The ‘skull cult’: A grand narrative or not? Comparing plastered skulls from PPNB Levantine and (A)ceramic Anatolian sites in West Asia

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Comparing plastered skulls from PPNB Levantine and (A)ceramic Anatolian sites in West Asia

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Chapter 1: Introduction

"the whole effect is extraordinary life-like (...) and one cannot escape the conviction that they are portraits" (Kenyon, 1954, p. 107).

The practice of skull manipulation in West Asia, dating back to the Pre-Pottery Neolithic B (PPNB) (ca. 8700-6900 cal. BC), has first been discovered by scholar Kenyon during the excavation in 1953 at Jericho. The plastering and applied features mimicking the human face in great detail amazed Kenyon, which is visible in her report:

"These heads had as a basis human skulls, on which the features were restored in plaster. The tops of the skulls are left uncovered, but the face and the jaw are completely covered. The interior of the skull was packed with earth before the plastering was carried out, and the soft tissues had therefore previously decayed or been removed (...). The features are modelled with delicacy and precision, ears, nose, mouth, and eyelids all being small and neat, while the cheeks are smooth and rounded. The eyes are inset with shells" (Kenyon, 1954, p. 107).

The discovery of the plastered skulls sparked the interest of various scholars and marked the beginning of considerable research in subsequent years. Since then, skulls have been found throughout West Asia, namely in the Levant, south-central Anatolia, and south-east Anatolia (Düring, 2022, pp. 127-129). The manipulation of decomposed heads is one of the first attested archaeological evidence of people interacting with death. Mostly crania and to a lesser extent skulls were removed from burial after their flesh had been decomposed and displayed for a period of time. A selection of these was plastered to give the skull a lifelike face again. In addition, some of these, but also some non-plastered skulls, were painted, and shells were placed into the eye sockets to create the Figure of eyes (Croucher, 2012, pp. 9495). Lastly, of some skulls the head was artificially modified likely during infancy when the head was flexible to alterations (Croucher, 2012, p. 98).

Local variety existed with regard to the skulls[1], but the problem is that several scholars were tempted to advocate a general cult. Since manipulated skulls have been excavated at other Neolithic sites as well, they have designated the practice as 'skull cult' in their research (e.g., Bienert, 1991; Schulting, 2015). Stordeur (2014, p. 177), for instance, called the practice within the entire southern Levant "a fairly uniform cultural tradition" in addition to Milevski and colleagues (2008, p. 44) who attributed the burial custom at Yiftahel to the "known pattern of the PPNB customs". Moreover, Anatolia has also been suggested to be part of this general cult by for example, Slon et al. (2014, p. 1) who wrote "in the Levant, plastered and remodeled skulls have been found in several PPNB sites (…) and are thus considered part of a mortuary practice typical of the PPNB. This practice seems to have continued in Anatolia (…) at Köşk Höyük and Çatal Hüyük in much later PN contexts." Likewise, Bonogofsky (2004, p. 119) thought it to be "an inclusive type of funerary ritual that focused on the handling, modeling, and care of the skulls of females, males and children." Similarly, Özbek (2009, p. 385) who examined Late Neolithic Köşk Höyük's manipulated skulls and burial customs that this practice slowly spread from the southern Levant towards Anatolia. Even though he recognized regional diversity between the sites, he was tempted to see comparisons, which made him suggest that the manipulated skulls at Köşk Höyük may have been derived from the southern Levant's tradition.

[1] For ease of use, the word 'skull' is used to generally denote skulls and crania throughout this paper. Except when a specific case about a cranium or multiple crania is discussed, the accurate phrases 'cranium' or 'skull without mandible' are used.

This idea of the ‘skull cult’ is problematic, and generalizations of West Asian Neolithic sites still occur in existing literature. Düring (2022, p. 126) applied the term ‘grand narrative’ (coined by Lyotard back in 1979) to this issue and illuminates that “in these publications it is suggested that one can use words like the “Near Eastern Neolithic (…) as if it is somehow unified around particular economic or cosmological essences”. By looking at the big picture or narrative, diversity between sites regarding all aspects is overlooked, as well as the significant distance in time and space between sites, which is concerning. To tackle this problem, the aim of my research is focused on analyzing each selected site independently and subsequently making a comparison between them regarding the (manipulated) skulls. This in order to find out if the sites do show significant overlapping characteristics allowing scholars to speak of a general practice or if the underlying differences are too substantial. To phrase it differently as a research question: Is the ‘skull cult’ a valid term to be used to denote a general mortuary practice in PPNB Levant and (A)ceramic Anatolia or does too much diversity exist between sites?

The first sub-question that follows this research question is which sites to include in my analysis. Croucher has written an article (2006) in which she addressed regional diversity regarding this practice. However, she analyzed only a selected sample of sites (Jericho, Kfar Hahoresh, ‘Ain Ghazal, and Nahal Hemar (Levant), Domuztepe and Çayönü Tepesi (Anatolia) leaving out some of the more renowned sites. The choice of the Anatolian sites is peculiar, because the two sites which bear evidence of manipulated skulls, namely Çatalhöyük and Köşk Höyük, are left out of her analysis. I aim to build upon her research and include, within the limited scope of this paper, as much PPNB and Late Neolithic sites in West Asia, where evidence of skull retrieval and manipulation have been found.

The following two sub-questions concern the typical features of the skull practice performed at each site. What was the gender and age of the people selected for skull removal and manipulation? What is the skull’s biography? With this the lifecycle of a skull is signified: from the beginning it was buried and brought up to their final moment. The latter hints at where the skulls were found and in what context. This could be, for example, still in use or deposited, buried beneath houses or in courtyards, and either deposited alone or in groups. After the data has been collected, the results can be compared and information can be drawn to answer the research question: Is the ‘skull cult’ a valid term to be used to denote a general mortuary practice in PPNB West Asia or does too much diversity exist between sites?

The analysis of the sites in this paper will be presented in chapter 5 and discussed in chapter 6, including limitations and implications for future research. A brief conclusion is provided at the end of the paper. Prior to this the context and time period in which the 'skull cult' was practiced are illuminated in chapter 2. A brief introduction has already been given above, but chapter 3 will provide an elaboration on previous research concerning the 'skull cult'. Methodology will be offered in chapter 4.

Chapter 2: The Neolithic and mortuary practices

The 'skull cult' is mostly associated with the PPNB, because most manipulated skulls have been found dating to this period. However, roots of this practice can be found within the Natufian period and PPNA. This is around the time that hunters and gatherers gradually transitioned from a hunting lifestyle towards a sedentary living and adopting the practice of cultivation. Therefore, I would like to illuminate the context of this transition a bit more and subsequently to delve deeper into the history of the 'skull cult'.

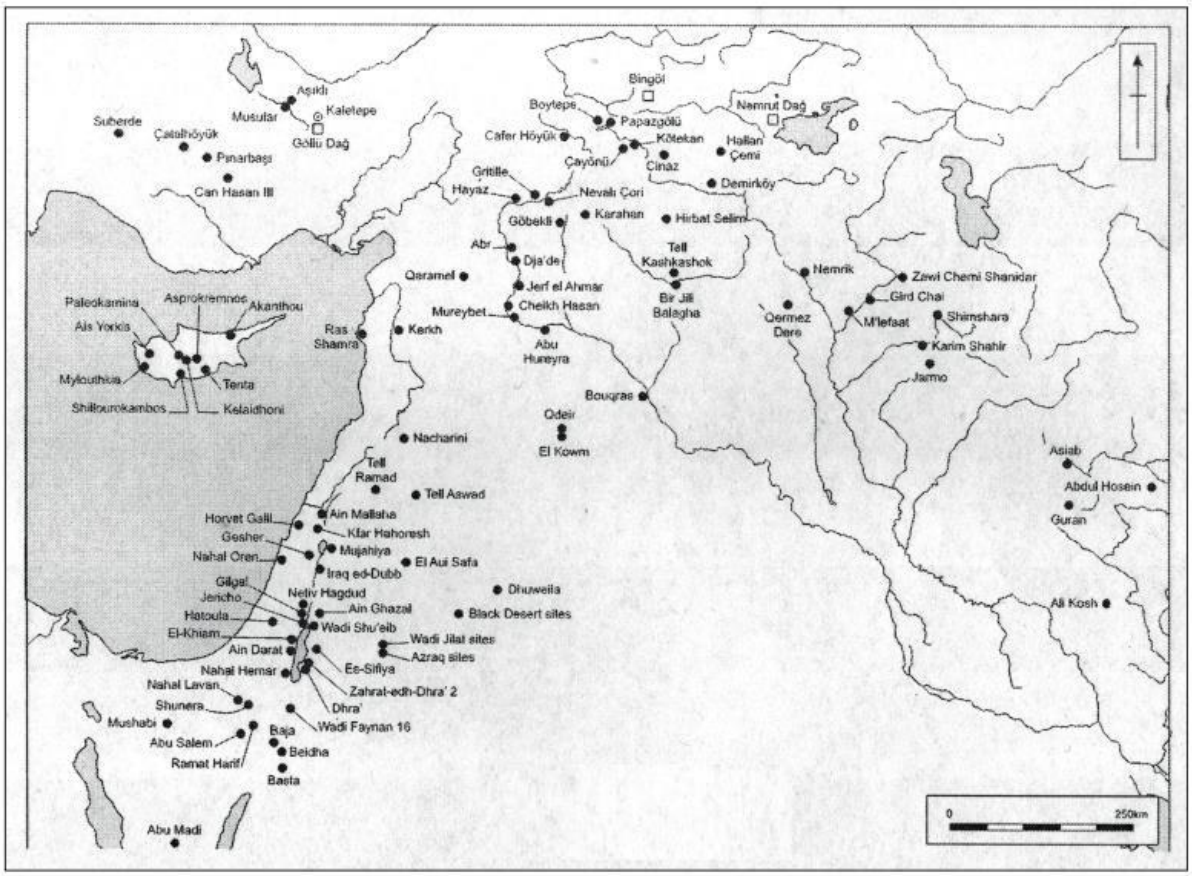


Figure 1: Map of Neolithic sites. Courtesy of Fuensanta, & Martín, 2019, p. 46

Table 1: Local chronology Levant and Anatolia (Watkins, 2018, p. 200; Yakar, 2011, p. 63).

Levant	Anatolia

Natufian period	(c. 13.000-9.600 BC)	Epipalaeolithic period	(c. 14.000-8500 BC)
Pre-Pottery Neolithic A (PPNA)	(c. 9600-8800 BC)	Early Aceramic period	(c. 8500-7000 BC)
Pre-Pottery Neolithic B (PPNB)	(c. 8800-6500 BC)	Late Aceramic period	(c. 7000-6000 BC)
Pottery Neolithic (PN)	(c. 6500-6000 BC)	Early Chalcolithic period	(c. 6000-5500 BC)
		Middle Chalcolithic period	(c. 5500-4000 BC)

§2.1 The Neolithic

During the Natufian and early Neolithic periods (*table 1*) a significant change was happening in the ancient Near East. This transformation consisted of two independently evolving processes, namely that hunters and gatherers settled down in villages and the adoption farming techniques (Belfer-Cohen, & Bar-Yosef, 2002, p. 20; Watkins, 2018, p. 228). Not all hunters and gatherers took over this new way of living, but some continued to hunt and gather foods. This phenomenon is also known as the Neolithic Revolution coined by Gordon Childe (Watkins, 2009, p. 621). According to Childe, the Neolithic Revolution was a sudden, quick, and drastic transition, which was caused by a changing climate, subsequently creating drought and thinning out the amount of animals and plants. Only close to rivers were people able to live. Furthermore, they came to the realisation that some animals and plants were more essential than others. In time, with success and failure, this led to the domestication of certain animal and plant species (Simmons, 2011, pp. 11-12).

After the second World War scholars refuted Childe's theory claiming that the Neolithic Revolution was a long process involving several steps. Cohen (1977), for example, suggested that a growth in population caused the original subsistence strategies to be insufficient for survival. Consequently, people were triggered to adopt new methods, among which husbandry and the cultivation of crops (Simmons, 2011, p. 18). Watkins (2010, p. 624, 632), on the other hand, believed that social and cultural motives directed people towards wanting to live together, which subsequently led to the start of agriculture. Nevertheless, opinions remain divided as to what extent climate has played a roll, and what other factors prompted people to change subsistence strategies over a significant period of time (Simmons, 2011, p. 43). A permanent sedentary lifestyle was adopted due to the reliance on the cultivation of wild plants and subsequently the domestication of animals, which in turn led to more settlements and population growth within those settlements (Watkins, 2010, p. 624; Jammo, 2022, 94).

By the time of the PPNB in the Levant and Aceramic period in Anatolia, these small villages had grown into well-functioning settlements comprising of about 1 hectare (*Figure 1*). Some of these reached large sizes, and have therefore been named mega-sites, comprising about 8 to 12 hectares (Hole, 2002, p. 195). Irrespective of size and regional variation, sites seem to have been egalitarian in nature and operated from the household (Hole, 2002, p. 206). Next to houses, most PPNB and Aceramic sites seem to have had at least one non-domestic building, which has likely been used for social gatherings or ritual activities. Even though the purpose(s) of these non-domestic buildings remain largely unknown, evidence of mortuary practices has been discovered at, for example, the Skull building at Çayönü. This fascinating building contained some 90 skulls and bones belonging to approximately 400 people (Hole, 2002, pp. 205, 207, 210).

§2.2 Mortuary practices in the Natufian period

The removal and/or manipulation of skulls have been regarded as one of the characteristics of the PPNB period in the Levant. However, evidence of skull retrieval from inhumations dates back to the Natufian period (Garfinkel, 2014, p. 145). During this time the sites were relatively small encompassing an area of about 0.1 to 0.2 hectares. As mentioned earlier, this period marked the start of the transition from hunting and harvesting to a more sedentary lifestyle. The construction of domestic buildings, storage facilities, mortuary practices and the like, implicate a more permanent way of living (Connelly, 2012, p. 3).

The Natufians buried their dead in ways which varied from site to site (Byrd & Monahan, 1995, p. 280). Some of the deceased were buried in pits beneath floors of abandoned houses or in close proximity of them (Connelly, 2012, p. 4). Single and group burials were common in which the deceased were positioned varying from a flexed position to an extended position (Bar-Yosef, 1998, p. 164). In general group burials dominate the early phases of the Natufian while single inhumations are favoured during the later stages of the Natufian period (Byrd & Monahan, 1995, p. 260). Characteristics of these burials is the addition of grave goods including “dentalium shell beads, a variety of bone beads and pendants, and perforated teeth” (Byrd & Monahan, 1995, p. 261). However, the amount and distribution of grave goods was fairly even across settlement burials regardless of gender, and is therefore not reflective of status or the presence of an elite at these sites, but seem to have been egalitarian in nature (Byrd & Monahan, 1995, p. 281).

Given the diversity, one burial, however, stands out compared to the other excavated Natufian graves. In a cave at Hilazon Tachtit (Western Galilee) located at about 10 kilometres away from the nearest Natufian settlement Hayonim Terrace, the graves of 28 people have been found among which was the burial of an elderly disabled female (*Figure 2*). Peculiar objects were placed carefully alongside and under her body including "50 complete tortoise shells and select body-parts of a wild boar, an eagle, a cow, a leopard, and two martens, as well as a complete human foot", "a pointed bone tool", and "a basalt bowl" (Grosman et al., 2008, p. 17665-17666). In addition, several large stones were placed on top of several areas of the body likely to keep it in place. Given that the entrance of the cave was located at a height of about 150 meters, a significant amount of effort was put into carrying the woman and grave goods to their final resting place. It is believed that this exceptional burial belonged to a shaman. These people embodied the bridge between the human and spirit world and were known for their magical and healing abilities (Grosman et al., 2008, p. 17668).

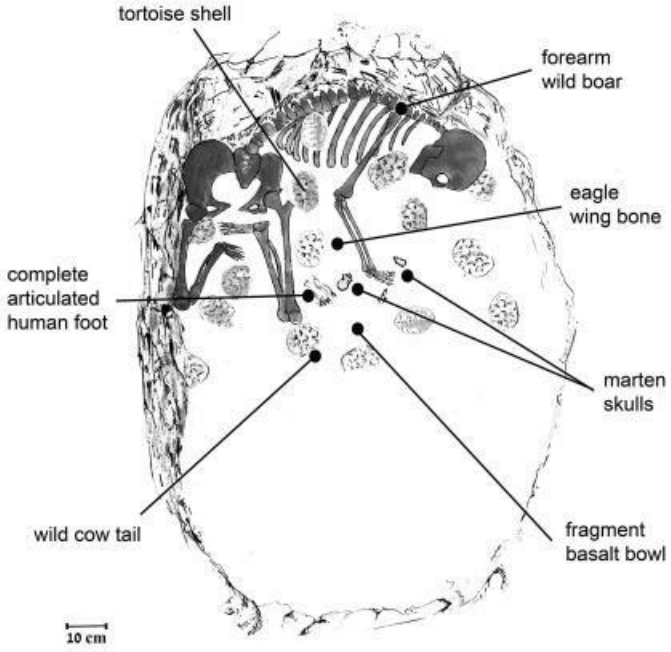


Figure 2: Illustration of the Shaman grave at Hilazon Tachtit. Courtesy of Grosman et al., 2008, p. 17667

This cave was first used as a burial place before it knew a one-time occupation during the Late Natufian period (Grosman et al., 2008, pp. 17665, 17668). The remaining bodies excavated at the site were buried inside 3 pits. The narrowness of these holes caused some of the earlier buried bodies to be pressed to the sides. Upon excavation, most of the skeletons were incomplete missing "long bones and skull elements" which have likely been dug up from the pits, used, and later reburied (Grosman et al., 2008, p. 17665).

Evidence of skull retrieval has also been discovered in the Hayonim cave (Western Galilee), a site in use during the Early as well as Late Natufian period, where at least 48 identifiable people have been buried divided in 16 graves. Group burials were characteristic

of both the earlier and later phases of the Natufian period, which is peculiar, because group burials are commonly associated with the earlier stages. Skull retrieval was performed albeit to a lesser extent during the later phases of the Natufian period, compared to other Natufian sites like Hilazon Tachtit, Eynan, Nahal Oren, and Hayonim Terrace among others (BelferCohen, 1988, p. 305). Apart from the Shaman burial, the Natufian graves appear to be fairly simple, and do not seem to exhibit social differentiation, but the procedures regarding interment seem to vary across sites (Byrd & Monahan, 1995, p. 280).

With the exception of the shaman grave at Hilazon Tachtit, the burying of people within or in proximity to their settlements is first attested during the Natufian period (Grosman et al., 2008, p. 17668). The practice of skull removal occurs at a few Late Natufian sites, namely at Nahal Oren, Eynan, Hilazon Tachtit, El Wad, Hayonim cave and the Raqefet cave, but only limited to the area west of the Sea of Galilee (Belfer-Cohen, 1988, p. 305; Weinstein-Evron et al., 2007, p. 118; Bocquentin et al., 2016, 40). There are indications that hint at origins in the Early Natufian period, namely at the site of Eynan where a single skull was found on the floor of a building (Baird et al., 2013, p. 180). In addition, at the contemporary Levantine site ‘Uyun al-Hammam skulls were removed and moved to other graves. It is interesting to note that these graves contain both human and animal remains. Moreover, the practice of skull removal was applied to a fox skull, which was buried in one of the graves and its skeleton was found buried in another grave nearby (Maher et al., 2011, pp. 4, 7).

Taken together, however, the limited number of human skulls that were taken out of the graves at these (pre-)Natufian sites after the body had been decomposed do not show evidence of being plastered or painted or other types of modification (Garfinkel, 2014, p. 145). In addition, “no correlations were found between the way of burial (primary or secondary) the position of the bodies (extended or flexed) and the age or gender” (Belfer-Cohen, 1988, p. 305). Next to skull removal, the use of lime plaster to seal off burials is another practice, which can be attributed to the Early Natufian and the PPNB. When the deceased were buried underneath houses the floors had to be opened to place the deceased inside. The grave was then closed off by rebuilding the floor using plaster (Goring-Morris, 2002, p. 126).

§2.3 Mortuary practices in the PPNA

The procedure of skull removal continued in the PPNA (c. 9500-8800 BC). At several sites located in the southern Levant the deceased were inhumated placed on their side with either a few or no grave goods distributed to them potentially hinting at the absence of social stratification (Kuijt, 1996, p. 326; 2008, p. 176). No correlations exists between the manipulated skulls and gender on the one hand and age on the other hand, indicating that skulls of both men and women were taken out of the grave as well as the head of children and adults (Kuijt, 2008, p. 176). Interments were usually located beneath floors of domestic buildings, but also in courtyards or pits (Kuijt, 2008, p. 176). After the body had been decomposed the skull or cranium was removed from the grave. It may be likely that the skull, as in the PPNB, was prepared for some ritual, before it was reburied within or just outside buildings. But this remains a speculation, because there is no archaeological evidence relating to any preparation and it is based on ethnographic studies (Kuijt, 1996, p. 325; 2008, p. 176).

Additionally, up until this day no adorned skull dating to the PPNA has been excavated, which indicates that the manipulation of skulls after retrieval likely originated in the PPNB (Garfinkel, 2014, p. 146). A practice that is occasionally mentioned in the literature when speaking about skull manipulation, is artificial skull modification. At an early age, when the skull is still prone to alterations, the head was consciously deformed to a desired shape. This means that people were selected when they were still alive and at a young age (Fletcher et al.,
2008, p. 319). For example, at the Shanidar Cave, located in Iraq, evidence of head deformation has been found. 29 people were buried in 26 graves at this PPNA site. Due to difficulties of analysing the human remains signs of deformation could only be detected on 2 skulls (Meiklejohn et al., 1992, p. 89).

