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Domestic economy and social organization in New Halos

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Chapter 6: Systems of activities and systems of settings at New Halos.

6.1 Introduction

In order to determine whether the associations of artefacts with particular spaces we have observed in the previous chapter form meaningful categories, we need to have a better look at the wider contexts in which domestic activities in Classical and Hellenistic Greece were performed. In this chapter we will discuss 'domestic activities' and their relationship with systems of domestic economies and social practices. Likewise, we need to study 'systems of settings' of domestic activities in order to answer questions related to domestic spatial formation and formalization.[1] We will therefore compare the findings at Halos regarding natural resources, artefact presence, absence and distribution with those of other sites and contexts, most notably Olynthus, Halieis and Athens. In addition, other relevant sources of information, such as literature and epigraphy will be evaluated in the discussion.

The latter sources are very helpful in recognizing what kind of activities took place in domestic environments. They also aid us in recognizing what we may miss in the archaeological record. In the following paragraphs, then, I will discuss patterns of artefact distribution by evaluating potential tool kits in which I will focus especially on the variation of their distribution within the houses. We will see below that, even though, the houses may have similar spatial configurations, they are used in different ways. In order to determine if and how these different usages relate to socio-economic deviations, I will assess variation and patterning with regard to quality, value and quantity of the artefacts as well.

6.2 The storage of household items

In order to better interpret artefact distribution in the houses at Halos this chapter needs to begin with an assessment of how ancient Greeks dealt with artefacts in their household space. It is easy to assume that artefacts, where we find them, were used 'on the spot', but that is often not the case. In chapter 4 we already discussed the impact of depositional and post depositional processes on the distribution of the remains, but there is one aspect that we have not looked at yet and that is ancient Greek attitudes toward the organization of household items. Household items not in use may be stored. And since we are looking at the distribution of the artefacts in order to gain insight in the nature and location of household activities, storing artefacts in places where they are not in use may have implications for our research.

The following two passages from Xenophon's *Oeconomicus* are informative:

> 'I have already told you that it is good for equipment to be arranged in order and that it is easy to find a place in the house that is suitable for each piece of it. How beautiful it looks, when shoes are arranged in rows, each kind in its own proper place, how beautiful to see all kinds of clothing properly sorted out, each kind in its proper place, how beautiful bed linens, bronze pots, table-ware! And what a facetious man would laugh at most of all, but a serious man would not; even pots appear graceful when they are arranged in a discriminating manner.'[2]

> 'After we had gone through these rooms,' he said, 'we sorted the contents by type. We first began by putting together the things that we use for sacrifices.

[1] Rapoport, 1990.

[2] Xenophon, *Oeconomicus* VIII, 18-19 Translation Sarah Pomeroy. In: Pomeroy, S., *Xenophon. Oeconomicus. A Social and Historical Commentary,* (Oxford: Oxford University Press, 1994).

> After that we separated the fancy clothing that women wear at festivals, the men's clothing for festivals and for war, bedding for the women's quarters, bedding for the men's quarters, women's shoes, and men's shoes. Another type consisted of weapons, another for spinning implements, another of bread making implements, another of implements used for food, another of bathing implements, another of kneading implements, another of dining implements. And we divided all this equipment into two sets, those that are used daily and those that are only used for feasts. We set aside the things that are consumed within a month, and stored separately what we calculated would last a year. That way we shall be less likely to make a mistake about how it will turn out at the end of the year. When we divided all the contents by types, we carried each thing to its proper place. After this, we showed the slaves where they should keep the utensils they use every day, for example, those needed for baking, cooking spinning, and so forth, and we handed these over to them and told them to keep them safe. Whatever we use for festivals or entertaining guests or at rare intervals we handed over to the housekeeper; and when we had shown her where they belong, and had counted and made an inventory of each required, but to remember what she had given to each of them and when she got it back, to return it to the place from which she takes things of that kind.'[3]

These passages give us a lot of information on how a well-to-do Athenian runs, or better said, *should* run, his household.[4] Ischomachus, the wealthy Athenian, tells Socrates that for a household to be run properly every household member needs to know his or her role, while all the household items should have 'their place.' In the second passage, Ischomachus advocates to store the household items according to who uses them: slaves, men, women as well as according to occasion: special items need to be stored and only taken out on heydays. If households in ancient Greece would organise their households as such, storing items in places where and when they are not used, we may be mistaken in how to interpret the particular areas where these artefacts are found.

But there are a number of reasons why we should be careful with taking Xenophon's passages literally and why their contents are not necessarily problematic for archaeologists.

First, this conversation is meant to serve as an incentive for an ideal way of organising a household. The ideological implications are plentiful and one of the main messages of the work is that order and restraint creates wealth on the level of the household and beyond. Projecting the organisation of such an ideal household on the archaeological record would be problematic. Even though these ideals may be real and lived in the minds of the inhabitants of Halos, in this research we take the view that ideals are often contested and that they are negotiated through material culture; the arena of which is the space of the house itself. The material record is therefore never a direct reflection of such ideals, but represents a series of transformations. It is therefore not to be expected that we will find a patterning of artefacts as described by Xenophon.

Secondly, the household of Ischomachus is modelled after the Athenian way of life and is relatively wealthy. The number of slaves, the housekeeper, the size of the house

[3] Xenophon, *Oeconomicus* IX, 6-11.

[4] The 'I' and 'we' in the passages of Xenophon are Ischomachus and his wife. The Oeconomicus is a dialogue between Socrates and Critobulos on how to best run an estate. Socrates tells about a conversation he had with a wealthy and respected man, Ischomachus, who manages his estate in an exemplary way.

described indicate that this is an estate that creates a profound surplus and may not be compared to the context that we are dealing with in Hellenistic Thessaly. Thirdly, the good news is that *if* the inhabitants of Halos systematically stored their household items in spaces where they were not used, we should be able to identify those in the archaeological record. Below, we will read that such areas have indeed been found.
For this research, the greatest value of sources such as Xenophon lies in the description of the nature and organisation of domestic activities. From the passages above, we can identify spinning, bread-making, bathing, kneading, dining and there are many sources, literate and archaeological, which can add to these. The paragraphs below systematically discuss the relationship between artefacts and domestic activities in the wider economic and environmental context of New Halos.

6.3 Production and consumption of food: food processing and cooking

6.3.1 Food and land-use at New Halos

What Greeks ate and how they prepared their food may have varied as different environments may have produced different kinds of food. Thus, in order to say something about food preparation and consumption at New Halos, we should first assess the information we have on the production of food and on resources of food. And here we find a problem, as information we have on food resources is limited. The sources associate Thessaly with the consumption of wheat porridge and beef, while the Pelion was known for its good quality gourds and wine.[5] But thanks to the analysis of the organic refuse found in the houses, largely consisting of bones and shells, interesting details have come to light with regard to the use and consumption of domestic mammals and shellfish in New Halos. Prummel concludes that the inhabitants of Halos ate pork (2%), horse and ass meat (20%), beef (48%), and mutton and goat (29%).[6] Sheep, which by far outnumbered the numbers of goat, were employed for their milk and wool for several years before they were slaughtered.[7] The bone remains represented in the houses were probably remains of sacrifices as ancient Greeks usually only ate meat as part of religious occasions.[8] Sacrifices were usually made at an altar and these altars could be located in a sanctuary, but also in a domestic setting; altars have been found in various houses elsewhere in Greece, most notably at Olynthus.[9] These altars were most often located in the courtyard and were sometimes small and portable, so that sacrifices could be made at a variety of locations in the house. In Halos, two foetal bones found in the courtyard of the House of the Snakes may testify to the custom of sacrifice in domestic context: a pregnant ewe may have been slaughtered here in winter or early spring.[10] Animals were usually killed by

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[5] Dalby, A., *Siren Feasts. A History of Food and Gastronomy in Ancient Greece,* (London: Routledge, 1996), 127, with sources cited on page 249 (note 43).
[6] Prummel, W., 2003. "Animal husbandry and mollusc gathering," in: Reinders and Prummel 2003, 215.
[7] Prummel 2003, 192.
[8] Public sacrifices were a major source of meat for the inhabitants of classical Athens and the religious calendar was organised in such a way that people would be able to consume meat every 8th or 9th day. See Rosivach, V.J., *The system of public sacrifice in fourth-century Athens*, (Atlanta: Atlanta Scholars Press, 1994), 65-76. See also Jameson, M., "Sacrifice and Animal Husbandry in Classical Greece," in *Pastoral Economies in Classical Antiquity*, ed. C.R. Whittaker, Cambridge Philological Society Supplementary Volume no. 14. (Cambridge: 1988), 87-119.
[9] Cahill 2002, 85, 88-89, 99, 110, 128, 144, 146-147, 158, 168, 235, 246, 249, 252, 276.
[10] Prummel 2003, 216. The sacrifice of pregnant ewes was not that uncommon according to Jameson 1988, 103, because it may be part of herd maintenance and minimizing risk of disease. The killing occurs before the period in which pastures dry up during the summer for flocks *not* moving up for the summer and if an ewe becomes pregnant late in the season there is a larger likelihood she may become

letting them bleed to death and bones, fat, tail and entrails would have been burnt on an altar, while the muscle and organ meat was usually consumed by the attendants, or could be bought and taken home. But there are many variations in sacrificial customs and these customs strongly depend on deity, context and region. No altars have been found at Halos, but a fixed hearth or a fire over which a brazier or bomiskos was set could also have served such a purpose. The ritual and symbolic aspects of fire (and associated charred bone fragments) have more connotations than with food alone and will therefore be discussed separately under 'domestic ritual' (see below).

Seen the fact that most sheep, goat and cattle at Halos were killed at an advanced age,[11] milk must have been a food item that was consumed regularly together with its preserved form: cheese. These food items, in addition to wool, were likely the main purpose of animal husbandry. Strainers found in some of the houses and wide containers may be remnants of cheese making, although due to their limited number they do not weigh heavily in the analysis (see below). Based on extensive ethnographical research, Reinders and Prummel have suggested the possibility that pastoralism in Halos may have been practiced as transhumance, with people living with their animals in the lower lying areas (the city) in winter time and moving with their flocks to greener pastures in the summer.[12] This may very well have been the case to a certain extent, but such a domestic economy is difficult to marry to an urban lifestyle such as that at Halos. This suggestion therefore needs further thought and consideration, which will be done in our next chapter.

Cattle, also mostly slaughtered at ca. 3+ years may have been kept for cheese, meat and they may have served as service animals pulling and ploughing. The prevalence of cattle consumption over sheep and goat is quite striking and contrasts sharply with evidence taken from other contexts, such as that of inscriptions recording animals sacrificed and animal bones at various sanctuaries analyzed by Michael Jameson.[13] Prummel assumes that most cattle remains found in the houses at Halos derive from public sacrifices as all parts of the cattle were represented in the assemblage, but the skull was underrepresented.[14]

It is interesting to see that not a single piece of bone deriving from poultry was found in the houses.[15] According to literary sources, birds were eaten frequently in Classical

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sick. c.f. Koster, H., *The ecology of pastoralism in relation to changing patterns of land use in the northeast Peloponnese*, (PhD diss., University of Pennsylvania, 1977) cited in Jameson 1988, note 25. Pregnant ewes were intentionally sacrificed to Demeter in the months Elaphebolion and Mounychion according to an inscription representing a religious calendar found in Thorikos. (Jameson, M., "Theoxenia," in: *Ancient Greek Cult Practices from the Epigraphical Evidence*, ed. R. Hägg, (Göteborg: Paul Åstrøm, 1994), 39). Bremmer lists a large range of female deities who received sacrifices of pregnant animals. (Bremmer, J., "The sacrifice of pregnant animals," in *Greek Sacrificial Ritual. Olympian and Chthonian*, ed. R. Hägg and B. Alroth, (Stockholm: Swedish Institute at Athens, 2005), 156), and he concludes that Demeter was by far the most popular recipient of such sacrifices. One of the excavated buildings in the higher city at Halos, the sepulchral building, has now been identified as a sanctuary dedicated to Demeter by Colette Beestman-Kruyshaar.

[11] Prummel 2003, 192 and 216.

[12] Reinders, H.R.and W. Prummel, "Transhumance in Hellenistic Thessaly," *Environmental Archaeology* 3 (1998): 81-95. See also Prummel's excellent discussion on local economy and land-use in Reinders and Prummel 2003, 215-219. Reinders, H.R., *Schaarse Bronnen.* Inaugural Lecture, (University of Groningen: 1994).

[13] Jameson 1988, 94.

[14] Prummel 2003, 190 ff.

[15] Bones from birds are light and may deteriorate faster in the archaeological record than bones from domestic mammals. At the excavation of the houses, special care has been given to the collection of bones in the archaeological record and the find spot of every piece of bone found was measured and plotted, resulting in the fact that even foetal bones were assembled. A reason for the relatively low

and Hellenistic Greece. They could be spit roasted and made attractive dishes for a symposion.[16] Hens and quails were generally popular, but also common birds such as larks, starlings, jays, pigeons, geese, pheasants and mallards. Hens and geese were kept for food, but also for their eggs. In the houses at Kassope a substantial number (397) of bird bones were found, although they make up a very small percentage of the total number found, namely 1.1%.[17] The majority of those belonged to domestic hens, confirming that they were partially kept for their eggs. If we project these numbers onto the bone assemblage found at Halos where about 900 bone fragments were collected, we should have found perhaps one bone belonging to a bird. We may have missed that one bone in the excavation process. The lack of bird bones does therefore not necessarily indicate that the inhabitants of Halos did not keep fowl or hunted for birds.

In addition, the inhabitants of Halos hunted for larger game to obtain additional sources of protein, such as badgers, red deer and roe deer all of which are represented by bone fragments. The large number of marine *gastropoda* found in the houses indicates that shell fish of various kinds were gathered nearby in Sourpi Bay and eaten, either raw (such as *arca noae* and oysters or cooked such as cockles).[18] The finds also yielded remains of *Helix figulina*, an edible species of snail of which remains were found in the houses.[19] The species is still common in the area and is gathered especially in spring time. Eating snails must have been common in ancient Greece. Galen, who considered snails an aphrodisiac writes that 'Greeks eat snails everyday. They have tough flesh, but once cooked, they are highly nourishing.'[20]

Only one fish bone was found in the houses at Halos and it was of a species that could not be identified. With its location so close to the sea, the inhabitants at Halos must have eaten fish on a regular base. What is true for the problematic preservation and retrieval of bird bones also counts for fish bones. In Kassope 61 fish bones were found making up only 0.16% of the bones found overall.[21] The negative evidence at Halos does, again, not imply that fish was not eaten and we therefore assume that the inhabitants of the houses ate fish on a regular base.

Then there are food resources of the sea that leave no traces in the archaeological record, such as squid, cuttlefish, octopus, langoustines and shrimp, which were all foods used in the common ancient Greek kitchen.

The preserved remains of meaty food represent the limited number of indications we have regarding the eating habits of the inhabitants of Halos. The food deriving from plants has left us no remains at all in the houses. Only the excavation of the south east gate yielded carbonized olive pips, but these date to a period after the abandonment of the houses.[22] Research done by Bottema and Woldring based on botanical research and cores taken from lakes in the environs of Halos yielded interesting results

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number of bird bones in the archaeological context is that they can be eaten and digested- by other animals, like dogs and foxes, both of which are found in the houses. The elaborate process of wet sieving the excavated soil would have probably yielded more remains of bird and fish bones. It was considered indeed but we decided it was too labour intensive to transport enough water to the site to make wet sieving possible.

[16] Archestratus 62 (in Athenaeus 101 c) as cited in: Dalby 1996, 63f.

[17] Boessneck, J., "Zooarchäologische Ergebnisse and den Tierknochen- und Molluskenfunden," in: Hoepfner and Schwandner 1994, 175ff.

[18] Prummel 2003, 202 ff.

[19] Prummel, 2003, 212.

[20] Galen, *On the Properties of Foods* 3.2.1. as cited in Dalby 1996, 62.

[21] Boessneck 1994, 175.

[22] Reinders et al. 1996, Dickenson, Radloff and Reinders 2006 on the south-east city gate.

regarding the impact of land use on tree, shrub and plant growth in the vicinity of Halos and especially in the Othris Mountains.[23] Transhumance had a strong impact on the vegetation in the Othris up to a level of 1200 m. affecting the naturally occurring mountainous deciduous oak forests which must have existed close to Halos around 3000 BP and the mountainous conifer forests. But also direct human activity had an effect: the oak forest was probably felled around the end of the Bronze Age and the beginning of the Early Iron Age. Bottema and Woldring presume that this was the results of a strong need for fuel for iron ore smelting. The lowest values of the presence of oak are observed at the time of the existence of New Halos. The inhabitants, then, may have used oak for reasons mentioned above and perhaps as timber in building the town.[24] But in addition oak could have been used in the process of ship building (especially for keels). Fir was perhaps used for making oars.[25]
There is very little evidence for farming nearby Halos and preliminary studies from the survey suggest that the area around the city was not intensively farmed.[26] Also, the palynological study yielded evidence for the cultivation of cultivated and wild barley and wheat species but only on a small scale, while soil analyses suggests that the soils were overall of medium to low fertility. The overall picture points more to a landscape used for grazing and probably the cultivation of olives and nut trees than that of intensively exploited farmland, but this issue will be addressed in more detail in the next chapter.[27] The inhabitants of New Halos may therefore have been dependent on

[23] Woldring, H., "Forest Vegetation and Human Impact in the Othris Mountains," in Reinders and Prummel 2003, 147-159. Woldring, H., "Late Holocene vegetational history of the Othris Mountains," in Reinders and Prummel 2003, 159-175. Bottema, S., "A reconstruction of the Halos environment on the basis of palynological information," in Reinders 1988, 216-226.
[24] Woldring, 2003b, 171.
[25] With the fall of Amphipolis, Athens lost its forested hinterland which was partially used to make oars for the Athenian navy. Oars could be easily lost at sea and needed to be replaced frequently. Borza states that between 480 and 410 BCE Athens built 1500 triremes and had to make at least 300.000 oars. (Borza, E., "Timber and Politics in the Ancient World: Macedon and the Greeks," *Proceedings of the American Philosophical Society* 131 (1987): 32-52). On that note, it is interesting to see the onset of decline of fir in the hinterland of New Halos around the time of the city's refoundation , even though Woldring suggests the occurrence of fir may be a local phenomenon (Woldring 2003b, 162, Fig. 4.4 and p. 169). Fir was in high demand by the Athenians and other Greek cities in order to make oars and fir was already in Classical times a scarce commodity in southern Greece. Various Macedonian rulers successfully capitalized on timber – and fir- trade between northern Greece and city states in the south and executed strong control over forested areas. (Borza, E., *In the Shadow of Olympus. The Emergence of Macedon.* (Princeton: Princeton University Press, 1990), 56).
[26] The Halos Archaeological Survey Project has surveyed the Sourpi plain and the southern part of the plain of Almiros in various seasons in the 1990s. The results of the Prehistoric and Archaic periods have been published in Reinders, H.R., (Ed.) *Prehistoric Sites at the Almiros and Sourpi Plains (Thessaly, Greece).* (Assen: van Gorcum, 2004). Reinders (2004, 5) suggests that the plain of Almiros was not intensively cultivated until recently: Maps of the British Admiralty indicate that in the 19th century AD only the immediate surroundings of the villages were cultivated. Leake (1835) visited the area of Halos in 1809 and records that the watermill north of the city flooded various cotton fields in the vicinity of the river. He also noted that the area of the lower city 'although thickly strewn with stones, the foundations of buildings and broken pottery, is now sown with corn.' The greater part of the Almiros plain was brought under cultivation after the introduction of heavy machinery in the 1950s. Preliminary results show that small patches of lighter soil below the 300 m level on the slopes of Mount Othris were farmed at various points in history. The publication of the results of the successive periods is in preparation, but the publication of soil type and geology of the region indicates that the soil types in the Almiros plain are overall well drained but of moderate to low fertility. (Floras S. and I. Sgouras, "The Almiros and Sourpi Plains: reconnaissance survey of the geology and soils," in Reinders 2004, 6-20.
[27] Woldring, 2003b, 172-173. There are strong indications that the mountains were even more intensively used from the Roman period onwards. cf Reinders and Prummel 1998. See also Gehrke

the import of grain deriving from city states in inland Thessaly, where wheat cultivation was abundant. This reliance on import may have been considerable, since it is estimated that cereals supplied ca 70% of the calorie intake of individuals.[28]
The inhabitants of the Halos would have also used their natural resources by gathering food. These, of course, leave no trace in the archaeological record. Especially in spring and early summer, many fresh plants could be gathered, such as a variety of greens, rocket, asparagus, nettle, bulbs and herbs such as oregano, anise, sage, and mint, while in the fall berries, saffron and mushrooms could be collected.[29]
The vicinity of Halos near the sea facilitated overseas contacts of the inhabitants with other areas in the Aegean. Coins found in the city from Histiaia, Chalkis and Egypt suggest direct or indirect contacts with distant areas and poleis. The many transport amphorae in the city with northern Greek provenances support this view. Halos may not have had a harbour, but literary sources discussed in chapters 2 and 3 suggest that the area near the Classical city was suitable for landing ships. The survey at the site of the Classical city, Magoula Plataniotiki, yielded, apart from Classical material, also finds datable to the Early Hellenistic period. We therefore assume that the area of the Classical city was in use as a landing spot and possible trading area during that period.

6.3.2 Horticulture

The evidence for horticulture in the pollen diagrams is also scarce, but this may also be due to the distant location of where the sample was taken and the fact that horticulture is a small scale and local activity by definition. There is ample evidence in historical, archaeological and epigraphical sources for the existence and exploitation of *kepoi* in and nearby Classical and Hellenistic cities. Diodoros in his account of the relocation of Sikyon by Demetrius Poliorcetes, for instance, mentions that the inhabitants of that city were able to develop rich gardens on their new acropolis thanks to the available water sources.[30] In Athens, gardens existed in the neighbourhoods of the Kallirhoe spring and the Lykeion, just outside of the city wall and gates.[31]
Archaeological sources regarding garden remains in or near houses are very scarce for the Classical and Hellenistic periods in Greece. In a grave in Larisa dating to the 4th century BCE, a meal was preserved consisting of fruits that may have been grown in a garden: pomegranates, almonds and figs.[32] But none of the houses excavated in

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(who asserts that the landscapes of the *perioikoi* in Thessaly were especially suitable for animal husbandry. (Gehrke, H.-J., *Jenseits von Athen und Sparta, Das Dritte Griechenland und seine Staatenwelt*. (München: Beck, 1986) 98.) Furthermore, an inscription dating to the mid 2nd century BCE reports on a conflict between the poleis Halos and Phthiotic Thebes which was resolved at Delphi. The conflict concerned grazing rights near the borders. cf. Daverio Rocchi, G., *Frontiera e confini nella Grecia Antica*, (Roma: "L'Erma" di Bretschneider 1988), 156-161. cf Ager, S., *Interstate Arbitrations in the Greek World.* Hellenistic Culture and Society, 18 (Berkeley: University of California Press, 1996) no. 153, 415-420. who does not mention that it concerns grazing rights. See also Chandezon, C., *L'élevage en Grèce (fin Ve-fin Ier s. a.C.). L'apport des sources épigraphiques*, (Bordeaux: Ausonius, 2003) who concludes that grazing rights in proxeny decrees were more often specified in areas with plentiful grazing grounds, such as eastern central Greece and the northern Peloponnese.

