren 2000: 177). Following my argumentation, these mixed depositions within the dug post-holes may materially manifest a collaborative, cosmological ideal of gender roles within this society. A possible matrilinear organisation for groups settling and re-settling at Skogsmossen has been well argued for by Hallgren, who suggests that material spatial distinctions may be an outcome of this kinship structure and its desire to define or differentiate female and male space (Hallgren 2000: 184ff). My argumentation does not contradict this idea, but it reinforces that this hypothetical ideal of gender separation may be a normative ideal not fulfilled by people in their daily life. The division of gender practises in egalitarian societies may be organised in ways that not only separate the sexes, but also bring them together to make society function. This can also create room for so-called third genders or other ways of constructing gender within a society (Strathern 1988: 212; McKenzie 1998: 43).

On the contrary, the structure within the Skogsmossen fen may be said to indicate a manifestation of ideal and cosmological gender relations. In contrast to “real life” daily actions, quern handstones seem to be more distinctly separated from quern slabs, although still together in an east-west, north-south notion of cosmology (fig. 8). It may seem as though a negotiation of genders is not as evident here.

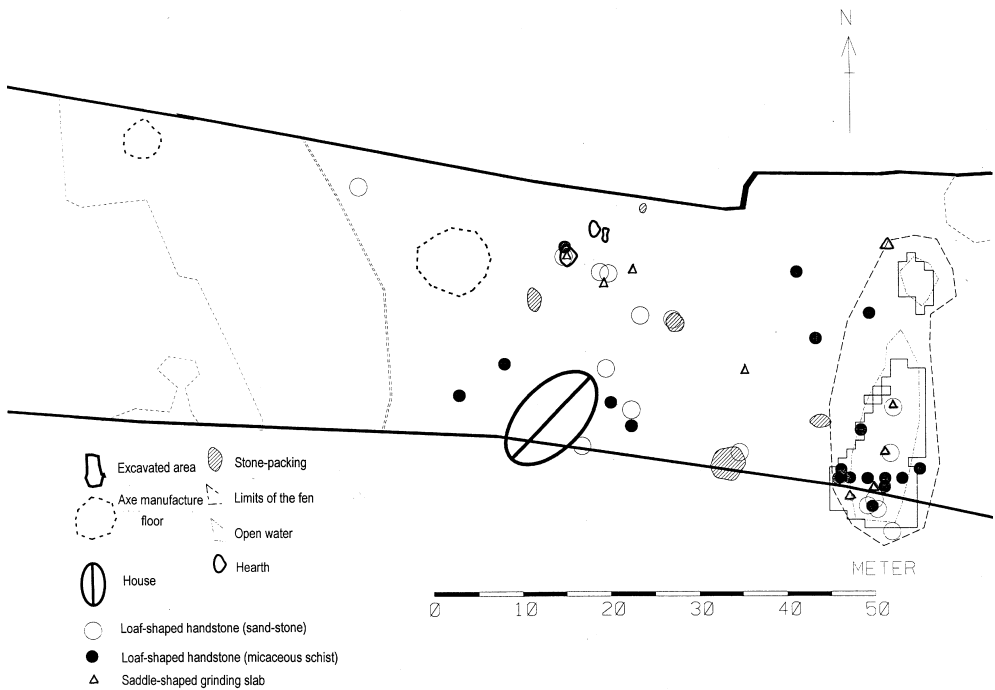


Fig. 8. The distribution of saddle quern slabs and quern handstones at the Early Neolithic Skogsmossen site, Fellingsbro parish in Västmanland. Note the east-west direction of handstones and north-south direction of quern slabs deposited within the fen. Also note that all saddle-quern slabs were found away from the house. Modified after Hallgren 1995.

The ritual actions enforce the separative ideals, but weave notions of embodied duality and cosmology into a collaborative ideal. As saddle querns can be seen as a material metaphor for multiple embodied genders, it theoretically implies that several genders are represented in the ritual context at Skogsmossen. At least both male and female ideologies have to be seen as categories intertwined with thoughts of cosmology within this Neolithic society.

As proposed by Weiner (1992), women gain power in their own right through control of economic resources, protection of inalienable possessions and control of cosmological phenomena linked to human and cultural reproduction. Female gendered power may often expand through production of objects with female symbolism that actually reproduce the past (Weiner 1992: 152). A reproduction theme associated to grinding and quern tools may have been at work during the Early Neolithic, at least at these particular sites. It is possible that the material quern symbolism included in this theme of reproduc-

tion is not all female, but rather includes both female and male symbolism, or brought together as a third gender, intimately enclosed within a cosmological web.