The co-mentioning of skull deformation and plastering in articles must, however, be read with caution. Both procedures happen at different stages in a person's 'life'. Skull deformation is performed at a young age while these people are still alive. The decoration of the skull with plaster, paint, or other adornments happens after the person had passed away and had his/her skull removed. Therefore, the possibility of these two to be unrelated practices must be taken into consideration.

A recurrent event for PPNA mortuary practices in West Asia is the caching of skulls once their intended use had been accomplished (Garfinkel, 2014, p. 146). Groups of skulls have excavated at several sites as for example at Jericho, where 33 plain skulls were divided into groups of 6 (Garfinkel, 2014, p. 146) (*e.g., figure 3*). At Qermez Dere a group of six crania were found inside a building. Noteworthy is that at Jericho the skulls were not reburied, but were found concentrated on floors in houses that were no longer in use at the time (Garfinkel, 2014, p. 146). At another PPNA site, Netiv Hagdud, 28 burials have been excavated of which 17 contained headless skeletons, and 6 included the burial of skulls. Whether these 6 skulls belong to either of these 17 headless skeletons and what the location of the missing skulls is remain unanswered questions (Belfer-Cohen et al., 1990, p. 83).

Figure 3: Cache of crania (D35-44) from PPNA Jericho. Courtesy of Bonogofsky, 2006, p. 18

§2.4 Skull manipulation in the PPNB

Skull retrieval and manipulation developed during the PPNB, where skulls, often without the mandible, were retrieved after the body was skeletonised. Subsequently the crania was manipulated with plaster modelled onto the crania and/ or painted. The materials used varied between sites, which used either lime plaster, clay, both, or collagen (Solazzo et al., 2016, p.

7); “facial features such as noses, ears, chins, eyes, and mouths” were modelled onto the skulls (Connelly, 2012, p. 3). Occasionally, decorations were applied like shells and/or flint particles representing the eyes, red paint covering (parts) of the skull, or possibly the use of wigs (Garfinkel, 2014, p. 151; Croucher, 2017, p. 5). After the decorations had been applied the skulls were likely put on display and used for a significant amount of time in the household or in a public building, because some show signs of weathering and replastering

(Goring-Morris, 2002, p. 116; Garfinkel, 2014, p. 154; Jammo, 2022, p. 96). Additionally, the exotic adornments applied to the skulls, like for example, shells and/or flint particles are not easy to come by (Garfinkel, 2014, p. 151; Croucher, 2017, p. 10). At Kfar Hahoresh red paint containing cinnabar was applied onto the skulls. This ingredient was only collectable from Anatolia, which implies at least a significant investment in adorning them and potentially a long-term use of the skulls (Garfinkel, 2014, p. 151). After some time of use the skulls were reburied in "skull caches, in shrines, and beneath building floors" (Jammo, 2022, p. 95) (*figure 4*).

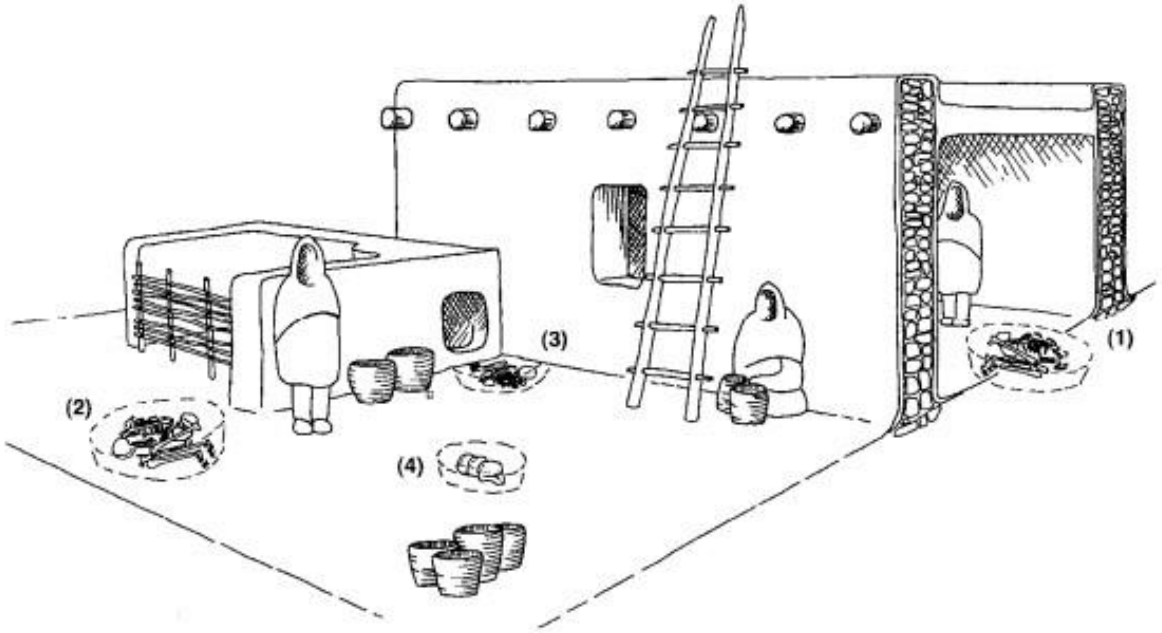


Figure 4: PPNB house and mortuary activities: "(1) primary adult burial, skull removed, subfloor, and inside of structure; (2) primary adult burial, complete, extramural; (3) primary child burial, complete, under wall of structure; (4) secondary burial cache of three skulls" (Kuijt & Goring-Morris, 2002, p. 390)

Variations existed between the Neolithic sites regarding the burial of the deceased. Some were deposited in pits while others received a more proper burial. Frequently people were buried beneath floors of domestic buildings or in between houses placed in a flexed position (Garfinkel, 2014, p. 151). Of few people the skull was retrieved for plastering and/or painting, subsequently put on display, and finally redeposited (Goring-Morris & Belfer-Cohen, 2010, p. 32) (*figure 4*). There seems to be no correlation between gender and the skulls chosen for manipulation, because men, women, and children are represented in the archaeological record (Goring-Morris & Belfer-Cohen, 2010, p. 32; Kuijt, 2008, p. 176).

The placement of animal remains together with human remains inside a grave seems not to have continued from the Natufian to the PPNB except at Kfar Hahoresh. At this

Levantine site the remains of a gazelle without a head were complemented with a human plastered skull. This co-burial seems to be exceptional to Kfar Hahoresh, however, some sites do contain the placement of animal bones inside human burials. Although dating to the PPNC, 2 burials from

'Ain Ghazal contained the remains of pig skulls and 3 graves were enriched with pig bones (Rollefson & Köhler-Rollefson, 1993, p. 38).

§2.5 Mortuary practices in Neolithic Anatolia

The burial of people in Neolithic Anatolia seems to have developed before or around the transition from a hunting to a more sedentary lifestyle. Körtik Tepe reveals evidence of intra- and extra-mural interments before the adoption of herding and the cultivation of crops. One has to keep in mind that not at every Neolithic Anatolian site evidence of mortuary practices has been found (yet) or even present (Osterholtz, 2020, p. 156). Moreover, during the Aceramic period no sites exist or have been discovered in the north and north-eastern part of Anatolia (Kuzucuoglu, 2015, p. 133).

Figure 5: Illustration sub-floor burial (Bonogofsky, 2006, p. 16)

Local variety existed among the sites that do possess evidence of mortuary practices. But some sites shared a few elements. As mentioned previously, the inhumation of people inside buildings occurred at most of the sites (*figure 5*), while extra-mural burials occurred at only a few settlements (Osterholtz, 2020, pp. 154-155). Furthermore, skull or cranium removal was practiced, of which the first instance is recorded at Pınarbaşı during the Epi-Palaeolithic. At the site, one grave contained the body of a young adult man of which the skull seems to be intentionally removed (Baird et al., 2013, p. 180). Some of the skulls were left plain, but others were decorated with plaster and/ or paint (Osterholtz, 2020, pp. 154-155).

Sometimes the skulls or bodies of humans were accompanied by the placement of animal remains. At Çayönü, for example, auroch bones and horns were buried inside the 'skullbuilding' together with a significant number of human remains. Additionally, a flint dagger and a stone slab were covered by blood traces of aurochs and of humans and cattle respectively (Hole, 2002, pp. 199-201).

§2.6 Summary

The gradual transition from hunters and gatherers to sedentism seem to go hand in hand with an increase in the number of burials (Jammo, 2022, p. 95). Skull removal was practiced at least from the Late Natufian period onwards where skulls and/ or long bones were retrieved after the decomposition of the body. However, some evidence hints towards origins in the Early Natufian period and even the middle Epi-Palaeolithic, but this needs to interpreted with caution, because only a handful of cases were found at these sites combined. During the
Natufian as well as the rest of the Neolithic "burials were subjected to a variety of funeral practices and took place in different locations and contexts" (Jammo, 2022, p. 95). Additionally, skull retrieval and the number of (manipulated) skulls found is very low compared to the total amount of potential burials. One would expect significantly more burials, based on the number of people who likely lived at the sites, but whose final resting place remain yet unknown unfortunately.

Chapter 3: Previous research

Since the first plastered skull has been discovered by Kenyon at Jericho numerous propositions have been put forward as to what the mortuary custom might entail. These theories will be discussed below and include the following: ancestor veneration, status, war trophy, integration into society, and memory and identity.

§3.1 Ancestor veneration

Kenyon first proposed the idea of ancestor veneration as performed by the 'skull cult' (Kenyon, 1954, p. 108). More specifically, the skulls of elderly males or elite men were retrieved from burial, manipulated, displayed and subsequently reburied (Bonogofsky, 2003, pp. 2-3; 2005, p. 133). One problem at the time was that gender was hard to define based on the heads themselves. Once Bonogofsky (2004, p. 15) examined 42 (out of a total of 73) plastered skulls originating from several PPNB sites, she discovered that beside men, also women and children were chosen for plastering. As a result, Kenyon's theory about the veneration of elderly men was refuted.

Later on, Kenyon's theory underwent some modification and posits that the selected group of manipulated skulls represented a communal form of ancestry rather than an individual one. Looking at the site of Jericho, the skulls were found in extra-mural contexts, allowing all inhabitants to visit the area. Hence, it was suggested that the 'skull cult' was performed by the community as a whole (Fletcher et al., 2008, p. 319). During this period farming and herding became the necessary subsistence strategies for people taking on a sedentary lifestyle living together in small communities. For several generations people depended on each other for survival, and therefore, in this line of reasoning the 'skull cult' helped strengthen the bond between the inhabitants by remembering and venerating their shared ancestors (Akkermans & Schwartz, 2003, p. 96). Yet, skulls belonging to children are represented in the archaeological record as well. Juveniles are not ancestors of the ones still living (Bonogofsky, 2005, p. 134). Instead of ancestor veneration it could be the honoring of deceased family members (Slon et al., 2014, p. 7).

§3.2 Status

Status has also been opted as a theory for the selected group of manipulated skulls. Compared to the amount of people whose burials remain complete, headless burials and the caching of manipulated skulls are few in number. This has led some scholars to believe that social differentiation was in place where the plastered skulls belonged to people of status

(Fletcher et al., 2008, p. 318). The inclusion of deceased children in the ritual does fit with this idea. However, the graves don't show "any form of distinction based on gender, age, or status" (Akkermans & Schwartz, 2003, p. 96). In line of reasoning with the shared ancestral past, one would think that it did not matter whose skull was selected for retrieval and/or adornment, because they share the same genealogy. However, the same argument is used for the opposite theory, namely that the skulls were intentionally chosen and belonged to people of status (Goring-Morris, 2000, p. 114).

It has been suggested that these people inherited their status, based on skull modification. As mentioned previously, head deformation has occasionally been treated as part of the 'skull cult' in the literature. Since deformation was only possible at an early age, status must be inherited (Fletcher et al., 2008, p. 319). However, acquired status is also possible given the presence of adult skulls. Their rise to prominence may have resulted from the acquisition of "prestige, rights, and more tangible wealth (property, fields, and herds)" (Goring-Morris, 2000, p. 130). The graves seem to hint at social indifference, while the selective skull retrieval hints otherwise. Potentially, "the emphasis upon solidarity and the collective refers to a set of societal ethics and values, although ideals and practice are not always the same" (Akkermans & Schwartz, 2003, p. 96). This might be the case, but to explore the possibility of social stratification other aspects of daily life need to be considered instead of burial practices alone.

§3.3 War trophies

Next to ancestor veneration, Kenyon also opted the idea of war trophies. Her thought was that the plastered skulls symbolized the prize of victory over the conquered enemies (Schmandt-Besserat, 2013, p. 231). Rivalry likely existed between the small Neolithic societies bringing about attacks back and forth, raiding villages and collecting heads as trophies of the conquered (Akkermans & Schwartz, 2003, p. 96). Based on ethnographic data collecting heads as war trophies is a common practice in some other cultures as well (Kuijt, 2009, p. 118). One inherent problem is that this theory assumes that the reburied skulls and headless burials belong to the conquered enemies. The ones buried beneath the floor of domestic buildings are then not related to the family owning the house (Kuijt, 2009, p. 119). This poses several questions, for instance, where are deceased family members or community members buried? If they are interred, are they buried according to the same rites or are they interred differently? Next to these questions, another problem arises, which entails that it is common for the victorious party to disassociate themselves from the conquered villagers. This

would not conform with the mortuary behavior practiced similarly in these villages (Kuijt, 2009, p. 119).

Schmandt-Besserat took on a different approach by using Sumerian and Assyrian sources dating between the 3rd and 1st millennium BC from the ancient Near East to provide answers where archaeology could not. She reasoned that the customs and traditions written in these sources "represent an already ancient tradition that must have it roots deep in prehistory (Schmandt-Besserat, 2013, p. 235). These customs have remained fairly stable during these millennia, among which the decapitation of enemy heads and treat them as war trophies (Schmandt-Besserat, 2013, p. 232).

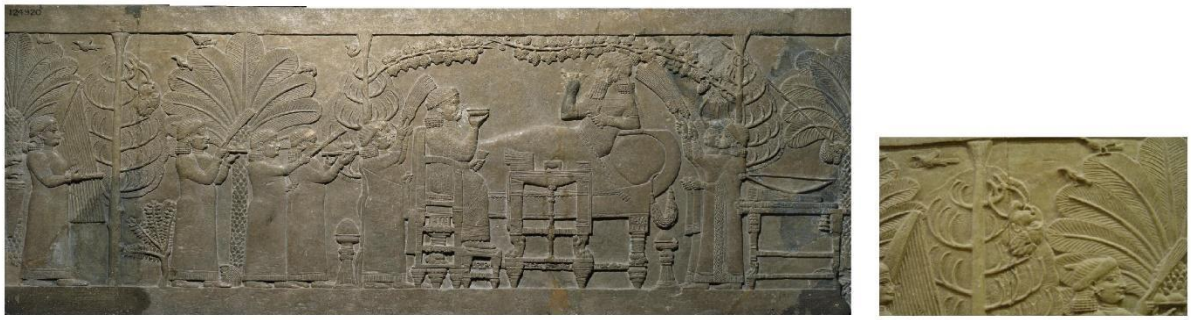


Figure 6: Wall relief of king Aššurbanipal. Courtesy of British Museum. Cat. No. 124920

This is, for instance, expressed in the royal annals of the Assyrian king Esarhaddon, who forced elite people from conquered cities to wear their kings' heads around their necks and parade through the city of Nineveh (Grayson, 1992, p. 125). In addition, the depiction of heads as war trophies was also expressed in architecture and iconography. For example, the palace walls in Nineveh show the Neo-Assyrian king Assurbanipal sitting in his garden looking out over the severed head of the Elamite king Teumman hanging in a tree (*figure 6*), while the Sumerian city of Lagash celebrates its victory over its neighboring city Umma by erecting the stele of Vultures portraying enemy heads carried by vultures inside their beaks (Schmandt-Besserat, 2013, p. 232). A problem with this line of reasoning is that the distance in space and time, which comprises a range of 4000 to 7000 years, is not taken into account.

§3.4 Integration into society

Another proposition made is the idea of an integrated society where both the living and the dead play a role. For example, it is suggested that the skulls may have possessed magical properties. They may have been involved in various rituals like, for instance, the protection of the living against evil doers, but also in rituals concerned with fertility and pregnancies

(Verhoeven, 2002, p. 8; Slon et al., 2014, p. 7). They were perceived as “the seat of life-force, which could be used to ensure fertility (to animals, plants and people) and well-being” (Verhoeven, 2002, p. 8; Bonogofsky, 2005, p. 133). Seen from this angle the skulls resemble charms to ward off evil on the one hand, and to enhance the chances of prosperity in everyday activities on the other hand. A second notion of an integrated society comes from the application of plaster. By applying the substance onto the skull and modelling human features onto it, the head regains its lifelike appearance, and is therefore, reincarnated (Slon et al., 2014, p. 7).

§3.5 Memory and identity

Skull retrieval and manipulation have been perceived as being part of a ritual concerning the remembrance of the dead and serve as a “link between life and death” (Milevski et al., 2008, p. 44). The dead were buried close to domestic dwellings or underneath floors of houses, which brings the dead in close proximity to the living. Additionally, the replastering of skulls seems to hint at an integration of the dead in the world of the living (Kuijt, 2008, p.
184). Skull retrieval requires the living to know when and where they were inhumated. According to Kuijt (2008, p. 184-185) it was “a form of collective integrational memory” where burial customs did not only involve the remembrance of “the individual identity of the deceased but also as a conduit for collective memory and reaffirmation of identity and community membership”.

Figure 7: 3 plastered masks found at 'Ain Ghazal. Courtesy of Maier, 2017, p. 15

Identity has been applied in several theories. For example, it is suggested that identity is restored once the plaster is applied to the skull. By putting on this layer its lifelike features return, subsequently bringing the deceased back to the living, or in other words, they are (symbolically) reincarnated (Slon et al., 2014, p. 7). But this restored identity seems

temporary, because after their use, the skulls were buried again. Some of these skulls possess traces of plaster indicating that the plaster had been removed. Additionally, at ‘Ain Ghazal 3 plastered faces without the skull have been discovered solely in a courtyard pit (Rollefson, 2002, p. 171) (*figure 7*). These masks have likely been tiered off of the skulls once their part in the ritual had been completed. Croucher (2006, p. 31) suggests that this procedure may resemble the first interment and flesh removal, where, as a consequence, identity is removed as well. However, this theory is limited to plastered skulls and does not take into account the painted or plain skulls as Croucher is well aware off. Her alternative idea is that the plastering is limited to “a specific event or performance, or for the skull to be used at a particular time. (…) Identity was (…) transitory, with transformations of identity (…) taking place through treatment of the skulls” (Croucher, 2006, p. 31).

§3.6 Summary

Several theories have been proposed since the first plastered skull had come to light. Venerations of elderly ancestors was proposed by Kenyon, which was later modified to the honoring of shared ancestry at the communal level or venerating deceased family members. Dismissing the association of genealogy, Goring-Morris (2000, p. 130) suggests status may have been the requirement for skull retrieval and applied adornments. Other ideas that have been put forward are heads used as war trophies, skulls having magical properties, or serve as memory tokens of deceased loved ones (Bonogofsky, 2004, p. 119; Schmandt-Besserat, 2013, p. 231). The idea of a general cult and the previously mentioned hypotheses, however, remain open to debate.

Chapter 4: Methodology

The methodology section involves elaboration on which sites will be examined, which variables will be looked at, and which methods are used to provide answers to the proposed research question, which entails: Is the ‘skull cult’ a valid term to be used to denote a general mortuary practice in PPNB Levant and (A)ceramic Neolithic Anatolia or does too much diversity exist between sites?

§ 4.1 Archaeological sites PPNB and (A)ceramic Neolithic

The sites included are: Jericho, Yiftahel, Kfar Hahoresh, Beisamoun, ‘Ain Ghazal, Nahal Hemar, Tell Ramad, Tell Aswad (Southern Levant), Abu Hureyra, Çayönü, (Northern Levant/ South-east Anatolia), Köşk Höyük, and Çatalhöyük (South-central Anatolia). The sites will be

briefly discussed below to provide concise and general background information about each of them, which becomes useful when discussing the results of the analysis later on.

§ 4.1.1 Jericho

Jericho is a Levantine site located in modern day Palestine, just north of the Dead Sea (*figure 8*). The city is known for its long occupational history and its fortification walls. The site was first occupied in the Natufian period, and has been subsequently inhabited by people in the PPNA, PPNB, and later periods (Kenyon, 2023). By this time Jericho was a stronghold possessing a tower and fortification wall that surrounded the city (Fletcher, 2015, p. 25), covering an area of about 2.4 to 2.5 hectares (Bar-Yosef, 1986, p. 157; Fletcher, 2015, p. 24). At some point during the PPN Jericho reached a size of about 6 hectares (Finlayson, 2020, p. vi).

Figure 8: Aerial view of Jericho. Courtesy of Google Earth Pro

Because Jericho possesses a long occupational history, much information can be deduced from its layers. For example, inside the Natufian and PPN layers the development of cultivation of certain plants and crops is noticeable as well as herding and hunting activities (Fletcher, 2015, p. 24). Apart from its walls, Jericho is also popular for its mortuary practices, in particular the plastered skulls, which were the first to be discovered in 1953 by Kenyon and fellow colleagues working for the British School of Archaeology in Jerusalem (Fletcher, 2015, p. 25). In total 26 PPNA skulls have been unearthed and some 18 skulls were dug up from PPNB layers (Nigro, 2017, pp. 3, 13). These excavated skulls “represent almost half of all known plain and modeled skulls found in the Levant” (Nigro, 2017, pp. 3).