[28] Foxhall L. and H.A. Forbes, "Sitometreia. The role of grain as staple food in Classical Antiquity," *Chiron* 12 (1982): 75.

[29] Plutarch, *Symposium Questions*, 4.2, Dalby 1996. 82 ff.

[30] Diodorus XX, 102,4.

[31] Caroll-Spillecke, M., *KHPOS. Der Antike Griechische Garten*. Wohnen in der Klassischen Polis III. (München: Deutscher Kunstverlag 1982), 25.

[32] Touchais, G., "Chronique des fouilles," *Bulletin de Correspondance Hellénique* 108 (1984): 790.

ancient Greek urban contexts has space for a garden outside and nearby the houses.[33] Some of the ancient sources imply that the courtyard of Classical and Hellenistic houses likely functioned as a space to grow flowers and vegetables or even trees. But this practice has only left us very little traces; occasional holes hewn out in bedrock or courtyard pavement for plants, shrubs and trees[34] and of the presence of so-called flower pots found in domestic contexts. But we have to keep in mind that there were various kinds of *kepoi* and they were used in various ways and locations, yielding different produce. Maureen Caroll-Spillecke divides the gardens in relation to domestic economy up in several kinds: 1. utilitarian gardens, meant for the production of fruits and vegetables such as figs, vines, olives, sesame, basil, mint, myrrh and various nuts; 2. flower and decorative gardens producing roses, anemones, lilies, hyacinths etc. as well as herbs; 3. orchards producing nuts, olives and produce like mulberries, laurel, pomegranates; 4. plantations, large scale agricultural production centres of 4.5-26.5 hectares; 5. vineyards. With regard to the domestic production of food, we will focus especially on the utilitarian garden.

Based on epigraphical and historical evidence, Caroll-Spillecke concludes that courtyards were perhaps used as gardens, and that occasionally city dwellers might have owned a plot of land near their house which they used as a garden, but that production of fruits and vegetables on a larger scale probably came from allotments just outside the city walls, near springs or rivers.[35]

Due to the recent destruction of the architectural evidence at New Halos, the city plan gives us no clues if certain areas of the housing blocks were left empty to be used as allotments. Also, no evidence in courtyards of the houses at Halos has been preserved that points to gardening. In addition, there are no clear historical or epigraphical references relating to the existence of *kepoi* known from New Halos, but reviewing the evidence of the sources above and combining them with the archaeological evidence we have from the houses opens up the possibility for an argument that 'kepoi' were exploited in or near New Halos. First we should consider location: the environment close to the city is very suitable for allotments and especially the area north of the city, just outside the city wall near to the Kephalosis spring and alongside the river Amphrysos could have been well used for gardens. Nowadays, the riversides are situated slightly below the level of the surrounding terrain and could be easily watered, and it can be assumed that that was the case in antiquity as well.[36] Second and perhaps most importantly, particular artefacts found in houses at Halos point to the idea that the inhabitants worked the soil. Artefacts such as those in room 5 of the House of Agathon, consisting of a hoe, a spade, a pick-axe and three pruning knives or sickles, testify to this practice. If this evidence is taken together with the idea that the people living in the houses must have been relatively self sufficient regarding their food resources, we should assume that they, to some extent, lived off small allotments in the vicinity of their houses outside the city walls. Household waste assembled within the houses at Halos will have served as fertilizer and was likely spread out over the gardens at regular times.[37]

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[33] Caroll-Spillecke 1989, 19.

[34] Robinson 1946, 61, tab. 50f. 62.

[35] See Caroll-Spillecke 1989, p.40f for more evidence concerning the locations of gardens near cities.

[36] The water of Kephalosis spring is slightly salty. I have not been able to assess the effect of the quality of this water on particular plant growth.

[37] Caroll-Spillecke 1989, 44f; Haagsma 1997, 36-39; Ault, B. A., "*Koprones* and Oil Presses at Halieis," *Hesperia* 68 (1999), 549-573. Ten years ago there was an intense debate regarding the so-called 'background noise'; ('halos' of sherds around major sites) found in archaeological surveys in Greece. John Bintliff, Anthony Snodgrass and Brad Ault argued that these sherd scatters derive from

Not many sources give us ideas of what was grown in these allotments. Small counts of pollen of the leguminosae family (pulses) and vicia (beans) occurred in the cores taken in the Othris,[38] but it is not clear whether they derive from domesticated species. Olive must have been grown as well, despite the fact that we have no evidence for olive processing in the houses, such as presses. The large storage containers in the houses must have contained significant staple foods that were at least partially the result of local cultivation. The burnt olive pips in the re-occupied south-east gate, the olive presses found there and the enormous capacity of the storage vessels testify to large scale olive cultivation in the area. Olive trees are very slow growers and yield only a good harvest after 30-40 years. Planting olives is therefore a long term investment and the olive trees that provided the inhabitants of the south-east gate with their oil have probably been planted long before the south-east gate was converted into a mansion.
The pollen diagram also shows small counts of the *vitis* family and the soils and climate in the Almiros plain would indeed be suitable for the cultivation of vines, provided that there would be enough water of good quality. At present, especially the north of the plain of Almiros shows intensive cultivation of vines. Many containers, such as lagynoi, olpai and fine ware drinking vessels, such as kantharoi indicate that the inhabitants of Halos drank wine. The wine may not necessarily derive from the vicinity; the large number of transport amphora's found in the houses suggests that the house dwellers may also have consumed imported liquids, such as wine, garos, and olive oil.

6.3.3 Food production and consumption: drying, salting, pickling, grinding, straining and cheese making

Foods that were collected in the wild, or that came from animals, from the land or from the sea were seldom ready to eat. Many food items needed processing before they could be consumed or stored for a longer term, which is what this paragraph deals with.

Pickling, drying and salting

Vinegar was a by product of wine and was indispensable in the Greek kitchen. It was also used for pickling many different kinds of foods, such as shellfish and olives. Also fresh vegetables could be boiled and then pickled to preserve them for a longer time. A variety of containers, such as lekanae and jars, both found frequently in the houses at Halos, would have been used for this relatively short term food storage. For pickled and salted olives, large pithoi would have been used. Dried fruit, such as figs and grapes would have been stored in baskets or in the vessels described above.
Another way to preserve certain food stuffs was to salt them. This was certainly the custom in Hellenistic times; a variety of sources refer to certain fishes as delicacies

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fertilizing the soil around settlements with household waste and manure. The waste included discarded broken pots that had been mixed in with the organic waste. (Snodgrass, A., "Response: the archaeological aspect," in *Classical Greece. Ancient Histories and Modern Archaeologies*, ed. I. Morris, (Cambridge: Cambridge University Press 1994), 199). The evidence at Halieis is indeed strong enough: large rectangular boxes were found in some of the courtyards filled with sherds which were obviously remnants of household waste. The feature found in the courtyard of the House of the Snakes at Halos may represent a well used as a kopron at the time of abandonment of the house (see chapter 2 and Haagsma 1997). If the waste had been used to fertilize the allotments near the town, one may expect the presence of Hellenistic sherd scatters in this area, which would further support the argument for allotments. I have not been able to verify with the Halos Archaeological Survey Project whether this is indeed the case.

[38] Woldring 2003b, 162-163, Fig. 4.4.

and that some of those were preserved in salt.[39] There are not many references that refer to meat preserved in salt, but they are certainly there. Salt meat was served at the Lykaion in Athens.[40] This source does not specify the particular kind of meat, but pork and beef both preserve well in salt, provided that the conditions are dry. We will discuss the evidence at Halos for long and short term storage below, under 'storage'.

Grinding

Cereals may be eaten whole but need a long cooking time necessary to make them edible. Yet, these meals were consumed in Greece; barley gruel was considered a healthy dish.[41] But wheat and barley were mostly ground into flour which was then used to make flatbread, loafs and cakes. Some cereals like wild wheat and barley have hulls that need to be removed. This de-hulling could be done by pounding the grains with pestles or wooden clubs then grinding it and finally sieving it.[42] The cereals were wetted, dried and then deposited in a holmos, a large mortar made of stone or wood and pounded with clubs. This activity is sometimes shown on Greek vases. They invariably show two women standing opposite each other pounding the cereals with alternating movements.[43] No holmoi or saddle querns were found at Halos, but given the fact that every house had grinding equipment; houses also must have held de-hulling tools. Wooden clubs and holmoi could have been used which have left no trace in the archaeological record.

Grinding stones are a highly visible household item in excavations. A total of 13 grinding stones are found in the houses, all of them so-called hopper-rubber type, and a number of hand rubbers/pounders were found as well.[44] These grinding stones would have been used for grinding barley and wheat, which could be used to bake flatbread and cakes. This kind of grinding equipment used up quite a bit of space in the domestic setting. The stones were placed on a higher surface, probably some kind of wooden platform, and a long beam was attached to the upper stone to facilitate the grinding. Grinding grains must have occurred on a regular base and since the equipment was heavy, moving the whole installation would have been highly inconvenient. We can therefore assume that grinding was a recurring static activity, meaning that it would not shift location very often.[45]

In the correspondence analysis, grinding stones are clearly associated with the large room in the houses (see Fig. 6.1). Generally, they appear together with items that point to cooking. If we look at where all the stones are found, we notice that the average number per house is 2. In the House of Agathon, Ptolemaic Coins and the Amphorae the upper and lower grinding stone were found together in positions that suggest that they had fallen of a higher platform.

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[39] Hermippus 63 in Epitome 27e as cited in: Dalby 1996, 105.

[40] Chrysippus of Soli in Athenaeus 137f.

[41] Dalby 1997, 91.

[42] Lin Foxhall experimented with grinding and de-hulling and found it most efficient to pound the grains first, then grind it on a saddle quern with a wooden pestle and then sieve out the hulls. Foxhall and Forbes 1982, 77.

[43] Such as: the Amphora inv. no. 2065 in the Hermitage. In: Étienne, G. and J.Étienne-Germeau, *Documents pédagogiques: Scènes de la vie quotidienne à Athènes.* (Brussels: Ministère de l'éducation nationale et de la culture Française, 1976). No. 47.

[44] For a detailed description of the operation of hopper-rubber mill stones, see Moritz 1958, 42ff. No saddle querns were found.

[45] Monaghan also assumes that grinding stones were used to grind dyeing stuffs, although we should question whether the hopper-rubber mills were used for this kind activity. (Monaghan, M., *Coats of Many Colours: Dyeing and Dyeworks in Classical and Hellenistic Greece*, (PhD diss., University of Leicester, 2001)).

House	Room	Sort of Room	No of grinding stones	Associated artefacts CA analysis
House of the Coroplast	1 + 3	Courtyard + larger side room	2	Coin, mould, figurine, aryballos, doornails, chytra, table amphora
House of Geometric Krater	1 + 3	Side room and large room	2	Hydria, hook, chytra
House of Agathon	3 + 6	Large room and courtyard	3	Cooking pot, knife, hearth, loomweights, bolsal, cup, plate
House of the Ptolemaic Coins	3	Large room	2	Unguentarium, bathtub, pyxis, chytra, miniature bowl, bomiskos, fireplace, brazier, grinding stone, krater, bolsal, amphora, kantharos, domestic mammals, marine molluscs
House of the Amphorae	2	Side room	2	Domestic mammals
House of the Snakes	8 11 + 14	Large room and courtyard	2	Rubber, Cooking pot, chytra, jug, hearth, loomweight, pot, snakes
Total			13	

Table 6.1. Distribution of all grinding stones.

The distribution shows a great regularity: all of the houses had grinding equipment and thus could make their daily bread, provided they had the grain. The fabrication of flour was usually done in the large room, where there was enough space for the hopper-rubber installation.
This contrasts with Olynthus where 39 individual examples of the hopper-rubber were found, together with 15 saddle querns, of which 7 come from a single house.[46] The contexts in which the stones are found back differ significantly from those in Halos. Cahill reports that stones were sometimes found in spaces obviously meant for storage, or in rooms with a bath.[47] This makes Cahill conclude that at least some of the grinding stones must have been stored. But the majority of the stones were found in well lit spaces such as in pastades or courtyards, where they must have been used.[48] The fact that not every household in Olynthus contained grinding equipment may mean that for some Olynthian households the making of flour took place elsewhere. Part of the population probably bought there bread in commercial bakeries, where grain was ground, dough was kneaded and bread was baked as has been identified in House Aviii 8 or bought ready ground flour at the miller in house A6.[49] Here we find a significant difference with Halos; the presence of grinding equipment in all houses implies that the grinding of flour and the production of bread was not a specialized domestic industry, but was part of the chores of the households. The images of women de-hulling cereals suggest that the other activities related to the processing of grains such as grinding, sieving and baking was done by the female members of the household.

[46] Cahill 2002, 163ff.
[47] In the House of Many Colours. Cahill 2002, 165.
[48] In comparison, the houses at Halieis all yielded grinding equipment, usually one or two grinding slabs, or rubbers. Ault 2005, 110ff.
[49] Cahill, 2002, 248f. Commercial grinding took place found in House A6, where also a press bed was found. (Cahill 2002, 242f).

6.3.4 The production and consumption of secondary dairy products

Reinders and Prummel proposed that large scale pastoralism including transhumance was a major economy in the polis Halos.[50] Such an economy would have left probable traces in the domestic realms of the inhabitants of the houses. That is the reason why, in this section, we pay attention to cheese making and textile industry as possible evidence for such an economy.

Cheeses were widely known in ancient Greece and it seems that every region had its variety of cheese. Several ancient sources indicate that cheese and 'oxygala'[51] making was a regular activity of those who owned animals.[52] Not much is known about the art of fermenting dairy products in antiquity and we have to rely partially on modern analogies to understand the process and assess the necessary equipment in making these products.

As we have read above, the animals, cattle, sheep and goat, kept at New Halos, were mostly slaughtered when they were more than three years old, meaning that for the first three years of their lives, they were kept for wool and for their milk. Dairy products can only be kept for a limited time; in hot weather especially, milk quickly becomes colonized with bacteria and goes sour within hours. Dairy was therefore transformed into a fermented form in which it could be preserved for a longer time and be sold off as surplus: cheese and yogurt.[53] This production process was usually done in the vicinity of where the milking took place.

The process of cheese and yogurt making consists of gathering the milk in containers and, in the case of cheese, adding rennet for which fig sap was usually used.[54] Warming of the milk is necessary to facilitate the formation of curds. The curds are put into a sieve or strainer lined with cheese cloth to filter out the remaining whey. The curds could then be pressed by hand into the desired form. Salt was added and the cheese could be left to dry and to ripen or could be packed in brine to ripen or in leaves to remain soft.[55] There is, in fact, not much equipment needed for cheese making.[56] What would be needed are pots to warm the milk, a fire, cheese cloth,

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[50] Reinders 2004, Reinders and Prummel 1998.

[51] A kind of yogurt. Galen, *On the properties of food*. 3.15

[52] Homer, *Odyssey*, 9.219, 246-9 and Aristotle, *Study of Animals* 522a22-b6.

[53] Butter was not an indigenous Greek product; it was produced in Thrace and was known to the Greeks as 'cow cheese' (boutyro) (Dalby 1996, 66, 226). In winter, the animals mostly cease to give milk and cheese would have been part of the foodstuffs that were being produced in surplus, to rely on in winter time.

[54] Dalby 1996, 66. Aristotle's *History of Animals* (522b) contains an excellent section on cheese making. See also Isager, S. and J.E. Skydsgaard,. *Ancient Greek Agriculture*. (London: Routledge, 1992), 91.

[55] Dalby 1996, 66.

[56] Also nowadays cheese is easy to make at home and elaborate equipment is not needed. I make cheese regularly (with lemon juice as rennet) and use a pot, a plate, cheesecloth, a knife and a wooden cutting board. I have seen Sarakatsani women make cheese on a larger scale. They used a bronze 'kazani' which was coated with tin on the inside for storing and warming the milk, cheese cloth and a second container, and strainers. Theodoros Arapis, the Sarakatsani owner of a dairy store in Almiros, invited our group in the spring of 1991 to his cheese and yogurt production shed in the nearby village of Platanos, followed by a family dinner. The curds of feta do not get pressed, but they are left in a metal strainer to set. After a day or so the cheese is removed from the strainer, salt is added and the feta is stored in salted brine to ripen.

In the summer of 1989 Reinder Reinders invited a group of students to visit two Sarakatsani brothers Giorgos and Vangelis Tsinis who were staying with their flocks of sheep and goats in the summer pastures on Mount Othris. They had two *konakia*, both made of thatch, wood and plastic tarp. One of these was used as living quarters, the other for making cheese. One of the brothers was always

strainers and a surface to mould and cut the cheese.[57] If hard cheese is made the curds would be put into wooden moulds which were pressed down by weights.[58] Yogurt is made by warming milk and adding an active yogurt culture. We may assume that the inhabitants of Halos consumed secondary dairy products such as these. But the question is whether these secondary products were actually produced by the households themselves and, if so, were they made *in the houses*.

As we have seen, 'the tool kits' for making cheese are rather simple, but two problems arise: the first is that many items used in the production process may have been used for something else as well. Strainers can be used for washing fruits and vegetables, sieving flour as well as draining cheese. Various strainer fragments have been found in the houses at Halos, but only two were relatively complete.[59] The ones that were complete enough to participate in the analysis were found in room 4 of the house of the Coroplast and in room 1 of the House of the Broken Amphorae. Secondly, many tools involved in making cheese are made of perishable materials. But one item for making cheese stands out and that is the vessel necessary for boiling milk. Up until recently large bronze 'kazania' were used and smaller versions of those, used as cooking vessels have been found in Olynthus We have found no such metal 'kazania' in New Halos, although the iron handle of one was found in room 5 of the House of Agathon. Milk could of course also be warmed in simpler cooking pots such as lopades, chytrae and 'stewpots' that have been found in abundance. But the volume of these pots betrays that *if* cheese was being produced at all in the houses it would have been on a small scale.

If cheese and yogurt were made in the houses, the animals must have been located near or even in the houses at milking time. Written sources imply that it was not uncommon to keep animals in the courtyard of houses.[60] However, a soil sample taken from the pit in the courtyard of the House of the Snakes turned out to be negative for the presence of excrements, which means that the pit was not used for the collection of dung, but for different organic matter which could not be otherwise specified.[61] This result can, however, not be taken as evidence for animals not being present in the

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responsible for transporting the cheese and selling it in Almiros (by horse and car), while bringing supplies back up the mountain.

[57] This is how Wace and Thompson describe the area in which Vlachs in Samarina make their cheese: 'This place, where the milking stones are, is roofed in with rough planks on rafters laid over forked sticks, and forms the porch of the *kashari* proper, where the mysteries of cheese making are carried on. This is a long oblong shed boarded in at the sides, but open at the ends. In one corner is a locked cupboard where made cheese can be kept, also bread and any implements not in use. Along one wall is a long, inclined wooden table where cheese can be laid to drain. In the centre is a round hearth, under a hook hanging from the ceiling, and walled in with stones on which are propped the pails in which the milk is boiled. Along the other side will be a row of tall slender tubs in which the cream is kept ready to be made into cheese. From the roof beams are hanging several bags containing half made cheese from which the water is being drained out." Wace, A.J.B. and M.S. Thompson, *The Nomads of the Balkans*. (London: Methuen and Co., 1913), 78.

[58] Wace and Thompson 1913, 79.

[59] These strainers were relatively small with rim diameters ranging from 8-13 cm. A much larger strainer of Hellenistic date was found in Pharsalos of which the authors suggest that it was instrumental in the making of white cheese: Karapanou, S. and S. Katakouta, "Angeia me eidikh xrhsh apo th Farsalo," in *Ellhnistikh Kerameikh apo th Thessalia*, ed. E. Kypraiou, (Athens: Hellenic Ministry of Culture, 2000) 112f. The rim diameter of this vessel was 21 cm and its height was 53 cm.

[60] Aristotle, *Oikonomika* I, vi, 7-8, but he seems to refer here to farmsteads.

[61] Schelvis 2003, 223-229.

houses; also no evidence was found for human excrements and humans were certainly present in the house.[62] But there are other considerations to be taken into account.
If animals were kept in the courtyards of houses at all then the number could not have been large; the courtyard areas average between 50-60 m2 in which one could keep 20 or so animals at the most. To keep animals as sheep and goats in courtyards must have been a rather smelly business too: fresh animal dung attracts large numbers of flies and other insects which would have been highly inconvenient for the inhabitants. It would therefore have been more likely that sheep and goat pens were located at some distance of the living quarters in Halos, perhaps outside the walls, near the spring. Fowl, such as chickens may have been kept in courtyard areas.[63]
If households sustained themselves partially or completely with animal husbandry, then animals were likely kept in pens near the city, where they were milked and from which they were herded. It is inconvenient to transport milk over large distances to the houses in order to make cheese. This combined with the fact that we find no items related to large scale cheese production in the houses suggests that cheese and yoghurt were made in the vicinity of where the animals were kept and not in the houses.

6.4 The Storage of food
Greek households mostly produced a surplus of food stuffs, both for economic reasons as surplus was traded, as for the survival of the household itself. In order for the household to be self-sufficient surplus was needed and consumed in 'bad years' or in situations where the location of the land used in the procurement of food was unsuitable.[64] 'Bad years' were years of drought affecting harvests, years in which disease or flooding struck etc. Other external situations sometimes contributed to subsistence crises as well such as war, destruction and disrupted trading routes. However, as Gallant points out, the causes of subsistence crises are interesting to know, but they can never fully serve as an explanation of a crisis. In the study of domestic economy, it is much more informative to study the nature and degrees of anticipation of and response to such hazardous situations, because it provides us insight into the social and economic systems in which households operate.[65]
One of the best strategies for minimizing risk in food supply is diversification of crops and other produce.[66] The natural environment at New Halos, as we have seen above, was suitable for such diversification. The availability of large containers and techniques of preserving diverse food stuffs made it possible for the inhabitants of the houses to store produce for a longer period of time for periods of uncertainty.[67] Part of the produce, fresh or preserved, could also be sold, traded, shared or given away; in horticulture fruits and vegetables usually ripen all at the same time and the, at that

[62] There is another problem with the sample taken from the House of the Snakes; this house is the only house with a courtyard 'at the back of the house'. If animals were kept at the house, they had to move through corridor 7/9 first to enter the open area of the house. It is very unlikely that that would have happened. Better candidates for possible but limited animal keeping are the House of the Ptolemaic Coins, the House of Agathon and possibly the House of the Geometric Krater.
[63] Also in nomadic cultures such as those of the Vlachs and Sarakatsani, animals pens are usually located near the settlement, but not directly bordering the living area. Wace and Thompson 1913, 78.
[64] Garnsey P., *Food and Society in Classical Antiquity*, (Cambridge: Cambridge University Press, 1999), 23.
[65] Gallant, T., *Risk and Survival in Ancient Greece,* (Cambridge: Polity Press, 1991), 5.
[66] Garnsey 1999, 25.
[67] Gallant, however, does not consider the preservation of food stuffs an adequate strategy for minimizing risk of famine due to the deterioration of stored food stuffs over time (Gallant 1991, 97-98), but Cahill (2002, 229 and note 33) convincingly points out that under the right conditions (dry, free of pests), food and especially cereals keep well over time.