Multiple identities of querns

Strictly functional, querns are dual objects with two parts that continuously construct each other. As a technological consequence, the quern is seen as a material relationship. It is suggested that this relationship also has much to do with gender symbolism. A quern tool can symbolically be associated with the female and male gender, or both. Theoretically, this artefactual relationship can be used as a metaphor for embodied relationships. Grinding as a social construction can also be said to have transforming qualities (Fendin 2000).

In fact, the transformation of raw ingredients into food is something that is directly linked to querns as a functional tool, and to grinding symbolism. The main role of plant food querns is to transform the non-edible to something digestible. The aim of transformation is to separate fibres, change the physical properties of the food and if necessary, separate toxic substances (Stahl 1989: 171). Querns interpreted as things with transformatory qualities, linked to the *domus*, and conceptually associated to thoughts of domestication, have been extensively argued for by Hodder (1990). I will here argue for an understanding of quern artefacts that interconnect their functional and ritual properties with notions of a gendered, cosmological set of ideas. I do not wish to make a straight connection between women and querns, although I do imply that one part of the quern symbolism seem to be connected to a female gender identity.

The multiple meanings of certain objects make them suitable for enactment in rituals, as suggested by Welbourn, who uses the concept “ambiguous” objects to describe them (Welbourn 1984: 21). She implies that objects with multiple meanings may be used to manifest social orders or notions of cosmology, as the object itself create ideas of overlap and negotiation. Everyday objects can be used as material metaphors of socialisation and negotiation, both to weave people, past, present and future together, and to separate categories from each other (McKenzie 1998: 104ff).

To some extent, associations woven into the use of querns as

objects with multiple meanings are based on ethnographic narratives. Saddle querns and other tools related to subsistence production and grinding activities have explicitly been used in gendered rituals among the Zambian Bemba (Richards 1982; Corbeil 1985). Here, the quern slab symbolised a female gendered identity, whereas the quern hand-stone represented a male gendered identity. When used in the ritual act, the two quern parts as a sexual unit were used to perform a socialising story of the ideal relation between the female and the male body. The quern may be seen a distinct metaphor of the embodied relation of two specific gender categories, i.e. males and females of fertile age, both biologically and food-wise. In this aspect, the quern may be said to symbolically interconnect cereal grains, finely ground food, bodies, sexuality, fertility and reproduction. The use of the material quern metaphor was used to more clearly express the social expectations of the transforming gender, i.e. a transformation from the body of a girl to the body of a fertile woman. A variety of material everyday symbols were represented with didactic singing and dancing in the “females-only” ritual setting (Corbeil 1985: 11). The objects, sounds and song lyrics had many different layers of meanings, from learning the practical household work to frankly sexually embodied notions and gender ideology. The normative fertile female/male body ideology was expressed metaphorically both by grinding as bodily motion, and through the dual quern-set as a material metaphor.

Hugh-Jones (1979) compares the grinding and processing of manioc, with female and male social symbolical structures in Barasan Colombian society. She argues that important manioc processing cycles have interesting parallels to the gendered everyday life within society. The separation of female and male elements, symbolically acted out by the material separation of fibres and starch from the edible manioc, is also acted out through female and male gender practises within the community.

Among Hopi Indians in the American Southwest, ritual grinding on saddle querns was used as material metaphors in manifesting the interdependence of female and male roles in cosmology. Rituals involving grinding on saddle querns emphasised how cosmology-humans-animals-plants-sexuality-fertility-life-and-death all are part of the web of life. Peoples were thought of as similar to plants, sharing

both life-cycles and critical stages in life. People, plants and other living things, such as rain-drops were thought of as symbolically gendered, sharing body parts, ideas of reproduction, the birth of young bodies and the death of the old (Black 1984).

Among Zapotec Indian communities in Mexico, saddle querns of high quality were used as traditional wedding gifts. Grinding food for feasting was also a major concern. The elaborately produced loaf-shaped handstones were sometimes referred to as a child, and the quern slab as its mother (Parsons 1970). In this aspect, the quern may be said to manifest nurturing and reproduction ideals, as does its functional use to produce food for feasting.

Ritual grinding for feasting?

It is likely that ritual acts, e.g. the ones possibly performed at the Skogsmossen fen, were accompanied by some sort of feasting. Three soil samples from the fen, and three samples from the living area, were subjected to macro-fossil analysis. Twenty-nine grains and fragment of grains of bread wheat (*Triticum aestivocompactum*) and naked barley (*Hordeum nudum*) were found in the fen samples, whereas only nine grains were found in the samples from the living area (Hallgren *et al.* 1997: 72, 96ff). This might of course be interpreted as a difference in preservation, but it can also be understood as part of some sort of ritual activity performed at the fen.