§ 4.1.2 Yiftahel

In the Lower Galilee in Israel lies the archaeological site of Yiftahel, which covers an area of about 4 hectares. It lies just north of another PPNB site, namely Kfar Hahoresh, and is located some 8 km away from Nazareth (Khalaily et al., 2008, p. 3; Milevski et al., 2008, p. 37).

Figure 9: Aerial view of Yiftahel.. Courtesy of Israel Antiquities Authority. In Schechter et al., 2021, p. 3

The first excavations started in the 1980s and 1990s and subsequently in 2007 and 2008 (*figure 9*). The latter were conducted as part of a salvage operation, because ideas for the construction of a new highway were planned, which would run straight through the archaeological site (Khalaily et al., 2008, p. 3). During the excavations 4 occupational layers were brought to light, namely the "PPNB", "PN-Lodian", "PN-Wadi Rabah", "and the Early Bronze Age IA" (Milevski et al., 2008, p. 37). Evidence of agriculture has been found in the PPNB layer. Seeds like lentils and beans seem to have been stored in large quantities inside a building, which could have functioned as a silo. Remains of gazelles, wild goat, aurochs, wild boar, and deer suggest hunting practices (Khalaily et al., 2008, pp. 4-6).

Next to its faunal and floral remains, the site possesses a rich assemblage of lithic tools and workshops. This abundance led some to believe that the lithic objects produced here were traded to other local contemporary villages (Khalaily et al., 2008, p. 6; Milevski et al., 2008,
p. 38). In contrast, relatively little evidence exist for mortuary practices during the PPNB with at least a total of 30 excavated interments. Parts of the settlement has been made inaccessible due to the construction of a new road, which could have potentially limited the discovered burials. Nevertheless, the number of inhumations is rather low considering that the PPNB lasted for a few thousand years. Among the ones interred a few were still complete, while

others got their heads removed. Three plastered crania and one plain cranium were excavated (Milevski et al., 2008, p. 39).

§ 4.1.3 Kfar Hahoresh

Kfar Hahoresh is a site is located in the Lower Galilee in Israel and lies near the contemporary site of Yiftahel. It is a relatively small site encompassing an area of only about 0.1 to 0.15 hectare and was utilized from the Middle to the Late PPNB (Simmons et al., 2007, p. 2). The earliest excavations started in the 1990s under supervision of Goring-Morris who worked on behalf of the Hebrew University of Jerusalem and colleagues (Goring-Morris et al., 1994-5, p. 74) (*figure 10*). Kfar Haharesh main function seems to only have been a burial site, since no residential areas have been built. Remains of L-shaped walls, plastered surfaces, lithic objects, faunal remains, and human interments were present at the site. The lack of domestic life would make sense, since the hilly area does not allow for the cultivation of plants and crops (Horwitz & Goring-Morris, 2004, p. 166).

The mortuary assemblage is rich and diverse, consisting of primary and secondary burials. Most primary interments were covered by plastered floors, which were marked at the spot under which the inhumations were located. Another characteristic feature is the removal of the cranium and frequently other bones, which were eventually reburied. Some of the crania were plastered and others remained plain, but this was not influenced by gender or age, since both adults and children were represented in the archaeological record (Simmons et al., 2007, p. 5).

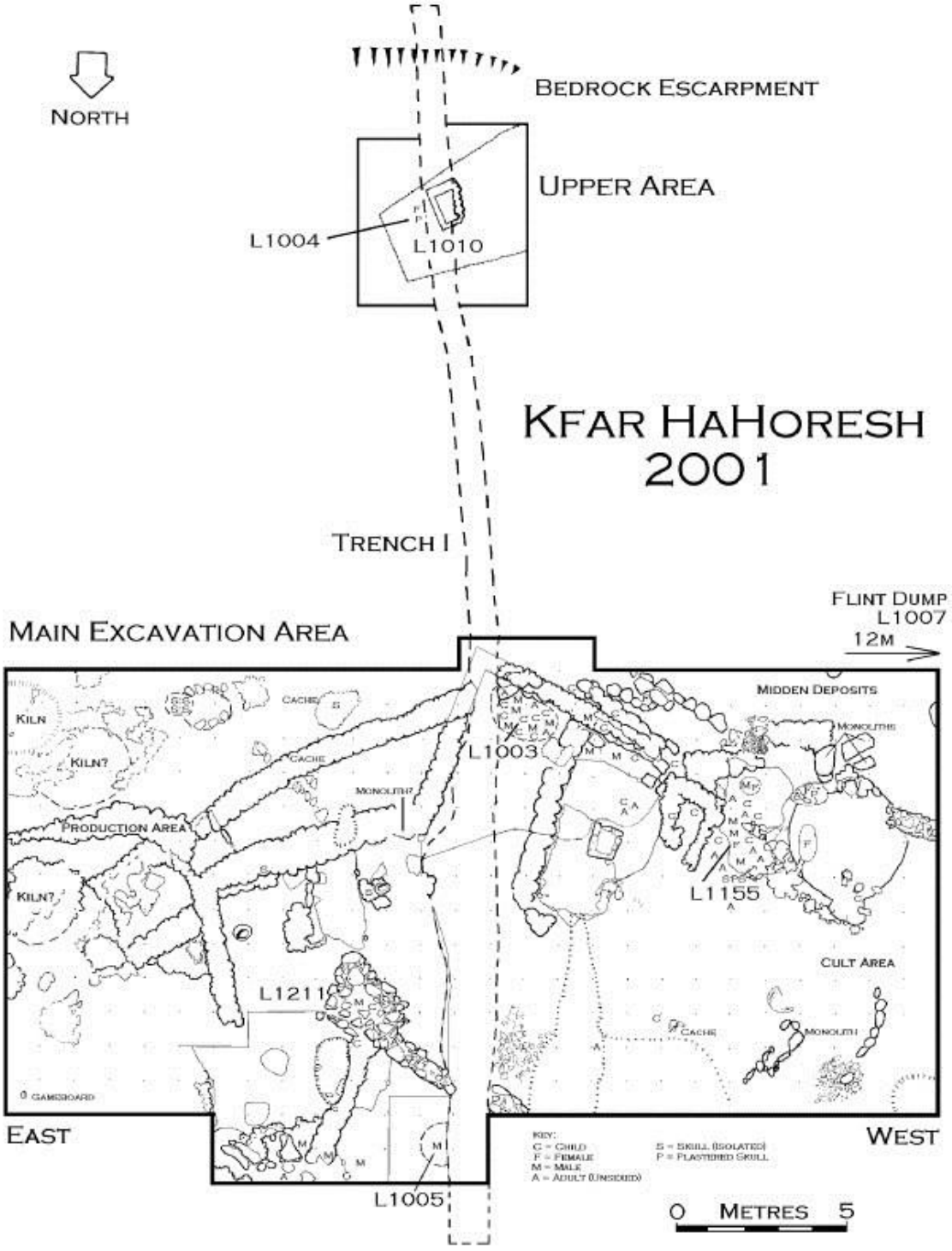


Figure 10: Map of Kfar Hahoresh. Courtesy of Horwitz & Morris, 2004, p. 168

§ 4.1.4 Beisamoun

Beisamoun is considered a large PPNB site covering an area of about 10 hectares (*figure 11*). It is located in the Hula Basin at the northeastern tip of Israel (Bocquentin & Noûs, 2022, p. 197) close to the Agamon and Eynan springs (Khalaily & Bocquentin, 2012, p. 124). The site knew a long time of occupation including the PPNB, PN and Bronze Age periods (Bocquentin et al., 2007, p. 17). The site has partly been destroyed due to the construction of fish ponds dug into the archaeological settlement layers in the 1950s. The site itself was discovered by Perrot when these ponds were drained for cleaning. However, further damage was afflicted to the site due to the continuous use of the ponds and agriculture, which ended in
1999, when the archaeological settlement became a legally protected site declared by the Israel Antiquities Authority (Bocquentin et al., 2014, p. 6).

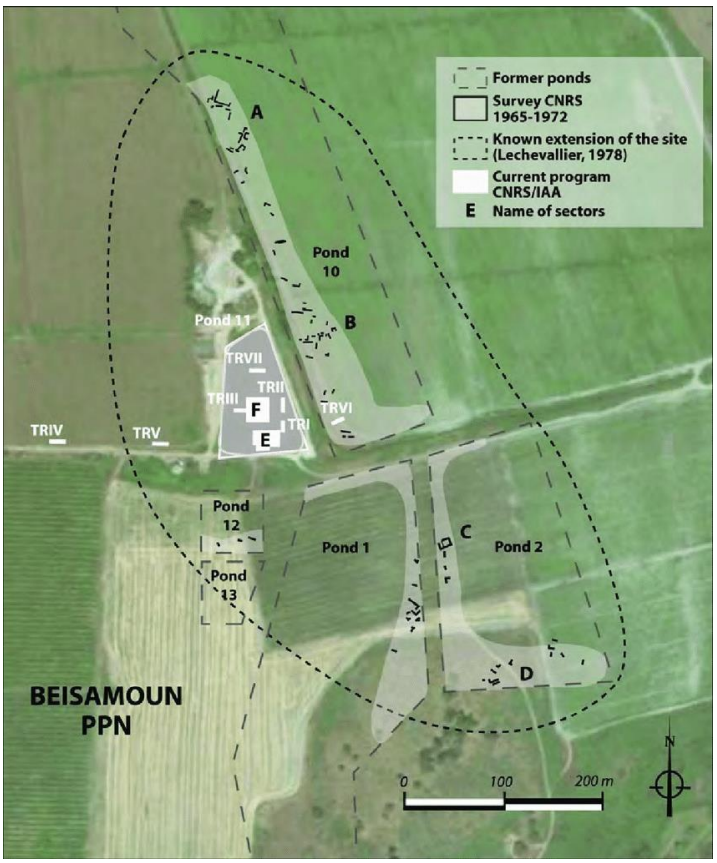


Figure 11: Aerial view of Beisamoun. Courtesy of Bocquentin et al., 2014, p. 9

Domestic buildings have been uncovered as well as a rich assemblage of lithics. A concentration of lithic tools has been found near plastered skulls potentially used for modeling the skulls (Boquentin et al., 2011, p. 201). Furthermore, a small faunal assemblage was present at the site consisting of aurochs, gazelle, pig, cattle and to a small extent caprine bones. Sheep and goats were not part of the assemblage (Boquentin et al., 2011, p. 208). Human remains have also been found inside the settlement, some 30 graves containing 34 people excavated between 2007 and 2016 (Bocquentin & Noûs, 2022, p. 198). The funerary assemblage also includes 4 plastered skulls, two dating to the Middle PPNB and the other two to the Late PPNB (Boquentin et al., 2011, p. 208).

Unfortunately, the anthropological material excavated from the graves, with the exception of two plastered skulls, has been lost for some reason. As a result, information can only be drawn from published reports dating to 1978 and 2004; the remains themselves cannot be reexamined (Boquentin et al., 2011, p. 208).

§ 4.1.5 'Ain Ghazal

At its height, 'Ain Ghazal comprised an area of 12 to 13 ha (*Figure 12*), which made it one of the megasites of the Levant, like Abu Hureyra (*see § 4.1.9*) (Hole, 2002, p. 202). It is located just north-east of Amman in Jordan, where it was occupied for approximately 2000 years knowing four main occupations, "including the Middle PPNB", "the Late PPNB", "the PPNC", "and the Yarmukian Pottery Neolithic" (Rollefson, 2002, p. 166). Today the site is threatened by urbanization closing in on the site as well as the construction of roads surrounding it. Additionally, agriculture has already afflicted some damage to the site (Hole, 2002, p. 202). Since 1982 the first excavations at the site started under the supervision of Rollefson (Rollefson, 1989, p. 135). The archaeological record contains a rich assemblage of material culture. Local pastoralism was one of their subsistence strategies as well as rainfed cultivation (Arbuckle & Hammer, 2018, p. 403-405).

Figure 12: Aerial view of 'Ain Ghazal. Courtesy of Google Earth Pro

Skull removal and manipulation were well-known by the people of PPNB 'Ain Ghazal, however, they practiced a variety of burial customs including "subfloor and courtyard burials,

caches of skulls (untreated, painted, or plastered), and ceremonial "burials" of large human statuary made of lime plaster" (Rollefson, 2002, p. 167). Some of the skulls contain cutmarks indicating that people aided the process of defleshment (Bocquentin et al., 2016, p. 45). Noteworthy is that in one grave plastered statues have been interred together with three plastered skulls (Akkermans & Schwarz, 2003, p. 85).

§ 4.1.6 Nahal Hemar

In the Judean desert, just 17 km southwest of the Dead Sea lies the Nahal Hemar cave: a small room measuring about 8 by 4 metres accessible through a small entrance measuring about 1 by 0,7 meters, located inside a cliff on the right bank of the Nahal Hemar (Solazzo et al., 2016, p. 6; Borrell et al., 2020, p. 150) (*figure 13*). The presence of the cave became known during the 1980s which prompted excavations at the site (Borrell et al., 2020, p. 150). The cave seems to have been solely used for ritual purposes relating to the dead during the PPNB since 6 intact manipulated skulls and partial remains of crania of about 23 people have been found, next to several artifacts including a stone mask, but also " a head gear and a napkin, baskets, painted wooden beads, a sickle, bone tools and a special type of flint blades" (Solazzo et al., 2016, p. 2; Borrell et al., 2020, p. 165) Analysis of the lithic assemblage indicates a long term use of the cave. Consequently, it has been suggested that people from several settlements or communities made use of the cave or came together to perform ritual ceremonies (Borrell et al., 2020, p. 165). Among the lithic assemblage were knives, which have not been found at other neighbouring settlements.

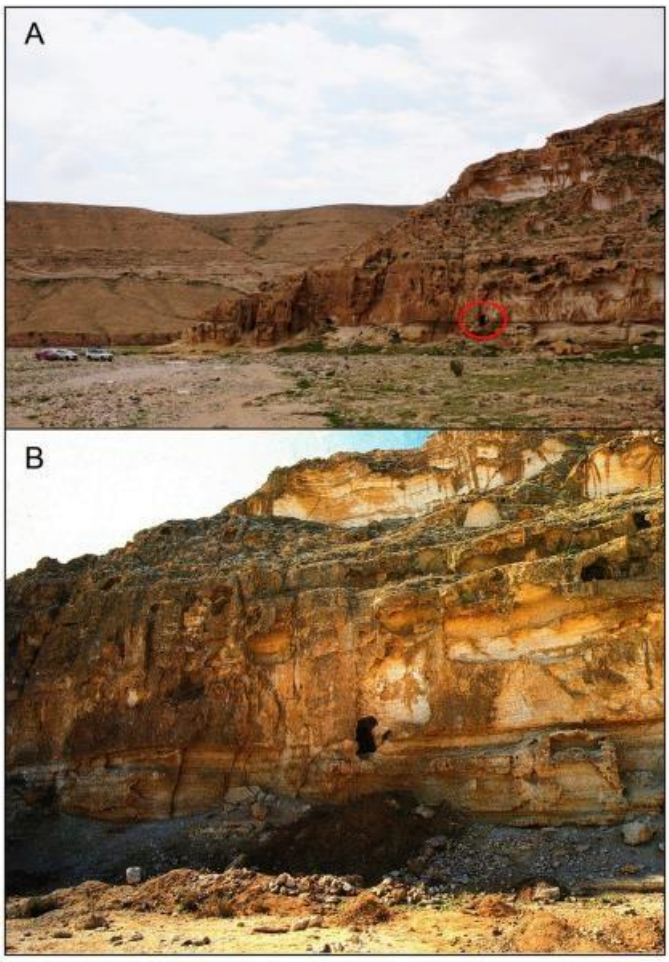


Figure 13: The Nahal Hemar Cave. Cited in Borrell et al., 2020, p. 151

Therefore, it has been proposed that the ritual customs performed at the cave were related to the dismembering and defleshing of the dead (Borrell et al., 2020, p. 165).

§ 4.1.7 Tell Ramad

Around the end of the 8th millennium people started to inhabit the area of Tell Ramad, located about 15 km south of Damascus in Syria (de Contenson, 1992, p. 186; Akkermans & Schwartz, 2003, p. 109). It is strategically located at the foot of Mount Hermon with nearby water sources, which favours agriculture. The people of Tell Ramad cultivated barley, wheat, and lentils, but also collected fruits and grass. Also, cattle, sheep, goats, and pigs were kept and to a small extent gazelle and deer were hunted down as part of the people's diet. The site knew three main occupational levels, but remained a small tell of about 2 hectares. In the beginning houses took the shape of pisé huts with some space in between them, but later they became rectangular in form using mudbrick supported by stone foundations. Courtyards and little streets divided the houses (Akkermans & Schwartz, 2003, p. 109). Excavations started first in 1963 under supervision of de Contenson and van Liere, but the former continued supervising the following excavations alone (Moore, 2006, p. 28).

Skeletal remains are well preserved at Tell Ramad (Kanjou, 2009, p. 26). People were buried underneath floors of houses either individually or in groups similar to the site of Halula (Fernández et al., 2014, p. 12). Skull removal and manipulation were part of the mortuary customs practiced at Tell Ramad. Noteworthy is that a handful of human figurines were placed inside graves next to groups of skulls, likely intended for ritual purposes instead of as grave goods (Akkermans & Schwartz, 2003, p. 90).

§ 4.1.8 Tell Aswad

Tell Aswad is a PPNB site situated in Syria some 30 to 40 km away from Damascus (*figure 14*). De Contenson first discovered the site in 1967, but Stordeur and Jamous took over in 2001 starting excavating again at the site. They discovered three main occupations, namely during "the end of the Early PPNB, the middle PPNB, and the beginning of Late PPNB" (Stordeur & Khawam, 2016, p. 57). At the time the site lay in the vicinity of a lake creating sufficient natural resources for the inhabitants to survive on. Evidence of cultivation of emmer and barley was present at the site, but also evidence of herding and the domestication of sheep, pigs, and goats were discovered (Stordeur & Khawam, 2016, p. 57).

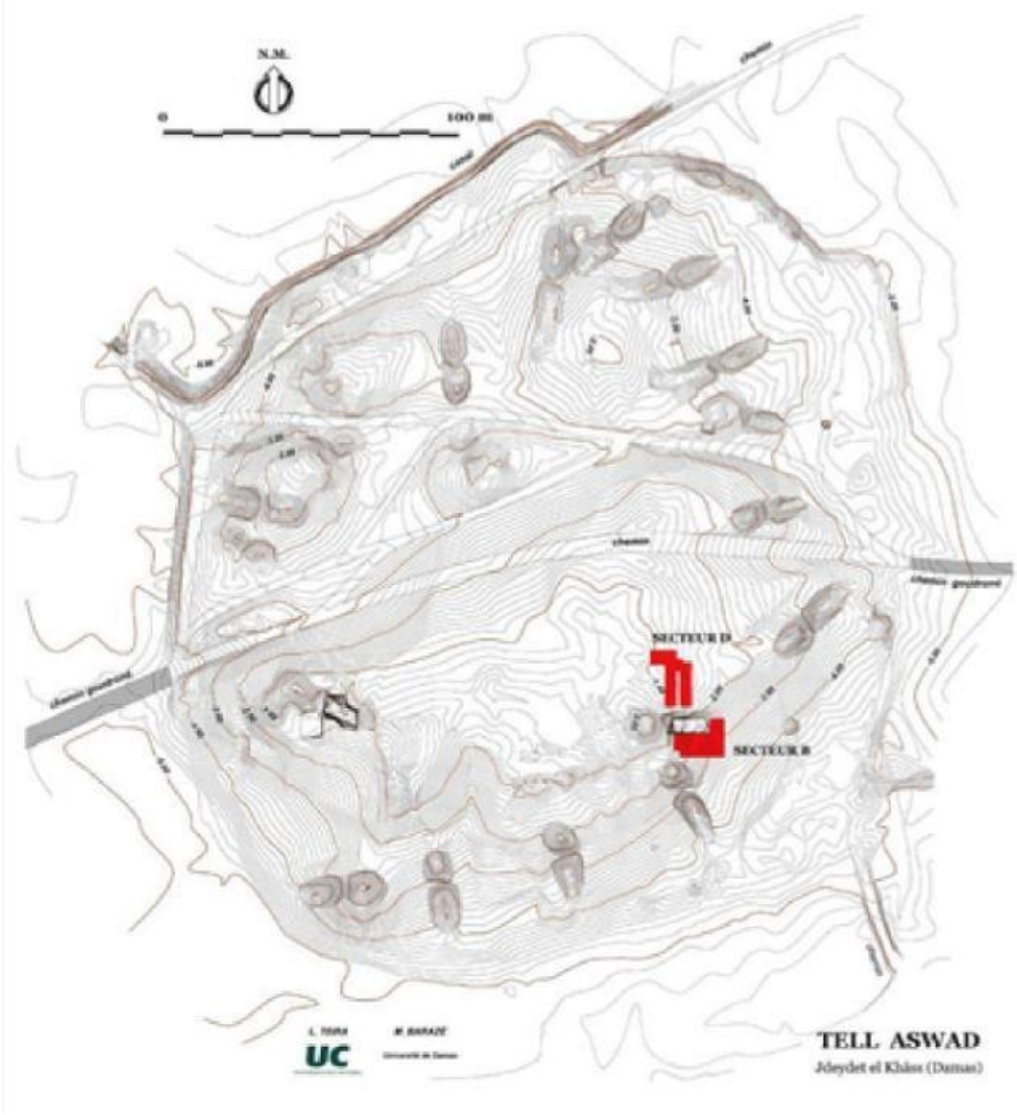


Figure 14: Map of Tell Aswad. Source: https://whitelevy.fas.harvard.edu/publication-neolithic-site-tell-aswad-damascusregion-syria

Fortunately, the archaeological material regarding mortuary practices is well preserved at Tell Aswad. The type of burial was diverse ranging from primary and secondary to single and group burials (Garfinkel, 2014, p. 147). However, over time some were more prevalent than others. Burials underneath floors of domestic buildings were popular during the early phases of the PPNB, while in the middle PPNB yard burials rivaled with house burials. During the final phases of the PPNB specific areas were chosen to conduct funerary practices (Stordeur & Khawam, 2016, p. 58). Evidence of skull removal and manipulation have been found at the site including plastered and painted skulls. The craftsmen responsible for the modelling of these skulls possessed great skill, because they created realistic lifelike appearances (Stordeur & Khawam, 2016, pp. 58-60).