House	Room	Sort of Room	No lekanae	Light	Associated artefacts CA analysis
House of the Coroplast	4	Side room	1	From alley?	Amphora, pithos, loomweight, domestic mammals
House of the Coroplast	5	Side room	4	From courtyard?	Lekane, krater, lebes, bead, ring, figurine
House of the Coroplast	7	Large room	1	From courtyard?	Hearth, marine molluscs, chytra
House of the Coroplast	9	Side room	1	From courtyard?	Coin, lekanis, astragalia
House of Geometric Krater	1	Side room	1	None?	
House of the Geometric Krater	2	Side room	1	From courtyard	Coin, lopas, weight, lagynos, playstones, astragalia, cup, kantharos
House of Agathon	5	Side room	1	From courtyard?	Loomweights, hook, sickle etc.
House of Agathon	7	Larger side room	2	From courtyard	
House of the Ptolemaic Coins	3	Large room	1	From courtyard	Unguentarium, bathtub, pyxis, chytra, miniature bowl, bomiskos, fireplace, brazier, grinding stone, krater, bolsal, amphora, kantharos, domestic mammals, marine molluscs
House of the Ptolemaic Coins	7	Larger side room	2	From courtyard	
House of the Amphorae	1	Side room	1	?	Lekane, rubber, strainer, pyxis, cooking pot, lid, chytra, loomweight, juglet
House of the Amphorae	6u1	Side room	1	?	
House of the Snakes	2	Side room	1	?	
House of the Snakes	4, 10, 13	Courtyard	6	yes	Domestic mammals, marine molluscs, lagynos, well
House of the Snakes	9	Corridor	2	From street and courtyard	
Total			26		

Table 6.2. Distribution of lekanae and association with other artefacts.

time, fresh or preserved surplus could be exchanged for money, other products and favours, or could be put to use in cementing social relations and appease the gods.
Smaller containers at Halos have been found that could have served as relatively short term storage containers. These include jars, lekanae, tubs, jugs and amphorae and there may have been more containers that have not survived over time, such as those made of leather and twigs (baskets) for storage of dried fruits.
The problem here is that part of these smaller containers could also easily been used for activities involved in food processing and serving, dyeing and washing. Of the vessels mentioned above, the various forms of closed pouring vessels, especially those defined as 'jug', may have had a role at the table, in the process of cooking or in the storage area. The only area in which we find jugs and other containers for liquid associated with large scale storage containers is in room 5 of the House of the Amphorae, although the presence of the amphorae in this room is not statistically significant.
Another such multifunctional vessel is the lekane. We can see this back in the analysis in the previous chapter: both jugs and lekanae are not strongly associated with particular areas and if they do, they are associated with a large variety of other

artefacts. It is interesting to note that lekanae are strongly associated with the courtyard of the House of the Snakes, together with marine molluscs and a well which may have been in use as a pit for household waste at the time the houses were abandoned. They may have been here used to assemble household waste, like molluscs and bone fragments to be thrown into the rubbish pit. Lekanae are not strongly associated with other storage vessels, such as pithoi and amphorae, with exception of a single item in room 4 in the house of the Coroplast. This counts for the other vessels as well and we should conclude that storage of food items on a small scale and for a short term are not spatially associated with large scale storage of staple foods as described below. The reasons for this may be that some food items may have been stored in perishable containers, the storage may have been short term and may not have had a strong designated formal 'place' in the house.

The grinding stones found at Halos which we discussed above are a good proof that the inhabitants of the houses ground cereals on a regular base. Flour does not keep well over time and that is why cereals must have been stored as seeds. Since cereals formed such an important part of the diet, the storage of cereals must have been a large scale business. Cereals are harvested once a year, in May and June after which they are transported and traded and redistributed by merchants, added to a communal cereal 'cooperation' or stored in houses as property.

Grain played an important role in Greek society overall, not only in the role of major staple food, but also in Greek mythology and religion.[68] Cereals were used in sacrifices and other rituals and one of the major etiological myths in Greek antiquity, the origin of agriculture, was intertwined with myths and cults of Demeter and Persephone. These cults often had a major role in Hellenistic urban communities and the fertility aspect it celebrated was not only connected to the seasons, life and death and the procurement of food, but also to the life cycle and reproduction of the community of citizens as a whole. It has recently been determined that Halos had a sanctuary dedicated to Demeter and Kore.[69]

As we concluded above, Halos may have been partially dependent on the import of grain. This dependency probably had consequences for the economic viability of the citizen community and the sustainability of household economy. This is an important topic that will be discussed in the final chapter.

Different figures have been proposed of how much cereals were consumed by a regular household in antiquity. Foxhall and Forbes assume that the amount of wheat necessary per household per year was 1419 kg max. This rather large figure was, admittedly, based on information concerning grain distribution, not consumption.[70] The amount necessary to stay alive was lower and ranges from 490-600 grs per person per day on average, based on the calorie intake of the average person which amounts to 895-1095 kg per household.[71]

Grain was stored in pithoi, but could also be stored in baskets or bags. The last would not keep in the archaeological record but pithoi were certainly found at Halos sometimes together with lids. Not a single complete pithos was found. Far from that:

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[68] Garnsey 1999, 18.

[69] Colette Beestman-Kruyshaar determined that the so-called sepulchral building at Halos (Reinders 1988, 137-147) was –in fact- a sanctuary dedicated to Demeter and Persephone. I will discuss the significance of part of the votives found in this sanctuary below in the paragraph on terracotta production and consumption. Further support for a cult dedicated to Demeter came from the recent discovery of an inscription in a two roomed structure near the south-western corner of the city's fortifications. The inscription was inscribed on a (votive?) base to Demeter (Nikolaou, 2000, 395).

[70] Foxhall and Forbes, 1982.

[71] Garnsey 1999, 20.

almost all the specimens were heavily damaged and we mostly found the rims and sometimes part of the wall fragments. That this is a consequence of the particular site formation processes at Halos has already been discussed in chapter 3. But the storage of grain was not the only use of pithoi; they could be utilized for the storage of salted olives, olive oil and wine as well. The coastal areas of Thessaly are excellent environments for the olives and it may well be that some of the inhabitants were involved in their cultivation. Wine may have been usually stored in amphorae. A large number of transport amphorae have been found in the houses, some of which have been made in wine producing areas such as Thasos, Chios and Rhodes.[72]

In the correspondence analysis pithoi and amphorae are sometimes associated together with a single room, such as room 4 of the House of the Coroplast and room 5 of the House of the Snakes. But the fact that in most instances the amphorae and pithoi were deposited in different rooms suggests that different types of storage existed and that they were not always confined to a single area in the house.

Storage vessels are, overall, strongly associated with side rooms. Only one of the 17 pithoi identified at Halos has been found in a large room. Amphorae are more widespread and it may be that they were used for both long term storage of various fluids as for use 'on the spot'. It is interesting to see that the areas which are strongest associated with pithoi (room 4 of House of the Ptolemaic Coins; room 4 unit 1 House of the Amphorae, room 6 House of the Snakes) are not associated with amphorae. In those houses the multitude of amphorae was found elsewhere (rooms 3, 5 and 5 respectively). This means that in some houses specific areas were designated for the storage of liquids, likely wine, and others for other foodstuffs, such as cereals, olives and perhaps oil.

If we compare the presence of storage vessels with the results of the correspondence analysis we see that there is a strong relationship between the location of storage vessels and groups of loomweights. They occur often in the same room, such as in room 4 of the House of the Coroplast, rooms 2 and 5 of the House of Agathon, room 4 of the House of the Ptolemaic Coins; room 1 of the House of the Amphorae and room 8/11 of the House of the Snakes. This indicates that loomweights were stored or looms were set up in storage areas. The implications of this association will follow below in a more detailed discussion on domestic textile production at Halos.

How do the houses compare in terms of storage capacity? To answer this question would tell us about possibly different storage behaviours amongst the inhabitants of Halos and possible differences in property or household size. Because the *pithoi* have been found in a fragmentary state, we have not been able to determine the exact capacity of each vessel. But the diameters of the rims indicate that they were roughly of similar size. The amphorae were better preserved and it thus proved easier to make the calculations. Colette Beestman has determined that most transport amphorae (type 1) can hold between 37.8 and 59.4 litres. These were the most frequent ones and they were found in all houses. Other types that have been found could contain between 10-29 litres.[73]

Table 6.4 indicates a significant variation in the presence of storage vessels in the houses. The smallest houses are associated with the smallest number of storage

[72] Beestman-Kruyshaar 2003, 90f. One of the few amphora stamps found was a stamped handle found during the survey at Magoula Plataniotiki. The stamp was from a workshop at Thasos in use around 275 BCE.

[73] Beestman-Kruyshaar 2003, 90f. A single so-called table amphora of small size was found in room 3 of the House of the Coroplast, which will be considered below, under consumption of food and drinking.

vessels, with the exception of the House of Agathon, where especially the amphorae are adding to the numbers. Especially the number of *pithoi* found, adds to the deviation and here too we see that the largest houses are associated with the largest number of vessels. If we assume that the pithoi mostly held cereals and that they were of similar size, as were the majority of those found at Olynthus, we can surmise that only the House of the Amphorae and the House of the Snakes were more than self sufficient in terms of feeding the household.[74] But the others are certainly not. Compared to Halieis, the Halos houses score low on the presence of large storage containers. There, the number of pithoi ranges from two to 14 per house. For houses, like that of the Coroplast, where other domestic economies have been identified, the low number of pithoi can be explained. If their domestic economies were generating cash, the household will have bought cereals elsewhere. But this may not be the whole story and we may ask whether the differences in storage capacity and house size be an indication of differences in wealth of the households?

We should not jump to conclusions. Strategies concerning the storage of surplus can vary according to the stage of the 'life cycle' of households and the economies on which individual households are dependent. Storage containers could also have varied and some may have been made of perishable materials as leather or twigs. In addition, there are other things to consider.

Cahill has determined that at Olynthus, the houses with large scale storage are all located in the villa section, where the houses are larger. Just like in the 'small' houses with a surface area between 154 and 166 m2, the houses on the north hill at Olynthus had one or two pithoi at the most, each holding a few hundred litres; not enough to store food for a year. This seems to repeat the pattern that we witnessed at Halos, except for the fact that the large houses at Olynthus are spatially removed from the houses on the north hill. At Halos 'large' and 'small' houses seem, at first glance, distributed unevenly over the housing blocks.

[74] Only one of the pithoi at Halos may give any indication of volume. The pithos nr. P257, found in room 1 of the House of the Amphorae bears, apart from various seal impressions, an inscription which is difficult to read. Since it contains the letter 'wau' it must refer to a number, since in the Hellenistic period the wau was not part of Greek alphabet anymore and only used for numbers. The first letter(s) are either two lambda's or one m, the second letter is a wau, the third a lambda and the last one probably a iota. This order makes no sense, however, and I have not been able to come up with a satisfactory interpretation for the lettering. According to Gallant the pithoi found at Olynthus could contain 248-424 kg of wheat (Gallant 1991, 93). But since this number is contested (see Ault 2005, 72) and the fact the pithoi can be divided into 'normal' ones and 'very large' ones (Cahill 2002, 233), we better take the first number.

House	Room	Sort of Room	No of Pithoi	No of Amphorae	Light	Associated artefacts CA analysis
House of the Coroplast	3	Large side room		2	From courtyard	Mould, figurines, aryballos, doornails
House of the Coroplast	4	Large side room	1	1	From alley?	Loomweights, domestic mammals
House of the Coroplast	7	Large room		1	From courtyard?	Hearth, marine molluscs, chytra
House of the Geometric Krater	2	Side room		1	From courtyard?	Coin, lopas, weight, lagynos, playstones, astragalia, cup, kantharos
House of Geometric Krater	4	Courtyard		1	yes	
House of the Geometric Krater	5	Side room	1?	2		
House of Agathon	1	Side room	1 + 2 lids	1	no	Krater, kantharos, lekythos, bowl, plate
House of Agathon	2	Side room		1	From courtyard?	Loomweights
House of Agathon	5	Side room		6	From courtyard?	Loomweights, hook, sickle, hoe etc.
House of Agathon	6	Courtyard	1		Yes	Bolsal, cup, plate, fireplace
House of Agathon	7	Large side room		2	From courtyard	
House of the Ptolemaic Coins	3	Large room		4	From courtyard	Unguentarium, bathtub, pyxis, chytra, miniature bowl, bomiskos, fireplace, brazier, grinding stone, krater, bolsal, amphora, kantharos, domestic mammals, marine molluscs
House of the Ptolemaic Coins	4	Side room	2 + 1 lid		No	Loomweights
House of the Ptolemaic Coins	5	Side room		1	From courtyard	
House of the Amphorae	1	Side room	1	1		Lekane, rubber, strainer, pyxis, cooking pot, lid, chytra, loomweight, juglet
House of the Amphorae	2	Side room	1	3		Domestic mammals
House of the Amphorae	4 u 1	Side room	4+ 1 lid			
House of the Amphorae	4 u2	Small hall		1		Kantharos, krater
House of the Amphorae	5	Side room	1lid	5		Lagynos, hydria, cup/bowl, olpe
House of the Amphorae	6u1			1		
House of the Snakes	1	Side room	1	2	no	
House of the Snakes	2	Side room		3		
House of the Snakes	5	Side room	2	5	From courtyard	Domestic mammals
House of the Snakes	6	Side room	2		From street?	Bathtub, unguentarium, pyxis
House of the Snakes	7/9	Corridor	1?	4	Street/pastas	
House of the Snakes	8/11	Large room	1		Street?pastas?	Grinding stones, rubber, cooking pot, chytrae, jugs, hearth, loomweight, pot and snakes
Total			17	48		

Table 6.3. Distribution of large storage vessels.

House	Pithoi	Amphorae	Pithos Lids	Total
House of the Coroplast	1	4		5
House of the Geometric Krater	1?	4		4
House of Agathon	2	10	2	14
House of the Ptolemaic Coins	2	5	1	8
House of the Amphorae	6	11	2	19
House of the Snakes	6 + 1?	14	1	21
Total	**17**	**48**	**6**	**71**

Table 6.4. Numbers of storage vessels per house.

The houses on the north hill were not less wealthy in terms of their price and architectural articulation.[75] An explanation may be that some of the households relied on communal storage; storage facilities of the city, where taxes could be paid and deposited in the form of grain.[76] For the north hill in Olynthus some families may also have sold off the grain they produced and then relied on the market, or on storage of family members elsewhere, to supply the household. Cahill identifies some possible central storage facilities on both the north and south hill of Olynthus, serving as storage for the community in times of hardship or as a reserve from which the citizens could buy. The question is whether this may have been the case at Halos as well. Central facilities for grain transport and storage were not unheard of in newly established Hellenistic cities; an inscription records the donation of grain elevators by Seleucus I to Antioch-on-the-Orontes.[77] But we have as yet no evidence for central storage at Halos. Given that a relatively small area of the city was excavated, this should not be surprising.

The remains of the largest houses and the largest storage capabilities could also be interpreted as inhabited by landowners who were engaged in agricultural processing and who sold their surplus on the market. But if we take the capacities of the average storage containers found at Olynthus as a starting point, the number of storage containers found in the large houses at Halos would be just enough to support the average family.

We should therefore conclude that *if* part of the inhabitants relied on selling their agricultural produce and worked as merchants, then we have not found their storage facilities. Grain storage facilities such as found in the Olynthian houses we have not found (yet) in Halos.[78] And perhaps they never existed; we may therefore question where the inhabitants of the *smaller* houses received their cereals from. The bottom line of our analysis is this: the total capacity of the storage facilities found at Halos does not cover the domestic need for the most important staple food: grain. In the next chapter we will consider this observation in its environmental and historical context.

[75] 'The houses sold for more than those in the villa section and they were decorated with mosaics and wall paintings and other luxurious features' (Cahill 2002, 233).

[76] An example is the Athenian tax law of 374/3 which demanded that the grain needed to be heaped up at the Aiakeion, a building identified in the Athenian agora. (Cahill 2002, 235.)

[77] Guidi, I., Una descrizione araba di Antiochia. *Rendiconti dell'Accademia dei Lincei. Classe di scienze morali storiche e filologiche.* vol. 6 (1897): 156.

[78] Cahill 2002, 248.

6.5 Food processing and cooking: boiling, stewing, grilling, frying and baking

Ancient sources frequently tell us about what ancient Greeks ate, but not as much as how they prepared their meal. We may assume that some food was eaten raw, but much was eaten cooked, baked and grilled. The utensils for making bread and for other cooking have been summarised by Brian Sparkes in his fundamental article on the Greek kitchen in which he evaluates domestic evidence from excavations, scenes in vase painting, terracotta figurines and literary sources.[79]

Archestratus, the Sicilian cook who wrote a cookbook called the *Life of Luxury* which only survives in citations by Athenaeus, tells us about the 'Thessalian roll', a circling whirl of dough well kneaded by hand; they call it 'crumble' there, emmer-bread as others say.'[80] This may be an unleavened kind of bread baked in a similar kind of way as flatbread.

A tub was needed to hold the meal and a lid needed to fit tightly to keep out insects and other pests. Dough was kneaded on a tray, made out of wood, stone or terracotta and since no large trays were found at Halos, we assume they were made out of wood.[81] Bread needs to be baked, but no remnants of ovens or even barrel ovens were found at Halos. Leavened bread may have been bought at a bakery shop, but the presence of grinding stones in all the houses suggests that the inhabitants of the houses regularly made their own bread. These breads were likely flatbreads that could be baked in a terracotta pan or on a hot stone.

Boiling and stewing must have been done in terracotta pots and pans, or perhaps metal ones, which have been taken during or after the abandonment of the site. Plenty of cooking ware was found at Halos, almost exclusively consisting of chytrae and lopades. These pots with their rounded bases cannot stand on their own and need a support to be used or they could be placed in hot ashes to facilitate the cooking process. Such a support was the brazier and they have been found regularly in domestic contexts in Athens and Olynthus. A brazier could also be used for grilling meat on an iron or wooden spit and roasting it above the fire.

Sparkes and Cahill conclude that because of the portable nature of the cooking utensils, especially regarding the brazier, 'mobility was a marked characteristic of Greek cooking equipment.'[82] This is further supported by the fact that the room that was identified as the kitchen complex, based on the presence of architectural characteristics such as a flue, at Olynthus was but rarely associated with cooking equipment. Cooking, the authors stress, was, relevant to season or preference, performed in various places of the house, inside, but also in the courtyard. The hearths found in the so-called oecus complexes at Olynthus, Cahill concludes, did not have a role in the process of cooking.[83]

Halos provides us with a different picture. The correspondence analysis has shown that –even though at first sight cooking gear seems to be quite evenly distributed over the rooms – cooking vessels are closely associated with fixed fireplaces in large rooms. Not all of these fireplaces were real 'hearths' demarcated by hearth stones. In fact, only two of such hearths have been found: one in room 8/11 of the House of the

[79] Sparkes, B., "The Greek Kitchen," *Journal of Hellenic Studies* 82 (1962):121-137.
[80] Archestratus in Athenaeus 111f as cited in Dalby 1996, 121.
[81] Sparkes 1962, 126.
[82] Sparkes 1962, 127.
[83] Cahill 2002, 160. This repeated by Lynn Foxhall (Foxhall, L., "House Clearance: unpacking the 'kitchen' in Classical Greece," in *Building Communities. House, Settlement and Society in the Aegean and beyond,* ed. R. Westgate, N. Fisher, J. Whitley, British School at Athens Studies vol. 15. (London: British School at Athens, 2007) 240.

Snakes and more recently in the House of the Tub.[84] But traces of fire places were found in the centres of rooms 5 and 7 of the House of the Coroplast and rooms 3 of the Houses of Agathon and the Ptolemaic Coins.[85] Traces of fire were, however, also found in various other spots of the houses, such as in room 1 of the House of the Snakes, room 3 of the House of the Coroplast and room 7 of the House of Agathon. These spaces may perhaps be interpreted as fireplaces where braziers were set up, since hearths were not always located in the centre of rooms. In a variety of instances hearths in Classical houses were found next to a wall, in which the wall may have supported the suspension of cooking pots.[86] None of these places were clearly demarcated, such as with stones and in the case of Halos we have to be careful with associating these remains with fire for cooking. The ashes and charcoal found may have been remains of wooden items, such as furniture, burnt during or after the abandonment of the houses. A clear example of a hearth found next to a wall was the hearth found in room 3 of the House of the Tub. It is clear from the form of the hearth and the way it is embedded into the wall that the wall included part of the chimney.[87]
The distribution of all cooking ware as associated with rooms and other activities is as follows.
The fact that so many chytrae are found at various places in the house may indicate that they were used for other activities than cooking and boiling alone. I do not believe that their distribution is an indication of the mobile character of cooking in the houses at Halos, since we have a rather severe lack of mobile cooking devices like braziers. Only one set of brazier fragments were found, in room 3 of the House of the Ptolemaic Coins. Besides, part of the cooking utensils may have been stored when not in use, an issue that we have already discussed above. Cooking will have been performed on or near the hearths, mostly in the large rooms of the houses and occasionally in smaller rooms, such as room 5 of the House of the Coroplast where cooking vessels are associated with traces of fire in the centre of the room.
Chytrae are by far the most popular kind of cooking vessel. Many of them are fairly small in size with a body diameter ranging from 9-23 cm. They may have contained 1 litre at the most. Only a few truly large cooking vessels were found which would be suitable for making meals for multiple people. With the lopades or casseroles we see the same issue; also here the widths of the vessels are no more than 14-24 cm,[88] the size of a modern small frying pan and most of them could not even contain half a litre. ‘Cooking pots or ‘stew pots’ are slightly larger, but, again, truly large vessels are an exception. The largest cooking vessel was a stew pot found in room 4 of the House of the Ptolemaic Coins in association with pithoi and other storage items. This vessel, weighing more than 1.3 kgs and with a height of almost 30 cm seemed to have been mended and repaired in antiquity. It may have served more a storage purpose than a cooking one.

[84] Reinders, per comm. I was able to visit the second excavation season of the House of the Tub in 2009 and saw the large hearth in room 3 of the House of the Tub.
[85] The majority of these ‘undemarcated hearths’ consisted of a cobbled platform containing charcoal and ashes. I have not been able to find whether that was the case in room 7 of the House of the Coroplast.
[86] For a comprehensive overview of fireplaces in Greek houses see Tsakirgis, B., “Fire and Smoke: Hearths, Baziers and Chimneys in the Greek House,” in Westgate 2007 et al., 225-231.
[87] The distribution of pottery and other items in the House of the Tub is not part of this research and I can therefore not say whether this hearth is associated with cooking pottery.
[88] Beestman-Kruyshaar 2003, 85.

