

Grinding Tools as Grave Goods

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Fig. 1. The stone lined Kebaran burial of Neve David. Top right stone is the mortar covering the skull. Right below it is an other mortar (from Kaufman and Ronen, 1987, fig. 3).

This paper focuses on the association of grinding tools with burials. Burial customs per se – the location of graves or position of the corpse – will not be discussed. Pounding and grinding implements – that is, palettes – existed, though quite rarely, in the Upper Palaeolithic and seem to have been made for processing mineral pigments (e.g. at Qafza, Ronen and Vandermeersch 1972). Grinding and pounding implements designed for processing vegetal food, on the other hand, appeared for the first time in the Kebaran, approximately 15 ky ago. Deep mortars made of basalt were recovered at Ein-Gev (Bar-Yosef, 1973) and Hefziba

(Ronen *et al.*, 1975), among other sites. These objects were produced at basalt outcrops (Weinstein-Evron *et al.*, 1999), and were brought as finished products to the sites, as no debris from basalt artifact production was found at any site. Hefziba is approximately 100 km air distance from the basalt source area, thereby testifying to the importance of these new objects which weighed 20-30 kg and were carried over such long distances.

Soon after their invention, food processors were placed in burials. The late Kebaran burial at Neve-David in Haifa, 12,5 - 13,5 ky ago (uncal) is the oldest example known at present (Kaufman and Ronen, 1987). The corpse was accompanied by three grinding tools of different types (fig. 1): a deep basalt mortar was placed above the skull, concave side down, in a protecting/feeding position; a shallower bowl near the shoulder, and a palette (color grinder?) between the femurs. We are certain that these objects were deliberately placed in the grave, and hence, that they constitute grave goods. Thus, three different types of grinding implements accompanied the Geometric Kebaran dead at Neve David to the afterlife.

All three grinding implements in the Neve David burial were fragments (fig. 2). Were they broken especially for the occasion, or were they already fragmented beforehand? The deep basalt mortar placed above the skull had clearly gone out of use at an earlier time: its base was completely worn out and was pierced through use. Later, the mortar was broken into two halves, accidentally or deliberately for the burial. Thus, the processing tools placed with the Kebaran dead were themselves “dead” objects, useless in everyday life and hence of symbolic value.

Natufian

Grinding tools continued to serve as grave goods during the Natufian period (Garrod and Bate 1937, 15). It should be mentioned, however, that Perrot and Ladiray (1988) are extremely cautious in admitting to the occurrence of Natufian grave goods. They argue that everyday objects such as mortars, pestles, flint and bone objects could have entered the grave fill accidentally (Perrot and Ladiray, 1988, 86). They go so far as to claim that even ornaments found in graves should not be regarded as grave goods, because these objects constituted the personal belongings of the deceased (Perrot and Ladiray, 1988, 91). Perrot and Ladiray maintain that red ochre and animal bones found in

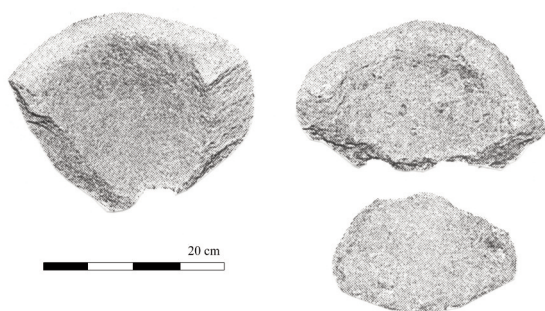


Fig. 2. The three grinding implements associated with the Kebaran burial of Neve David (from Kaufman and Ronen, 1987, fig. 5).

graves represent some unknown ceremonial purpose, but are not grave goods (1988, 87). They concede, however, that stones may have been an integral part of some burials (Perrot and Ladiray, 1988, 90), but their final conclusion (1988, 91) is that there is no evidence for a Natufian preoccupation with post mortem material needs or the after-life.

One objection to this cautious approach is that there is no way to know whether jewelry found in a grave was in fact part of the personal belongings of the deceased. Even then, there is no reason, in our opinion, why personal belongings should not be considered grave goods. On a more general level, however, it seems that the grave fill was closely observed and, contrary to Perrot and Ladiray's assumption, objects had not entered the grave accidentally. Otherwise, it would be hard to explain why grinding equipment, though common household objects, was found in very few Natufian graves. Furthermore, in the Pre-Pottery Neolithic A (PPNA) period, which immediately followed the Natufian, grinding implements were as common on dwelling floors as in the Natufian. Yet not a single grinding implement was incorporated in any of the approximately 40 PPNA burials known (for Hatula, see Le Mort, 1994 and for Netiv Hagdud, see Belfer-Cohen and Arensburg, 1997). It may be concluded that the presence of grinding equipment in burials is intentional.