§ 4.1.9 Abu Hureyra

Abu Hureyra was a site about 11,5 hectare in size located on a plateau in Syria on the Euphrates (*figure 15*). It was occupied for roughly 4000-5000 years and contains two prehistoric settlements with an intermediate period in between: the first settlement dates to the Epipalaeolithic and the second started in the PPNB. The site was eventually abandoned around 6000 BC, but was later reoccupied during the Chalcolithic, Byzantine, Islamic, and current days (Moore, 2016, pp. 31-34; Molleson & Arnold-Forster, 2015, p. 117). Previously it had been assumed that Abu Hureyra was a large settlement, especially compared to other contemporary villages, like Bouqras or Beidha for instance which encompass an area of 2,75 and 0.1 ha respectively (Hole, 2002, pp. 195, 203). Moore who excavated the site during the 1970s termed it consequently a "regional center" (Moore, 1975, p. 69, cited in Hole, 2002, p. 198). Domestic structures had been found across the entire mound, which resembled in style and size. According to Moore these must have been inhabited by thousands of people living next to each other contemporaneously. This quick assumption was made, because the excavated houses were not dated at that time, likely due to time constraints. As a consequence this gave rise to Abu Hureyra as a megasite (Hole, 2002, p. 198).

Figure 15: Aerial view of Abu Hureyra. Courtesy of Moore et al., 2000, p. 27

A total of 162 PPNB burials, collective and individual, have been found all roughly resembling each other. No distinction in status or wealth were present among the interred. Evidence of skull removal and manipulation has been discovered, where some graves contain groups of skulls including some bones, and a few others bore headless skeletons. Traces of pigment were visible on a few skulls, but also covered the bodies of some of the interred (Molleson et al., 1992, p. 230; Hole, 2002, p. 198). Frequently mats or bags were used to keep

the bones in place, which likely suggests that the body was exposed to be defleshed before interment (Moore & Molleson, 2000, p. 278). One very important limitation we have to be aware of though, is that only a very small portion of the site has been excavated, namely seven trenches spread across the site were dug (Molleson & Arnold-Forster, 2015, p. 117). Plans for the construction of the Tabqa Dam put the (pre)historic settlement of Abu Hureyra on the list of endangered archaeological sites. Salvage operations (1972 and 1973) were organized to gather as much information as possible about the site before it became fully submerged by Lake Assad, created upon completion of the dam. The site has been inaccessible ever since (Moore, 2016, p. 31; Moore et al., 2000, p. v). The small portion of archaeological material excavated at the site can therefore not be generalized to the whole site and needs to be treated with caution.

§ 4.1.10 Çayönü

Çayönü is located in Southeast Anatolia lying at the foot of the Taurus Mountains on a fertile highland (*figure 16*). The site is known for "its continuous plant management cultivation and animal management" but also for "innovation in architecture" and the production of several types of artefacts (Altınışık et al., 2022, p. 1). Braidwood and Çambel were the first excavators operating at this pre-pottery Neolithic site in the 1960s. Subsequent excavations have frequently been organized until the 1990s (Haklay & Gopher, 2019, p. 7). The size of the site encompasses an area of about 2 to 3 hectares and was inhabited from the Early Aceramic Neolithic to the Ceramic Neolithic (Lichter, 2016, p. 73; Yakar, 2011, p. 60). However, nothing seems to suggest simultaneous occupation of the whole site (Hole, 2002, p. 199).

Figure 16: Aerial view of Çayönü. Courtesy of Google Earth Pro

The site knows three 'special' buildings next to domestic architecture found on the west and east side of the mound. On the eastern side the Flagstone building, the Terrazzo building, and the Skull building were constructed and used. However, little information can be deduced about the function of the first two apart from the fact that the Flagstone building is the oldest structure of the three. The Skull building received its name due to the findings and

likely performed activities inside the structure. The remains of about 400 people and 90 skulls have been buried inside the building. Additionally, bones and horns of aurochs were also interred. Blood traces of humans and animals have been uncovered in the Skull building and Terrazzo building. Based on the archaeological material and similar architecture it has been proposed that the Skull building and maybe the other two 'special' structures as well were associated with funerary practices (Hole, 2002, pp. 200-201). Next to the Skull building, burials have also been uncovered underneath houses: 33 adults and children were interred in close proximity or beneath 6 Aceramic Neolithic houses (Altınışık et al., 2022, pp. 2-8).

§ 4.1.11 Köşk Höyük

Within the Niğde district in Central Anatolia lies the archaeological site of Köşk Höyük (*figure 17*).

Figure 17: Overview of Köşk Höyük. Courtesy of Google Earth Pro

Excavations started in the 1980s and revealed 5 stratigraphical layers, assigning the youngest layer to the Middle Chalcolithic. The remaining levels are problematic to date, because there exist only one radiocarbon date for level 3 assigning it to the Early Chalcolithic. The two oldest layers have not been dated yet (Düring, 2022, p. 128). Based on iconography and other art forms, the people of Köşk Höyük sustained themselves by means of possibly agriculture and hunting (Düring, 2022, p. 132). However evidence regarding subsistence strategies, architecture and the like, remains to be topic of further research before anything with more certainty can be proposed about the way of life of the people living at Köşk Höyük

(Düring, 2022, p. 132). Information that can be deduced is that it was common for people at Köşk Höyük was to bury their dead inside dwellings, more specifically “neonates, infants and children” (Düring, 2022, p. 128). 13 plastered skulls (out of 19 skulls) have been discovered at the site buried in groups or alone inside buildings together with plain skulls (Özbek, 2009, p. 380; Croucher, 2017, pp. 203, 205; Lichter, 2016, p. 75).

§ 4.1.12 Çatalhöyük

Çatalhöyük was first excavated by Mellaart between 1961 and 1965, and subsequently taken over by Hodder from 1993 to 2017. The Neolithic and Chalcolithic site is located southcentral Anatolia in the Konya plain and is renowned for its size of about 14 hectares containing 18 occupational levels spanning some 1400 years (Hodder, 2010, p. 3; Orton et al., 2018, p. 620).

Figure 18: Aerial view of Çatalhöyük East and West. Courtesy of Google Earth Pro

Çatalhöyük consists of two mounds, which have been named Çatalhöyük East and Çatalhöyük West (*figure 18*). At first glance it was believed that these could be perceived as two separate settlements whereby East was occupied first, and after its abandonment, people moved to the west tell. However, evidence shows that the two mounds share overlap in time indicating that people gradually moved to the west side in the course of 100 or 200 years (Orton et al., 2018, p. 622). Agriculture and the domestication of animals was the main source of subsistence. Crops like cereals and pulses were cultivated and sheep and goats were kept

for their meat and secondary uses (Hodder, 2010, p. 32). Characteristic of the site are the densely built mudbrick domestic dwellings, which contain a rich assemblage of art and symbolism (e.g., paintings on walls, sculptures), but also interments beneath houses (Hodder, 2010, p. 3).

There is evidence of skull retrieval and manipulation at Çatalhöyük, however, the modelling of skulls seems rather exceptional to the rule (Düring, 2022, p. 129). In total, 470 intact skeletons have been discovered, while 272 people were excavated showing only partial remains (Larsen et al., 2019, p. 12617). The latter includes headless burials, but also reburied isolated skulls (Haddow & Knüsel, 2017, p. 55). The partial remains were discovered in secondary and even tertiary contexts, which prevailed toward the end of occupation. Before, primary burials were the standard to the rule (Larsen et al., 2019, p. 12617). Considering all the burials, only one manipulated skull was found inside a grave embraced by an adult female (Haddow & Knüsel, 2017, p. 55). The reason why it is included in this research is because it has been considered by some scholars to be part of the 'skull cult' (Slon et al. 2014, p. 1; Haddow & Knüsel, 2017, 52).

§ 4.2 Procedure

The selection of archaeological sites was based on searching for scholarly research invested in the 'skull cult' using the online catalogue of the Leiden University library and Google Scholar. The latter allowed me to find the necessary books and articles, but also citations in recent publications. After reading several works, the archaeological sites presented above were selected for this research, because their assemblages contain skulls, either manipulated or plain, and/or headless burials. However, the sites have not been studied collectively, but only a few case-studies were examined, and subsequently the results were generalized to the rest of West Asia where similar assemblages have been discovered (e.g., Milevski et al., 2008, p. 44; Özbek, 2009, p. 385; Slon et al., 2014, p. 1). Because of that reason, 12 sites are taken up in this research. To avoid the risk of producing excessive data, consequently creating information overload, the focus will be on occupations during the PPNB (Levant) and Aceramic Neolithic (Anatolia). Another reason is that most evidence of the 'skull cult' dates to these periods (Jammo, 2022, p.95). A few sites dating to the PPNA and Ceramic Neolithic, however, have provided evidence of skull burials, and will therefore be included. An additional reason is that these specific settlements were examined by other scholars as well, whose research was focused on the 'skull cult'.

After collecting the selected samples, each site will be examined individually, based on several variables (*table 2*). This in order to avoid creating parallels between other sites unconsciously. Due to the limited size of the paper, the main focus at each individual assemblage lies on the presence and the number of plastered skulls. Additional features (e.g., plain skulls, the application of paint, head deformation, adornments etc.), will be briefly mentioned if present. Age and gender are also taken into account while analyzing the skulls and or the headless burials, because men, women, and children are represented in the assemblages (Bonogofsky, 2003; 2004; 2005). A binary classification will be used for these two variables with 'man' and 'woman' to biologically designate gender and 'child' and 'adult' to denote age. If present more detailed information is given regarding age (*table 2*) Furthermore, burial practices are also an essential feature to look at, because local diversity is visible within the archaeological record among sites. The following aspects need to be considered, which are the location of deposition within and/or outside a settlement; individual burials and/or group burials; graves containing headless skeletons and/or only skulls. Finally, the collected data from each site will compared with each other. ***Table 2: Variables chosen for analysis regarding the 'skull cult'***

Variables	**(possible) outcomes**
Plastered skulls	Yes or no
Gender	Male, female
Age	(Elderly adult), adult, (young adult), (juvenile), child, (infant,) (neonate)
Type of burial	Individual or group
Findspot	On or beneath floor of house, courtyard
Headless burials	Yes or no
Additional features	Painted or plain skulls, head modification, adornments, masks, etc.

The data is derived from excavation reports, books, chapters, and articles investigating the aforementioned sites. Using Excel, the gathered information will be presented structurally in tables based on gender, age, manipulation, and location. This allows for a clear overview of the data per site according to the aforementioned variables and for comparison between the sites.

Chapter 5: Analysis and results

The results of each site (Jericho, Yiftahel, Kfar Hahoresh, Beisamoun, 'Ain Ghazal, Nahal

Hemar, Tell Ramad, Tell Aswad (Southern Levant), Abu Hureyra, Çayönü, (Northern Levant/ South-east Anatolia), Köşk Höyük, and Çatalhöyük (South-central Anatolia)) are presented below. The data is structured according to the variables chosen for this research, which include the following: the total amount of skulls discovered at the site, including how many of those are plastered and whether they contain the mandible or not. Furthermore, gender, age, findspot, and the manner of burial (either individually or in groups) are looked at. To investigate the activity of skull removal and its significance headless and intact burials are included (if present). Any peculiarities associated with a site are also mentioned under 'additional features'. In the second paragraph all sites are taken collectively and juxtaposed to each variable separately.

§ 5.1 Archaeological sites

§5.1.1 Jericho

The largest collection of skulls has been excavated at Jericho dates to the PPNA and PPNB. The number of skulls found at the site remains obscure, because Nigro (2017, p. 6) mentions the discovery of 45 skulls, but Bonogofsky (2006, p. 16) calculates as much as 85 next to the already 16 heads analyzed in her paper, and Croucher (2012, p. 98) numbers 206 skulls. Since Nigro provides a detailed analysis of the 45 skulls, I will use his research to elaborate on the Jericho skulls here.

Table 3: Overview of variables at PPNA Jericho

Variables	**Results**	**Literature**
Total amount of skulls	26	Nigro, 2017, p. 7
Number of plastered skulls	0	Nigro, 2017, p. 6
With or without mandible	Without	Nigro, 2017, p. 6
Gender	Male, but for most part female	Nigro, 2017, pp. 8-11
Age	Adults and children	Nigro, 2017, pp. 8-11
Findspot	• Beneath courtyard • Beneath floor of a house • Within foundation	Nigro, 2017, pp. 8-11

Manner of burial (single or group)	1 individual burial 4 group burials: • 1) 3 children, 3 females, 3 unidentified adults • 2) 1 young adult, 5 children of which 3 female. Others remain unidentified • 3) 5 infants • 4) 4 adult females	Nigro, 2017, pp. 8-11
Headless burials	Yes (number unknown)	Bonogofsky, 2001, p. 93
Additional features	No	

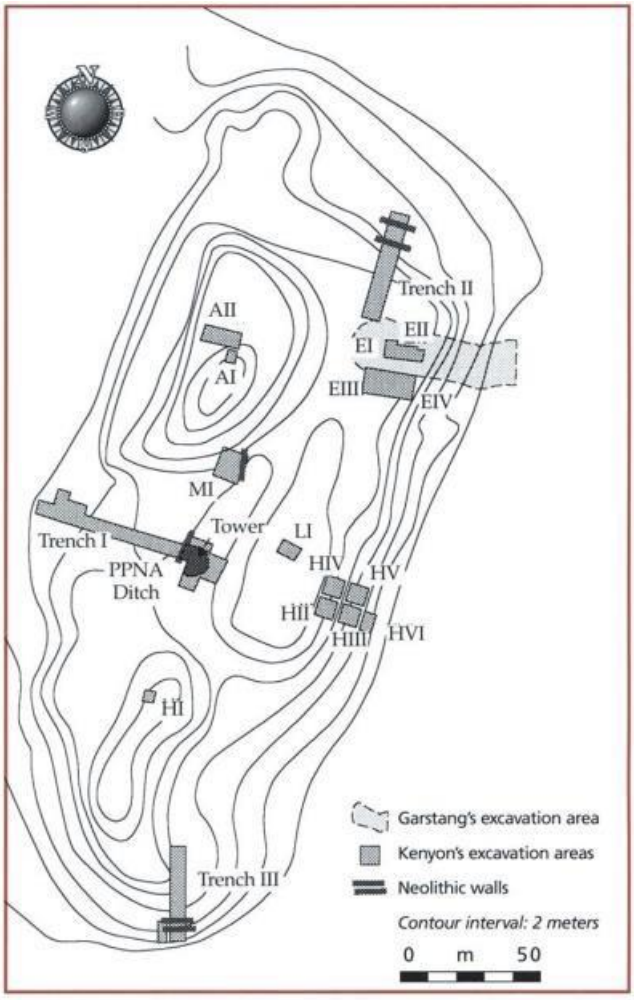


Figure 19: Overview excavation areas at Jericho. Courtesy of Banning, 1998, p. 191

26 skulls can be attributed to the PPNA period (*table 3*). These represent for the most part women and children, but some skulls remain unidentified (Nigro, 2017, p. 11).They were found divided into 4 groups, namely in: "Trench I/ Squares DI and FI, Square MI, and Squares EI-II" (Nigro, 2017, p. 7). One singular cranium was found "in a stone cist in (…) Square FI" buried "into the foundation of a structure" (Nigro, 2017, p. 7) (*see figure 19*).

One group comprised 10 crania in rows of 3, which have been labeled D35-D44 (*figure 3*). These "three children, three young women and three adult individuals" were discovered beneath a

courtyard facing west (Nigro, 2017, p. 8). They can likely be dated towards the end of the PPNA or the early phase of the PPNB.

Figure 3: Crania (D35-D44) grouped together. Dating to late PPNA. Courtesy of Bonogofsky, 2006, p. 18

The second group included 6 skulls (E11-E16), which were placed in a circle looking towards the center. These belonged to a young adult and 5 children of which 3 could be identified as female. The burial was located towards the northern area of the settlement near the wall of a domestic structure, buried underneath a courtyard. Just like the previous group, this one has been attributed to the end of the PPNA or early PPNB phase (Nigro, 2017, p. 9).

A third group contained the heads of 5 infants (F43-F47) and one interment bearing an intact child skeleton (F42). The pit was located "inside a stone foundation of a circular round basin" (Nigro, 2017, p. 10) (*basin designated as AT. See figure 20*). Noteworthy is that the skulls contained the cervical vertebrae, which means that these children were

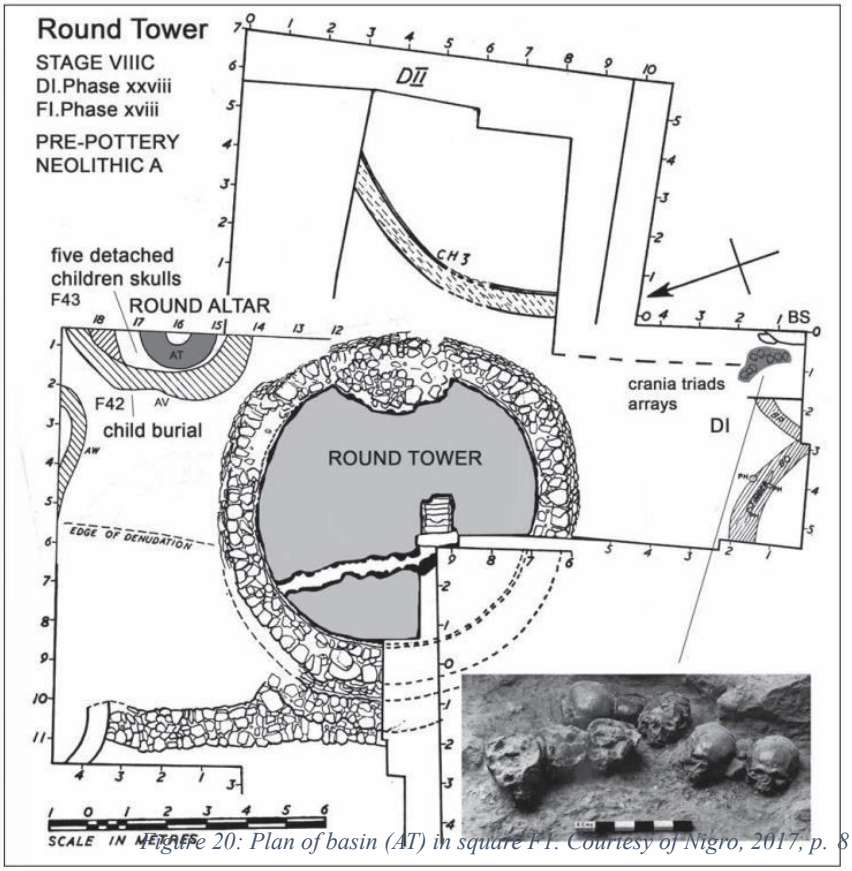


Figure 20: Plan of basin (AT) in square F1. Courtesy of Nigro, 2017, p. 8

decapitated before their bodies were decomposed. These burials have been assigned to the later phase of the PPNA (Nigro, 2017, p. 10). One cranium belonging to a child was found "in layers sealing the basin" which dates to the late PPNA or the early phases of the PPNB (Nigro, 2017, p. 13). These layers were covered with fill, in which 3 additional headless burials were discovered belonging to an adult male and two adult females (Nigro, 2017, p. 11).

The last group of crania was excavated from underneath the floor a domestic building and included 4 adult women (M31-M34). These burials were located north of Trench 1 and can be dated to the PPNA. Additionally, burials of 5 babies and one adult woman were found in the same stratigraphical location. It has been assumed that these people likely inhabited this house (Nigro, 2017, p. 11).

Table 4: Overview variables at PPNB Jericho

Variables	**Results**	**Literature**
Total amount of skulls	18	Nigro, 2017, p. 13
Number of plastered skulls	12	Nigro, 2017, p. 20
With or without mandible	1 with mandible; the rest without	Bonogofsky, 2006, pp. 16-17; Nigro, 2017, p. 6
Gender	6 males and 12 females. Data obscure. See text below	Nigro, 2017, pp. 13-14
Age	Adult and young adult	Nigro, 2017, pp. 13-14
Findspot	Plain skulls: • Inside wall • Set into floor in a corner of a room • Inside a pit against a wall Plastered skulls: • In fill between two walls	Nigro, 2017, pp. 13-20

	• Covered by brick debris	
Manner of burial (single or group)	Group burial (2 to 7 skulls)	Nigro, 2017, pp. 13-20
Headless burials	Yes (number unknown)	Banning, 1998, pp. 191, 223
Additional features	Likely 7 crania painted	Croucher, 2012, pp. 99-100; Nigro, 2017, p. 13
	28 skulls cranial	modification Croucher, 2012, p. 98
	Shells to mimic eyes	Fletcher et al., 2008, p. 314

Since the first excavations at Jericho by Kenyon 18 skulls have been excavated of which 14 have been manipulated and 4 remain plain. The latter are dated to the earliest phases of the PPNB, while the others are attested from the middle and late PPNB periods (*table 4*). Two plain crania (B1 A-B) belonging to young females were found together inside a pit alongside a wall of a domestic building located on the westside of the settlement. Another plain cranium was found inside a building. The head belonged to a man in his 40-60s and was placed upright in a corner of a rectangular room underneath the floor. In another wall (E169) a head was incorporated, which likely belonged to and adult, likely a male, but this remains uncertain. These latter two did not receive a catalogue number during the time of excavation (Nigro, 2017, p. 14).