House	Room	Sort of Room	No of chytrae	No of lopades	No. of cooking pots	Fireplace/traces of fire	Tot.	Associated artefacts CA analysis
Coroplast	1	Courty.proth.			1		**1**	
Coroplast	3	Larger side room	6	1	1	Charcoal and ash NE corner of room	**7**	Mould, figurine, aryballos, doornails, amphora
Coroplast	4	Larger side room		2			**2**	Amphora, pithos, loomweights, domestic mammals
Coroplast	5	Side room	2	2		Ash and charcoal in centre	**4**	Lekane, lebes, krater, bead, ring, figurine
Coroplast	7	Large room	3		1	Cobbled platform in centre. Ashes, charcoal?	**4**	Domestic mammals
Geometric Krater	1	Side room	1				**1**	
Geometric Krater	2	Side room	1	2	1		**4**	Coin, weight, lagynos, playstones, astragalia, cup, kantharos
Geometric Krater	3	Large room	1				**1**	Grinding stone, hydria, hook
Geometric Krater	4	Courtyard.pastas			1		**1**	
Geometric Krater	5	Side room	1				**1**	
Agathon	1	Side room	3		1		**4**	Krater, kantharos, Lekythos, Bowl, Plate, pithos, Lid
Agathon	2	Side room	1		1		**2**	Loomweight
Agathon	3	Large room	2		1	Charcoal remains in centre of room	**3**	Grinding stone, knife, loomweights
Agathon	5	Side room	5 plus meathook			Traces of fire throughout room	**5**	Loomweight, hook, sickle, hoe, many items etc.
Agathon	6	Courtyard/pastas	1			Clean fireplace?	**1**	Bolsal, cup, plate
Agathon	7	Large side room	1			Charcoal remains alongside walls	**1**	
Ptolemaic Coins	3	Large room	3 plus fork			Charcoal remains in centre of room	**3**	Unguentarium, bathtub, pyxis, chytra, miniature bowl, bomiskos, fireplace, brazier, grinding stone, krater, bolsal, amphora, kantharos, domestic mammals, marine molluscs
Ptolemaic Coins	4	Side room			1 (very large)		**1**	Pithos, pithos lid, loomweight
Ptolemaic Coins	6	Courtyard/pastas	1				**1**	
Amphorae	1	Side room	4	1	1		**6**	Lekane, rubber, strainer, pyxis, cooking pot, lid, chytra, loomweight, juglet
Amphorae	4u2	Hall	1				**1**	Kantharos, krater
Amphorae	5	Side room	3		1		**4**	Lagynos, hydria, cup/bowl/olpe
Snakes	1	Side room	2	2		Charcoal remains alongside E wall	**4**	
Snakes	2	Side room		1			**1**	
Snakes	3	Large side room	6	1			**7**	Krater, askos, lekanis
Snakes	4	Courtyard		1			**1**	Domestic mammals, marine

								molluscs, lagynos, lekane, well
Snakes	5	Side room	1				**1**	Pithoi, amphorae, domestic mammals
Snakes	7/9	Corridor	4	1			**5**	
Snakes	8/11	Large room	11	3	3	Fireplace	**17**	Grinding stone, rubber, jug, loomweight
Snakes	12	Courtyard/pastas		2			**2**	Domestic mammals, marine molluscs, lagynos, lekane, well
Snakes	13	Courtyard	2				**2**	Domestic mammals, marine molluscs, lagynos, lekane, well
Snakes	14	Courtyard	2				**2**	Domestic mammals, marine molluscs, lagynos, lekane, well
Snakes	16	Courtyard/pastas	2				**2**	Domestic mammals, marine molluscs, lagynos, lekane, well
Total			70	19	14		**103**	

Table 6.5. Distribution of items related to cooking at the Houses of Halos.

The size of the vessels may partially have to do with the fact that cooked food could not be preserved for long. Porridges, stews or soups were cooked for the day and needed to be eaten within hours of preparation. The sizes of the cooking pots indicate that they could serve only a few people and they therefore do not warrant us to conclude that cooking happened for extended households with many in-laws and slaves.

Regarding the distribution of cooking vessels, there is, however, a strong difference in absolute numbers of cooking gear between the houses as well as in the percentage share of cooking utensils in relation to all artefacts found in the houses. Both the houses of the Coroplast and the Snakes have the highest percentage of cooking gear as a percentage of the total number of items found in these houses (including non-pottery): ca. 8 and 7% respectively. Moreover, the House of the Snakes contains more than 40% of all the cooking utensils found in *all* of the houses. This may tell us something about differences in household size. Given the fact that the House of the Snakes had a high storage capacity, the high percentage of cooking gear may indicate a higher number of household members than the House of the Ptolemaic Coins which stands at the other end of the scale. This issue will be further discussed in chapter 7.

An additional argument regarding cooking and household size is provided by Lin Foxhall who assumes that household members did not eat all at the same time and that consumption may have been fragmented, 'temporarily and spatially'. By this, she means that some household members ate elsewhere and that various meals were cooked during the day at various places for various groups of people, presumably by slaves.[89] While her observations may be true for many households at Athens and other Classical cities where cooking was considered to be too mundane for 'nice Greek ladies',[90] we should keep in mind that not all households had slaves and many had none. Given the modest inventory of all houses excavated thus far at Halos and their

[89] Foxhall 2007. 240.
[90] Foxhall 2007, 240.

limited storage capacity (the excavation of the House of the Tub has not significantly changed that view) we are not dealing with households that could have afforded a large number of extra mouths to feed. I therefore believe that the female members of the households (perhaps including female slaves) prepared the meals.
Perhaps Foxhall's argument holds true for the House of the Snakes which may have been inhabited by a larger household. But, contrary to what she bases her arguments on, namely, that cooking takes place at various locations in and outside of the house, cooking utensils in this house are most strongly associated with the hearth in room 8/11. This and the other associations of cooking gear with the fireplace suggest a 'sense of place' for cooking in Halos. Yet, this does not mean that cooking designated such places 'kitchens' as we will see at the end of this chapter.

6.6 Consumption of food and drinking
Eating and drinking can be done basically everywhere: any kind of hand food can be taken and eaten while doing other things and gourds filled with water can be taken wherever one goes. There is an inherent informal, and mobile, quality about eating and drinking and on its most basic level it does not require a 'place' nor an extensive tool kit, except for ones hands.
Eating and drinking were, of course, daily activities for the inhabitants of Halos, but the ways in which foods and drinks were served and the social circumstances in which they were consumed must have varied, together with the accompanying utensils. Eating and drinking in Ancient Greece was regularly done in the public sphere such as at religious festivals and political events. Cities and sanctuaries often had public dining facilities in the form of 'andrones' that could be rented by social clubs to organize dinner parties. Food and drink was even offered and consumed in cemeteries at times of a funeral or commemoration.
In order to answer the question where and how people ate and drank, we should first look into what we know about the social settings of domestic meals in Classical antiquity and it is here that we find a problem. Ancient sources are notoriously quiet when it comes to family food consumption in a domestic setting.[91] On the other hand, we know quite a lot about one aspect of domestic consumption of food and drink; the formalized domestic symposion and it is this 'social event', strongly linked to 'place', the andron, that has dominated discussions of consumption on the level of the households.
The social significance of the formal male dinner party should, of course, not be underestimated, but we should view it as part of a wider context of patterns of consumption in the domestic setting. Nicholas Cahill has strongly emphasized the temporary aspect of the symposion while looking for evidence of drinking gear, such as kraters and cups in relation to the andron. The andron is usually a highly recognizable room with platforms on the side for klinai, plastered and painted walls and often a mosaic floor in the centre. In Olynthus, these rooms are, surprisingly perhaps, not particularly associated with table ware, while in studies on pot forms the connection between table ware and the symposion is often stressed. The forms of table ware are conservative and consist of: the krater in which wine and water were mixed; the amphora in which wine was stored or transported; the lagynos, from which it was poured; the bolsal and kantharos serving as drinking cups and bowls and plates for eating. These vases are usually glazed, and sometimes decorated and the vases

[91] Demosthenes (xlvii 55, cited in Foxhall 2007, 240) describes a meal in which a wife, children and a (slave) nanny participate. The husband and slaves do not participate in this meal.

House	Room	Sort of Room	No of bowls	No of kantharoi	No. of plates	No of bolsals	No of kraters	No of Lagynoi	Tot.	Associated artefacts CA analysis
Coroplast	3	Large sideroom	1	1					**2**	Mould, figurine, aryballos, doornails, chytra, table amphora
Coroplast	4	Large sideroom			1				**1**	Amphora, pithos, loomweights, domestic mammals
Coroplast	5	Side room					4		**4**	Lekane, lebes, bead, ring, figurine
Coroplast	7	Large room		1					**1**	Hearth, marine molluscs, chytra
Coroplast	9	Side room	1						**1**	Coin, lekanis, astragalia
Geometric Krater	1	Side room	1	1	1				**3**	
Geometric Krater	2	Side room	2	3				1	**6**	Coin, lopas, weight, playstones, astragalia
Geometric Krater	3	Large room		1					**1**	Grinding stone, hydria, hook, chytra
Geometric Krater	4	Courtyard/pastas	1						**1**	
Geometric Krater	5	Side room	2						**2**	
Agathon	1	Side room	1	1	3		5		**10**	Lekythos, bowl, plate, pithos, pithos lid
Agathon	5	Side room	8				1	1	**10**	Loomweights, hook, sickle etc.
Agathon	6	Pastas/courtyard	3		4	1			**8**	Fireplace?
Agathon	7	Large sideroom	1			1	1		**3**	
Ptolemaic Coins	3	Large room		2		2			**4**	Unguentarium, bathtub, pyxis, chytra, miniature bowl, bomiskos, fireplace, brazier, grinding stone, krater, bolsal, amphora, kantharos, domestic mammals, marine molluscs
Amphorae	1	Side room		1					**1**	Lekane, rubber, strainer, pyxis, cooking pot, lid, chytra, loomweight, juglet
Amphorae	2	Side room		1	1				**2**	Domestic mammals
Amphorae	3u1	?	1						**1**	
Amphorae	3u3	?		1					**1**	
Amphorae	4u2			2			1		**3**	
Amphorae	5	Side room	1		1			1	**3**	Hydria, olpe
Amphorae	6u1	?	1	1	1				**3**	
Amphorae	6u2	?			1				**1**	
Amphorae	7u1	?		1	2				**3**	
Snakes	1	Side room	2	1	1			1	**5**	
Snakes	2	Si de room	2	1					**3**	
Snakes	3	Large side room	3		1		1		**5**	Askos, chytra, lekanis
Snakes	5	Side room	3		1				**4**	Pithos, amphora, domestic mammals
Snakes	6	Side room	1		1				**2**	Bathtub, unguentarium, pyxis, pithoi
Snakes	7/9	Corridor	3						**3**	
Snakes	8/11	Large room	3		2		1		**6**	Grinding stones, rubber, cooking pot, chytra, jug, hearth, loomweight, pot and snakes
Snakes	10,12	Pastas/courtyard	7	1	1			1	**10**	Domestic mammals, marine molluscs, lekane, well
Total			48	20	22	4	14	5	**113**	

Table 6.6. Distribution of fine table ware.

mostly represent a higher end quality of ceramics. This does not mean that the vases were overall 'expensive'; a large pithos or a grinding stone must have cost much more than a set of glazed consumption vessels.[92]
Only in two instances a krater was found in or near an andron at Olynthus[93] and Cahill notes a striking absence of drinking cups in the houses of Olynthus (there is no information on bowls and plates). This means three things: 1. that drinking parties occurred occasionally and that drinking gear may have been stored when not in use 2. that drinking utensils were also in use at regular meals at the house 3. that metal vessels were used in consumption activities, which have been taken during the looting of Olynthus.
The variations in use and the lack of a significant part of the assemblage related to consumption certainly complicate the analysis of the distribution of vases at ancient Halos. But it gives a lot of information too as we will see in the analysis below.
The vases found at Halos that can be associated with consumption are not always glazed or decorated.[94] In fact, the number of decorated vases is extremely small and consists of a number of worn vessels with West Slope decoration. Other forms of decoration are more common and consist mainly of the addition of stamps and rouletting in bowls. Most jugs and other pouring vessels such as hydriai and olpai were not glazed or decorated and they may have served a role in cooking, consumption, but also in other activities such as bathing.[95] Lagynoi were the only pouring vessels that could clearly be designated as having a role in drinking and eating and a few individual vessels have been recorded in the houses.[96] Table amphorae are non-existent in Halos with the exception of one specimen in room 3 of the House of the Coroplast. For the sake of clarity, I have restricted the evidence for consumption to bowls, plates, bolsals, kantharoi, lagynoi and kraters in the table (Table 6.6).
In the CA analysis in the last chapter we see that table ware is associated with a variety of rooms:
House of the Coroplast: room 5; House of he Geometric Krater, room 2; House of Agathon, room 1 and area 6; House of the Ptolemaic Coins, room 3; House of the Amphorae room 4 unit 2; House of the Snakes, room 3 and the courtyard. These rooms include large and small rooms and courtyards. Analysis of the distribution of *all* table ware found and the associated artefacts does not change the picture very much. Table ware is by far the most wide-spread kind of pottery, and can be found in many areas of different size and location. How representative is this distribution of items? Does it clearly relate to patterns of consumption in the houses?
Clusters of items were found together: room 5 of the House of Agathon is clearly a storage area of household goods, while room 1, dominated by pithoi is a storage area.

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[92] On the prices of vases our best source of information are the Attic Stelai which record a variety of domestic items to be auctioned off belonging to those that were accused of mutilating herms in Athens in 415 BCE. (Prichett, Kendrick 1953, Pritchett, Kendrick, 1956, Amyx 1958). Vickers and Vickers and Gill have argued that the price of decorated ceramics was not all that high in comparison to the metal versions of drinking utensils. (Vickers, M., Artful Crafts: the Influence of Metal Work on Athenian Painted Pottery, *Journal of Hellenic Studies* 105 (1985), 108-128.; Vickers, M. and D. Gill , *Artful Crafts. Ancient Greek Silverware and Pottery*, (Oxford: Clarendon Press, 1994)
[93] Cahill 2002, 186ff
[94] For a discussion on the table ware found at Halos see Beestman-Kruyshaar 2003, 92ff.
[95] Some of the *olpai* were glazed on the inside (Beestman-Kruyshaar 2003, 88)
[96] Lagynoi became increasingly popular vessels for pouring wine in the Early Hellenistic period. Their form (broad body, narrow neck and rim) and decoration suggests a function at the table for pouring liquids Rotroff 1997, 127.

The items associated with drinking may have been in store in room 1, but some of the five kraters found there may also have been used as storage vessels. We may however, associate the pastas of the house of Agathon with consumption: a cluster of bowls and plates were found here, all relatively close together. Room 2 of the House of the Geometric Krater has another cluster and the items connected to consumption (lagynos, bowl and kantharos) are clearly associated with each other as well as with other items of leisure found in the room, such as the 'play stones' and astragalia. Room 3 of the House of the Ptolemaic coins is associated with two kantharoi, two bolsals, both unique items to the house. The number of organic remains in this room, especially marine molluscs weighed heavily in the CA analysis.
Room 4 unit 2 of the House of the Amphorae is associated with a krater and two kantharoi, but the room itself is too small to serve as a seating area and it is likely that the items were in storage there, conveniently located next to the area where the liquids were stored (room 5). Another cluster may be room 3 of the House of the Snakes, where three bowls, a krater and a plate were found, associated with an askos and chytrae. The courtyard of this house also features a large number of consumption items. The association with marine molluscs and domestic mammals and the lagynos strengthen the interpretation for this area as a location for consumption, but the vicinity of the filled up well, in which large numbers of sherds were found as well as bone and shell remains may very well indicate that the area was a dump for food remains and broken household items.
The clusters of consumption ware do, however, not very clearly stand out in the statistics and in our distribution table: table ware is, in fact, relatively evenly distributed over the houses. In all, we can say that there are but few clusters that we can identify and they are sometimes associated with small and large side rooms, and in one case with the courtyard.
A warning should be put in place, however. We should keep in mind that the total numbers of items related to food consumption are low and in some cases (the House of the Coroplast and the House of the Ptolemaic Coins) even very low. We should therefore be careful with the interpretation of the distribution of these remains.[97] The low number may mean that people ate 'fingerfood' and used pieces of bread as tools to eat directly from the cooking pots. Food may have been sometimes served on plates and bowls which perhaps were made of wood, which have not survived in the archaeological record. The most frequently used reason for the dearth of consumption vessels is that part of the assemblage was made out of bronze, which was taken during and after the abandonment of the houses. Small remnants of bronze drinking vessels have indeed been found at Halos testifying to the use of those vessels in domestic context; they are a bronze kylix handle found in the large room of the House of the Snakes and the handle of a bronze kantharos in the courtyard of the House of Agathon. Because of this presumed lack, we have to be careful with what we say about the distribution of consumption vessels.

[97] Lin Foxhall already warned against a straightforward interpretation of the distribution of cooking and consumption ware in her article on the Greek kitchen (Foxhall 2007).

House	Room	Sort of Room	No of Jugs	No of juglets	No. of Hydriae	No of olpai	Tot.	Associated artefacts CA analysis
House of the Coroplast	3	Large side room		1			**1**	Mould figurine, Aryballos, Door nails, Chytra, Amphora
House of the Coroplast	5	Side room	1	1			**2**	Lekane, krater, lebes, bead, ring, figurine
House of the Coroplast	7	Large room	1		1		**2**	Hearth, marine molluscs, chytra
House of the Geometric Krater	3	Large room	1		1		**2**	Grinding stone, hook, chytra
House of the Geometric Krater	5	Side room	1				**1**	
House of Agathon	2	Side room	2		1		**3**	Loomweights
House of Agathon	3	Large room	1		2		**3**	Cooking pot, grinding stone, knife, hearth loomweight
House of Agathon	5	Side room	3	1	1		**5**	Loomweight, hook, etc.
House of the Ptolemaic Coins	1	Side room	1				**1**	
House of The Ptolemaic Coins	7	Larger side room	1		1		**2**	
House of the Amphorae	1	Side room		3			**3**	Lekane, rubber, strainer, pyxis, cooking pot, lid, chytra, loomweight, juglet
House of the Amphorae	2	Side room	2	1			**3**	Domestic mammals
House of the Amphorae	3u1	?			1		**1**	
House of the Amphorae	5	Side room		1		2	**3**	Lagynos, cup/bowl
House of the Amphorae	6u2	?	1				**1**	
House of the Snakes	1	Side room	1				**1**	
House of the Snakes	2	Side room	1				**1**	
House of the Snakes	3	Large side room	2				**2**	Krater, askos, chytrae, lekanis
House of the Snakes	5	Side room	3				**3**	Pithoi, amphorae, domestic mammals
House of the Snakes	6	Side room			1		**1**	Bathtub, unguentarium, pyxis, pithoi
House of the Snakes	7/9	Corridor	4		3		**7**	
House of the Snakes	8/11	Large room	2	7	1	1	**11**	Grinding stone, rubber, cooking pot, chytrae, hearth, loomweight, pot and snakes
House of the Snakes	10/14	Courtyard	2		1		**3**	Domestic mammals, marine molluscs, lagynos, lekane, well
Total			30	15	14	3	**62**	

Table 6.7. Distribution of pouring vessels.

But there are alternative ways: I believe that support for identifying eating (and drinking) locations would be provided by examining the distribution of items linked to cooking and consumption discard. We have already seen that cooking is bound to location: the large rooms were most closely associated with food preparation and cooking. Our CA analysis links discard of food remains in various cases with these

rooms. The far more detailed analysis of the faunal remains and their distribution by Prummel confirms this relationship. She clearly associates food preparation and eating with the large room and some side rooms in the houses, while discard is associated with courtyards.[98] This coincides with our findings based on the distribution of cooking and table ware.

The distribution of 'simpler' pouring vessels, such as jugs, juglets and hydriae, does further support our views that the interpretation of 'artefact function' is not a straightforward one, but should be considered in context. Some pouring vessels would have been used in food preparation and jugs and juglets can indeed be found in areas associated with *chytrae*, hearths, domestic mammals and other items of food preparation (room 8/11 House of the Snakes), while others can be linked to the clusters found associated with drinking, such as room 3 of the House of the Snakes. Other jugs may have been stored with or without contents such as in room 5 of the House of the Amphorae, supporting the interpretation of this area as a storage room for liquids, and room 5 of the House of Agathon, the store room for a multitude of household items.

We may conclude then that the distribution of pouring vessels does not change the picture very much; table and serving ware is widely spread over the houses. Despite the overall low numbers. the differences in the numbers of table ware items per house is striking. Both the houses of the Coroplast and the Ptolemaic Coins have by far the lowest number of consumption items. This seems to closely mirror the distribution pattern of storage capacity and cooking items that we have seen in the previous paragraphs. The largest number of items is associated with the largest houses, with the exception of the House of Agathon, which, thanks to the wealth of items in side room 5, can easily compete with the House of the Snakes. It is not surprising that the houses where the remnants of the bronze vessels were found are the two houses with the largest number of consumption ware overall. Combined with the fact that these are also the houses with the largest storage capacities, as well as the houses with the highest number of cooking equipment this may strengthen our case that we have to do with differences in household size as well as perhaps differences in wealth.

House	No of bowls	No of kantharoi	No. of plates	No of bolsals	No of kraters	No of Lagynoi	Tot.
House of the Coroplast	2	2	1		4		**9**
House of the Geometric Krater	6	5	1			1	**13**
House of Agathon	13	1	7	2	7	1	**31**
House of the Ptolemaic Coins		2		2			**4**
House of the Amphorae	3	7	6		1	1	**18**
House of the Snakes	24	3	7		2	2	**38**
Total	48	20	22	4	14	5	**113**

Table 6.8. Distribution of fine table ware per house.

[98] Prummel 2003, 187f.

In terms of artefacts we have ample evidence for formal dinner parties in the houses. The ingredients for a domestic symposium are all there; we have an abundance of kraters (far more in fact than to be expected in a Hellenistic context)[99] in which water and wine could be mixed, bowls, a relatively small number of kantharoi and bolsals for drinking, plates for eating, lagynoi for pouring wine into the krater, hydriai for water. There is evidence that the inhabitants used metal drinking cups. But what we do not have is a clear space that is architecturally defined in the traditional manner: with platforms, a central area for the krater, front hall and painted walls. What weighs most here? The architecture or the artefacts?

I believe that the matter is not straightforward and I also think that we should not aim for a unified answer. Table ware could be used by various members of the household in various settings and I do not believe that kantharoi and cups found in domestic contexts are strongly engendered artefacts that can serve as proof for symposia.[100] Instead, I would conclude that the inhabitants at Halos may have organised formal or less formal dinner parties in their houses, but they did not express the formality of these dinners in their architectural space. If formal dinners indeed occurred in the spaces where we have most evidence for consumption: the large room and side rooms, then they would have been completely integrated in household life with no possibility for female household members to retreat to more private chambers. If not, then the courtyards or pastades would have been the best locations, although for these locations, the evidence is scant. We can therefore conclude this; if formal dinners were organised in domestic contexts in Halos, their location did not actively regulate social relations between men, women and visitors.