In the Natufian of El-Wad, Garrod mentioned a broken limestone mortar placed on the thorax of adult burial H.60 and a fragment of a basalt pestle associated with child burial H.5 (Garrod and Bate 1937, 15). Four bodies of group burial H.57 were disposed in a semicircle around one-half of a limestone mortar (Garrod and Bate, 1937, 19). As for Eynan, the presence of mortars or pestles in the Natufian burials was not recorded, unfortunately, as Perrot and Ladiray assumed that they were incidental. Photographs reveal, however, at least one broken pestle near the skull of burial no. 19 (Perrot and Ladiray, 1988, Plate V,1) and a pestle possibly associated with burial no. 102 and 23 (Perrot and Ladiray, 1988, Plates XVIII and XXIII, 1). Clearly, the majority of grinding artifacts deposited in Natufian graves were broken, "dead" or "killed", like their Kebaran predecessors.

Neolithic

In the Pre-Pottery Neolithic of the Levant, which followed the Natufian, grinding implements disappeared from burials. Grinding implements in fact disappeared for approximately three millennia, during the duration of Pre-Pottery Neolithic A and B periods. For the PPNA, this disappearance is evident in the burials at Netiv Hagdud (Belfer-Cohen and Arensburg, 1997) and at Hatula (Le Mort, 1994). In regard to PPNB, no grinding implement accompanied any burial in either the Mediterranean core area (Gopher and Hershkovitz, 1994) or in the desert areas (Hershkovitz *et al.*, 1994; Gebel, *in letteris*, 1999). We may note in passing the Cypriot Aceramic custom of breaking a stone vessel at a burial, with the fragments left in the tomb (Le Brun, 1994, 202). Although the Aceramic of Cyprus is contemporaneous with mainland PPNB, this custom definitely echoes an older, pre-Neolithic mainland tradition.

Not only grinding equipment but also all other grave goods were absent from burials of the Pre-Pottery Neolithic A and B periods. There are only rare exceptions: a shell bead associated with one PPNA burial in Hatula, an ornamented plaque in a PPNB child burial in Ghwair I in Jordan (Simmons and Najjar, pers. comm. 2000), and animal bones associated with a few PPNB burials at Kfar Hahoreh, in what seems to have been a sacred burial ground (Goring-Morris *et al.*, 1998).

Grinding tools became again associated with graves during the Pottery Neolithic period of the 6th - 5th millennium BC, together with other grave goods such as shell beads, copper and pottery (Avner, pers. comm. 2000). Thirteen of the 16 grinding implements found in a Pottery Neolithic graveyard in Eilat were broken. Hence in the Levant, grinding tools were periodically placed in tombs and were usually fragmented. This periodic phenomenon may reflect changing social attitudes through time toward grinding equipment, burials, or a combination of both.

Europe

Like the Levant, we will only focus on the association of grinding implements with graves. Burial customs of the European Neolithic (e.g. Jeunesse 1997, 141-146) will not be discussed here. Grinding implements appear in western and central Europe in the middle of the 6th millennium BC in association with the oldest agricultural societies, the early Neolithic Linearbandkeramik (Farruggia 1992; Peschel 1992; Jeunesse 1997) and, as in the Levant, were incorporated in burials. They are found in about 2% of burials of the earliest Neolithic, and in 30% to 50% of burials of the middle Neolithic (e.g., Lichardus-Itten, 1980, 11) (fig. 3). Grinding implements were most often placed near the head (Jeunesse 1997, 81) and were most often fragmented (Farruggia, 1992). In one case, a concave fragment of a grinding tool was placed above the skull (Peschel, 1992, 228), as at the Neve-David burial previously mentioned. It is claimed that grinding stones

were sometimes placed in burials as “weights” (Peschel, 1992, 227); even if this was the case, the important fact is that grinding stones, and no other stones, were used.

With the beginning of the late Neolithic, around 4500 BC (cal), grinding tools were no longer placed in graves (Farruggia 1992; Jeunesse 1997), but grinding tools of the same types as in the preceding middle Neolithic continued to be found in dwellings (Jeunesse, pers. comm. 1999). Thus, in the transition from middle to late Neolithic a change must have occurred in societal attitudes toward grinding implements and/or the dead and, as a result, the symbolic association of the two was no longer valid.

Discussion

Both in the Levant and in Europe, grinding tools were placed in graves in some periods but not in others. In both areas, the change seems to have occurred “suddenly”. The change probably reflects either a different significance attributed to grinding tools or a different concept of death and the dead, or both.

It is reasonable to assume that grinding tools, and grave goods in general, were offered to the dead to ensure their physical well being, and enable them to eat and function in the afterlife, albeit symbolically. Grave goods indicate a “material-like” concept of the afterlife. Does the absence of grave goods, including grinding tools, reflect a lack of concern for the afterlife, or for the well being of the deceased? This is most unlikely, because the very act of burying is proof of the desire to protect the corpse so that it can function in the next life. Hence, we suggest that the absence of objects accompanying the dead reflects a more spiritual concept of the afterlife, as an immaterial world where physical objects would not be needed.