Underneath the floor of a domestic building 7 plastered heads were likely intentionally buried in between two walls (Nigro, 2017, 19). Noteworthy is that one of the heads contained its mandible while the rest was plastered without it (D112) (Bonogofsky, 2006, pp. 16-17). Not far away two additional plastered crania were discovered, and taken together with the other 7 heads (D110-D118). The couple of heads (D117-118) belonged to a young female between the age of 13-19 and a young male adult in between his 20-30s. The other 7 belonged to 5 females and 2 males. Two young females in between the age of 13-19; one young adult female between the age of 20-30, and two females between between 30-40. With regard to the males, one young man between the age of 13-19 and one adult male between the age of 30-40 (Nigro, 2017, 19). White shells were placed in the eye sockets to recreate the eyes (*figure 21*). Only D111 possessed Cowrie shells compared to the others (Fletcher et al., 2008, p. 314) (f*igure 22*).

Figure 21: Jericho cranium D114. Courtesy of Croucher, 2012, p. 95

Within the late PPNB stratigraphical layers another group of manipulated crania was excavated (E20-22, E25, E26). E20 and E21 were plastered and belonged to two young females (age 23-19). Noteworthy is that E22 is covered in plaster and paint. In addition, E25 and E26 display only traces of paint. They belong respectively to a young male (age 13-19), and two

females (age 20-40). Next to these three, D110, D111, D114, and D115 also show signs of red paint applied to their skull (Fletcher et al., 2008, p. 314; Nigro, 2017, p. 20). It is possible that due to early restorations red paint has been erased on some crania, but which are currently classified as plain skulls (Nigro, 2017, p. 13). Croucher (2012, pp. 99-100) elaborates further that the painted decoration was applied in 3 different manners: "some have streaks running laterally across the cranial vault (…), and one of the males has radial lines from below the nose possibly depicting a beard; the remainder have flattish colours applied, which were probably originally a pink or reddish colour" (Croucher, 2012, p. 100) (f*igure 21*).

A total of 28 skulls was artificially modified (Croucher, 2012, p. 98). Most of these were also plastered (*see figure 22*). There does not seem to be a significant correlation between cranial modification and gender, meaning that both males and females received this treatment roughly equally. Since most of the artificially modified skulls received also the application of plaster after death, it is suggested that some special people were chosen for some role during their lifetime, which ending was defined by plastering (Croucher, 2012, pp. 98-99). However, since the artificially modified skulls outnumber the plastered ones (28 vs. 12), it does not seem that these two practices are related to each other. Moreover, in some cases the modification was not visible to the naked eye, meaning that people either had to remember who received the treatment in order to receive the final ritual of plastering or the two are not related (Croucher, 2012, p. 99).

Figure 22: Plastered and artificially modified cranium (D111). Courtesy of Croucher, 2012, p. 97

Based on the above presented results, one remark of caution concerns the difficulty to estimate gender and age based on solely the skull. Nigro (2017) and Bonogofsky (2006) analyzed skulls D110-118 and E22. Nigro (2017, p.20) came to the conclusion that these skulls presumably belonged to 4 males and 6 females, but the results of Bonogofsky's (2006, p. 16) analysis revealed that 6 might possibly be males; three remain undetermined, and the last belonged to a juvenile, whose young age made Bonogofsky unable to determine gender. The point to take away from this is to be aware when interpreting data regarding gender and age based on the skull alone, which is applicable for the results presented in this paper as well.

Of the total 45 skulls, 26 are datable to the PPNA or even to the early PPNB, while 18 skulls can be assigned to the PPNB. 12 skulls were plastered, but paint was also applied to at least 5 skulls (Nigro, 2017, p. 13, 20). This could possibly indicate an origin of skull removal within the PPNA and possibly even in the Natufian, while skull plastering and painting rose up halfway the PPNB (Nigro, 2017, p. 14). However, given the small sample size of (plastered) skulls dated to the PPNA and PPNB, and the presence of intact burials, this theory remains tentative.

§5.1.2 Yiftahel

Table 5: Overview variables at Yiftahel

Variables	**Results**	**Literature**
Total amount of skulls	4	Milevski et al., 2008, p. 39

Number of plastered skulls	3	Slon et al., 2014, p. 2
With or without mandible	Without mandible	Khalaily et al., 2008, p. 8
Gender	Unknown	Milevski et al., 2008, p. 40
Age	Adults	Milevski et al., 2008, p. 40
Findspot	Deposited in pit near building 501	Milevski et al., 2008, p. 39
Manner of burial (single or group)	Cache of three; all faces facing west	Milevski et al., 2008, pp. 39-40
Headless burials	5 (4 adults and 1 child around the age of 8 years)	Milevski et al., 2008, p. 39
Additional features	1 plain skull	Milevski et al., 2008, p. 39

A total of 32 primary and secondary interments have been excavated at Yiftahel (*table 5*), of which most are located in Area I and a few in F, G, and H. These include men, women and children (Milevski et al., 2008, p. 39; Khalaily et al., 2013, p. 222). Three plastered crania have been found grouped together facing west inside a pit just north of building 501 in Area I (*figure 23*). They all suffered significant damage due to the "pressure from surrounding sediment through the many years since their burial. Additional damage was caused during the excavation, when the upper part of the calvarium of Homo 3 was accidentally shattered" (Slon et al., 2014, 2). Consequently, difficulties arose in determining age and gender, however, it can be discerned that all three crania belonged to adults (Milevski et al., 2008, p. 40).

Figure 23: Homo 1, Homo 2, Homo 3 respectively. Courtesy of Milevski et al., 2008, p. 43

For convenient purposes the plastered crania are named Homo 1, Homo 2, and Homo 3 based on their position from north to south. Homo 1 and 3 are not fully plastered; the first one is plastered around and inside the eye areas. Shells and small black flint pieces were placed to resemble eyes. Homo 1 had "collapsed and had been compressed in the past due to some vertical pressure" (Milevski et al., 2008, p. 44). It has been suggested that this head shows resemblance with skull J 5757 discovered at Jericho. Similarly, Homo 2 shares similar features with D113 excavated at Jericho and a skull from Kfar Hahoresh. But in contrast to Homo 1 and 3, this cranium's face is fully covered with plaster. A limestone pebble was attached and subsequently plastered to resemble the nose, and shells were placed inside the orbits with a small black shell to represent the eyes. A dent was made to create the appearance of a mouth. Homo 3 suffered the most damage with parts of the cranium missing Nevertheless, what can be deduced is that the head was plastered the same way as Homo 1 around and inside the eye areas containing shells and black flint pieces to mimic the eyes (Milevski et al., 2008, p. 39-44). Because only the crania were removed from the grave, the craftsman recreated the mandibles using plaster (Khalaily et al., 2008, p. 8). Next to the plastered crania, an additional plain cranium, although severely damaged, and 5 headless burials were discovered in Area I, one of which belonged to an 8 year old child. Skull removal was practiced at Yiftahel, but it was not always performed, since intact burials were also present in Area H and I (Milevski et al., 2008, p. 39).

§5.1.3 Kfar Hahoresh

Table 6: Overview variables at Kfar Hahoresh

Variables	**Results**	**Literature**

Total amount of skulls	At least 15	Based on drawing Horwitz & Goring-Morris, 2004, p. 168, Figure 2.
Number of plastered skulls	6	Bonogofsky, 2006, p. 20; Maier, 2017, pp. 21-22
With or without mandible	Without	Maier, 2017, p. 22
Gender and age	1 male (20-25 years); the rest unknown	Bonogofsky, 2006, p. 20; Maier, 2017, p. 23
Findspot	Underneath plastered floor	Maier, 2017, p. 23
Manner of burial (single or group)	Individual and group burials	Goring-Morris et al., 2008, pp. 1-3
Headless burials	15	Goring-Morris et al., 1994-5, p. 81, 105-106; Simmons et al., 2007, p. 5; Goring-Morris et al., 2008, p. 2
Additional features	• Some burials involve human and animal remains	Bonogofsky, 2006, p. 20
	• Cut marks on mandibles	Simmons et al., 2007, p. 17

Primary and secondary interments were present at Kfar Hahoresh containing the remains of about 70 people. Additionally, both individual and group burials were part of the mortuary culture at the site. Skull removal was also practiced, since caches preserving skulls were discovered (*table 6*). The use of plaster seems to have been related to the interment of people, since “many graves occur under or associated with lime plaster surfaced L-shaped walled structures” (Goring-Morris et al., 2008, p. 1).

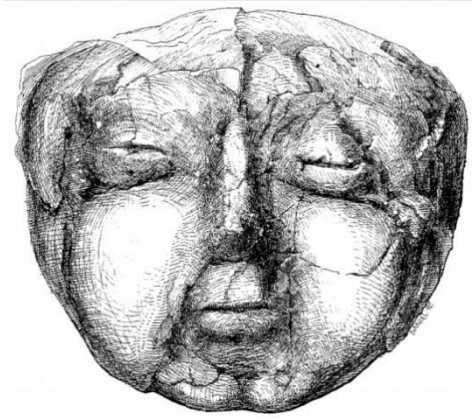


Figure 24: KHH-Homo 1. Courtesy of Goren et al., 2001, p. 677

Potentially 6 plastered skulls have been discovered at the site, but only one (KHH-Homo 1) (*figure 24*) has been well analyzed; the others remain yet unpublished. The head of a male of about 20 to 25 years old was buried inside a pit beneath a plastered floor of a domestic building. The face was looking east and was placed together with the skeleton of a headless gazelle (Bonogofsky, 2006, p. 20). The head showed some signs of damage due to the pressing sediment (Maier, 2017, p. 23). His full face was covered except for the calvarium, which may have been done intentionally potentially for the placement of a headdress or due to "degradation of plaster on top of the skull" (Maier, 2017, p. 23). The plastered skull did not wear any decorations like shells to represent the eyes. These, like the mouth and nose, were molded by the plaster and attached to the face. The outer layer of plaster was covered with cinnabar giving the face a red glace (Maier, 2017, pp. 23-24). The other 5 are damaged to a great extent, making it difficult to determine anything. The second one was discovered in 1994 in a fragmented state. Three years later one intact and one damaged plastered skull were discovered. It has been suggested that a sixth plastered skull has been found at the site (Kangas, & Goring-Morris, 2000. Cited in Bonogofsky, 2006, p. 20).

Next to these plastered skulls, plain heads have been excavated at the site, which were buried in groups and individually. Both adults and children represent the osteological record (Bonogofsky, 2006, p. 20). However, it remains uncertain how many skulls have been dug up. Schmandt-Besserat (2013, p. 225) reports at least two caches each containing three and four heads with one skull containing traces of plaster. Noteworthy is that cut marks are visible on mandibles, but also other human and animal bones. Generally, the head possessed the most cutmarks followed by the limbs. The former relates to the practice of skull removal (Simmons et al., 2007, p. 17).

About 15 headless burials were excavated (Simmons et al., 2007, p. 5), but grave L1804 or the burial of the 'half-a-man' is noteworthy. The 40 year old man was interred for a second time, but part of his skeleton was absent. Only sections of the mandible, ribs of the left side of the body, and long bones were present (Goring-Morris et al., 2008, pp. 1-2). It was

common that secondary interments involved the removal of skeletal components among which the skull (Simmons et al., 2007, p. 5).

§5.1.4 Beisamoun

Table 7: Overview variables at Beisamoun

Variables	**Results**	**Literature**
Total amount of skulls	Unknown	
Number of plastered skulls	4	Bocquentin & Noûs, 2022, p. 198.
With or without mandible	Likely without	Bocquentin & Noûs, 2022, p. 209).
Gender	1 female. The other unknown	Bonogofsky, 2006, p. 19; Croucher, 2012, p. 104
Age	2 adults, but one was around the age of 65	Bonogofsky, 2006, p. 19; Croucher, 2012, p. 104
Findspot	2 plastered skulls deposited in antechamber of building 150	Croucher, 2012, p. 104; Bocquentin & Noûs, 2022, p.202
Manner of burial (single or group)	Cache of two skulls	Bocquentin & Noûs, 2022, p.202
Headless burials	2	Bocquentin & Noûs, 2022, p. 203
Additional features	1 plastered skull painted reddish-brown	Croucher, 2012, pp. 42, 104; Bocquentin & Noûs, 2022, p. 209

2 plastered skulls date to the Middle PPNB and the other two to the Late PPNB-PPNC periods (*table 7*). The former two were discovered in 1972 by Lechevallier together with two graves in the antechamber of a domestic structure (building 150) (Bocquentin & Noûs, 2022, p. 198; Croucher, 2012, p. 104). They were placed next to each other, with one skull facing east and the other one facing south (Bocquentin & Noûs, 2022, p. 207). Noteworthy is that these skulls were not buried, but "deposited (…) on a plaster surface" (Schmandt-Besserat, 2013, p. 226). For unknown reasons the archaeological material is lost, except for these two plastered skulls. This together with the "high rate of errors generated by the methods used in the 1970s to estimate sex and age at death for adults" must be interpreted with caution (Bocquentin & Noûs, 2022, p. 198). The two plastered skulls belonged to an elderly female aged around 65, and the other one appears to be the one of an adult, but gender and the

specific age remain unidentified (Bonogofsky, 2006, p. 19; Croucher, 2012, p. 104). Data concerning the two skulls from the Late PPNB-PPNC periods remain obscure (Bocquentin & Noûs, 2022, p. 198).

The two skulls that have been preserved were found in severely damaged condition, but have been restored (f*igure 25*). Due to sediment the skulls have been deformed and fragmented: of the elderly female's skull "fragments of plaster are missing, particularly from the chin and the right side of the face" (Bocquentin & Noûs, 2022, p. 208). The other skull has lost the top part of its head. Underneath both skulls "a plaster base was placed", however "it is not clear whether the mandible is part of the molding or not" (Bocquentin & Noûs, 2022, p. 209). Goren et al. (2001, p. 673) on the other hand claims that the Beisamoun skulls preserved their mandible. Both were modeled with a similar almost sleepy appearance: "the eye sockets were not infilled (…) but remained hollowed, their opening being narrowed to a slit by two patches of plaster" (Goren et al., 2001, p. 673). However, they were made using different mixtures of plaster, and to the second skull a reddish-brown paint was applied (Croucher, 2012, pp. 42, 104; Bocquentin & Noûs, 2022, p. 209).

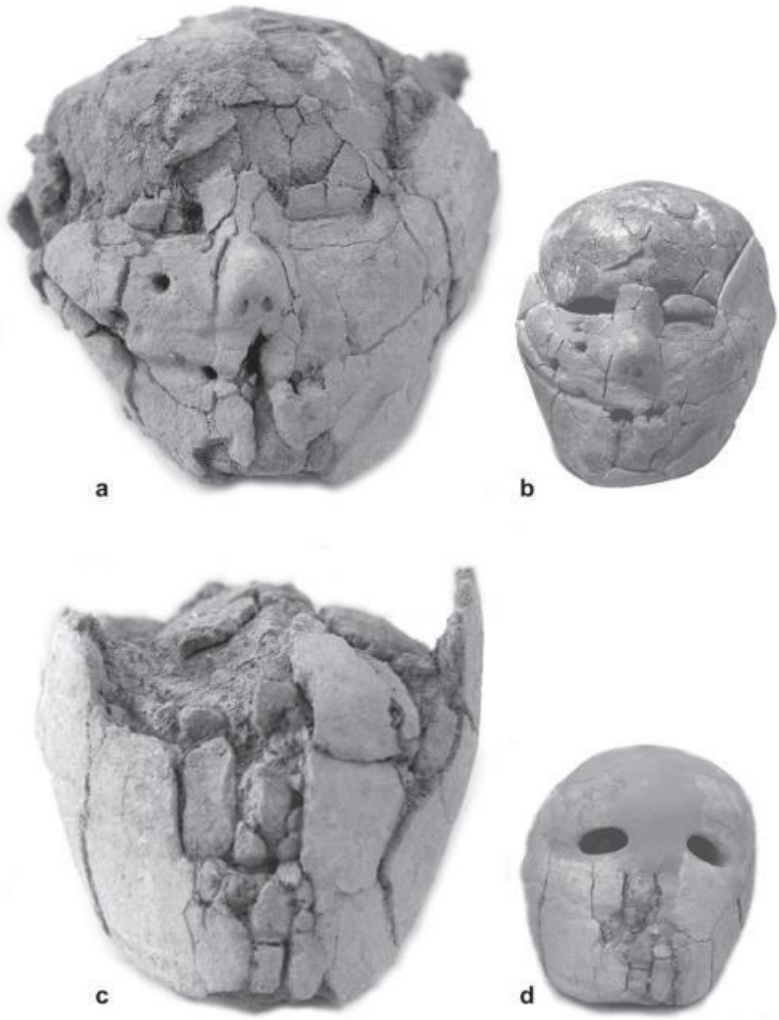


Figure 25: 2 plastered skulls before and after restoration. Courtesy of Bocquentin & Noûs, 2022, p. 209

§5.1.5 'Ain Ghazal

Table 8: Overview variables at 'Ain Ghazal

Variables	**Results**	**Literature**
Total amount of skulls	Unknown	

Number of plastered skulls 20	8	Bonogofsky, 2006, pp. 19-
With or without mandible	Without	Maier, 2017, p. 13
Gender and age	5 adult males 1 unknown	Bonogofsky, 2006, pp. 192 juveniles 20; Croucher, 2012, p. 109
Findspot	• Beneath plastered floor domestic building 20 • Beneath painted floor of domestic building • Buried in pit in courtyard • On a floor inside domestic building	Bonogofsky, 2006, pp. 19of
Manner of burial (single or group) 20	Caches and individual burials	Bonogofsky, 2006, pp. 19-
Headless burials	Yes	Bonogofsky, 2006, p. 19
Additional features	3 plastered masks	Croucher, Bocquentin et al., 2016, p. 2012, p. 109 Cutmarks 45; Bonogofsky, 2001, p. 142

Since the first excavations started about 81 burials have been uncovered at ‘Ain Ghazal (Rollefson, 2002, p. 169). Several of these preserved plastered skulls (*table 8*). The first cache was discovered in 1983 bearing two plain and two plastered skulls of 4 adult males. They were looking southwest inside a pit located in a courtyard. Two of the skulls showed signs of plaster. During the same year another plastered skull was found lying bare on the floor inside a burned down domestic building (Bonogofsky, 2006, p. 19). This adult male cranium showed signs of cuts on the skull, however, based on the “location and direction” it remains uncertain whether this is the result of flesh removal (Bonogofsky, 2001, p. 142). It is likely a consequence of sanding, which is either used to prepare the skull for plastering or to remove the plaster. Traces of plaster have been found, which indicates that this skull was likely modelled (Bonogofsky, 2001, p. 144).

One year later, in 1984, a discovery was made underneath a plastered floor of domestic building: 4 crania, of which one belonged to a juvenile (AG 84 3083 107), but the other three remain uncertain. It has been suggested that two belong to adult males and one to a juvenile (AG 84 3083 116). To all four heads a substance was applied. One juvenile cranium (AG 84 3083 107) bore traces of either collagen or bitumen, while the other three show traces of plaster inside the cavities. Noteworthy is that the use of collagen is analogous with Nahal Hemar. Next to the applied substance, small scratches were present on the juvenile cranium (AG 84 3083 107) (Bonogofsky, 2006, p. 20).

During the excavations of 1988, skull (AG 88 2872) (*figure 26*) was found inside a pit located underneath a painted floor of a domestic building (Bonogofsky, 2006, p. 20). Several parts of the adult cranium are missing, however, it can be deduced that the nose, eyes, right ear and cheek were made of plaster and attached to the cranium. Previous research has mentioned that cut marks were present on the head, but these parts of the cranium have been lost (Bonogofsky, 2006, p. 20). Gender and age remain obscure since this data is not mentioned in the literature (Bonogofsky, 2006; Croucher, 2012).

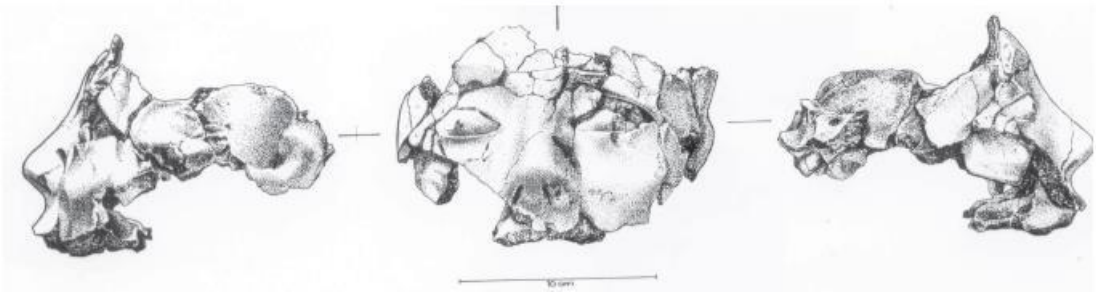


Figure 26: Plastered skull (AG882872) from 'Ain Ghazal. Courtesy of Bonogofsky, 2006, p. 20

Next to skull inhumations, intact and headless burials were also preserved. Unfortunately, these numbers have not been catalogued (Bonogofsky, 2006, p. 19). This indicates that skull removal was practiced at the site, but not everyone received this treatment. Noteworthy is the discovery of three plastered masks cached together (*figure 7*). Based on the interior of the mask these faces were once applied to skulls, but later removed after their lifecycle had ended and buried (Croucher, 2012, p. 109).