As for family dinners, Foxhall's analysis, based on two Attic country houses and two houses at Halieis, concludes that both eating and cooking in Classical housing are not clearly bound to place. She asserts that the ideology of the commensality of the family was not expressed in cosy family dinners around the hearth or even in the andron, but that cooking and eating were more haphazardly organised.[101] I concur with her conclusion and assume that at Halos various household members may have eaten at various times of the day and in various locations in the city or outside of it. But also here I do not think that we should establish a general picture valid for the larger part of the Greek world. Rather, we should be open to (local) variations on that theme. From the evidence at Halos, it is clear that cooking is associated with the large room. With regard to consumption, the locations are more varied: some of the side rooms could have been used for drinking and eating and perhaps in one case, the pastas. But when looking at the spatial organisation of the houses it is clear that both cooking and consumption are household activities that are spatially mostly integrated in the more

[99] This is a significant phenomenon that will be discussed in the next chapter

[100] In her substantial study on gender relations in the Greek household, Lisa Nevett relates particular artefacts to gender based on an analysis of images on vase painting. The kantharos she asserts, often depicted in a sympotic context, is strongly associated with men. In the context of New Halos, I would deem the highly idealized images on Classical Athenian vase painting too remote, spatially and temporarily –and therefore culturally- to be of value in this analysis. Even though we do not have depictions of women drinking wine from a kantharos, this does not mean that women did not drink wine. There are numerous (often humorous) accounts of women drinking the wine/water mixture at home, even though –in Athens- this was not really considered 'done'. They may even have drunk it from kantharoi; in Hellenistic Thessaly kantharoi are associated with male as well as female graves. The gender associations with sympotic ware found in public contexts, such as that in the Athenian agora, are of a different order.

[101] Foxhall 2007, 240f. Bradley Ault, however, concludes that the two hearths in houses 7 and D were probably used for cooking, although he asserts that portable braziers were favoured by other householders. (Ault 2005, 76).

private realm of the household. All side rooms are clearly connected with the large room where a variety of household activities took place; they cannot be entered or be left without moving through the main room. If we take spatial separation of the daily household activities as a condition for the degree of 'formality' of consumption, then we have no evidence whatsoever for formal dining at Halos. But it should be kept in mind that some rooms, not clearly associated with anything in the analysis could be cleared at times to make space for formal dining. We will discuss these possible arrangements in our next chapter.

6.7 Domestic textile production and consumption

It was customary for Greek households to produce their own textiles for clothing, for bedding and other household needs such as tapestries. Domestic textile production in ancient Greece consists of a number of diverse activities ranging from preparing the materials for textile production washing and carding wool or flax, to spinning, dyeing and weaving. In the archaeological context of domestic space, it is usually the remnants of spinning and weaving in the form of spindle whorls, loomweights and sometimes epinetra that are found back with relative ease and that are given most attention in analyses. But, in order to provide us with an idea of a tool kit involved in the production of textiles we need to look carefully at the preparation of the materials used and other processes used in the production of cloth.

It is most likely that the inhabitants of Halos produced their cloths of wool and raised their animals nearby their homes.[102] Prummel's discussion on the role of animal husbandry at New Halos focuses on various aspects of animal usage: for meat, milk, hides and wool. The kill-off pattern of sheep/goat at Halos is very similar to that of Kassope: only 30% of the animals were killed when they were less than 3 ½ years old, which indicates that the majority of sheep/goats reached an advanced age.[103] This means that they must have been used as animals for milk and for wool.[104] The best wool is being produced by neutered rams (wethers), but they give no milk and produce tough meet.[105] A large number of wethers would point to a large industrialised textile production, such as has become clear from the Linear B records in Mycenaean Greece. But the animal remains found at Halos give no indication for an overrepresentation of wethers at the expense of ewes and we should therefore conclude that there is no evidence for keeping animals exclusively for their wool.

Sheep are sheared once a year, usually in spring. In Halos several shears are found which may testify to this practice as a domestic one.[106] The wool must have been gathered, washed, and put in storage for future use. Sheep usually produce a pound and a half of wool.[107] A garment woven of wool may have weighed around two

[102] Archaeological evidence for woollen clothing in Thessaly can be found in a report by V. Adrymi-Sismani on graves dating to the late 5th and early 4th centuries BCE at Pherae. These include blankets covering the bodies in the tombs and chitones in various colours ranging from purple to pale beige. Adrymi-Sismani, V., "Tymbos Pheron," *Archaiologika Analekta Athinon* 16 (1983): 23-42.

[103] Prummel 2003, 192.

[104] Barber, E.W., *The Development of Cloth in the Neolithic and Bronze Ages*, (Princeton N.J.: Princeton University Press 1991), Table 1.1, 27.

[105] Barber, E.W., *Women's Work: The first 20,000 years*, (New York: Norton, 1994), 216. Hodkinson

[106] Although we should question whether this occurred at home. Research on mites in soil by Jaap Schelvis (Schelvis 2003, 223-229) taken from the courtyard in the House of the Snakes have produced negative evidence for the presence of animals in the houses. The shears found in the houses were not complete but consisted of half shears. Hijmans, 2003, 126 suggested that the shears may therefore have had a secondary usage as knives. The shearing of sheep took likely place where the animals were housed in pens outside of the city walls.

[107] Barber 1994, 216.

pounds. It is next to impossible to guesstimate the number of sheep that the average shepherd at Halos would have kept, but taken that a household with five members may need at least two new garments per person per year, fifteen sheep would be the absolute minimum to be self sufficient with regard to domestic textile production.[108]
Washing the wool was most likely done in tubs.[109] The wool then must have been put to dry, plucked for impurities, combed and then put into storage. The traditional storage space for wool was the wool basket. There are a multitude of wool baskets displayed on Athenian vases and in written sources we find that they sometimes are made of silver.[110] As an example of the abundant visual and archaeological evidence we have of Classical textile production I have added Fig. 6.1, an Attic lekythos dating to ca. 560 BCE, on which is depicted a group of eleven women at work in various stages of textile production.[111] The wool is stored in baskets; wool is being weighed, spun, woven and the end product is folded and stored on a table.
Spinning wool in Classical and Hellenistic Greece was usually done by using a low–whorl drop-spindle.[112] The wool was put on a distaff and spun by turning the spindle and stretching the thread by hand. The spun thread would be wound around the shaft of the spindle. A low-whorl drop-spindle would have a weight at the end of the shaft to keep it down and to be able to twist it around at some length of time. These spindle whorls are found back frequently in the archaeological record. Only the ones made of stone or clay are usually found, but they can be made from a large variety of other materials: bone, wood or metal. The wooden spindle shaft usually had a groove at the end of the stick to fasten the thread so that the spindle can be twisted and more thread

[108] The amount of clothing people owned may have varied according to their age, wealth and was may be dependent on custom. But a clear account of single person's wardrobe has survived thus giving us an idea what clothing people wore and what needed to be replaced on a regular base. The account is preserved as a papyrus and lists the contents of a trunk belonging to Zenon, a Greek from Asia Minor living in Egypt in the 3rd century BCE. He was a relatively high ranking official linked to the Ptolemaic court. The wardrobe counts 28 pieces of clothing and includes chlamydes, chitones, himatia, a cloak, pillow cases, socks and girdles. The items were divided up into clothes suitable for either winter or summer and the list indicates whether they were worn or new. Cited in: Hughes, M. and M. Forest, *How the Greeks and Romans made cloth*. (Cambridge: Cambridge University Press, 1984). 49-50. A larger flock was needed In order to be self-sufficient with regard to milk and meat. See Halstead P., "Counting sheep in Neolithic and Bronze Age Greece," in *Pattern of the Past. Studies in honour of David Clarke*, ed. Hodder, I., G. Isaac and N. Hammond, (Cambridge: Cambridge University Press, 1981), 307-330.
[109] In Aristophanes' Lysistrata the protagonist gives a detailed account of preparing wool for weaving as a metaphor for managing state affairs in Athens:
'Lysistrata: The very first thing you have to do is put the fleece in a tub and wash it. This would remove all the dirt and the grease from the city. Then you must put it on a bench and beat it and pick away until you've got rid of all the rubbish and burs. This is how you remove all those associations and groups who join up and plot against the state – all these knots you comb right out. Now you can fluff up the fleece and put it all into the basket – this is the Common Good. Mix up everyone – citizen and foreigner, friend and foe. But, by Zeus, you mustn't forget all those colonies of ours which lie around all on their own like scattered bits of wool. You should take all of them, join them up and spin them into one thread. Then you can wind up a large ball of yarn, and weave it into a cloak for the people. Magistrate: Plucking fleeces, winding threads! You're just spinning one long yarn! What has any of this got to do with the war?' Aristophanes, *Lysistrata*, lines 574-587. Unknown translator.
This description fits the one that Wace and Thompson give for wool working at Samarina, except that there the impurities are taken out before the wool is washed and that two qualities are kept: long thread for 'flokates' and short thread for clothing. (Wace and Thompson 1913, 80)
[110] Homer, *Od*yssey, 125-35.
[111] This lekythos is on display in the Metropolitian Musuem of Art, New York. Fletcher Fund, 1931: no. 31.11.10. The image is retrieved from the museum website.
[112] Barber 1991, 43.

Fig. 6.1. Attic Lekythos with weaving scene.

be spun. At Olynthus and others sites, bronze hooks have been discovered that must have been fastened to spindles to serve a similar purpose.[113]

Spinning, unlike weaving, is an activity that can be done while moving around.[114] In that case a distaff is used to hold up the wool. Distaffs are known from the archaeological record and from vase painting and sculpture.[115] They are sometimes made of metal, but most of them seem to have been made of wood. Greek women in the Archaic and Classical period sometimes seem to have used knee guards (*epinetra*) in the process of rolling the wool into fluffy rolls that can be easily pulled to be spun. In Classical Athens these objects were often made of terracotta and painted in black- or red figure style. They seem to have evolved into some kind of status object or wedding gift, as the painting was often very fine and detailed, with scenes frequently of a domestic nature or of weddings, and added plastic decoration.

The spun thread could be dyed before used into a woven fabric or the fabric as a whole could be sent to the fuller who had a complete installation for dyeing and cleaning at his disposal. Dyeing yarn alone was probably mostly done, as pictures on vase paintings often show fabrics on looms with intricate patterns. This was probably done by a dyer to which one could bring their spun wool, but dyeing thread could also have been done on a household base.[116] There are various sites where dye equipment has been located. Vats containing dye were found in House IIIU on Delos, but the

[113] Robinson, D.M., *Olynthus. Metal and Minor Miscellaneous Finds*, Olynthus 10. (Baltimore, MD: the Johns Hopkins Press, 1941), pl. 119, nos 1884, 1886, 1891.

[114] I have seen Greek Saraktasani women spinning while walking and herding sheep keeping their wool on a distaff (rocca) (summer of 1993). These modern but traditional Greek distaffs are very distinct objects. They vary in form from region to region and are strongly individualized in their decoration. Also in antiquity, spinning was a mobile activity. Herodotus (5.12) tells of the amazement of Persian King Darius when he saw a Paeonian woman spinning flax walking back from a river with a water pitcher on her head while holding a horse on a leash on her arm (As cited in Barber 1991, 69). I have also learned to spin with a hand held spindle in high school in the Netherlands; an educational project typical of the 1970s. We made our own spindles out of wood; fastened a small metal ring on top of the shaft to hold the thread and spun uncombed wool to knit pullovers. I later learned how to spin on a spinning wheel. I found spinning with a spindle most effective when standing upright.

[115] A distaff is seen in an Archaic stele from Prinias, Crete: Pernier, L., "Vestigia di una Città Ellenica Arcaica in Creta," *Memorie dell' Istituto Lombardo di Scienze e Lettere* 22 (1910).

[116] Dyes were made from plants, shellfish and other sources, Some of these dyes would occur in the context of Halos naturally, such as kermococcus vermilio planchon, a small scale insect living on kermes oak producing a yellow dye. Monaghan 2001, 13.

most well known examples derive from the Rachi settlement at Isthmia, where dyeing facilities are highly recognizable by the presence of vats and tanks. But dyeing facilities were also found in the industrial district of Halieis recognized by a pithos sunk into a plaster floor.[117] In his thesis on dyeing in Classical and Hellenistic Greece, Monaghan has laid out very clear criteria for recognition of dyeing and according to these we have no evidence for dyeing in New Halos. Yet, admittedly, dyeing in household context is notoriously difficult to recognise since the same household equipment involved in that activity could have been used for different purposes. This counts for the so-called specialised spaces, e.g. bathrooms, as well.[118] The author therefore assumes that dyeing on a small household scale was wide spread, leaving very little traces in the archaeological record. The most recognizable of the artefacts involved would be fireplaces, grinding stones and rubbers and containers for soaking, like baths, but these were, of course, not exclusively meant for this activity.

Weaving was done on a loom. Fig. 6.1 is but one of the images in Greek vase painting showing a typical loom used in Classical and Hellenistic Greece. They were so-called warp-weighted looms, meaning that the warp (the vertical threads forming the foundation of the weft) is weighted down with weights, hanging in groups of alternating front and rear warp threads at the lower end of the loom. These weights were most often made of fired clay and sometimes of lead. They are found in great abundance in domestic settings as well as in sanctuaries. Looms were probably all made out of wood and consisted of frame with a cross beam at the top to wind up the woven fabric, a heddle rod to which the rear warp threads were fastened with leashes and a shed bar at the lower end. A shuttle was used to thread the weft into the warp. A wooden rod was used to beating the weft upwards.[119]

The weights used in a loom should be all of equal weight, otherwise the warp threads would be stretched unevenly, resulting in an unequal pattern of the weft. The weight of the loomweights bears significance to the thickness of the fabric being woven: the strength with which the weft could be beaten upwards depended on the weight that kept the warp threads down. Lighter weights were therefore probably used for finer cloths, while heavier ones may have been used for coarser fabrics.[120] Over the years, there has been a lot of discussion about the question how many weights would be used in a single loom. When examining the iconographical evidence, the number of weights seems to differ significantly, ranging from 10 to 65.[121] In Olynthus, the number of loomweights found *in situ* range from 20 to 43 weights, while Barber estimates that even 6 loomweights could have formed a set.[122] The number of weights needed could in fact depend strongly on the width of the loom, the material used for the weave and the number of grouped warp threads per loomweight.

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[117] Monaghan 2001, 61-62.

[118] Monaghan 2001, 51-52 and 133.

[119] Warp-weighted looms were probably not the only looms in use (see the discussion by Burnier, Y. and S. Hijmans, "Loomweights," in Prummel and Reinders 2003, 118ff), but only the weighted ones have left us traces in the archaeological record.

[120] Burnier and Hijmans 2003, 121 and Wilson L.M., "Loomweights," in *Excavations at Olynthus.* Vol. II, ed. D.M. Robinson, (Baltimore: The Johns Hopkins Press, 1930), 118-121.

[121] The numbers range from: 28 (Boeotian skyphos, late 5th century BCE, in Hoffmann, M., *The warp-weighted loom: studies in the history and technology of an ancient implement*, (Oslo: Universitetsforlaget, 1964), 303, 65 visible ones (Skyphos found at Chiusi. Furtwängler and Reichold, *Griechische Vasenmalerei*, pl. 142 in: Hoffmann 1964, 306), 10, (Black figure lekythos in the Methropolitan Museum of Art, Fletcher Fund 1931, no 31.11.10).

[122] Cahil 2001, 173. Barber 1991, 113 ff.

Domestic textile production was performed by women of the household. There are many written as well as iconographical sources related to the education of women and spinning, rolling wool and weaving. In Xenophon's Oeconomicus, Ischomachus is of the opinion that the role of a woman of the household should be more than knowing how to make cloth of wool and assigning spinning tasks to the handmaidens, but also to participate in a beneficial partnership.[123] Euripides in his tragedy Ion, lets queen Creusa of Athens describe a cloth that she wove herself as a child.[124]
Spinning and weaving was a task being divided between all females members of the household, including slaves, were there any. This female task was rooted in a long tradition of domestic economy but was also deeply socially embedded through the reproduction of myths, epics and religious acts. In Homer's Odyssey we hear about Queen Penelope weaving a funerary shroud for her father in law, warding off her suitors by unravelling at night all her work done during the day.[125] In a rather late myth Ovid tells about Arachne, the daughter of a wool dyer from Colophon, who could weave such beautiful cloths that people started to compare her skill to that of Athena, the goddess of weaving herself. The offended Athena challenges Arachne to a weaving contest but was appalled at the choice of subject by Arachne; scenes of infidelities of the Olympian gods. Athena thereupon punished Arachne for her *hybris* and in Ovid's version of the myth changed her into a spider.[126] Athena was closely associated with weaving in many cults throughout the Mediterranean.[127] Her most well-known cult was that in Athens on the acropolis. Every year, young girls from aristocratic families were chosen to weave the *peplos* that was given annually to the goddess in the temple of Athena Polias. These *arrephoroi* would live temporarily on the acropolis in a specific building designed for them, the arrephoreion, in which they would fulfill their task.
This small *excursus* on textile production in religious contexts serves to point out that seemingly mundane domestic activities in ancient Greece, like spinning and weaving, were embedded in a larger framework of associated meanings; meanings relating to 'appropriate' roles of men and women, boys and girls. We have to keep in mind that houses are places where social relations are produced and perceived on a daily base, often concomitant with those in other contexts. A 'good woman' should work at her loom and one could even say that domestic textile production aided to create 'femaleness' as a social category as well as the other way around: the gender specific nature of textile production was shaped, reproduced and naturalised in both domestic and religious spheres and reinforced by the dialectic relationship between these two environments.
In addition to the symbolic quality of textile production, we should not forget that textile production is an economic activity as well. Textiles were a form of capital of the household; they were dedicated in sanctuaries, were included in inheritance and served as security for loans.[128] Foxhall and Stears argue that textiles produced by women within a household belonged to those women, since they were the ones who

[123] Xenophon, *Oeconomicus* VII, 18.
[124] "Creusa: Take a look: a cloth which I myself wove while still a child. Ion: of what sort? The weavings of maidens are varied. Creusa: Not a finished piece, but a sort of sampler from the shuttle." Euripides, *Ion* 1417-23. In Barber 1991, 360.
[125] Homer, *Odyssey* 2.94-110.
[126] Ovid, *Metamorphoses*. vi.5-54 and 129-145.
[127] Athena cults in which weaving played an important role are known from Athens, Stymphalos and Francavilla Marittima, among other places. But loomweights are found in sanctuaries dedicated to other female deities too, such as Hera and Demeter.
[128] Demosthenes 27.10 and 49.22.

made them. In legal terms, it is clothing in particular that women took with them into a marriage as a form of wealth and retained in the event of a divorce.[129]

From the survey above it is clear that the tool kit relating to domestic textile production is varied, but that most of the artefacts used are perishable. The cloth itself does not preserve, wool baskets perish as well as the distaffs, spindles, looms and stools which were all made of wood. What we find in the archaeological record are sometimes pots with dye and mostly spindle whorls and loomweights.

In Halos only four clay spindle whorls were found: they come from the House of the Snakes (courtyard area) and the House of the Broken Amphorae (room 1 and area 6u1). The number is too small to make any conclusions, and since spinning was an activity which could be carried out wherever one went and in association with other domestic activities, we can expect to find them in a variety of spaces. The courtyard seems a suitable space for spinning. In the House of the Broken Amphorae the spindle whorl found in room 1 is associated with weaving and food processing.

One other item which may be related to domestic textile production has been found at Halos: this concerns a piece of molten lead found in room 5 of the House of Agathon. The piece, now in display in the museum of Almiros, bears the imprint of woven basketry and may be the imprint of a wool basket or *kalathos*. Room 5 yielded a large number of finds, and many of them are related to textile production (see below). No remains of a spindle were found in association with the basket.

In Halos loomweights are found in every house. The average number of weights found per house is 21 (not including the hoard found in room 5 of the House of Agathon), which is far more than are found at Olynthus, where the average number of weights per house is only 6, and at Halieis where the total number of loomweights per house ranges from 6 to 28.[130] Several sets could be identified and the numbers of loomweights in each set vary significantly. There are variations in form as well: the majority of the weights (68%) found was pyramidal in form and had one suspension hole, 22% was discoid with two suspension holes, 8% was trapezoidal with one or two suspension holes and 2% were conical in form with one suspension hole.[131]

At Halos, loomweight sets vary from 7 to 14 loomweights each and these sets are not found in every house. In room 4 of the House of the Coroplast 7 loomweights were found in a line of ca. 1m along the N wall of the room. The room is an elongated side room, with possible daylight coming in from an alley at the back of the house. Also, 11 loomweights were found in a group in room 4 of the House of the Ptolemaic coins, a side room with no daylight, unless a window opened in the courtyard of the house north of it. A third set came from the House of Agathon. Here, in room 3, a set of 10 loomweights, were found. Although very similar in size and form, they were not found *in situ*, but rather dispersed over the southern part of the room. A second

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[129] Foxhall L. and Stears, K., "Redressing the Balance: Dedications of Clothing to Artemis and the order of Life Stages," in *Gender and Material Culture in Historical Perspective*, ed. M. Donald and L. Hurcombe, (New York: Palgrave MacMillan, 2000), 3-16. This is based on the law code of Gortyn which stipulates that in case of divorce women were allowed to take half of what they had woven.

[130] Cahill, 2001, 179. Ault 2005, 78.

[131] Burnier and Hijmans 2003, 122, table 3.12. The authors suggest that the weights with two suspension holes were used for two warp threads, but since a piece of yarn or even a metal ring can be used to tie multiple warp threads to one weight, I do not believe that there is a clear relationship between the number of holes in the loomweight and the number of warp threads attached to them. It is true, however, that the trapezoidal loomweights with two suspension holes are heavier, all of them weighing well over 100 grams each. They may have therefore been used for coarser fabrics. None of these have been found as a set. It could, however, be that the heavier weights were just used on both ends of the warp, which was quite common (Brendan Burke, pers. comm.)

House	Room	Sort of Room	No. of Loomweights	Light	Associated activities	Room size in M2
House of the Coroplast	4	Side room	7	None or from alley?	Storage	16.54
House of Agathon	2	Side room	14	From pastas/courtyard		12.23
House of Agathon	3	Large room	10	From pastas/courtyard	Food preparation, cooking	30.24
House of Agathon	5	Side room	100	From pastas/courtyard	Storage household items	9.62
House of the Ptolemaic Coins	4	Side room	11	None?	Storage	11.4
House of the Amphorae	1	Side room	6	?	Food preparation, cooking	12.54
House of the Snakes	8 11	Large room	5	From courtyard	Food preparation, cooking, ritual	35.25

Table 6.9. Distribution of sets of loomweights in the houses at Halos.

possible set came from room 2, where 14 loomweights came to light, again not grouped together. In addition, a small set of loomweights was found in room 1 of the House of the Amphorae.

But the largest number of weights came from room 5 of the House of Agathon where a hoard of 100 loomweights was found; 60 of those were pyramidal in form and 35 had a discoid shape, while the rest was conical or trapezoidal. Their weights varied from 56 to well over 150 grams, but the majority fell into the category of 70-90 grams each and could therefore be used together on looms of similar design.

What becomes clear when we look at the distribution of the sets is that they are associated with side rooms, some of which allow probably no daylight. Only in one case, the main room of the House of Agathon do we witness weaving associated with the large living room. It is also interesting to see that the number of loomweights which form a set is overall rather small. The largest set consists of 14 weights, apart from the hoard in the House of Agathon. The looms may therefore have been of relative narrow size.

In order to explain in what kind of context weaving took place we need to look at with what kinds of materials weaving was associated. The correspondence analysis indicates that weaving was connected either with materials related to food preparation and cooking or with items related to storage. Only in one case, room 2 of the House of Agathon, weaving appears to be the single clear activity associated with that space.