Feasting and rituals can activate normative or formalised practises in which social categories are clearly marked. In particular, association of gender roles and notions of embodied relations can be defined and manifested in food activities transforming raw food ingredients into food for feasts (Dietler & Hayden 2001: 10). It is suggested that a ritual grinding of grain might have been part of the ritual performance at the fen. This grinding may also have had something to do with the reproduction of the society in itself.

The preparing, grinding and serving of food by women for men is often interpreted as exploitation of female labour by male political and ritual power (Dietler & Hayden 2001: 11, Riviere 1987). However, the Skogsmossen situation may be interpreted as a good example of the opposite. Querns deposited in the fen can be seen as similar representations of gendered relationships practised and negoti-

ated in daily life. That means that some sort of “ritualization” or association of genders to cosmology, and perhaps reproduction, are inherent in daily life as well as in ritual life. Accordingly, I see a close relationship between daily life and the manipulative ritualization reproducing it (Engelstad 2001: 283).

Cereal grains and saddle querns may functionally and symbolically be associated with gendered bodies and sexuality (Lidström Holmberg 1998: 134). The idea of the quern as an androgynous object symbolically associated with thoughts of sexual and cosmological reproduction might have been acknowledged among the Early Neolithic group of peoples that settled and re-settled at Skogsmossen. The technological relationship between adzes and quern handstones is probably also of importance for this social order. Without closing the issue, I propose that different gender roles were expressed and negotiated using querns as material metaphors of contrasting, but complementary, relationships. Why these practises may have been manifested at this situation in time will be elaborated upon in my thesis.

Manifesting child/adult relationships through querns

The adult/child quern relation may perhaps be archaeologically exemplified by the late Early Neolithic TRB-site, Östra Vrå in the province of Södermanland (fig. 3). Two partly stone filled pits, *c.* 2 x 4 m in diameter, were excavated at this site in 1994. The pits contained charred bones and teeth from small children (Kihlstedt 1996b). One of the pits also contained carbonised seeds of cereals (*Triticum*), of which one has been radiocarbon dated to 4600 ± 60 BP (Ua-6937), 3500-3100 cal. BC (Kihlstedt *et al.* 1997: 118). The stone-packing covering the pits were made up of an astonishingly large number, nearly 80, of intact and fragmented querns. Most consisted of manufactured saddle-shaped quern slabs made of arcose sandstone and granite (Lidström Holmberg 1998: 138). They show different life-stages of use-wear; however, most have been fully functional when deposited. The fact that most of the deposited querns were quern slabs is intriguing. Is it accidental that bones from small children are deposited together with quern slabs, and not with quern handstones? I think not. The contextual relation between bones of children and quern slabs may manifest an important social relationship in society,

the bond between adults/nurturer/lifegiver (quern slabs) and children (bones). It is important to realise that this relationship cannot be reduced to a mother/child unit due to “biological”, “natural” or “universal” ideas. The image of mother/child representing ideas of natural motherhood, bound to family and household, is a nineteenth century idea of the private, nuclear family (Moore 1988: 24).

In contrast to the saddle quern slab/child bone association, an Early Neolithic Funnel Beaker site was partly excavated in 1993 at Fågelbacken in the province of Västmanland. The site has been interpreted as a ritual site for collective burials. During the Early Neolithic it was situated on a small island in the Litorina Sea (Lekberg *in press*). Within one of the burial pits, a small and well-shaped quern handstone was deposited with mixed human adult bones (Lekberg *in press*). Although it is impossible to relate the quern handstone to an individual, it is interesting to note that the buried individuals were of adult age. The context of the quern handstone and adult bones may hypothetically be interpreted as a material metaphor manifesting a child (handstone)/adult (bones) relation.

Summing up

In this article, I have argued that querns can be archaeologically thought of as something beyond the functional and utilitarian sense. In mid central Sweden, a change into a new saddle quern technology and quern use seems to take place at the very beginning of the Early Neolithic, *c.* 4000-3900 cal. BC. It is argued that some vital aspects of this situation of change are manifested through the spatial distinctions and different uses of querns and grinding practises, both in materialising and negotiating gender relations. An order of internal separation and collaboration related to different genders seems to be at work. Querns situated and activated in this period are thought of as multiple material metaphors of complementary and contrasting embodied relationships. Theoretically, several embodied and cosmological relationships may have been activated using saddle quern parts as material tools during the Early Neolithic: 1) The negotiation between male gendered identity and female gendered identity, 2) a child gendered identity, 4) a male-female-age relation, 5) an adult-child-age relation, and 5) an east-west, north-south cosmological idea. I

maintain that quern practises express some aspects of how people lived and made sense of their gendered world through one particular object. In particular, I suggest that Early Neolithic saddle quern tools and its related practises can be materially associated with sexual bodies in a lifecycle, and the ideal reproduction of gender relations.