Figure 7: 3 plastered masks found at 'Ain Ghazal. Courtesy of Maier, 2017, p. 15

§5.1.6 Nahal Hemar

Table 9: Overview variables at Nahal Hemar

Variables	**Results**	**Literature**
Total amount of skulls	Cranial remains of up to 23 individuals	Borrell et al., 2020, p. 165
Number of plastered skulls	6 coated skulls	Solazzo et al., 2016, p. 2
With or without mandible	Without	Bonogofsky, 2006, p. 19
Gender	Male	Bonogofsky, 2006, p. 19
Age	Between 25-50+ years	Bonogofsky, 2006, p. 19
Findspot	Inside cave	Croucher, 2012, p. 122
Manner of burial (single or group)	Unknown	
Headless burials	None	
Additional features	• Use of animal collagen and rare aromatic resin instead of plaster. • 2 limestone masks	Solazzo et al., 2016, p. 7

At the site of Nahal Hemar remains of 23 crania were uncovered, however, it is not mentioned in the literature in what context they were found (e.g., placed inside cave, buried, etc.) (*table 9*). Apart from the cranial remains and 3 vertebrae, no other human bones were placed inside the cave (Croucher, 2012, p. 122). At first glance, it is noteworthy that instead of plaster, animal collagen was used to model these 6 crania. However, instead of the face, the cranial vaults of these 6 heads were covered with this brownish-black substance. The face itself remained untreated. After the application animal collagen was used to decorate the cranial vault like a net pattern, subsequently creating the image of a headdress (Solazzo et al., 2016, pp. 1-2) (*figure 27*). This substance was also used to coat artefacts placed inside the cave. However, an aromatic resin, which was difficult to obtain, was added to the substance only when applied onto the crania (Solazzo et al., 2016, p. 7). Cavities of the head were not filled, like skulls at other sites (Arensburg & Hershkovitz, 1988, p. 54). The six coated crania have been designated as males and estimated to be between the age of 25 and 50+ years old upon their deaths (Bonogofsky, 2006, p. 19).

Figure 27: cranium with net-like pattern from Nahal Hemar. Courtesy of Borrell et al., 2020, p. 152

In addition to the cranial remains, two stone limestone masks have been deposited inside the cave (*figure 28*). Although one was broken and only its lower half was placed inside the cave, the other mask is almost intact. It was found fragmented in 12 pieces and contained some burn marks. Both "masks display a pattern of radial decoration" (Maier, 2017, p. 34). Eyes and teeth were created through incision. Along the side of the mask perforations were made, which led to the suggestions that the mask was tied to a skull or that these holes were created for specific adornments (Croucher, 2012, p. 124). It has been suggested that these masks were meant for ritual purposes, but were deposited inside the cave after their use (Croucher, 2012, p. 128).

Figure 28: Stone mask from Nahal Hemar. Courtesy of Maier, 2017, p. 35

§5.1.7 Tell Ramad

Table 10 ***Tell Ramad***

Variables	**Results**	**Literature**
Total amount of skulls	Unknown	
Number of plastered skulls	27	Bonogofsky, 2006, p. 17; Croucher, 2012, p 104
With or without mandible	At least one with mandible	Bonogofsky, 2003, p. 8
Gender and age	First cache: • 2 adult females • 1 male (30-40 years) • 1 unidentified Second cache: • 3 adult females • 3 adult males • 9 juveniles Third cache: • 5 adult females • 2 adult males • 1 juvenile	Bonogofsky, 2006, pp. 17-18
Findspot	First cache: alongside wall Second cache: inside oval space Third cache: semisubterranean hut	Bonogofsky, 2006, pp. 17-18
Manner of burial (single or group)	3 caches (respectively 4, 15, and 8 skulls)	Bonogofsky, 2006, pp. 17-18
Headless burials	Unknown	
Additional features	Two skulls possess necks	Goren et al., 2001, p. 686; Bonogofsky, 2006, p. 18

: Overview variables at

During the excavations of 1965 and 1966 a total of 27 plastered skulls have been excavated at Tell Ramad in two stratigraphical layers of the PPNB (Bonogofsky, 2006, p. 17) (*table 10*). The heads have been cached together in three groups (Croucher, 2012, p. 104). It is suggested that the mandibles of all skulls had been removed prior to plastering (Fletcher et al., 2008, p. 313), however a CT scan showed that one of plastered heads still preserved teeth in the upper and lower jaw (Bonogofsky, 2003, p. 8).

The first cache contained 4 skulls and was discovered "along the stone foundation of a house wall in area N4NE" (Bonogofsky, 2006, p. 17). The specific age of the skulls is not clear, but two heads belonged to adult females, one to an adult male, and the remaining head could not be identified regarding gender and age. An additional obscurity concerns the context of the finds. It is uncertain whether the skulls were buried or deposited above ground (Bonogofsky, 2006, p. 17).

Inside an oval space a second cache bearing the crania of 15 people, who were divided by "plastered and painted clay balls" (Bonogofsky, 2006, p. 17). The skulls have been plastered covering their faces, but the top of their heads have been painted with red ochre. Inside the cache several human and animal bones were deposited with the skulls as well. These heads belonged to "three adult females, three adult males, and nine juveniles" (Bonogofsky, 2006, p. 18).

The third cache was found a year later in 1966 containing the remains of 8 heads.
The plastered skulls were excavated "in a low exterior recessed area of a semisubterranean hut" (Bonogofsky, 2006, p. 18). These belonged to "five adult females, two adult males, and one juvenile" (Bonogofsky, 2006, p. 18). On two females a neck was added made out of plaster and red paint (Goren et al., 2001, p. 686; *Figure 29: Plastered skull with added neck from Tell Ramad.*

Bonogofsky, 2006, p. 18) (*figure 29*). *Courtesy of Maier, 2017, p. 28*

§5.1.8 Tell Aswad

Table 11 ***Tell Aswad***

Variables	**Results**	**Literature**
Total amount of skulls	Unknown	
Number of plastered skulls	9	Stordeur, 2014, pp. 183-185; Stordeur, & Khawam, 2016, p. 59
With or without mandible	With	Stordeur, & Khawam, 2016, p. 59
Gender and age	Unknown	
Findspot	Cemetery	Stordeur, & Khawam, 2016, p. 59
Manner of burial (single or group)	2 groups: • 1) 5 plastered and 1 plain skull • 2) 4 plastered skulls	Stordeur, & Khawam, 2016, p. 60
Headless burials	Unknown	
Additional features	1 skull painted with yellow pigment	Stordeur, 2014, pp. 187-188; Stordeur, & Khawam, 2016, p. 60

At two cemeteries have been excavated at Tell Aswad, of which one predates the other. At the former, one group consisting of 4 plastered skulls have been buried at the time (*table 11*). At a later moment the skeletal remains of 6 other individuals were added to the grave. This group of skulls was arranged alongside a wall with the plain skull next to two plastered skulls on each side (Stordeur, 2003, p. 110).

The ‘new’ cemetery contained a grave preserving 5 plastered skulls, which surround the plain skull of a 6 year old child (*table 11*). At a later time the skeletal remains of a child

were buried on top of the skulls, causing damage to one of the plastered skulls (Stordeur, 2014, p.
183) (*figures 30 & 31*).

Figures 30 & 31: Plastered skulls including burial of a child (left); Plastered skulls surrounding plain child's skull (right). Courtesy of Stordeur, 2014, p. 183 (left) and p. 186 (right)

A communal element shared by these skulls is that all maintained their mandible and teeth. They were not removed before the application of plaster. Furthermore, the same area of the face was covered in plaster, namely: "from the eyebrows to the base of the chin" extending
"to the temples, plugging the occipital bone" (Stordeur, & Khawam, 2016, p. 59). After covering the face, the modelled ears and nose were attached to the skull. A thin cut was made to represent covered eyes. A slight change is visible in the application technique. In contrast to the separate addition of the nose and ears to the previous skulls, these features were immediately attached when the plaster was adhered creating one cohesive mask (Stordeur, & Khawam, 2016, p. 60). Furthermore, different types of plaster were applied randomly to the skulls, which were either clay, plaster, or lime. Next to plaster, red pigment was painted onto the skulls from the old and new cemetery (Stordeur, 2003, p. 112). Remarkable however, is that the plaster of one skull from the new cemetery was mixed with a yellow pigment (Stordeur, 2014, pp. 187-188; Stordeur, & Khawam, 2016, p. 60).

The realistic appearance and the anatomical details of the plastered skulls show amazing craftsmanship and knowledge that was applied by the craftsmen who made these faces (Stordeur, & Khawam, 2016, p. 60) (*figure 32*). Unfortunately, none of the skulls could be identified regarding gender and age.

Figure 32: cache of plastered skulls. Courtesy of Stordeur & Khawam, 2016, p. 59

§5.1.9 Abu Hureyra

Table 12 ***Abu Hureyra***

Variables	**Results**	**Literature**
Total amount of skulls	Unknown	
Number of plastered skulls	None	
With or without mandible	N/A	
Gender and age	N/A	
Findspot	N/A	
Manner of burial (single or group)	N/A	
Headless burials	Yes	Moore & Molleson, 2000, p. 278
Additional features	Several skeletons and skulls wrapped in matting	Molleson, et al., 1992, p. 231

People buried their dead in pits beneath floors of domestic buildings or in courtyards. Both individual and group

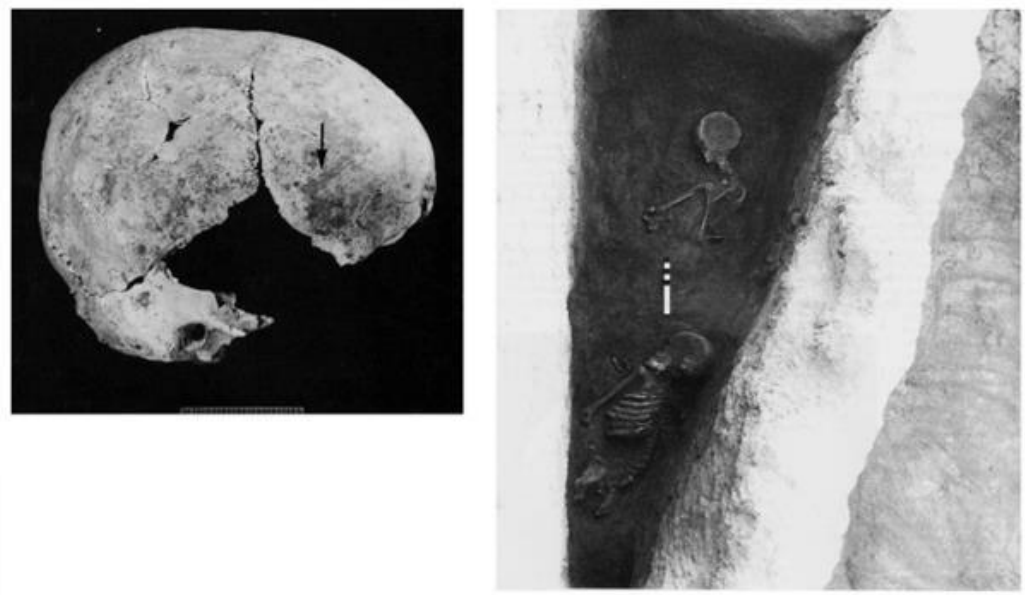
: Overview variables at

burials were used to inter the dead, which contained mostly incomplete skeletons, skulls with some bones, individual skulls, or headless bodies (Moore & Molleson, 2000, p. 278) (*figure 33*). No plastered skulls have been excavated at Abu Hureyra (*table 12*). Moreover, headless burials are included in the mortuary record as well as skeletons with skulls belonging to someone else. For example, one large group burial preserved 3 skeletons and some 15 skulls (Moore, 1973, p. 22;

Figure 33: Group burial including separated skulls. Courtesy of Moore, 2016, p. 33

Molleson, et al., 1992, p. 231). Upon interment some bodies and skulls were covered in matting and some others were painted with a mixture of mercury and sulfur. So did one juvenile skull (nr. 73.27772), which was discovered in Trench A. Several parts of the skull were painted among which the whole frontal bone and the right parietal area (*figure 34*). The mandible was left plain. Noteworthy is that this skull was not taken away from its body and buried somewhere else, but placed together inside the grave with another adult body (*figure 35*). Absence of cut marks indicates that people have waited to apply the paint to the skull after the decomposition

process. After the pigment had been painted onto the skull, the juvenile was reburied (Molleson, et al., 1992, pp. 231-234).



Figures 34 & 35: Pigment applied to the frontal bone (arrow) of juvenile (left); juvenile and another skeleton buried (right). Courtesy of Molleson et al., 1992, pp. 230-231

Before the final burial, most bodies were likely laid to rest somewhere in the open air or in charnel houses to decompose (Moore, & Molleson, 2000, p. 290). One charnel room was discovered at the site, which was likely used as some kind of repository for deceased people.

It held the remains of numerous headless bodies and skulls belonging to at least 24 persons. The latter were severed after the decomposition process and subsequently deposited either individually or in groups. One skull (73.2400) "had been wrapped in matting coated with bitumen before it was deposited" (Moore & Molleson, 2000, p. 280) (*figure 36*). This seems to have been a common ritual at the site of which delayed burial and skull removal were integral elements (Moore & Molleson, 2000, p. 290).

: Overview variables at

Figure 36: Skull 73.2400. Courtesy of Moore & Molleson, 2000, p. 281

§5.1.10 Çayönü

Table 13 ***Çayönü***

Variables	**Results**	**Literature**
Total amount of skulls	Ca. 90	Hole, 2002, p. 200
Number of plastered skulls	None	
With or without mandible	N/A	
Gender and age	N/A	
Findspot	'Skull Building'	Hole, 2002, p. 200; Lichter, 2016, p. 74
Manner of burial (single or group)	Inside 'Skull Building'	Hole, 2002, p. 200; Lichter, p. 74
Headless burials	Unknown	
Additional features	Child with cranial modification	Altınışık et al., 2022, p. 8

Remains of about 400 humans and a number animals have been found collectively inside the 'Skull Building' (*figure 37*). This structure has known several phases of construction. During the first and oldest one, two pits were dug to deposit several intact human skeletons and human bones (Lichter,, 2016, p. 74). Inside these pits bones of aurochs were deposited too (Hole, 2002, p. 200). Three cellars were made during the following

phase which harbored human skeletal remains as well. To give an indication, the third cellar held one intact skeleton, several skulls, and long bones belonging to about 90 people (Lichter, 2016, p. 74) (*table 13*). An additional pit was dug to bury the bones and horns of aurochs (Hole, 2002, p. 200). The cover up of these cellars with stone slabs marks the beginning of the last phase during which human remains continued to be deposited inside the rooms of the building.
(Lichter, 2016, p. 74).

Figure 37: East side of Çayönü. On the lower right the Skull Building is encircled. Source: Çayönü.Tepesi (Facebook). https://www.facebook.com/photo/?fbid=1796332003738063&set=pb.100006 8263804043.-2207520000

dagger abandoned in one of the rooms. It is possible that inside this building head decapitation and defleshing activities were performed (Hole, 2002, pp. 200201). This is supported by the find of 49 skulls inside a room above the cellars, likely stored on a shelf. Most of them still contain their mandibles and cervical vertebrae and show traces of cuts indicating that the heads were severed off instead of removed after decomposition (Lichter, 2016, p. 74; Croucher, 2005, p. 616). No distinction was made regarding gender and age, since the remains belong to each roughly equally (Pearson et al., 2013, p. 182). Next to the Skull building, burials have also been uncovered underneath houses: 33 adults and children were interred in close proximity or beneath six PPNB houses. One these children showed evidence of cranial modification (Altınışık et al., 2022, pp. 2-8).

Inside the Skull Building traces of human and animal blood was found on a floor tile and on a flint

: Overview variables at

§5.1.11 Köşk Höyük

Table 14: Overview variables at Köşk Höyük

Variables	**Results**	**Literature**
Total amount of skulls	19	Özbek, 2009, p. 384
Number of plastered skulls	13	Özbek, 2009, p. 384
With or without mandible	With	Özbek, 2009, p. 384
Gender and age	4 young adult males 2 young adult females 1 middle aged female	Özbek, 2009, p. 381

	1 child 4 young adults (gender unknown) 1 middle aged adult (gender unknown)	
Findspot	On floor of domestic building	Özbek, 2009, pp. 379-383
Manner of burial (single or group)	Individual and group burials	Özbek, 2009, p. 384
Headless burials	Yes	Düring, 2022, p. 128
Additional features	Intact burials	Özbek, 2009, p. 384

The site of Köşk Höyük has provided archaeologists with several plastered skulls (*table 14; figure 38*). Özbek (2009) discusses 19 skulls found between the first, second and third Late Neolithic layers. Of these, 13 skulls were plastered and 6 remained unadorned.

Figure 38: Plastered skull (Kş 1987) from Köşk Höyük. Courtesy of Bonogofsky, 2006, p. 21

One group contained the heads of 5 adults placed in a row on the floor of a domestic building. The first and last skull in the line were plastered, while the ones in between did not receive any adornments (Özbek, 2009, p. 380). All heads were looking to the east, and were previously likely been wrapped or placed on mats, since the heads preserve traces of fiber material (Özbek, 2009, p. 380). The plastered heads belonged to 2 young adult males, while the unadorned skulls belonged to one adult male and female, and the last to an adult of unidentified gender (Özbek, 2009, p. 381).

Unfortunately, due to a new construction of a water reservoir the skulls were damaged in the process (Özbek, 2009, p. 380). Nevertheless, it

can be deduced that the top of the skulls and the back were left plain, while the rest of the heads was plastered and painted with red ochre. It is possible that this untreated area was once covered with a headdress, but has been lost over time, since no traces are visible (Düring, 2022, p. 128). A base was modelled to the bottom of the skulls allowing them to stand on their own. Noteworthy is that both still possess their mandibles (Özbek, 2009, p. 381).

Some specific details of the other 11 plastered skulls are left out, but Özbek (2009, p. 381) writes generally that these belonged to 2 young adult males, 2 young adult females, 1 middle aged female, 1 child, and 4 young adults whose gender remains unknown. All of them showed traces of red ochre next to the applied plaster, and traces of fiber indicating that they were wrapped inside mats. Upon burial they were positioned looking towards the east. Noteworthy is that these skulls were likely "exposed rather than buried either separately or in groups on plaster surfaces in the building situated on the northeast part of the settlement" (Özbek, 2009, p. 384).

Several headless skeletons and intact burials have been excavated at the site of Köşk Höyük. The body of a young boy, who died around the age of 15 or 16, was located beneath the floor of a domestic building. Noteworthy is that next to his cranium, the mandible was missing from his grave. Two years later, in 2007, the skeleton of an adult female between the age of 50-55 was also found beneath the floor a domestic building (Özbek, 2009, pp. 379, 384). As for the intact burials, two have been discussed by Özbek (2009, p. 384) and were discovered at the site so far buried beneath the floor of a house. Note the contrast regarding the 'burial' between the (plastered) skulls and intact and headless burials. The former have been found lying on plastered floors, while the headless and intact burials are located underneath the floors of domestic buildings (Özbek, 2009, p. 384).

§5.1.12 Çatalhöyük

Table 15: Overview variables at Çatalhöyük

Variables	**Results**	**Literature**
Total amount of skulls	At least 60	Haddow, & Knüsel, 2017, p. 60
Number of plastered skulls	1	Bonogofsky, 2006, p. 22; Croucher, 2017, p. 204

With or without mandible	With	Haddow, 2012
Gender and age	Adult female	Bonogofsky, 2006, p. 22
Findspot	Beneath plastered floor of domestic building	Bonogofsky, 2006, p. 22
Manner of burial (single or group)	Together with other intact skeleton	Bonogofsky, 2006, p. 22; Croucher, 2017, p. 204
Headless burials	Yes	Haddow, & Knüsel, 2017, p. 60
Additional features	11 painted skulls	Molleson, 1992, p. 235

During the excavations of 2004 one plastered skull was excavated from underneath a plastered floor in a corner of building 42 (*table 15*). The head of this adult female was buried together with an older female, "who held the face of the skull against her chest" (Bonogofsky, 2006, p. 22) (*figure 39*). In addition, the plain cranium of an infant was placed on top of this burial. Looking closely at the plastered skull, it shows several layers of plaster, which has been painted with cinnabar (Croucher, 2017, p. 204). It is possible that a second head was plastered, because a mandible buried in a pit inside a building was excavated and it possessed some evidence of plaster and red paint. The lower jaw belonged to an elderly female, but the rest of the head remains hidden or lost (Haddow, & Knüsel, 2017, p. 55) (*figure 40*).

Figure 39: burial plastered skull embraced by elderly female. Illustration by Kathryn Killackey. Cited in Haddow & Knüsel, 2017, p. 55

From several burial contexts plain skulls, crania, and headless skeletons came to light during several excavational seasons. 16 and 43 crania have been uncovered from respectively secondary and tertiary contexts. The secondary burials include 6 whole skulls belonging to 4 adults, of which one is likely female, 3 males, and 2 children between the age of 3 and 12. In addition, 10 crania were found in secondary contexts belonging to 7 adults (likely 2 females, 1 male, and the rest remain undetermined), 2 children, and 1 neonate. Most heads were placed inside primary burials (Haddow, & Knüsel, 2017, p. 61). In contrast, the tertiary contexts include deposits in "middens", intramural-burials, and "post-abandonment building infill" (Haddow, & Knüsel, 2017, 62). At least 43 cranial remains were uncovered in these deposits, of which 81% belonged to adults. Because these remains are fragmented (i.e., parts of the vault and/or mandible) it is difficult to determine age and gender (Haddow, & Knüsel, 2017, p. 62).