This may mean two things: given that the spaces with loomweights are associated with storage, lighting is mostly absent. In these cases, the looms may therefore have been temporarily stored. The looms were probably limited in size and they could have been lifted and put away to create space for other activities. Areas in which loomweights are associated with cooking and food preparation are overall larger in size and have relative good lighting. These are likely the areas where the looms were set up. We may therefore assume that weaving, then, was performed in multifunctional areas of the houses and was thus part of a larger array of domestic activities, especially food processing and cooking. Only room 2 and perhaps room 3 of the House of Agathon may have been a specialised room for weaving while room 5 of the same house stored a multitude of weights which could be used for at least four looms. Not only the hoard, but also the number of weights in two other rooms of the House of Agathon shows us that weaving must have been a specialization in this household and suggests domestic textile production for a larger clientele than household members alone.

What these associations and distribution patterns may mean in relation to social roles within the household, to the organisation of domestic industries and to the formalization of spaces needs to be discussed in relation to rooms as formal settings of activities. We will turn to this in our next chapter.

6.8 Production and consumption of figurines in domestic contexts

Clay figurines became mass-produced items in the course of the 4th century BCE and several terracotta production centres are known in the Hellenic world, such as Athens, Corinth and, close to Halos, Demetrias. The meanings and purposes of terracotta's are debated, but seen the diverse contexts in which terracotta's are found, graves, sanctuaries, houses, and the large variety in forms and themes, their purposes would have been diverse as well. Some figurines are representations of animals, others of divine creatures, but many, and that counts especially for the single female standing terracotta's, often look very human. It has been suggested that these figurines are often generic so that they may be used for various goals.[132] The particular form of the figurines found at Halos and their relevance to the domestic context will be further discussed below.

It is true that terracotta's often do not represent unique items: sometimes figurines from the same mould are found in one single grave. It is these kinds of terracotta's that were also kept at the home. Higgins suggests that figurines served as personal possessions that, once their owner died, went into the grave. Due to the nature of many excavations of Classical and Hellenistic cemeteries, there is very little evidence in how figurines as grave gifts are distributed along the lines of age, sex, grave type and indications of wealth. In the analysis of 600 graves at Olynthus: only 10% of graves contained terracotta's. Figurines are slightly more present in children's graves and where they are present, then they are found in large numbers.[133]

Moulds were commonly used for the mass production of terracotta's in the Hellenistic period. The production in New Halos is an example of so-called *double moulding* of which the development can be dated between 330-200 BCE. In this process, an archetype is used made out of wax or clay. Wet clay is then folded over one half of the archetype and pressed. When the clay is leather-hard it is removed and then touched up and fired. The same process was repeated for the 'back side' of the mould, with the exception that the backside would receive a round or square hole in order to let the air circulate during the firing process. Various tools were used to touch up the figurines.[134] And sometimes moulds consist of fragments that could be put together in varying ways: torso, hands, head could all be all put together separately.

In the Classical period the firing of terracotta's strongly resembles the ways in which traditional black- and red-figured pottery was fired, with alternating oxidizing, reducing and again oxidizing the kiln. In the Hellenistic period, a different technique was used in which the complete figurine was painted by a white slip which served as a base for polychrome painting, necessitating a one stage firing process. On two figurines at Halos a white slip was preserved (F1 and F5,) but these are not found in the House of the Coroplast, but in the House of Agathon (room 5). There are no indications that the figurines found in the house of the producer of the figurines were intended to be painted.

Kilns were mostly simple affairs made of mudbrick. Kilns for the firing of pottery have been found all over the Mediterranean, but only in one instance a kiln was found

[132] Higgins, R.A., *Tanagra and the figurines.* (London: Trefoil Books, 1986), 65.
[133] Higgins 1986, 65.
[134] Higgins 1986. 66.

that could be associated with terracotta making, namely in Panticipaeum (Kerch) on the north coast of the Black Sea.[135] This kiln was found together with a small terracotta model of a kiln which includes details such as firing chambers.
Only from the Late Hellenistic period onward do the terracotta's and moulds sometimes become incised with the name of the coroplast. One of the figurines found in the house has such a mark: F2, the figurine of a standing woman found in room 5 bears the mark KSI on the interior. Over 50 names are known from coroplasts of this period, some of them Romans working in the Hellenistic east.[136]
The fact that moulds are frequently found in houses means that the production of terracotta was at least partially a 'cottage industry'.[137] But most evidence for terracotta production is associated with the more public and industrial quarters of cities. In Athens, probably the largest production centre of terracotta's, production was closely associated with other crafts and the most abundant evidence for terracotta making can be found in the industrial quarter of the city. House K on the Athenian agora was converted into a workshop at around the mid 4th century BCE. This conclusion was based on the excavation of a well and the fact that a series of large rectangular shallow basins lined with roof-tiles were installed in the courtyard around that time. Nearby was found a large quantity of moulds, figurines and small bowls containing colouring matter probably from a terracotta 'factory', meaning a large scale production centre.[138] The basins served for the purification of large quantities of clay.
In Delos and Argos the workshops were more closely situated near the theatre, serving those who frequented the plays and the associated rituals. In Agrigento a terracotta workshop is associated with a sanctuary.
But there is evidence for domestic terracotta production as well. In Arta, archaeological finds indicate that a coroplast worked in the courtyard of his house.[139] This house, dating from the early Hellenistic period and excavated by S. Dakaris at the Odhgytrias Street, contained both moulds and figurines mostly representing chthonic deities. The examples represented in the publication are: Ganymedes and the mould of a banqueter, very much like the type found at Halos.[140] Some of these moulds bear the coroplast's mark: Satyrou. In Olynthus, various moulds have been found, the largest number of which was 13 from house B i 5.[141]
In large cities such as Athens, metalworkers, potters and terracotta makers worked in close vicinity in a part of town where many workshops were housed. Coroplasts may have even worked together with metalworkers producing perhaps producing terracotta archetypes for the production of bronze specimens, as suggested by Uhlenbrock.[142] The tools used seemed to have been similar to those found in a workshop for the production of bronze items: the punch, the awl and the graver. Uhlenbrock suggests

[135] Kobylina, M.M., *Terrakotovye statuzski Pantikapei*, Archaeologia SSSR, issue G1-11, (Moscow: Izdatelstvo Akademii Nauk SSR, 1974), 48, no. 8, pl. 57.
[136] Uhlenbrock, J., "The Coroplast and his Craft," in *The Coroplast's art: Greek Terracottas of the Hellenistic World,* ed. J. Uhlenbrock, (New Rochelle, NY: A.D. Caratzas, 1990), 15.
[137] Uhlenbrock 1990, 15
[138] Young, R., "An Industrial District of Ancient Athens," *Hesperia* 20 (1951): 245-246. Uhlenbrock 1990, 15.
[139] Daux, G., "*Chronique des Fouilles*," *Bulletin de Correspondance Hellénique* 91 (1967): 681.
[140] Daux 1967, 680. At Halos the moulds are often in a rather fragmentary state (except for the mould of the terracotta horse). Especially much of the rim has been lost and we therefore may be missing the name of the coroplast.
[141] Cahill 2002, 253.
[142] Uhlenbrock 1990, 15.

that the tools were partly made of perishable material such as wood or bone.[143] At Hellenistic Troy, an assemblage was found which indicates the presence of one or more workshops for the production of figurines. These finds consisted of a mixture of: moulds, bone tools and patches of very fine pure clay.[144] The bone tools must have been used for refining terracotta archetypes and for patching up leather hard clay statuettes before firing.

From the evidence above, which derives from a variety of sites, we may conclude that a coroplast's tool kit would look like follows: clay in considerable quantity, basins to purify the clay, a work space large enough to work and to store products that were partially finished, water, water containers, containers for purifying clay and mixing with water, tools such as styluses, spoons, small brushes, shovels or spades and finally, a kiln which could be located at a distance from the workshop as kilns could be shared with potters.

It is obvious that many elements of this tool kit are absent in the House of the Coroplast. Part of this absence can be explained. Some parts of the production process, such as the purification of clay, need a lot of space and is difficult to combine in a space also used as domestic quarters. This also counts for the firing of terracotta's: the kiln could simply have been located elsewhere, perhaps in the vicinity, in part of a housing block that contained a plot of land that was not occupied by architecture.[145] The presence of charcoal remains in one of the corners of room 3 is not enough to suggest the presence of a kiln.[146] Kilns were made out of mudbrick and temperatures of 750-900 C° were needed to fire the terracotta's. Therefore, this production process should have left behind more evidence than charcoal alone. Temperatures as those indicated must have fired the clay at the inside of the kiln and form amorphous lumps of terracotta, and a partially fired clay floor. These items were not found in room 3, nor in other areas of the house.[147] There is also lack of evidence for the basins to purify clay. Even though the production at the House of the Coroplast was a household activity, basins or vessels to aid in purifying the clay must have been used, but none of them have been found in the vicinity of room 3 of the House of the Coroplast where the terracotta moulding likely took place.[148] The six *chytrae* may have had a role in the production process, but the larger basins may have been located outside of the building in an area specifically designated for the purification process, which may have been shared with other crafts people.

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[143] Miller, S., "Terracotta Figurines: New Finds at Troy," *Studia Troica*, 1 (Eberhard-Karls-Universität Tübingen; University of Cincinnati; Mainz am Rhein: P. von Zabern, 1990), 38-68. Miller discusses the workshop on pages 54-59.

[144] Miller 1990, 57.

[145] Two kilns were found in the excavation of the south-western corner of the city during the works to broaden the highway between Athens and Thessaloniki. They were located just W the walls of the lower city and were round and 'pear-formed'. The publication mentions no date. Reinders assumes that at least one of these was a relatively recent lime kiln (Reinders pers. comm.). Nikolaou, 2000, 479-480.

[146] Contra van Boekel and Mulder in Prummel and Reinders 2003, 111. One figurine (a banqueter) exactly fits one of the moulds and we can therefore assume that the kiln cannot have been far removed from the house.

[147] Kilns are usually highly identifiable in the archaeological record. See for a variety of examples Cuomo di Caprio, N., "Les ateliers de potiers en Grande Grèce," in *Les ateliers de potiers dans le monde grec aux époques géométrique, archaïque et classique,* ed. F. Blondé and J. Perreault, BCH supplement 23 (Paris: École Française d'Athènes, 1992), 69-86. Kilns are sometimes found in domestic contexts, especially in Magna Graecia.

[148] In Olynthos, three marble basins were found in House Bi5 where also 13 moulds came to light. The basins may have been used in the purification process of the clay. One of the moulds at Olynthus was also used in the production of plastic vases (Cahill 2002, 253f.).

As stated, there is ample evidence that indicates that Coroplasts worked in either industrial districts or in houses.[149] They may have belonged to both the citizen class as to the class of metics.

What created the market for terracotta's? Assuming that the coroplast at Halos would be able to earn his daily bread with the production of these statuettes, what processes lay behind the consumption of these artefacts and what was the role of the terracotta maker in this process? In an attractive holistic analysis of terracotta production and consumption based on an analysis of Athenian assemblages and their contexts, Minna Lönnqvist suggests that coroplasts produced terracotta statuettes for ordinary people who could not afford large scale works of art.[150] Besides that, the introduction of the sumptuary laws at the end of the 4th century BCE in Athens must have had an impact as well, as the production of large scale sculpture commissioned by individuals was curbed by these laws. Lönnqvist's analysis is aimed at explaining the development of the so-called Tanagra style (named after Tanagra in Boeotia, where many of these figurines are found in grave contexts), a style that is now acknowledged to have developed in Athens.[151]

Terracotta makers, the author states, had an active role to play in the rising popularity of terracotta's and in the development of the form and style of these artefacts. For Athens then, Lönnqvist claims that the coroplasts' production reflects a creative response to a social need, a need that arose from the challenging social and economic circumstances in Athens at the end of the 4th century BCE.

In the course of the 4th century BCE, statuettes of children, and women in the so-called Tanagra style in particular, became preferred subjects in the production and consumption of terracotta's in Athens. Lönnqvist, in her analysis, links the preference of these forms to the wider religious contexts in Athens in which women and children play a particular role. The religious significance of rites of passage, especially initiation rites related to the passage of childhood to adulthood (the Arkteia, for instance) and of life, death and fertility (cemeteries, Demeter and Persephone) became highlighted in the context of perceived threats, such as that of expansionist outsiders (the Macedonians) and threats from within the Athenian economic realm; the reported drought in Athens between 350-325 BCE must have been perceived as a strong hazard to the food supply of the city, the survival of children and reproductivity of Athens' citizens overall.[152] The risk of famine and the prospect of possible death may indeed have been a significant factor in the worship of deities associated with fertility and procreation of the community: Demeter and Kore (Persephone). Artemis, Aphrodite, Athena Parthenos. The challenging economic situation in Athens, the limited means of many of Athens' inhabitants, perceived threats from outside and the execution of

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[149] Athens, Agora. *Hesperia*, xxi (1952), 120; Athens, Pnyx, *Hesperia*, suppl., vii (1943), 140; Athens, Kerameikos. *Corinth*, xv, pt. 1, 86, n.11; Corinth, *Corinth*, xv, pt 1; Delos. *Delos*, xxiii, 18; Olynthos, *Olynthus*, ii 109; iv, 92; vii, 4; Abdera. *PAE* 1952, 272; Pergamon. A. Conze, *Pergamon*, i, 2 (Berlin, 1913), 255; Agrigento. *RM* xii (1897), 253; Tarentum. *Corinth*, xv, pt 1, 86, n. 11; Naucratis, *JHS* xxv (1905), 132 f. Fig.12; Kerch. Minns. *Scythians and Greeks*, 363; Chersonnese, ibid., 364. These sources are cited in: Higgins, R.A., *Greek Terracotta's*. (London: Methuen, 1967), 137.

[150] Lönnqvist, M., "Hellenistic Athens and the Message of the Tanagra Style," *Hellenistic Athens:.Symptoms of a Change.* ed. J. Frösén, (Helsinki: Papers and monographs of the Finnish Institute at Athens, 1997), 157.

[151] Uhlenbrock 1990, 48ff.

[152] This situation remained in existence throughout the 3rd century BCE; Athens had no control over its harbour throughout this period in time which obstructed the imports of grain and jeopardised the food supply in Athens. The Macedonian competition over control on food supplies to Greek cities even led to wars; the Chremonidean war started over the clandestine import of grain by Ptolemy II of Egypt.

sumptuary laws must have contributed to the production of suitable, pleasing and relatively inexpensive statuettes that could be displayed at home, dedicated as votives and could be used as grave gifts for the majority of the population of Athens, securing the survival of the community. The coroplasts themselves were active agents in this process and played in on that need by working in a 'dynamic relation with the artistic atmosphere and the public.'[153]

What can we say about the particular terracotta's found at Halos? What relevance do they bear to the domestic and religious spheres in this Hellenistic city? Would the Coroplast at Halos and his products have contributed to the formation of social realities in a similar way as coroplasts in Athens?

Van Boekel and Mulder have given a fine overview of the terracotta fragments found in the Houses at Halos and of their iconography[154] and I summarize their findings here combined with my own observations of the material and its distribution.

The number of terracotta fragments found in the houses at Halos is limited. The fragments amount to six figurines and three moulds in the House of the Coroplast (one figurine of a standing woman in the courtyard, fragments of a standing woman and an unknown fragment in room 5) and a combination of three moulds (banqueter, two half moulds for a horse) and three figurines (a disc shaped relief showing Aphrodite, a banqueter and a standing woman) in room 3. Two statuettes of females were found in room 5 of the House of Agathon and seven fragments of unknown statuettes in rooms 7/9, 8/11, courtyard) of the House of the Snakes.[155]

Thus, the majority of the figurines and moulds that could be identified are female. Five of those represent free standing females of the *tanagra* type[156] and two represent females in combination with animals: Phrixos or Helle riding a ram and Aphrodite riding a billy goat.[157] One is a mould of a horse consisting of two halves and the banqueter is represented by a mould and a figurine.

The free standing female figurines are of the same type as those found elsewhere in Hellenistic Greece. The development of the style occurred at Athens in era of economic stress, limited means and resulted in an emphasis on the free standing terracotta female figurines which were deposited in a variety of contexts, but especially in graves and sanctuaries dedicated to female deities, stressing a relationship with fertility. Besides the free standing female figurines we have two other images of females in combination with animals: Aphrodite and (probably) Helle. Goats were sacrificed to Aphrodite indicated in her epithet *epitragia*. In this guise she is identified with Aphrodite Pandemos who was worshipped as a 'planet (star) goddess associated with happiness and physical love'.[158] The billy goat refers to the fertility aspect of this cult and it is very likely that Aphrodite Pandemos was worshipped somewhere within the city. Van Boekel and Mulder claim that the disc shaped reliefs may have been meant to hang on a wall and the mould was likely to have produced more than one of such discs. They were most likely a cheaper substitute of reliefs made of more costly materials.

The fragmented figurine of Phrixos or Helle on a ram, found in room 5 of the house of Agathon is of a different nature. This figurine represents a young boy or girl riding a

[153] Lönnqvist 1997, 158 and 182.
[154] Boekel, G.M.E.C. van and B. Mulder, "Terracotta Figurines," in Reinders and Prummel 2003, 106-118.
[155] The fragments found in the House of the Snakes were not included in Prummel and Reinders 2003.
[156] F1-4 in van Boekel and Mulder 2003, 111ff.
[157] F5 and F9 in van Boekel and Mulder 2003, 111ff.
[158] Van Boekel and Mulder 2003, 115f.

ram and represents a myth closely associated with the founding myth of Halos. Phrixos and Helle, the two children of the mythical founder of Halos, Athamas, were threatened by their stepmother Ino who invented a Delphian oracle claiming that Phrixos needed to be sacrificed on mount Laphystios. Nephele, their mother, thereupon sent a ram with a golden pelt to save the children and bring them safely to Kolchis. On their way Helle fell in sea, an area now called Hellespont. This myth was closely linked to the cult of Zeus Laphystios at Classical Halos as described by Herodotus.[159] The descendants of Athamas were not allowed to enter the prytaneion (the *Leiton*) of the polis. In case they did, they would be sacrificed in the sanctuary of Zeus Laphystios at Halos.[160] This myth must have had a particular significance to the inhabitants of Halos and it is likely that the sanctuary was the main cult centre of the city; as the figurine with the image of Phrixos or Helle on a ram is not the only image that we have from Halos related to this myth. The coins at Classical Halos bear the portrait of a laureate Zeus on the obverse, likely representing Zeus Laphystios, while the reverse we find an image of Phrixos or Helle seated on a ram.[161] The coins of the refounded Hellenistic city feature a similar design, but now we only find Phrixos sitting on a ram.[162]

Images on coins of ancient Greek poleis mostly function as 'emblems' for civic identity; they are usually related to the mythical founding history of a city and display the main deity worshipped in those cities. The terracotta of Phrixos or Helle on a ram was found in a room associated with storage of household goods and probably not in an area where it was 'consumed'. In my opinion, however, it could be related to some form of ancestor worship or commemoration that may have taken place in Halos. Ancestor worship in which mythical founders are venerated, often as mythical heroes, can be found in many cities in Classical and Hellenistic Greece; the mythical royal family in Athens was worshipped in and around the Erechtheion, the mythical royal family of Sparta in the Menelaion, the hero Pelops in Olympia.[163] Jonathan Hall, in his study on the Hero cult in the Peloponnese, has shown that especially in periods of stress, civic, and occasionally ethnic, identity is being increasingly expressed in various, sometimes competing, forms of ancestor worship.[164] Given the context in which Hellenistic Halos was (re) founded, a 'free' city under Macedonian influence, the imagery on the terracotta found in the House of the Coroplast and on the coins of Hellenistic Halos seem to suggest that they are meant to be expressions of local civic pride, identity, freedom and independence. The idea that expression of civic identity perhaps took the form of ancestor *veneration* (rather than commemoration) is, admittedly, premature and more research, which goes beyond the scope of this study, is needed to substantiate this suggestion. However, the discovery of a 4th century

[159] Herodotus VII 197.
[160] Reinders, 1987, 236. The sanctuary has not yet been located.
[161] Reinders 1987, 236 ff.
[162] Van Boekel and Mulder 2003, 113, Reinders 1988, 136. See also a discussion on the relationship between coins, trade and textiles in paragraph 7.5.2.
[163] There are many forms of hero or heroine cults; they range from cults dedicated to oikists to cults dedicated to anonymous heroes. The literature is extensive and the most significant works to date are: Antonaccio, C., *An Archaeology of Ancestors: Tomb and Hero Cult in Ancient Greece,* (Lanham, MD: Rowman and Littlefield, 1994), Larson, J., *Greek Heroine Cults,* (Madison: The University of Wisconsin Press, 1995), Malkin, I., *Religion and Colonization in Ancient Greece,* (Leiden: Brill, 1987), 189-266.
[164] Hall, J., "Beyond the *polis*? The multilocality of heroes," in: *Ancient Greek Hero Cult. Proceedings of the Fifth International Seminar on Ancient Greek Cult, 21-23 April 1995*, ed. R. Hägg, Skrifter utgivna av Svenska Institutet i Athen. (Stockholm: Paul Åströms Förlag, 1995), 49-59.

inscription in the south-eastern city gate, in which ancient Thessalian heroes are commemorated, seems to point to the Hellenistic custom of creating heroic poems at the foundation of new cities in which the city's heroic past is celebrated.[165]

Apart from the figurines in the houses, there are other areas where excavations at Halos have yielded figurines. This concerns the Hellenistic cemeteries of Halos and the so-called sepulchral building excavated in 1982.[166]

The cemeteries were excavated first in 1984 and again in 1990.[167] The graves yielded a small number of terracotta's. Most of them are on display in the Archaeological Museum of Almiros and the majority are female figurines of the Tanagra type.[168] The sepulchral building is located on the slope of the higher city and consists of two spaces, each with a separate entrance. Each space was divided up into two rooms and in room 4 a double 'grave' was found with a different orientation than the building. This building is now securely identified as a sanctuary dedicated to Demeter and Persephone.[169] A large number of female figurines were found here, together with a large number of miniature hydriae and other votives.[170] The figurines consist of free standing females of the Tanagra type, reliefs, female heads and protomes. Some of these figurines are made of local 'Halos Ware', just as some of those found in the House of the Coroplast.[171]

With regard to the consumption of terracotta's in Hellenistic Halos we can summarize that they were used in grave, sanctuary and domestic contexts and that the majority of them were female forms. Our findings, then, resemble what Lönnqvist has concluded for the development of the Tanagra style in Athens. As a newly (re)founded polis, Halos was dependent on a population with limited means which had recently settled in a new urban space. We may perhaps say that the terracotta's at Halos befit a community which needed imagery related to fertility and civic identity serving as media in socially and religiously important contexts of the polis.[172]

What we should realize with regard to the interaction between production and consumption of terracotta's at Halos is this: just as in Athens, the (domestic) economy of terracotta making was not an isolated activity, but occurred in a wider context of social, economic and religious practices. The coroplast at Halos produced for the local market which needed images of deities related to fertility cults (Aphrodite and Demeter) to secure the reproductivity of the community, and images related to the mythical history of the city as a display of (re-founded) civic identity. They were deposited in graves, sanctuaries and in the domestic sphere. As an area of both

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[165] The inscription is in the course of being published by Annette Harder who concludes that the text may indeed be part of such a poem, be it that it contains many mistakes.

[166] Reinders 1987, 137 ff.