A different concept of the afterlife does not necessarily mean that the significance and importance of grinding tools remained unchanged. A different attitude toward grinding tools and a more spiritual concept of the afterlife could have been linked, resulting, for example, from a decreased reliance on grinding tools for processing food. This could have happened in times of drastic dietary change involving a reduced intake of cereals, perhaps because of climatic deterioration. Such a scenario is indeed suggested by the Levantine data.

In the Levant, the custom of offering grinding tools to the dead ceased in the transition from Natufian to PPNA. This transition is marked by a dietary crisis which may have started in the late Natufian (Tchernov, pers. comm. 2000) and lasted through PPNA (Ronen and Winter, 1998). This dietary crisis is indicated by two independent lines of evidence: first, although gazelle continued to be the single major food source, there was an unprecedented increase in the consumption of small fauna, notably birds (fig. 4), fishes and hare, in the PPNA (Lechevallier and Ronen, 1994; Tchernov, 1994). Second, the proportion of young animals in the hunted population considerably increased in the late Natufian and PPNA (fig. 5) (Davis *et al.*, 1994, 90). The dietary crisis seems to have

ended with the domestication of food animals (caprines) in the PPNB, when the consumption of small animals sharply decreased and returned to the earlier, pre-crisis level (Ronen and Winter, 1998).

The Levantine data do not reveal whether the food crisis affected the availability of animals or of cereals, but an analogy might be helpful. Minute analyses carried out on Swiss Neolithic lake dwellings (Schibler *et al.*, 1997) reveal a food crisis around 3700 BC (cal). Due to the excellent preservation of organic material in the lake dwellings, it could be demonstrated that an increased intake of small fauna, wild game, and wild plants had substituted for a shortage of cereals, not of animal protein. If the Levantine crisis of the 10th millennium BC had similarly affected cereal production, then the importance of grinding tools in the economy would have been drastically reduced and, expectedly, these implements would not be offered to the dead. Whether a food crisis had occurred in Europe at the middle/late Neolithic transition, around 5000 - 4500 BC (cal), remains to be established.

It was hitherto assumed that societal attitudes toward burials more or less reflect real life, but that is not always the case. For example, the proportion of wild game placed in burials in the middle Neolithic of west-central Europe was far higher than that in the early Neolithic (Jeunesse, 1997). Nevertheless, contrary to expectations, in the residential areas no change occurred in the ratio of domestic to wild fauna between these two periods, and domestic fauna predominated in both (Jeunesse 1997, 146). In sum, social attitudes toward burials and the dead is a complex matter, of which we continue to have but a limited understanding.

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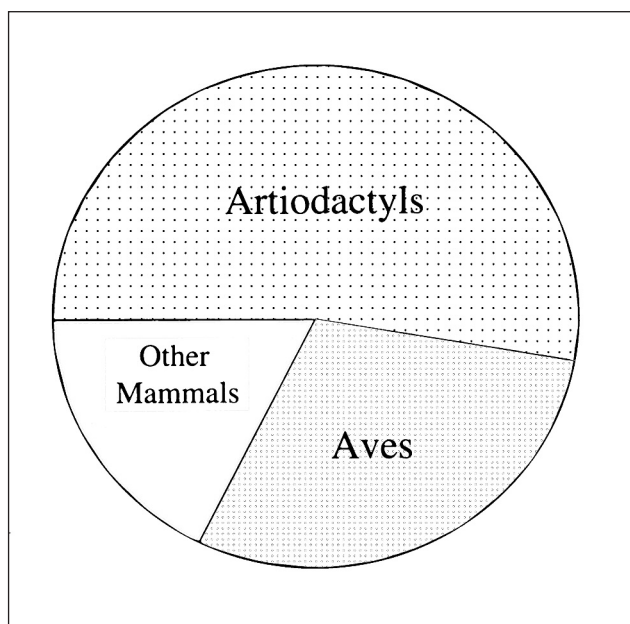


Fig. 4. The proportion of fowl in the diet of PPNA Netiv Hagdud (from Tchernov, 1994, 71).

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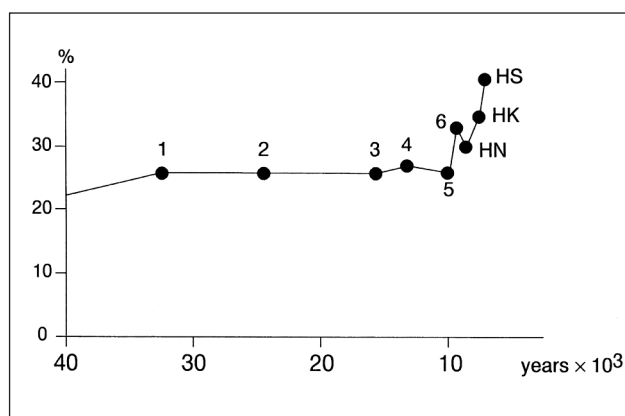


Fig. 5. Proportion of young (unfused) gazelle in the hunted population (from Davis et al., 1994, 90).

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