Figure 40: Isolated mandible with traces of plaster and pigment. Courtesy of Haddow & Knüsel, 2017, p. 55

The number of headless burials stands currently at 15, of which 3 retained their mandible inside the grave (*figure 41*), but the complete skull of the other 12 was removed. The latter group included "4 young adults (20-30 years of age at death: 3 male and 1 female), 6 mature adults (30-50 years of age at death: 4 male and 2 female), as well as 1 adolescent (12-20 years of age at death) and 1 child (3-12 years of age at death), each of indeterminate sex" (Haddow, & Knüsel, 2017, p. 60). The 3 headless burials of which the mandibles were still present in the grave belonged to "2 old adult females (50+ years of age at death) and 1 adolescent" (Haddow, & Knüsel, 2017, p. 60). All except one were buried beneath the floor of a domestic building. Given that 485 stratified individuals were discovered buried at the site, skull removal and

Figure 41: Headless burial. Courtesy of

skull manipulation in particular were exceptional (Haddow, & Knüsel, 2017, p. 60).

§5.2 Variables

In the previous section, the archaeological data was structured according to site. Here, data is presented from all sites collectively and sorted per variable (i.e., gender, age, manner of burial, findspot, headless and intact burials, skulls or cranium, and other manipulations applied to the skull). This way, potential similarities and/or differences will come to light. All variables are based on plastered skulls, except for 'headless and intact burials', and 'manipulations applied to the skull'.

§5.2.1 Gender and age

Table 16 and 17 gender and age respectively are presented for all sites. ***Table 16: Overview gender plastered skulls per site***

Site	Male	Female	Undetermined
Jericho (PPNB)	4	8	0
Yiftahel	0	0	3
Kfar Hahoresh	1	0	5
Beisamoun	0	1	3
'Ain Ghazal	5	0	3
Nahal Hemar	6	0	0
Tell Ramad	6	10	11
Tell Aswad	0	1	8
Abu Hureyra	0	0	0
Çayönü	0	0	0
Köşk Höyük	4	3	6
Çatalhöyük	0	1	0

As mentioned before, determining age and gender based on skulls, let alone, damaged ones is challenging. For example, Bonogofsky (2006, p. 16) could not determine the gender of three Jericho skulls, while Nigro (2017, p. 20) tentatively suggested these belonged to females. In addition, gender is difficult to ascertain when the skull belonged to a child

(Bonogofsky, 2006, p. 16). In this case, the skull is listed in the table as undetermined gender. Two other examples involve the skulls from Tell Aswad. Skull 741-CSI has been thought off to be female rather than male because of its slender face. Doubts surround skull 741-CS3, which has been designated either as a child or as an adult female (Stordeur, 2014, pp. 187188). The former skull I have designated as female in table 3, but the latter head I have labeled as undetermined, because no evidence supports either possibility. Taken all together, these examples present the difficulties that arise when determining gender and age. As a consequence, the data needs to be interpreted with caution.

At two sites, Abu Hureyra and Çayönü, no plastered skulls have been uncovered. It is possible that at Abu Hureyra plastered skulls were present, but due to the few possible rescue operations only a small portion of the site was excavated, while the rest remains lost to us now. Males and females are represented in the osteological record, but given the amount of unidentified skulls it cannot be suggested that plastering was solely reserved for males at ‘Ain Ghazal. For Tell Aswad, nothing can be said at all about male/female representation.

Table 17: Overview age plastered skulls per site

Site	**Adult**	**Child**	**Undetermined**
Jericho (PPNB)	5	7	0
Yiftahel	3	0	0
Kfar Hahoresh	1	0	5
Beisamoun	2	0	2
‘Ain Ghazal	5	2	1
Nahal Hemar	6	0	0
Tell Ramad	16	10	1
Tell Aswad	0	0	9
Abu Hureyra	0	0	0
Çayönü	0	0	0
Köşk Höyük	12	1	0
Çatalhöyük	0	1	0

Data regarding age contains some undetermined cases as well. Adults are better represented at Yiftahel, Nahal Hemar, Tell Ramad, and Köşk Höyük. A roughly equal

division is present at Jericho, and possibly ‘Ain Ghazal, depending if the unidentified skull belonged to a child. These undetermined cases together with the low numbers of plastered skulls make it challenging to say anything about age per site. Another difficulty concerned the assignment of some skulls to a ‘category’. These categories are for presenting a clearer overview, but these are subjective. For instance, the sample of Jericho was difficult to assign. 4 people died between the ages of 13-19. Some would assign the earlier years to ‘child’ while a person aged 19 would be considered a young adult. Since most of the ages in between this range are not considered mature, I have assigned them here to ‘child’.

§5.2.2 Manner of burial

Table 18 provides information regarding the amount of plastered skulls buried individually or in groups.

Table 18: Overview manner of burial plastered skulls per site. - = not present or unknown

Site	**Single**	**Group**
Jericho	-	3 groups: • 1) 7 plastered • 2) 2 plastered • 3) 3 plastered of which 1 also painted; 2 painted
Yiftahel	-	1 group (3 plastered)
Kfar Hahoresh	Likely 6 individual burials	-
Beisamoun	-	2 groups (2; 2. All plastered)
‘Ain Ghazal	2 individual burials	2 groups: • 1) 2 plain and 2 plastered • 2) 4 plastered
Nahal Hemar	Unknown	Unknown
Tell Ramad	-	3 groups (4; 15; 8. All plastered and painted)

Tell Aswad	-	2 groups: • 1) 5 plastered and 1 plain • 4 plastered
Abu Hureyra	-	-
Çayönü	Unknown	Yes
Köşk Höyük	Unknown	Yes, but only 1 group mentioned (2 plastered; 3 plain)
Çatalhöyük	1 (together with 1 intact skeleton)	-

Single burials seem to have been preferred at Kfar Hahoresh, but group burials are common for most other sites. Both types of interment were discovered at ‘Ain Ghazal, but group burials alone were executed at Jericho, Yiftahel, Beisamoun, Tell Ramad, and Tell Aswad. The remaining sites’ preference remains uncertain due to insufficient data. For example, at Çayönü it remains unclear whether the dead buried underneath the domestic buildings were interred together or separately. At Çatalhöyük only one plastered skull was found, and therefore, no suggestions can made about whether single or group burials were preferred regarding the manipulated skulls.

Some group burials held only plastered skulls, which was the case at Yiftahel and Beisamoun. But others contained plastered skulls in combination with others (i.e., plain or painted). At ‘Ain Ghazal, Tell Aswad, and Köşk Höyük, one group consisted of plastered as well as plain skulls. One group from Jericho did preserve both plastered and painted skulls.

§5.2.3 Findspot

For each site the context in which each plastered skull was found is presented in table 19.

Table 19: Overview findspot plastered skulls per site

Site	**Findspot**

Jericho	• In fill between two walls; • Deposited on floor of house covered by brick debris.
Yiftahel	• In pit near building.
Kfar Hahoresh	• Sealed beneath plastered floor of likely a funerary center.
Beisamoun	• Deposited on plastered surface in antechamber of building. Likely funerary center.
‘Ain Ghazal	• Beneath plastered or painted floor of house; • Buried in pit in courtyard; • On a floor inside house.
Nahal Hemar	• Inside cave (no mention of burial or exposure).
Tell Ramad	• In niche outside building. Likely on display; • Lying at the foot of a stone foundation. • Stored inside oval enclosure.
Tell Aswad	• Buried at cemetery.
Abu Hureyra	• N/A
Çayönü	• N/A
Köşk Höyük	• On plastered floor house; • Placed on mudbrick base.
Çatalhöyük	• Beneath plastered floor house.

The data shows both intra-mural as well as extra-mural graves for plastered skulls. The most common are interments in a courtyard or beneath the floor of a building. This structure could be a domestic building, but also a funerary center where other inhumations have been discovered too (Schmandt-Besserat, 2013, p. 226). There does not seem to stand out a particular way of disposing plastered skulls among sites. This is even applicable to several individual sites as well where multiple procedures existed. The archaeological record of Jericho, ‘Ain Ghazal, Tell Ramad, Çayönü, and Köşk Höyük show two or more ways to inter a plastered skull. However, it could be that in some instances, the lifecycle of the skull had not ended yet. The ones found inside a niche, for example, could have been still on display (Schmandt-Besserat, 2013, p. 226). Results for Abu Hureyra and Çayönü are not presented, because no plastered skulls have been found at either of these sites.

§5.2.4 Headless and intact burials

Table 20 provides an overview of the presence and number of headless and intact burials discovered at each site. Based on this data, information can be drawn about on the practice of skull retrieval and to what extent it was performed.

Table 20: Overview headless and intact burials per site

Site	**Headless**	**Intact**
Jericho	Yes (number unknown)	Unknown
Yiftahel	5	Yes (number unknown)
Kfar Hahoresh	15	Unknown
Beisamoun	2	Unknown
‘Ain Ghazal	Yes (number unknown)	Yes (number unknown)
Nahal Hemar	Unknown	Unknown
Tell Ramad	Unknown	Unknown
Tell Aswad	Unknown	Unknown
Abu Hureyra	Yes (number unknown)	Unknown
Çayönü	Unknown, but likely	Yes (at least 1)

Köşk Höyük	Yes (at least 2)	Yes (at least 2)
Çatalhöyük	Yes (number unknown)	Yes (at least 1)

Unfortunately, lots of data regarding headless and intact burials remains obscure or are not mentioned in the literature. This is applicable for Nahal Hemar, Tell Ramad, Tell Aswad, and
Çayönü. Evidence of headless burials was found at Jericho, ‘Ain Ghazal, Abu Hureyra, and Çatalhöyük, however, statistics are not given. In contrast, the total amount of headless burials found so far have been provided for Yiftahel, Kfar Hahoresh, and Beisamoun.

Intact burials are less accounted for in the literature, but this could potentially be due to the fact that intact burials were not part of the local tradition. Nevertheless, at 5 five sites the interment of complete bodies was documented, but only the minimum number of which scholars are certain about, are presented. Unfortunately, these statistics are too low to say something about the extent of its importance within the mortuary tradition of each site.

§5.2.5 Skull or cranium

At 4 sites skulls have been found which are plastered and still retained their mandible. Skull D112 is exceptional, because it is the only skull from Jericho of which the mandible has not been removed before the plastering process (Bonogofsky, 2006, pp. 16-17). In contrast, at
Tell Ramad, Tell Aswad, and Köşk Höyük all skulls kept their lower jaw (SchmandtBesserat, 2013, pp. 226-227).

§5.2.6 Other manipulations applied to skull

Table 21 provides an overview per site of some additional features found related to the (plastered) skulls. These include: manipulation (i.e. plain, painted, artificial modification), adornments, and the use of collagen instead of plaster.

Table 21: Overview other manipulations to skulls per site

Site	**Plain**	**Painted**	**Collagen**	**Artificial modification**	**Adornment**
Jericho	4	7	-	28	Cowrie and white shells ❼ eyes
Yiftahel	1	-	-	-	Shells ❼ eyes
Kfar Hahoresh	9	-	-	-	None

Beisamoun	-	1	-	-	None
‘Ain Ghazal	2	-	1	-	None
Nahal Hemar	-	-	6	-	• Headdress; • Net pattern on top of cranium.
Tell Ramad	-	27	-	-	Necks plastered
Tell Aswad	-	8	-	-	None
Abu Hureyra	-	At least 1	-	-	None
Çayönü	-	-	-	1	None
Köşk Höyük	6	13	-	-	None
Çatalhöyük	Yes (number unknown)	11	-	-	None

Several sites held the remains of painted and plain skulls, next to plastered skulls. In addition, some plastered heads were also painted (i.e., Jericho, Beisamoun, Tell Ramad, Tell Aswad, Köşk Höyük). Artificial skull modification in combination with the practice of plastering was limited to Jericho. The practices here seem related, but the number of skulls, whose heads were deformed outweigh the number of plastered skulls (28 vs. 12). This could either be due to chance associated with excavation or to the fact that these were two separate practices. One other skull, whose head was artificially deformed, comes from Çayönü, however, this one was not plastered.

Deductible from this dataset is that most of the plastered skulls did not receive any facial adornments. Only at Jericho and Yiftahel, shells were used to represent the eyes. For the remainder of the skulls facial features were modelled onto the head with plaster. One perishable decoration, which may have been applied is a headdress or wig. At Kfar Hahoresh, for example, the calvarium has been left untreated, which may indicate that wigs were once in attached to this area (Maier, 2017, p. 23). At the site of Nahal Hemar, however, evidence of headdresses are visible. A netlike pattern was drawn on top of the skulls. Another element that distinguishes Nahal Hemar is the application of collagen to top of the skull, while the face itself was left untreated. Though one skull (AG 84 3083 107) from ‘Ain Ghazal exhibited traces of collagen or bitumen (Bonogofsky, 2006, p. 20). The remainder of the sites nevertheless used plaster as the main substance.

Chapter 6: Discussion

This chapter is devoted to interpreting and discussing the results of the 12 sites analyzed in the previous chapter. The paragraphs are structured according to the variables chosen for this research: gender and age, manner of burial, findspot, headless and intact burials, skull or cranium, other manipulations applied to the skull. After discussing these points, interpretations concerning the plastering of skulls and skull retrieval are addressed. The chapter ends with a presentation of the limitations regarding this research and future implications.

§6.1 Variables

§6.1.1 Gender and age

At first, Kenyon thought that only elderly males received the special treatment of plastering (Bonogofsky, 2003, pp. 2-3). But after an extensive study by Bonogofsky (2004, p. 118) women and children are represented in the archaeological record as well (*figure 42*), which consequently refuted the theory of ancestor veneration. Based on table 16 and 17, there seems to be a fairly even distribution across all sites regarding gender. Geographically, there does not seem to be a correlation with type of gender or age. Sites located relatively near each other do not significantly correspond based on gender and age. Only at Nahal Hemar solely male plastered skulls were found. However, due to the challenges faced with determining gender and age, the numbers presented in table 16 and 17 must be interpreted with caution. In addition, the low number of plastered skulls are only a small sample of people who had lived and died at the settlement.

Figure 42: Crania D110-118 representing male, female, adult, and juvenile persons. Courtesy of Nigro, 2017, p. 19

The low number of discovered plastered skulls might be a fruitful statistic for scholars in favor of the status-theory to argue that selective people were assigned for plastering. Given the longevity of the settlements and the number of plastered skulls, little can be said about the potential role of status. For example, 27 plastered skulls were found at Tell Ramad, which was occupied for almost a thousand years (Van Zeist, & Bakker-Heeres, 1982, p. 173). It is not realistic to opt status or anything at all given the small sample size. What can be said is limited to the fact that men, women, and children were able to receive the plaster treatment. Some people might have been selected over others, since plain skulls have also been uncovered. From this can be deduced that these plain skulls as well as the plastered and painted ones were part of the practice of skull retrieval. Nevertheless, the small sample

together with the unidentified skulls limit the making of any speculations regarding the role of gender and age within local burial customs.

§6.1.2 Manner of burial

Plastered skulls were commonly buried in groups at all sites. The only exception seems to Kfar Hahoresh, where the plastered heads have been buried separately. Single burials existed next to group burials at Abu Hureyra, but group burials were only done at Jericho, Beisamoun, Tell Ramad, Tell Aswad (*table 18*). The distance between the latter three is relatively small, which might account for the similarities regarding the manner of burial of plastered skulls.

Considering the group burials more closely, at Yiftahel and Beisamoun only groups of plastered skulls were excavated. At Jericho, ‘Ain Ghazal, Tell Aswad, and Köşk Höyük multiple caches were discovered preserving plastered skulls, but at least one group contained plastered skulls in combination with other skulls. The one at Jericho contained additional painted skulls, while plain skulls were placed together with the plastered ones at the other three sites. From this can be deduced that multiple burial procedures were in order within sites. Another point of discussion is the number of plastered skulls buried together. It has been suggested by Kuijt (2000, pp. 152-154) that this was fixed at three skulls or “multiples of three” (Benz, 2012, p. 171). However, this idea is refuted, because group burials vary in number between 2 to 15 skulls interred together in the Levantine area and up to 5 in Anatolia (Bonogofsky, 2006, p. 24). Diversity even exists within some sites where multiple caches have been discovered. For example, at Jericho the groups are unevenly distributed containing 7, 2, and 5 skulls; groups at Tell Ramad consisted of 4, 15, and 8 skulls; groups at Tell Aswad included 4 and 5 skulls (*table 18*). Only at ‘Ain Ghazal, and Beisamoun the number of skulls are evenly distributed among the graves (each groups of 2 skulls). However, at both ‘Ain Ghazal and Tell Aswad the groups differ, indicating diversity within sites as well.

Geographically there does not seem to exist a correlation between the geographical distance between sites and similarities regarding the manner of burial. Diversity exists between sites that are relatively near each other and settlements further apart do show some analogies. The reason(s) for variations within sites remain unknown, but they indicate a range of rites part of the local mortuary customs.

§6.1.3 Findspot

Nahal Hemar is different compared to the other ones (except Kfar Hahoresh), because this place was solely used as a funerary center (Solazzo et al., 2016, pp. 1-2). There is no mentioning in academic literature about the context of the skulls, ore specifically, if they were buried or lying exposed inside the cave. It has been suggested that people from several settlements or communities made use of the cave or came together to perform ritual ceremonies (Borrell et al., 2020, p. 165). Among these ritual activities dismemberment and defleshment of the dead was likely part of these ritual activities, since knives and other tools were found inside the cave, which could have been used for these procedures (Borrell et al., 2020, p. 165). It resembles the Hayonim Cave (*figure 43*), where towards the end of the Natufian period the site changed from a settlement with graveyard to a sole grave site (BelferCohen, 1988, p. 297), and Kfar Hahoresh, which has likely specifically been used as a burial site (Horwitz & Goring-Morris, 2004, p. 166).

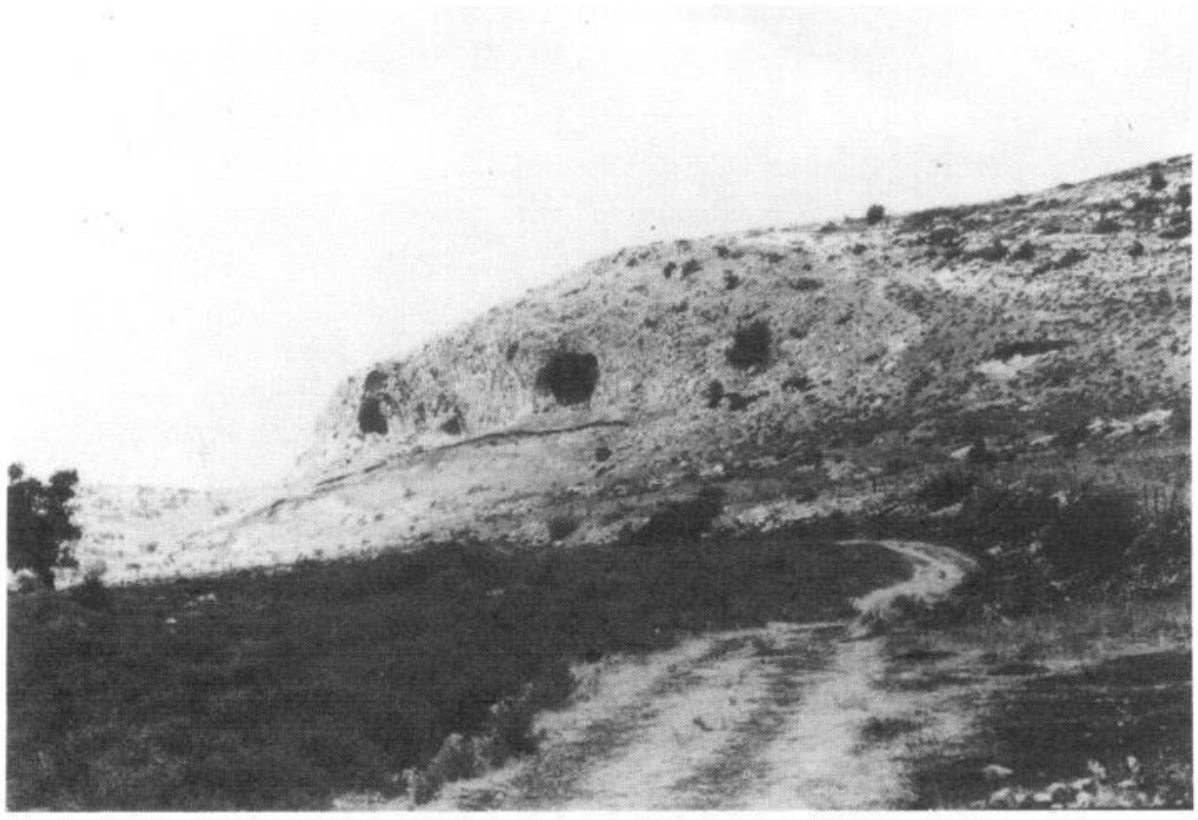


Figure 43: The Hayonim cave. Courtesy of Goldberg, 1979, p. 169

The remaining plastered skulls discovered at the other settlements were found intra-mural or extra-mural. At Tell Aswad two cemeteries existed where the plastered skulls were buried (Stordeur, 2014, p. 180). But the most common location was inside pits dug beneath

the (plastered) floor of a domestic building (*table 19*). However, there does not exist a geographical correlation, and moreover, several sites contain multiple interment possibilities. As a result, comparisons and speculations are difficult to make.

Apart from houses, non-residential buildings were used to inter the plastered skulls. At Çayönü, for example, skulls and bodily remains were buried inside the Skull building, used for funerary activities (Hole, 2002, pp. 200-201). Similarly, at Kfar Hahoresh and Beisamoun the plastered skulls were likely buried underneath a building which has been proposed to be a funerary center (Schmandt-Besserat, 2013, p. 226). Geographically, these sites are located relatively close, which could account for the possession of funerary centra. This argument might be strengthened if at Yiftahel (located in between Beisamoun and Kfar Hahoresh) the building where the caches were found is also a funerary center. So far, doubts exist about the original function of the structure, however, given the findings and the large size of the building it has been suggested that this was once a communal building (Khalaily et al., 2013, p. 228).