[167] Malakasioti 1985, 184-185; Malakasioti and Rondiri, 1990, 203-204.

[168] This also indicated in the publications of Malakasioti and Rondiri. 1984: Grave 1: 1 male, 1 female figurine; Grave 8: two female figurines (out of 11 graves); 1990: terracotta's were found, but no indication of how many. Four figurines are on display in the Museum in Almiros; three are female and one is male.

[169] Reinders, pers. comm.. Colette Beestman-Kruyshaar made a detailed study of this structure and its contents which she presented at the 3rd Conference of the Archaeology of Thessaly and Central Greece in Volos in March 2009. I have not yet been able to include her findings in this publication. In the vicinity of the sanctuary, along the fortification wall near the south-western corner of the lower city an inscription was found on a block which represented a dedication to Demeter. The inscription, which may be the base of a votive, mentions Nikoboula daughter of Polykleitos, and Demeter. The inscription reads: 1st line: Nikoboula:Polykleitou 2nd line: Thygathr:Damatri. (Nikolaou, E. 1999 (2008), 395).

[170] Reinders 1987, figs. 116 and 117, 296-310.

[171] Colette Beestman-Kruyshaar, pers. comm.

[172] Lönnqvist 1997, 182.

production and consumption, the domestic sphere itself was thus a dynamic context fulfilling a role in both fuelling these social needs as well as quenching them.

6.9 Personal hygiene

Toilets

Specific spaces meant for defecation and urination are rarely recognized in Classical houses in Greece. In Olynthus, a ceramic 'toilet seat' may have been found, but this artefact is not known from other houses, in Olynthus or elsewhere.[173] Three spouted vessels at the site have been identified as urinals and elsewhere, particular vases may have served as receptacles for urination and defecation, which were emptied on the spoil heap or in large pithoi situated in the courtyard which were emptied at a regular base.[174] Designated areas for defecation and urination in the form of latrines and aborts were included as specialised spaces in domestic architecture from the Hellenistic period onwards.[175] They have not been recognized at Halos and neither have we found any special vessels related to these activities. The filled up well in the House of the Snakes may very well have served as a *kopron*. Although the soil analysis did not indicate that the well was filled up with any kind of animal excrement, the decayed matter in the well was organic, and may have derived from plant remains, while the research was inconclusive regarding the presence of human waste.

Bathing, oil and perfumes

Much is known about Roman bathing culture, but we still have to wait for more detailed studies on the relation between social practice and personal hygiene and bathing in Greek domestic contexts.[176] Many studies deal with personal hygiene and bathing in public settings, such as sanctuaries or gymnasia.[177] Bath accommodations are well attested in various religious and sporting complexes, such as Delphi, Olympia and Gortyn, where there was a large sense of commonality and openness in the spatial organisation of bathing.[178] Bathing in these settings was done together and public baths related to gymnasia were an overall male environment. Bathing in sanctuaries

[173] Robinson and Graham, 1938, 205, pl. 55.1-1a. cited in Ault 2005, p. 69, note 62.

[174] Bradley Ault has identified several koprones in the houses of Halieis. These features, which have the form of rectangular 'tanks' demarcated by slabs, were located in the courtyard of houses 7, A and D and served as a large scale receptacle of organic waste and broken household items. On the interpretation of these features and the way they tie in with domestic agricultural practices see Ault 1995. For the well in the courtyard of the House of the Snakes see Schelvis 2003 and Haagsma 1997 and also this volume, chapter 2. The well found in the courtyard of the House of Agathon may have served this function.

[175] House II in Eretria (Phase 1 and 2) has a latrine (in rooms a and a1). Reber, K., *Eretria X. Die Klassischen und hellenistischen Wohnhäuser im Westquartier*, (Lausanne: École Suisse d'Archeologie en Grèce, 1998), 100-102. Fig. 164.

[176] At the conference on Housing in the Eastern Mediterranean, organized by the Austrian Academy held in October 2007 in Vienna, Monika Trümper gave a paper on bathing in Classical and Hellenistic domestic contexts as part of a larger research project on domestic bathing she had initiated. I did not have the text of her paper at my disposal at the time I wrote this chapter.

[177] These following works describe Greek bathing, but mainly in relation (and anticipation) to sanctuaries and gymnasia, as well as Roman bathing culture: Weber, M., *Antike Badekultur*, (München: C.H. Beck 1996), Yegül, F., *Baths and Bathing in Classical Antiquity*, (New York: Architectural History Foundation; Cambridge, Mass. : MIT Press, 1992). The work by René Ginouvès also analyzes domestic baths in literature, in iconographical sources as well as in archaeological context and should still be considered the standard work on Greek bathing in antiquity: Ginouvès, R., *Balaneutike. Recherches sur le bain dans l'antiquité grecque*, (Paris: E. de Boccard, 1962).

[178] See for instance the plan of the Greek bath facilities at Olympia (plan reproduced in Ginouvès 1962, pl. XXXVIII).

often had a religious component and some bathing facilities will have been used by female worshippers. Vase painting gives us some information on personal hygiene as well and washing and they are quite informative about the ways people cleanse themselves and others.
Ginouvès summarizes various ways of washing and gives an excellent summary of 'washing tool kits'. Various vases were used as wash basins: the lebes is a well known vase for this purpose. The lebes has strong connections to religious cleansing: the lebes gamikos was a vessel traditionally used for the bridal bath prior to the wedding ceremony. The lebes also has a connection to the cleansing of the dead, just as the loutrophoros. The podanipter was a vase used for washing the feet and the louterion is often depicted as a vessel where members of the household as well as athletes could clean themselves. The problem with all these vessels is that they could also be used for other purposes: the lebes could be used for serving and storing wine while the louterion could be employed in food preparation.[179] In addition, other vessels, such as lekanae, as we have seen, are multifunctional vessels; they can be used in food preparation, in serving as receptacle and as wash basins. Thus, we can therefore expect that the more 'informal' forms of washing cannot easily be recognised in domestic contexts.
From Halos, we have one large part of a coarse terracotta louterion (P272), found in the courtyard of the House of Agathon. Two lebetes were also found (P268 & P270), one in room 5 of the House of the Coroplast and one in room 5 of the House of the Snakes. Louteria are found in a variety of settings in Olynthus. Sometimes they occur in or near courtyards in combination with portable altars. In such a setting they could have functioned as washbasins for ritual cleansing, but they are also found together with grinding equipment. In the latter setting, Cahill asserts, they could also be identified as a kardopos, a basin for kneading dough. Our louterion is, according to the CA analysis, associated with drinking gear. There are no direct indications for ritual usage and thus it may have simply functioned as a wash basin. The lebes in the House of the Coroplast is linked with a number of other open vessels (kraters and lekane). Taken together, they suggest some form of storage. This also counts for the lebes found in the House of the Snakes which was associated with pithoi and transport amphorae.
The clearest examples of bathing would of course be the presence of a bathtub in a room coated with water resistant cement. Many of those rooms have been found in Olynthus, although not often with the bathtubs, and they are found in Halieis and other sites as well. These specialised areas are lacking in the houses of Halos.[180] In only two instances do we have a few remains of a bathtub: in room 3 of the House of the Ptolemaic Coins and in room 6 of the House of the Snakes.[181] The remnants do not provide us with direct indications that these were indeed bathing areas.
But the presence of other items may. Bathing is an activity that requires particular utensils, such as hydriae, or other water containers such as amphorae and jugs. Bathing may have been accompanied by using oils and perfumes and applying make up, stored in lekanides, pyxides, aryballoi, lekythoi and unguentaria. Especially the distribution of the oil and perfume vessels may provide us with a stronger idea about areas where items related to personal hygiene were stores or used. Oil was scraped off the body by using a strigil. We only found one of those, in the household storage area

[179] Cahill 2002, 71.
[180] An extensive bathing area was, however, discovered in the reoccupied south-eastern gate at New Halos. Reinders et al. 1996, Dickenson et al. 2006.
[181] In the catalogue of Reinders et al. 2003, these items are identified as 'tubs': P266 and P 268.

of room 5 in the House of Agathon. Because pyxides could be made out of wood with leaden lids, I also included a leaden pyxis lid in the table below.

House	Room	Sort of Room	Unguentarium	Lekanis	Pyxis/lid	Lekythos	Aryballos	Bathtub	Total	Associated items CA analysis
Coroplast	3	Large sideroom			1		1		**2**	Mould, figurine, doornails, chytra table amphora
Coroplast	4	Large sideroom			1				**1**	Amphora, pithos, loomweights, domestic mammals
Coroplast	9	Side room		1					**1**	Coin, astragalia
Agathon	1	Side room				2			**2**	Krater, kantharos, bowl, plate, pithos, pithos lid
Agathon	2	Side room					1		**1**	Loomweights
Agathon	5	Side room			2+1?	1			**3**	Loomweights, hook, sickle etc.
Ptolemaic Coins	1	Side room				2			**2**	
Ptolemaic Coins	3	Large room	1		1		1	1	**4**	Unguentarium, bathtub, pyxis, chytra, miniature bowl, bomiskos, hearth, grinding stone, krater, amphora, domestic mammals
Ptolemaic Coins	4	Side room				1			**1**	
Amphorae	1	Side room			1				**1**	Lekane, rubber, strainer, pyxis, cooking pot, lid, chytra, loomweight, juglet
Snakes	2	Side room			1				**1**	
Snakes	3	Large side room		3					**3**	
Snakes	6	Side room	1		1			1	**3**	
Snakes	8/11	Large room	2		1		1		**4**	
Snakes	10/12 etc	Courtyard well	1						**1**	
Total			5	4	9	6	4	2	**30**	

Table 6.10. Distribution of items related to personal hygiene.

From the distribution we learn that most items are associated with side rooms. The exception is room 3 of the House of the Ptolemaic Coins which stands out by its location and because it has the largest numbers of items related to personal hygiene in that particular room. The combination bathtub with perfume vessels indeed point to a bathing area. The amphorae, chytrae, and fire place with which this room is associated may, apart form cooking, also have served as water storage and water heating.
We find a similar configuration in room 6 of the House of the Snakes. This room is mostly associated with pithoi, but the chytra and the bottles meant to contain perfumed oil may have a connection with the bathtub remains found there.
We have to keep in mind that the bathtub pieces found may not have been in 'their place'. But the fact that they are found together with other items associated with personal hygiene, which are otherwise not abundantly present in the houses, suggests that these rooms were used for washing in bathing. What is striking is that these rooms do not serve a single purpose, but seem to be the location for multiple activities.

6.10 Domestic Cult and Ritual

Even though religious acts were celebrated at the house, the evidence for these ritual activities in domestic contexts of the Classical and Hellenistic periods overall is scant. Indeed, many every day activities had some form of religious connotation. Small religious acts were known to be carried out before eating (libation), at the end of the meal, but they leave, of course, no traces behind. And others, like the *amphodromia* (the welcoming ceremony of a new baby in the household), for instance, consisted of the father carrying the newborn around the hearth which seems to have operated as a central conceptual element in Greek domestic space. But the hearth, as we have seen above, also has a daily role in food preparation and heating. It is therefore difficult, and perhaps even impossible, to separate domestic religious acts from mundane daily tasks. In my view we should even question this strict separation of the sacred and the profane, as Greeks may not have perceived the *kosmos* in those terms. We should instead realise and accept that our evidence is ambiguous by nature and that archaeology alone has only so much to contribute to the study of religion in domestic context.
The most archaeologically verifiable domestic cult practice in Classical Greece is the one dedicated to Zeus Herkeios, the protector of the enclosure.[182] Small altars are found at Olynthus, Priene, Delos and elsewhere while rectangular hearths have been found at Colophon in courtyards which probably served as altars.[183] Although the altars are not inscribed, scholars have associated them with domestic cults dedicated to Zeus Herkeios, since literary sources describe that Zeus Herkeios was venerated by way of an altar in the courtyard.[184]
At Halos, we do not have any such altars or hearths in the courtyard, although we do have bomiskos fragments found in room 3 of the House of the Ptolemaic Coins. The fragments were found in combination with a large number of items that stood out in the CA analysis; an unguentarium, bathtub fragments, brazier fragments, a pyxis, 3 chytrae, a miniature bowl, a fireplace, two grinding stones, a krater, 2 kantharoi, an

[182] Jameson 1990, 92-113, Nilsson, M., *Geschichte der griechische Religion,* Vol.I. (München: C.H. Beck, 1967), 402ff, Sjövall, H. *Zeus im Altgriechischen Hauskult*. (Lund: H. Ohlsson, 1931), 53ff.
[183] Robinson and Graham 1938, 189-190, 321-325. Holland, L., "Colophon," *Hesperia* 13 (1944), 91-171. Hoepfner and Schwandner 1994, 219.
[184] These sources can be found in Nilsson 1967, 403ff. and consist of references to the worship of Zeus Herkeios in the Odyssey the house of Odysseus, (Homer, *Odyssey* X 333ff) and a description by Pausanias of the House of Oinomaos (Paus. V, 143, 7) cited in Sjövall 1931, 10.

aryballos, 4 transport amphorae and a high number of domestic mammals and marine molluscs. Both the brazier as the bomiskos were unique finds in the houses. The fireplace is not the kind of fixed hearth as was discovered in the House of the Snakes or the House of the Tub. It merely presented as a location with charcoal and ash and was situated in the middle of the room. It seems, then, that occasionally a fire was made here over which the brazier could be placed, while the bomiskos could be used in association for making a sacrifice. The fire itself, then, served multiple roles, and the utensils differed according to the occasion.[185] Also the miniature bowl in room 3 may testify to the ritual taking place in this room.[186] There is no indication if a particular deity would have been venerated.

Room 3 of the House of the Ptolemaic Coins may thus be one of our best examples of the multifunctionality of both space and artefacts as well as the variability of the temporal scale on which domestic activities were performed. The combination of the large range of artefacts in this room suggests usages and activities which varied per hour, day, month or season. We can identify: grinding (grinding stones), bathing (bathtub remains, chytrae, unguentarium, pyxis, fireplace, brazier), cooking, eating and drinking (Fireplace, brazier, chytrae, kantharoi, bolsals, domestic mammals, marine molluscs) and ritual activity (Fireplace, bomiskos, miniature bowl and perhaps domestic mammals and marine molluscs if they represent a sacrifice). These variations indicate that ritual was closely integrated into the daily domestic activities of the Halians.

The other location where we can witness the combined practical and ritual role of the hearth comes from the large room of the House of the Snakes, where a lidded two-handled pot made out of poros stone was found dug into the soil just west of the hearth, the blocks of which were also made out of poros. Chapter 2 already gave a detailed description of this find complex, but for the interpretation and significance it is be necessary to highlight certain aspects and relate the artefacts to their spatial contexts.

The pot was dug into the soil below the floor level on the south-eastern corner of the hearth, right in front of the entrance to room 5. Just north of this entrance a foundation stone was found which probably represented a wall or support. Next to that wall or support a rectangular limestone slab was revealed in a position that suggested that it had fallen from a higher surface or from a standing position. A single text was inscribed in the stone with the text: ΕΠΙΔΟΣΙΣ. Initially, we believed that this inscription was a re-used building block, but now that other and similar *epidosis* inscriptions have been found in the House of the Tub,[187] we will have to revisit our initial conclusion.

The lid of the pot was partly damaged, but about 1/3 of it still covered the pot. The contents of the pot consisted of a large body sherd of a ceramic pot (HA 247/66), a fragment of the lower jaw of a sheep (HA 247/65), a marine mollusc of the species Patella caerulea (HA 247/65), an iron snake (HA 247/64) and a silver snake (HA 247/67). The items seem to have been intentionally placed in the vessel. Although the

[185] This would support the ritual and static concept of the fire in the domestic context. For a discussion on the symbolic significance of hearths, see below.

[186] Very few miniature vessels have been recovered from the houses at Halos. Two more bowls were found in room 2 of the House of the Amphorae. The miniature form of these vessels may testify to a ritual usage: at least 16 miniature hydriae were found in the newly identified sanctuary of Demeter and Kore at Halos. (Reinders 1988, 144) and miniature vessels elsewhere in the Greek world are often associated with ritual activity (See Ault 2005, p. 51 and note 142).

[187] Reinders, pers. comm.

pot was filled with soil, the finds were all located near the bottom of the pot. The snakes, shell and bone were lying on top of the large sherd. There was no trace of burning inside the pot.

This find as such is unique in the archaeological record. I have not yet come across a similar kind of feature in other domestic contexts in Classical and Hellenistic Greece and it is therefore trivial to assign particular significance to it. But a find reminiscent of the one described above, however, came to light during the 2009 season at Kastro Kallithea, where the 15th Ephorate and the University of Alberta conduct excavations at a Classical/Hellenistic site which can probably identified with Peuma. In unit C (the large room) of a domestic structure called building 10, a large stamnoid two handled *pyxis* was found placed into the corner of the hearth, demarcated by two large roof-tile fragments. The pot (of which the lid was not present) contained burnt bone, ashes and a very small iron spiral. The pot itself was decorated with a coiling snake.[188]

Because the snake is such a present attribute in both these finds and the connection with the hearth is so apparent, a logical pathway to proceed is to look for evidence in other sources that would shed light on these associations. Furthermore, the organic remains would be able to inform us how common the foodstuffs which they represent were in the Halian domestic contexts.

Patella caerulea is one of the shell fish species that occur most frequently at Halos and their remains were especially abundant in the House of the Snakes.[189] These species live on rocky spots in shallow waters and occur frequently in Sourpi Bay, near Halos. They served as food and are mostly eaten cooked.[190] The sheep jawbone fragment was not burnt. Not only seafood in the form of shell fish were eaten frequently at Halos, but as we have seen, sheep/goat and cattle were amongst the most frequent eaten meats at Halos. The food stuffs found in this pot thus represent an important part of the diet of the Halians which was provided by the natural resources available in the city territory.

There exists a vast number of articles and volumes on the role and significance of hearths in domestic and urban contexts.[191] It has been suggested that fixed hearths are less common in Classical and Hellenistic houses than portable braziers, while hearths that we can discern may have been used to create warmth but not for cooking, at least in Olynthus.[192] But this may be a matter of regionality or perspective.[193] Fixed hearths in domestic contexts are quite common in north western Greece and it seems that in Thessaly they occur quite frequently too. Hearths have been discovered in Kassope, in Orraon, and in Thessaly we have houses dating to the Hellenistic period with hearths

[188] This find is not yet published, but at the time of this writing, a report had been handed in to *Archaeological Reports* for initial publication which will appear in the course of 2010. A more detailed description will be given in the final publication. The first volume of the Kastro Kallithea project is in preparation.

[189] Prummel 2003, 202. The other most popular shell species that served for food are oysters and cockles.

[190] Davidson, A., *Mediterranean Seafood*, (London: Penguin, 1981), 190.

[191] The literature is much more up to date regarding hearths and their role in domestic practice and ritual: Jameson 1990; Vernant, J,-P., "Hestia-Hermes: the Religious expression of Space and Movement in Ancient Greece," in *Myth and Thought among the Greeks*, (Paris: Maspero, 1983), 127-175; Ault 2005, 75-77. Tsakirgis 2007.

[192] Foxhall 2007, Cahill 2002, 160.

[193] Tsakirgis notes that the apparent absence of hearths in houses in southern Greece may perhaps be a lacuna in our knowledge of Classical housing in this area. Tsakirgis 2007, 226, note 2.

usually located in the large room.[194] They seem to testify to a building tradition what Hoepfner and Schwandner have labelled the 'herdraum haus.'
Based on literary sources, the hearth has often been interpreted as the burning centre of the household around which household life revolves. The hearth is associated with Hestia, goddess of the hearth and as such, Hestia not only symbolized the central place of the house, but also that of the city state; the *prytaneion* was the location of a fire that never went out.[195] As such, the city was seen as the embodied household in which the 'common hearth' through various rites symbolically represented the hearths of its members, the citizens.[196] Hestia is strangely elusive in the Greek pantheon. Her cult is not marked by representations of the goddess and there are but very few images available of her. The cult of the hearth may also not have had an associated and exclusive ritual that left behind clear archaeological evidence. The presence of household fire may just have been a given and its symbolic connotations were only highlighted during household rites of passage and by association with other cult activities.[197]
The relation between hearths, pots, foodstuffs and snakes is even less straightforward. The offering of food stuffs at the hearth has connections with the wedding ritual in which a newly wed couple was showered with a mixture of 'katachysmata', a mixture of dates, coins, dried fruit, figs and nuts.[198] There exists a large volume of literature on the significance of snakes in Greek religion and cult from prehistory to the Roman period and there are clear associations with domestic cult.[199] In the archaeological record there are no other snakes made from any kind of material known from Hellenistic Halos. Singular serpents in a domestic context, such as these, are rare in general. A snake made of bronze is known from Olynthos, but it was found in the street.[200] One coiled serpent in terracotta was found in the andron 7 of the House of the Mosaics in Eretria, where it was originally attached to a wall.[201] Perhaps the most interesting find a terracotta hearth incised with three serpents of a house in Seuthopolis in Thrace, but only one out of the 30 hearths found was decorated in this fashion.[202]

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[194] For north-western Greece, see the evidence assembled by Hoepfner and Schwandner 1994, 114ff. Apart from the two houses at Halos with fixed hearths, we find a hearth in unit C of Building 10 at Kastro Kallithea.
[195] Especially in French scholarly thought this quality of Hestia is stressed. See Vernant 1983. For a more archaeological view of the cultic use of the hearth see Jameson 1991 and Tsakirgis 2007.
[196] Jameson 1991, 106. In literature and plays the city is often represented as a household on a grander scale. A famous example is Aristophanes' *Lysistrata* in which the women of Athens view the government of the city similar to running a household. For the role of hearths in the prytaneion see Miller, S., *The Prytaneion: its function and architectural form,* (Berkeley: University of California Press, 1978), 20.
[197] See Tsakirgis 2007, 230 for an extensive description of the domestic rites associated with the hearth.
[198] The Athenian wedding ceremony is systematically described in Oakley J.H. and R.H. Sinos, *The Wedding in Ancient Athens,* (Madison: University of Wisconsin Press, 1993).
[199] Most of the literature regarding domestic cult related to snakes is rather dated. The best overview is still provided in Nilsson, 1967. About the snake in Greek art and religion: Küster, E., *Die Schlange in der Griechischen Kunst und Religion,* RGVV XIII, (Giessen: A. Topelmann, 1913), 2.
[200] Robinson 1941, 517, no 2607, pl. CLXVII.
[201] Ducrey, P., I. Metzger and K.Reber. *Eretria. Fouilles et Recherches. Vol. VIII. Le Quartier de la Maison aux Mosaïques,* (Lausanne: Editions Payot, 1993), 118-119. Fig. 188, no. 92.
[202] For an image of this terracotta hearth: Dimitrov, D. and M. Čičikova, *The Thracian City of Seuthopolis*. (Marguerite Alexieva, transl.) BAR Supplementary series no. 38. (Oxford: British Archaeological Reports, 1978), Fig. 78p. For a summary of cultic hearths at Seuthopolis see p. 48ff. There are 30 well preserved hearths found in the palace and the houses of this city which developed under the Thracian king Seuthes III in the late 4th century BCE. The discussion stresses the

Various deities are represented in the form of a snake in both literary as archaeological sources but it is notably Zeus and the associated Dioskouroi that connect snakes to the domestic context. On various artefacts the Dioskouroi have been symbolized in the form of two amphorae with snakes depicted in the neighbourhood or on the pots themselves.[203] The Dioskouroi were likely venerated in a celebration called the *theoxenia*, which consisted of a banquet and table of foodstuffs prepared for these divine sons.[204] Their cult was especially strong in Sparta, Sparta's colony Taras and elsewhere on the Peloponnese. Could our find bear a relation to the domestic worship of the Dioskouroi?

There were indeed two snakes deposited in the pots and there are indications that the Dioskouroi were indeed worshipped in the form of snakes.[205] But there are problems with an identification as such. First, *domestic* worship of the Dioskouroi is not attested elsewhere except, perhaps, Halieis and there it takes a completely different form. Second, we may have two snakes, but only one pot and the iconographical evidence points clearly to two amphora-like pots associated with the cult of the Dioskouroi. Third, the connection between the Dioskouroi and the hearth is not clear and fourth, we may wonder whether 'identifying' this cult is useful and significant at all. Yet, as I hope to show in the remainder of this chapter and especially in chapter 7, putting forward arguments to support an association of this assemblage of artefacts with a particular household cult is meaningful if we consider the social and economic context in which this cult was celebrated. In short, I do not believe we are dealing with a cult dedicated to the Dioskouroi here, but I may not have so readily dismissed this interpretation if we could not make a much stronger argument for another deity, closely associated with the Dioskouroi.

Zeus is reportedly venerated in domestic context as Zeus Herkeios and his cult is attested in the form of altars (see above). Literary sources indicate that Zeus also appeared in domestic contexts in three other, closely related manifestations: as Zeus Philios, Zeus Meilichios and Zeus Ktesios.[206] A number of 4th century votive stelai from a sanctuary in Piraeus, dedicated to Asklepios, Zeus Philios and Zeus Meilichios, carry a big, usually bearded, coiling snake. However, no finds dedicated to these deities are known from a domestic context. Things are different with Zeus Ktesios. The name refers to a manifestation of Zeus who protected the property and the produce of a household and his name may be translated as 'he who procures'.[207] There is a 3rd century stele from Thespiai, bearing a coiling snake, and carrying an inscription "Dios Ktesiou" (of, or belonging to, Zeus Ktesios)[208] and there are further inscriptions known from Teos and Panamara in which Zeus Ktesios is referred to as a household god. A

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iconography and cultic usage of these hearths, but does not indicate whether they served for cooking as well.

[203] Nilsson 1967, 408f.

[204] See Jameson 1994 for an overview of the rituals of Theoxenia. See Jameson 2001 and Ault 2005, 76-77 for evidence of a domestic cult of the Dioskouroi in House E in Halieis. The possible identification of this cult relies on two inscriptions found in room 6-24 found in combination with a bolsal and two miniature kotylai.

[205] Nilsson 1967, 409.

[206] For Zeus as a household god see Nilsson 1967, 402-406.

[207] Nilsson translates Zeus Ktesios in German as 'der Erwerber', the 'provider', the meaning of which has more dynamic connotations than the usual 'Zeus of property.'

[208] Nilsson, M., "Schlangenstele des Zeus Ktesios," *Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Athen* 33 (1908): 279-288.

small altar in the form of an eschara dedicated to Zeus Ktesios is known from domestic context in Thera.[209] Most of these finds date to the Hellenistic period.
The evidence that Zeus Ktesios was worshipped in domestic realms comes most clearly from literary sources. Although there are few literary passages concerning Zeus Ktesios, they are quite pertinent to our find. The Athenian orator Isaeus presents a case in which various nephews (sons of a brother and that of a sister) argue about the inheritance of the estate of the deceased Kiron who had no children of his own. In Isaeus wordings, one claimant says that the late Kiron always let them be present at the celebration of the rites to Zeus Ktesios, a household cult to which he was especially attached and which he wished to celebrate in privacy as only family members were allowed to be present. Not even slaves or servants or free men outside of their own family could attend the ceremony. The celebration consisted of 'laying hands on the victims and placing the offerings side by side and praying for health and wealth' (κτήσιν ἀγαθήν).[210] Harpokration, one of the lexicographers, refers to fragments of Hyperides and Apellaion and to a comedy of Menander from which we learn that Zeus Ktesios was worshipped in or near the storage room, in the vicinity of the women's room.[211] But the fragment from which we learn most comes from Athenaios, who describes in his lexicon a certain type of pot, known as a *kadiskos.* This word is the diminutive of the word kados which is usually referred to as a container in which various substances could be stored.[212] Athenaeus thus connects the small storage vessel to the cult of Zeus Ktesios, the 'provider' or protector of the storage and possessions of the household. Drawing on the works of the lexicographer Philemon and the exegeticon of Autokleides (both 4th c. B.C.), he writes:

> *Kadiskos: Philemon says in the book mentioned above that it is a type of cup; It is a vessel in which the Ktesian Zeuses are set up, as Autokleides says in his exegetikon writing as follows. The right way to set up the signs of Zeus Ktesios is this. Take a new jar with two ears and a lid to it and wreath its ears with white wool, and stretch a piece of yellow [lacuna] anything you can find [lacuna] from its right shoulder and its forehead, and pour ambrosia into it. Ambrosia is a mixture of pure water, olive oil, and all manners of food-stuffs (Pankarpia): empty these ingredients in..[probable lacuna]*

Let us suppose, for the sake of argument, that Zeus Philios, Zeus Meilichios, and Zeus Ktesios were all worshiped in the form of a snake, as the abovementioned evidence suggests. In that case, our find in the House of the Snakes may well be a *kadiskos*, in which the Ktesian Zeuses, in the form of two snakes, were placed, along with the 'pankarpia' mixed with ambrosia, of which the bone and the shell form the remains. The small storage vessel found buried next to the hearth must have thus been filled with

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[209] Sjövall 1913, 54. The evidence from Panamara consists of a stele on which Zeus Ktesios, Tyche and Asklepios and other deities are mentioned as household gods (enoikidioi theoi). Cousin, G. and G. Deschamps, "Inscriptions du temple de Zeus à Panamara," *Bulletin de Correspondance Hellénique* 12 (1888): 269, no 54. For the altar from Thera: IG XII 3 Suppl. Nr. 1361 and Hiller von Gaertringen, F. Freiherr, *Thera: Untersuchungen, Vermessungen und Ausgrabungen in den Jahren* 1859-[1902] III, (Berlin: G. Reimer, 1902),154, which is comparable to other of such altars found in the eastern Greek world (Syros, Amastris, Teos) (Sjövall 1913, 55, note 2 and 3).
[210] Isaeus VIII, 16ff. In the translation of Edward Seymour Forster (Loeb).
[211] Harpokration, s.v. Κτησίου Διός in: Harpocration, *Lexeis of the ten orators*, ed. J. J. Keaney, (Amsterdam: Adolf M. Hakkert, 1991).
[212] Amyx 1958, pp. 186ff

food stuffs that the natural environment of the city yielded and that formed an important part of the diet and the economic basis of the Halians. The fact that the pot was buried into the soil with its rim at the same level of the floor and the lid exposed emphasizes the chthonic aspects of Zeus Ktesios. It also meant that it was visible at all times and that it could be re-used on a regular (annual?) base. At the occasion of celebration, the inhabitants of the house may have enjoyed their food near this cult site.
Since part of these food stuffs were also stored in the house in large and small storage containers, it is tempting, to treat this find as a clear indication of the cult of Zeus Ktesios, the protector of produce, and thus of the nature of ritual activities in the large room of the House of the Snakes. The connection with the storage and 'property' aspect of the cult area of the house may be less clear at first sight, however, and we still need to explain its connection with the hearth.
The pot was buried next to the hearth right in front of the entrance to room 5. Room 5, together with room 6, the latter of which could only be entered through room 5 have been identified as the areas with the least 'openness' (see chapter 3) and thus areas with a high level of privacy. In addition, they have been clearly identified as areas associated with storage. The position of the pot may therefore give us clues regarding to what area was 'protected'. A further argument for the connection between storage and the snake form of the 'Ktesian Zeuses' can be found in the decoration of Pithos P257 found in room 1 of the House of the Amphorae at Halos. This pithos of which only the rim, shoulder and part of the body was preserved bears at least 15 very small stamps on the rim and along the shoulder all of which represent a coiling snake.
The remains that we have from this cult, the buried pot with contents, may not be representative of *all* the rituals connected to Zeus Ktesios. From Isaeus we have learned that sacrifice formed part of the worship and that Kiron considered the ceremony a highly private event. The element of burnt sacrifice is further confirmed by the altar found at Thera in domestic context. I would therefore suggest that the hearth next to which the pot was buried served the role of altar at the occasion of this celebration and, at times, it may have served a similar role at various other religious occasions.
What we have in the House of the Snakes is clear evidence for domestic cult, a cult dedicated to procuring and protecting food stuffs that the natural sources of the city provide to the household. These items were of vital importance for the survival of the household, and they needed to be kept safe in a well protected built environment. The physical structure of the house itself was therefore the ultimate locus for the worship of the Ktesian Zeuses and it must have been the domestic built environment, its protective qualities and its role as property of the household that were celebrated in this cult too.

6.11 The epidosis inscriptions

An element that we have not yet included in our analysis is the ΕΠΙΔΟΣΙΣ inscription found in the House of the Snakes in between the doorway to room 5 and the hearth, just east of a small foundation. Initially we believed this inscription to be a re-used building block, but since other of these inscriptions have since come to light, two in room 3 and one in room 10 in the House of the Tub I believe that there is more to their presence than initially thought.
The inscription in the House of the Snakes is inscribed on the top centre of a rectangular slab of local lime stone. Those of the House of the Tub are of similar material and size.[213] Some of the inscriptions are damaged: in one case the text seems to be broken off after EPI/ and at a later time the ending /DOSIS must have been added. The contexts

[213] These inscriptions will be published by O. van Nijf..

in which the inscriptions are found have strong similarities. They are all found in large rooms, three of them in rooms with hearths, and they may have been set up as a distinct marker against a wall or on top of it.

Epidosis has varied meanings in Greek antiquity. I will not engage in an extensive analysis of the term, but will keep it brief and will focus on the epigraphical evidence that we have from other sites as well as the context in which the inscriptions were found and in which they must have figured.

Ἐπίδοσις refers usually to an appeal being made by a city for donation, a free gift, a contribution, a subscription in, a benevolence, a benefaction or a charitable endowment, usually from a citizen or non-citizen to a common cause of the city.[214] There is plenty of inscriptional evidence listing public ἐπίδοσεις, and they usually refer to gifts to sanctuaries, to the city or to festivals. These inscriptions often take the form of lists of names of donators who pledged contributions to the erection of a monument, the repairs of a sanctuary, the defence of the countryside or the purchase of grain. These gifts could take the form of contributions of money, but also of weapons, ships, taking over payment of taxes or providing commodities. In such inscriptions the meaning of the epidoseis is connected to the donators, the nature and amount of the donation and to the cause. The public nature of these inscriptions is to emphasize and recognize the efforts made by individuals or groups of citizen for the common good of the community, the sanctuary or whatever the purpose of donation may have been.

It does not often occur that the word epidosis is not accompanied by a name of a donator, a recipient or a cause. But it is interesting to notice that the appearance of epidosis as a single word on an inscription is restricted in time as well as in space: the known inscriptions all date to the Hellenistic period and they are mainly found in cities along the coastal zone of the Pagasatic gulf. Since we are 'in the dark' as to what is contributed, by whom to whom and for what, we should have a closer look to the contexts in which they are found as their original locations, as far as we know them, and their historical and political context bear significance to their meanings.[215] The evidence for epidosis inscriptions come from Pagasai/Demetrias, Phthiotic Thebes and Halos.[216]

Arvanitopoulos briefly reports about an epidosis inscription found near the 'alogopati' in or near the city wall at Pagasae (Demetrias). The epidosis inscription found here was inscribed on a rock in a section where other non-alphabetical signs were found as well.[217] Arvanitopoulos interprets the area as a quarry. The next inscription was found near an ancient road close to the agora of Demetrias A third was found set up as a

[214] These translations are taken from Liddell and Scott and are based on the appearance of the word in various texts such as Polybius 34.8.10, Demosthenes 18, 171 and Theophrastus *Characters,* 22.3. A book completely dedicated to the phenomena of epidoseis is the PhD thesis of A Künze: Künze, A., *ΕΠΙΔΟΣΙΣ*, Bern: 1923. For recent literature on *epidoseis* see: Migeotte, L., *Les souscriptions publiques dans les cités grecques,* (Genève, Québec: Droz, Editions du Sphinx, 1992), Liddel 2007, 277-279. Oliver 2007, 199-209.

[215] McLean, B.H., *An Introduction to Greek Epigraphy of the Hellenistic and Roman Periods from Alexander the Great down to the Reign of Constantine* (323 B.C- A.D. 337), (Michigan, University of Michigan Press, 2002), 3 quoting Louis Robert.

[216] Phthiotic Thebes: Arvanitopoulos, A.S., *Praktika ths en Athinais Archaeologikis Etareias* (1907): 162. Pagasai: "Anaskaphai en Thessaliai," *Praktika ths en Athinais Archaeologikis Etareias* (1909): 139, Demetrias: "Anaskaphai en Thessaliai," *Praktika ths en Athinais Archaeologikis Etareias* (1912): 166, Staehlin, F., *Mitteilungen des Deutschen Archaeologischen Institut. Athenische Abteilung* 52 (1927): 87-88; Catalogue of the Athanasaikon Museum of Antiquities, Volos; *Thessalika Mnemeia.* 116, 7a.

[217] These are all published in IG IX, 2, 395. Their context is described in Arvanitopoulos 1909, 139.

visible part of the mudbrick wall in a tower in the South Eastern part of the city wall. The word is also inscribed in the back of a grave stele found at Demetrias.
The inscription from Phthiotic Thebes was found in a probable domestic context (belonging to the demos, or an owned property) of which two rooms were excavated. It was located under a walled up doorway. The inscription reads ΕΠΙΔΟ/ΣΙΣ and was found together with a small marble head of Athena amongst a large amount of household pottery, bones and traces of fire. In connection to these finds Arvanitopoulos reports the find of a so-called Megarian bowl painted in various colours. We may infer from this find that the date of the inscription is from before the late 3rd or early 2nd century BCE.

Finally, a stele was discovered with the text ἐπίδ[οσις] Εὐκρατεί[δα] Αρτέμι[δι] in the vicinity of Almiros. This stele probably honours Eukratis for making a contribution to Artemis, but it is uncertain if the gift concerns a votive or a contribution to the physical structure of Artemis sanctuary.[218] Last, we have the four epidosis inscriptions mentioned above, found in a domestic context at New Halos.
The inscriptions are thus either built in walls on purpose, on rock or their context is unclear. Kuenze viewed epidosis inscriptions as contributions to the financing of built structures, such as walls.[219] Two of the inscriptions are indeed built into walls, one is a city wall, while the other is the wall of a house. Staehlin, however, saw nothing more in these inscriptions than a 'spielerische Dreingabe des Steinmetzen', meaning 'grafitti.' But his observations were based on a limited number of these items and since there is such a consistency to the ones found in Halian context, I believe that they may represent something else.[220] We should approach the topic with caution, however, and it is therefore not my intention to produce a 'definitive answer' to what these inscriptions may mean. What I merely will do is to make some suggestions.
Stelai such as these are not known from domestic contexts otherwise as indicated above. The *stelai* may have been painted. Decorating stelai with paint in various colours was customary in the Hellenistic period and may thus have been personalised in this way. The contexts in which the inscriptions are found suggest that they are set up as markers. As an artefact, they seem to have had little use. Their surface is not flat or polished and they are not found in a position that suggest secondary use as a table or bench nor are they used as secondary building material. What is curious is that the Halian inscriptions are set up as markers *within* the house, not outside of it. Their location indicates that they were primarily set up to be read by household members; only the house in Phthiotic Thebes had its marker set up as part of the exterior doorway.
My first suggestion is that the stelai commemorate a donation of the inhabitants to the city or to a public cause. From the inscription on the synoikismos of Lebedos and Teos we know that the 600 richest citizens of Teos had to forward money in proportion to their property to provide ¼ of the funds for building the new houses for the Lebedians. The money would be paid from city revenues after a year. It may very well be that in the case of Halos, the inscriptions represent the honour of forwarding money towards a common fund meant for building expenses. But they can refer to other forms of public needs as well, such as the purchase of grain. In this light it is interesting to see that the houses in which these stelai are found are the largest houses and in those with the

[218] This may represent a dedication to Artemis Panachaia of which a sanctuary existed in the territory of Halos (see chapter 3). Another inscription mentioning Artemis was found during the recent excavations at the south-east gate at Halos.
[219] Künze 1923, 69.
[220] Stählin 1927, 88.

largest storage volume. The private display of the stelai in this context is still puzzling, however.[221]

The following suggestions have admittedly less merit, but since the single occurrence of the word epidosis on an inscription is geographically restricted to Achaia Phthiotis, they seem to point to a local meaning and usage. Thus my second suggestion would be that the stelai mark the proclamation of the donation of free lots of land in the new urban territory. From the two letters regulating the synoikism between Lebedos and Teos by Antigonus the One Eyed we have learned that the lots were provided to the new inhabitants for free. This may have been the case at Halos as well and the benefaction may even have included part of the building expenses. The donator here would have been the Macedonian ruler who founded the city and the recipients the inhabitants of Halos. A serious argument against this interpretation that, to my knowledge, epidosis is never used as a term to describe a gift to a city and its citizens.

My last suggestion is that the stelai represent a private donation to a household deity, perhaps Zeus Ktesios. Most of the Halian stelai are found in rooms with a hearth or fireplace and in this argument house size and storage volume both play an important role as well. We have also seen that the hearth could serve at occasion as an altar. This last interpretation would best explain why the donators and recipients were not made explicit; the inhabitants of the house knew who they were, to whom they were giving and from whom they were receiving. This suggestion is certainly the most dubious one, but it is based on the epidosis inscription honouring Eukratis for his donation to Artemis, mentioned above.

Whichever suggestion one favours, all of the possibilities have a close connection with the aspects of the household that were seen as property. Either something was received or been given away *in order to* receive, and the stelai seem to mark these exchanges as signs of either indebtedness, acknowledgement or both. The connection to property seems to be furthered by the association of one of the stelai with a clear centre of domestic cult dedicated to the 'one who procures.'

6.12 Concluding remarks

Based on the analysis of the distribution of the most frequently occurring artefacts we have seen a number patterns appearing and the results of the analysis are summarised in table 6.10

The Halians stored their food in designated spaces and appear to have employed different storage strategies. Rooms associated with storage are usually one or two of the side rooms. The largest houses also have the largest storage capacities and the difference is significant with some of the smaller houses. In terms of private economic wealth it may be of significance that the two houses with the largest storage capacities may have been engaged in *epidoseis*, private funding of projects benefitting the larger community.

Furthermore, *within* the house the patterns of food preparation, weaving and consumption do not seem to have been spatially exclusive. In fact, very few activities seem to have systematically been assigned to a particular space or area within the house, with the exception of three activities:

In every house there is at least one room almost void of finds. An argument *ex silentio* could be made for associating these areas with sleeping. Secondly, bathing seems to

[221] Even though the House of the Tub is not included in this analysis, I have been allowed to refer to the contents of this house. The house yielded a very large amount of pottery and had distinct storage areas with pithoi and amphorae. The stele found in room 10 was lying amidst four crushed amphorae.

be associated with the deepest areas of the house and lastly, cooking and cult activities seemed to centre around the hearth.
Finally, we have been able to identify at least two domestic industries aimed at a larger clientele than the household members alone: coroplasty in the House of the Coroplast and weaving in the House of Agathon. Our next question should be what these patterns mean in social, economic and cultural terms. This will be the topic of our next and final chapter.

House	Room	Sort of room	Corresponding items	Activities	Light
House of the Coroplast	1	courtyard	coin	Financial transactions?	yes
	2	courtyard/prostas			yes
	3	larger side room	mould,, figurine, aryballos, doornails, chytra, (table) amphora	coroplasty	from courtyard
	4	side room	amphora, pithos, loomweights, domestic mammals	storage, (storage for) weaving	none
	5	side room	lekane, krater, lebes, bead, ring, figurine		from courtyard
	6	side room		sleeping?	none
	7	large room	hearth, marine molluscs, chytra,	food prep.?	from courtyard
	8	side room		sleeping?	from street?
	9	side room	coin, lekanis, astragalia		from courtyard
House of the Geometric Krater	1	side room			
	2	side room	coin, lopas, weight, lagynos, playstones,	consumption, storage area	?
			astragalia, cup, kantharos		
	3	large room	grinding stone, hydria, hook,	food prep.	from courtyard
	4	courtyard			yes
	5	side room			
	6	side room			
House of Agathon	1	side room	krater, kantharos, lekythos, bowl, plate	Consumption, storage	none
			pithos, pithos lid		
	2	side room	loomweights	weaving	from courtyard
	3	large room	cooking pots, grinding stone, knife hearth, loomweights	food prep. weaving	from courtyard
	4	side room		sleeping?	none
	5	side room	loomweights, hook, sickle, hoe, keyhole, lead lid, strigil, spade, hoe, stylus, pelike meathook, lead, pickaxe, unguentarium, miniature bowl, astragaloi, amphorae, weight, basket	storage of household items	from pastas
	6	courtyard	bolsal, cup, plate	drinking, consumption	yes
	7	larger side room			from courtyard

House of the Ptolemaic Coins	1	side room		sleeping?	none
	2	side room			from pastas
	3	large room	unguentarium, bathtub, pyxis, grinding stone, chytra, saw, kantharos, miniature bowl, bomiskos, grinding stone, krater, aryballos, Fork, pyxis, lid, bolsal, fireplace	personal hygiene, food prep., religious act.	from courtyard
	4	side room	pithoi, pithos lid, loomweights	storage, weaving	none
	5	side room			from courtyard
	6	courtyard			yes
	7	larger side room			from courtyard
House of the Amphorae	1	side room	lekane, rubber, strainer, pyxis, cooking pot, lid, chytra, loomweight, juglet	food prep. cooking, weaving	from street?
	2	side room	domestic mammals, grinding stone	various	from courtyard?
	3	?			
	4 unit 1	side room	pithoi,	storage	from street?
	4 unit 2	small side room	kantharos, krater	storage area household goods	none
	5	side room	lagynos, hydria, cup/bowl, olpe	storage for liquids	from courtyard?
House of the Snakes	1	side room		sleeping?	none
	2	side room		sleeping?	none
	3	larger side room	krater, askos, chytrae, lekanides	pouring, consumption	from street
	5	side room	pithoi, amphorae, domestic mammals	storage	from pastas
	6	side room	bathtub, unguentarium	personal hygiene, storage	from street?
			pyxis, pithoi		
	7 9	corridor			from street
	8 11	large room	grinding stones, rubber, cooking pot	food prep., cooking	from pastas
			chytrae, jugs, hearth, loomweight,	ritual, weaving?	
			pot and snakes		
	4,10 ,12 - 16	pastas/courtyard	domestic mammals, marine molluscs lagynos, lekane, well	consumption, refuse	yes

Table 6.11. Results of the Correspondence analysis and comparisons with other finds in the various rooms and areas.