§6.1.4 Headless and intact burials

Next to skulls, headless burials were included in this research to analyse the presence of skull removal. No information is given about the situation at Nahal Hemar, Tell Ramad, and Tell Aswad in academic literature. Headless skeletons were found at the other sites though, which indicates that skull retrieval was part of the mortuary customs of these settlements. Given the low number, except for Kfar Hahoresh, no suggestions can be put forward about the extent of its role within each local funerary tradition. The fact that intact burials were discovered as well would be an argument against skull retrieval as the only procedure. But this would be a fairly weak argumentation, because ‘at least 1 or 2’ can be said for certain to have been excavated. In general this type of burial is less accounted for in the literature. One can argue that this is due to chance or that this person was forgotten about, and therefore, his/ her head not retrieved.

§6.1.5 Skull or cranium

It was common for most sites to remove the mandible upon retrieval of the skull. Yet at 3 sites the complete skull was removed and subsequently plastered. These sites include: Tell Ramad, Tell Aswad, and Köşk Höyük (Schmandt-Besserat, 2013, pp. 226-227). The former two are located geographically a relatively small distance apart, which could account for this similar procedure (Kuijt, 2008, p. 182). Köşk Höyük on the other hand, is located at a

significant distance in time and space from Tell Ramad and Tell Aswad, and might, therefore, have evolved separately (Düring, 2022, p. 129). An exception to the rule seems to come from Jericho, where all, but one skull, had their lower jaw removed (Bonogofsky, 2006, pp. 16-17). A potential reason might relate to craftsmanship. It has been suggested that multiple craftsmen were busy creating these plastered faces, who might not have lived at the same time, which could account for this slight variation (Grissom, & Griffin, 2013, pp. 196-197). The latter argument does not seem plausible, since D112 was cached together with 6 other plastered crania. If they were buried together or soon after each other, you would expect the same craftsman still actively involved or maybe his apprentice to have learned the same knowledge. It could be a coincidence, a mistake from one of the craftsmen, or difficulties were present during the retrieval of the cranium. The latter does not seem likely, since the mandible is easily removed from the cranium once it is fully decomposed.

§6.1.6 Other manipulations applied to the skull

In several instances some skulls were left plain, but on other occasions manipulations were done to some skulls. These include: paint, collagen, artificial modification, and/ or adornments.

At several sites skulls were painted. Of some skulls at Tell Ramad the top of their heads red ochre was applied including the necks (Bonogofsky, 2005, p. 14). At Tell Aswad the plastered face was covered in red paint as well (Stordeur, 2003, p. 112). At some sites, plastered skulls were additionally painted, or preserved only painted skulls, and/ or plain skulls. This combination was present at Jericho, indicating that within a site itself multiple traditions existed (e.g. 1 plastered & painted skull; 2 painted skulls) (Nigro, 2017, p. 20). The location of the paint also differs, while sometimes only parts of the skull or plaster were painted, the whole plastered area of other skulls was covered (e.g. Çatalhöyük). Next to the location of the plaster, the colour of the paint differed as well. Red, white, black, and yellow pigment have been discovered at the sites, but the latter two are rarely used (Bonogofsky, 2005, p. 16; Stordeur, 2014, p. 189). At Tell Aswad for example, yellow ochre was mixed with the plaster itself with regard to one skull. Yet the other skulls were treated with red ochre. Difficulties arise when motives are sought for these differences in application, location, and use of colour. Various cultural values are attached to each colour and among cultures these meanings vary, which result in conflicting explanations (Stordeur, 2014, p. 189).

One noteworthy point concerns the paint found on the skulls from Abu Hureyra and Kfar

Hahoresh. This red paint or cinnabar was imported from Anatolia, and available in Transcaucasus and western Anatolia (Goren et al., 2001, p. 685). A few skulls from Catalhöyük do display traces of the same substance as well (Akkermans, & Schwarz, 2003, p. 92). A connection might exist between these three sites. This could be the result of trade where ideas were shared about possibly burial practices among other things. Another suggestion relates only to Abu Hureyra, which proposes that people from Abu Hureyra travelled north and settled in Anatolia, bringing their ideas and customs along (Molleson et al., 1992, p. 235). One thing to keep in mind is the long distance between the sites. They used the same source, but the procedure possibly developed independently of each other.

Artificial skull modification in combination with the practice of plastering was limited to Jericho (*figure 22*). The practices here seem related, but the number of deformed skulls outweigh the number of plastered skulls (28 vs. 12). This could either be due to chance resulting from excavation or that these were likely two separate practices.

Figure 22: Plastered and artificially modified cranium (D111). Courtesy of Croucher, 2012, p. 97

Adornments were also limited to Jericho and Yiftahel. Most of the plastered skulls did not receive any facial adornments. Only at Jericho and Yiftahel, shells were used to mimic the eyes (*figure 22*). For the remainder of the skulls everything was modelled with plaster. One perishable decoration, which may have been applied is a headdress or wig. The material itself is not visible anymore, but the top part of the skull has been left untreated, which may indicate that wigs were used. At the site of Nahal Hemar, however, evidence of a headdress is visible or at least an imitation of one. The top of the skulls contains a netlike pattern which appears as a painted headdress. Another element that distinguishes Nahal Hemar from the other settlements under discussion is the application of collagen to top of the skull, while the

face itself was left untreated. Also, one skull (AG 84 3083 107) of ‘Ain Ghazal exhibited traces of collagen or bitumen was present (Bonogofsky, 2006, p. 20). Plaster remained however the main substance used at the other sites. The combination of collagen and plain faces suggests at a different custom compared to the other sites.

Uniquely at Tell Ramad is the addition of plastered necks on at least two of the skulls. The function of the neck might have been used as a base for display, but several scholars have proposed that the necks were created for the skulls to be able to stand on a “plaster sculpted torsos” “intended as life-like portrayals of the deceased (Goren et al., 2001, p. 686). However, this idea has been judged as an unlikely event, since the removal of the mandible would not appear to be a convincing realistic version of the deceased (Goren et al., 2001, p. 686).

§6.2 Skull plastering and skull removal

§6.2.1 Skull plastering

Based on the aforementioned data discussed per variable, it seems that the term ‘skull cult’ is an inappropriate term to use for several reasons. The lack or the insufficient amount of data is not enough to make speculations, which applies in this case to gender and age for some sites. Furthermore, there is no consensus with regard to mortuary customs between the settlements. Upon retrieval, mostly the crania were taken out of the grave, while at Tell Ramad, Tell Aswad, Köşk Höyük, and one instance at Jericho, the whole skull was dug up. Once the skulls or crania were retrieved and ready for plaster, the areas receiving the plaster treatment differed. “At ‘Ain Ghazal, Jericho, and Köşk Höyük it was restricted to the visage. At Beisamoun and Tell Aswad it extended on the top and side of the cranium while the whole head was treated at Kfar Hahoresh and even the neck at Tell Ramad” (Schmandt-Besserat, 2013, p. 229). The type of plaster applied could be “lime, gypsum, or mud” (Croucher, 2012, p. 95). The plastered skulls were buried varying from single burials to caches “in different places such as in caves and on terraces, open sites, inside residential buildings or nonresidential/ritual buildings, and in outdoors cemeteries” (Jammo, 2022, p. 95). The orientation of the skull also differed with some facing west, east or north (Schmandt-Besserat, 2013, p.
228).

Given this much variety between the Levantine and Anatolian sites regarding the procedure of plastering itself, the data does not favour a general cult, but local traditions.

This is strengthened when the application of other skull decorations is added into the mix. For example, the use of paint to create a netlike pattern at Nahal Hemar or the application of shells to mimic eyes at Jericho and Yiftahel is restricted to these sites. Furthermore, looking from a geographical perspective there does not seem to be a correlation between each discussed settlement, except for a few. A potential relation could have existed between Abu Hureyra and Anatolia, based on the use of cinnabar, which has been explained previously. Other than that, no similarities between the sites are visible from the archaeological material that has been obtained to this day. Due to the diversity in mortuary customs the theories that have been proposed in association with the skull cult's function are inappropriate. Each procedure within each site was performed with a particular motive or drive in mind. Therefore, not one, but multiple functions were likely in place at the time, and maybe even within one site. For instance, at Jericho, 'Ain Ghazal, Tell Ramad, Abu Hureyra, Çayönü, and Köşk Höyük the skulls were deposited in two or three ways (*table 19*).

§6.2.2 Skull removal

The act of skull removal might have originated from the Natufian period onwards. A cluster of Natufian sites located west of the Sea of Galilee preserved evidence of skull retrieval. These include: Nahal Oren, Eynan, Hilazon Tachtit, El Wad, Hayonim cave and the Raqefet cave (Belfer-Cohen, 1988, p. 305; Weinstein-Evron et al., 2007, p. 118; Bocquentin et al., 2016, 40). It might have been a local tradition for this region, which had spread over time to other areas of the Levant and perhaps even into Anatolia as well (Bocquentin, 2007, p. 76). However, there is also a chance that skull retrieval evolved independently in Anatolia, since a significant distance in time and space exists between these Late Natufian Levantine and Ceramic Anatolian sites (Düring, 2022, p. 129). However, it is suggested that the long duration from the Natufian until the PPNB in the Levant in combination with "the large regional distribution of the burials" that the settlements under discussion all contained some knowledge about this practice (Benz, 2012, p. 172). But at each settlement people put their individual stamp on it. In other words "the religious or ideological concepts underlying, and the rituals relating to, skull burial differed widely from region to region" (Benz, 2012, p. 172).

§6.3 Limitations and implications future research

Several limitations came to the surface during the conduction of this research. The first one is concerned with the focus of this paper, namely plastered skulls. Yet the act of

plastering was likely one step within a complex tradition of local burial rites. This can only be examined once the skulls are placed in a wider context, which should be considered in future research. This framework includes: the location of burial, and findings inside the burial next to the skull (e.g. human remains, faunal remains, statues, figurines, artefacts etc.). These aspects vary across sites. Some skulls were buried and later accompanied by primary burials. Others received lavish grave goods, which were placed next to the skull inside the grave. Some skulls were associated with children graves (Benz, 2012, p. 172).

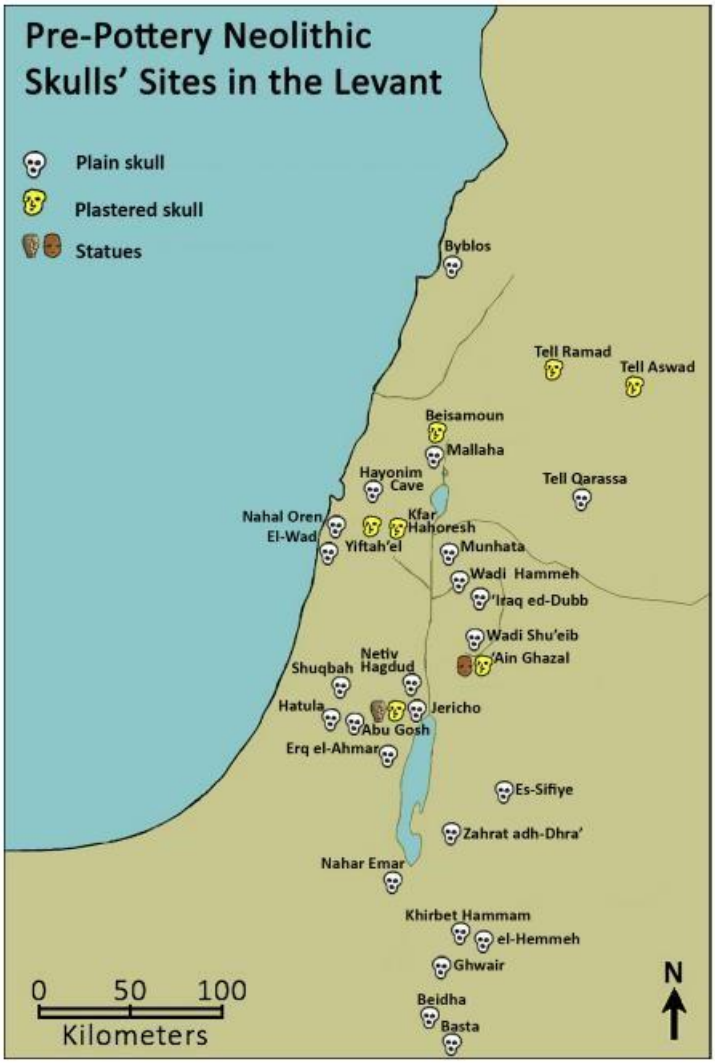


Figure 4skulls, or plastered statues. Courtesy of Nigro, 2017, p. 44: Map of PPN Levantine sites with evidence of plain, plastered

A second limitation and future consideration concern the limited sample size chosen for this paper. Based on previous research and the limited scope of this paper, 12 settlements were selected. However, other archaeological sites exist where skull retrieval and/ or skull manipulation have been uncovered. Figure 44 shows several sites which are promising in light of skull removal. Several of those are the following: at Tell Qarassa in southeast Syria, evidence of skull retrieval was excavated including skull caches (Tsuneki & Kanjou, 2016, p. 38); some 25 km north of Aleppo, tell Qaramel preserved headless burials and separated skulls inside a large building (Tsuneki & Kanjou, 2016, p. 45); at the southern Levantine site of Es-Sifiya skull caching was performed (Kuijt, 2002, p. 152); The 'House of the Dead' at the northern Levantine site of Dja'de al-Mughara, contained several human remains

including separated skulls (Akkermans & Schwarz, 2003, p. 94). Motza, located in the southern Levant showed evidence of skull retrieval, but not of plastering (Finlayson, 2021, p. 319). Nevali Çori located in southeast Turkey preserved the remains of long bones and crania (Lichter, 2016, p. 75). At Körtik Tepe in southeast Turkey 400 burials were excavated, of which two the skull was missing (Lichter, 2016, p. 75); inside the 'Death Pit' at Domuztepe 25 separated human skulls were recovered along with other human remains (Verhoeven, 2002, p. 7). 3 skulls were excavated at Göbekli tepe with intentional decorative carved incisions into the skull. Gresky et al. (2017, p. 1) have proposed that this is a 'new variation' to the skull cult, but it is likely a locally evolved custom. The southern Levantine site of Abu Suwwan is promising to analyze in light of skull plastering: at least 8 skulls have been brought up to the surface during the excavational season of 2016. Several of those show signs of plaster, however analysis is still ongoing and we have to await further results (Maier, 2017, p. 31).

A third limitation concerns the significant amount of incomplete data. This is not only due to preservation or chance of excavation, but to lack of detail or mentioning in academic literature. For example, few articles write briefly about headless burials, but specific numbers are left out. This limits the making of any propositions about the role of skull retrieval and its extent within local mortuary customs. Future excavations are needed to dig up more information, if these are possible and permitted to conduct. These might hopefully produce more findings related to skull removal and to plastered skulls including their role in local mortuary traditions.

Chapter 7: Conclusion

This research aimed to critically examine the use of the term ‘skull cult’ in academic literature. Manipulated skulls, and in particular, plastered skulls were found since the 1950s across the Levant and central Anatolia. Consequently, scholars were tempted to speak of a general cult, thereby overlooking local diversities. To tackle this issue, the following research question was raised: Is the ‘skull cult’ a valid term to be used to denote a general mortuary practice in PPNB Levant and (A)ceramic Anatolia or does too much diversity exist between sites?

12 sites were selected for analyzing their mortuary assemblage, with a focus on plastered skulls. By looking at several variables, this research has emphasized the existing local varieties of these settlements at the time. There may be four instances of shared traditions of closely located sites, but three of these are limited to two or three settlements. The first one being the use of funerary centers underneath which plastered skulls were buried. These installations were located at Kfar Hahoresh, Beisamoun and perhaps Yiftahel. Second, the use of cinnabar at Abu Hureyra and Kfar Hahoresh might indicate a trade network that extents into Anatolia. At Çatalhöyük traces of this substance were also present on the discovered skulls over there. Third, at the neighboring sites of Tell Ramad and Tell Aswad plastered skulls retained their mandibles. Fourth, group burials seems to have been the preferred method. However, at a few sites, single burial was also performed or even the preferred method at Kfar Hahoresh. Nevertheless, cautiousness is called for, because even though shared traditions were present, different beliefs might have been the drive forces for these procedures.

In most cases, however, there does not seem to be a significant correlation between geographical distance and the selected variables for this research regarding the plastered skulls. For instance, Jericho and Çatalhöyük both preserved painted skulls, but are located far apart in time and space. A few sites performed their own unique technique(s), for example, the addition of plastered necks at Tell Ramad or the painted headdresses at Nahal Hemar. Furthermore, multiple procedures were in place within sites themselves. For example, plastered skulls were found beneath a plastered floor of a domestic building and inside a pit in a courtyard at ‘Ain Ghazal. In addition to this, caches of skulls at Jericho, ‘Ain Ghazal, Tell Aswad, and Köşk Höyük contained plastered skulls, but also at least one group plastered skulls in combination with other skulls. Furthermore, variations also pertain to the type of

plaster used (i.e., gypsum, mud, lime plaster), the area of the skull plastered, and the orientation of the skull once it was reburied.

Given this much variety between the Levantine and Anatolian sites regarding the procedure of plastering itself, does not favour a general cult, but local traditions. The latter would be strengthened when the application of other decorations to the skulls is added into the mix. Unfortunately, gender, age, and intact burials did not provide sufficient data, and therefore, no speculations have been proposed. Headless burials did produce incomplete data as well, but the presence at most sites supports the act of skull retrieval practices at the site. I would not completely rule out the slight possibility of skull retrieval and potentially the application of plaster from originating from roughly the same area(s), since both have been found over a vast area. But over time local variations developed and people at these sites integrated these practices and attached their own unique symbolic meanings to them. Therefore, the proposal of a "uniform cultural tradition" (Stordeur, 2014, p. 177) for these diversities existing between and within sites is inappropriate. Less attention should be given to the 'skull cult' as a grand narrative, and a critical eye must adopted to recognize and acknowledge the diversities existing between Levantine sites and take into account "the archaeological and chronological facts and discrepancies" when the Anatolian sites are included as well (Düring, 2022, pp. 131-132).

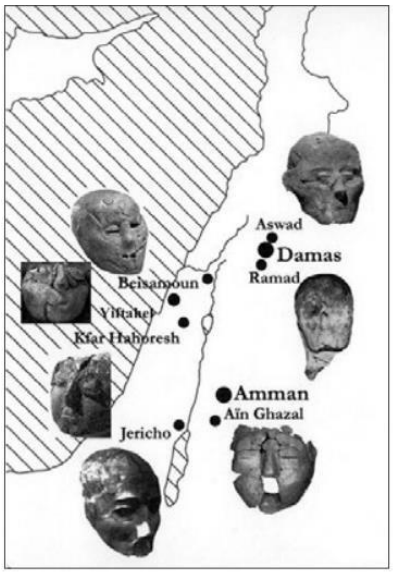


Figure 45: Distribution skulls southern Levant. Courtesy of Stordeur, 2014, p. 179

Figure 38: Plastered skull (Kş 1987) from Köşk Höyük. Courtesy of Bonogofsky, 2006, p. 21

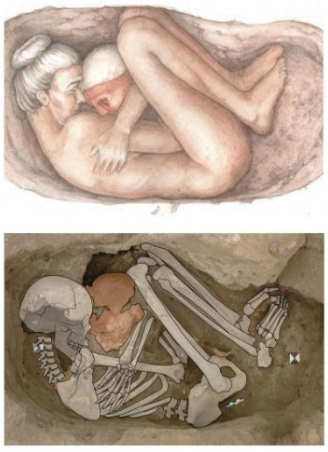


Figure 39: burial plastered skull embraced by elderly female. Illustration by Kathryn Killackey. Cited in Haddow & Knüsel, 2017, p. 55

Abstract

The aim of this paper is to critically examine the use and validity of the term ‘skull cult’ in academic literature. Since the discovery of the first plastered skull in 1953 by Kenyon, more plastered skulls have been dug up from sites across West-Asia. Due to temptation ideas were opted for a shared tradition, which resulted in a grand narrative called the ‘skull cult’. As a consequence detailed information was overlooked, and local variation ignored. Due to the limited scope of this paper, twelve sites were selected for analysis, including: Jericho, Yiftahel, Kfar Hahoresh, Beisamoun, ‘Ain Ghazal, Nahal Hemar, Tell Ramad, Tell Aswad (Southern Levant), Abu Hureyra, Çayönü, (Northern Levant/ South-east Anatolia), Köşk Höyük, and Çatalhöyük (South-central Anatolia). The sites were first examined individually to provide a clear overview of each settlement. They were structured according to several variables associated with plastered skulls and skull retrieval, which are the following: gender, age, individual and/or group burials, findspot, headless and/or intact burials, skulls or cranium, and other skull manipulations (i.e., plain, paint, artificial modification) and decorations applied to the skull. Next, the sites were compared to each other to find potential similarities and differences. Gender, age, and intact burials did not provide sufficient data, and therefore, no speculations have been proposed. Headless burials did produce incomplete data as well, but the presence at most sites supports the act of skull retrieval practices at the site. Overall, the data showed the existence of analogies between sites, but these are outweighed by local diversities. In addition, the significant distance in time and space with regard to a few sites does also contradict the idea of one shared mortuary practice. Skull retrieval might have originated from the late Natufian period onwards, but over time local variations evolved to which people from each site attached their own unique symbolic meanings.

Keywords: ‘skull cult’, plastered skulls/ crania, PPNB Levant,(A)ceramic Anatolia, Neolithic

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