# From Face to Face

# Dying and Not-Dying in the Aceramic Neolithic of the Levant

### CONSTANCE VON RÜDEN\*

To Susan, whose ability to ask benevolently critical questions and to respectfully encourage colleagues is a very rare gift.

### Introduction: heads and faces

Ritual, psychological, philosophical and ideological concepts that centre on the human head are well-known both in the past and today. For instance, the head was considered to be the location of the life force and a guarantor of fertility in the context of the head hunt of the Jivaro in Amazonia (Karsten 1935) and the Naga from India (Mills 1937, 161), and related to Galen von Pergamon's soul concept of the 2<sup>nd</sup> century CE (Santoro et al. 2008). Skulls have been used as intermediaries between this life and the afterlife in the Fontanelle cemetery of Naples (Pardo 1989, 115-19) and were measured to espouse racist and chauvinist concepts in the 19th and 20th centuries (Gould 1996). It is doubtless that many more examples can be added here.

In addition to these different cultural concepts, however, we can also make some more general observations concerning the human head and face. As humans, most of our sensual experiences reach us through the head and, more precisely, the face. For hearing, seeing and tasting, the face can be considered an important connection through which we perceive our environment and construct our personal experience of the world. Moreover, the face is of great importance for human cohabitation. Facial perception allows people from their earliest childhood to process, store and apply information about others (Ried

et al. 2017). Perhaps even more important is our ability to identify the emotions of other people in their faces. For the recognition of emotions, the face is a central source of information and is thus essential to understand how other people feel. Despite cultural (Lozada and Halberstadt 2015), gender-based and individual differences (Jang and Elfenbein 2015), emotional recognition enables us to anticipate both actions and statements. It helps us "to guide, build consensus, and lead others" (Krawszyk 2018, 283–84). Thus, human capabilities concerning faces are indispensable to social cooperation, particularly within densely settled spaces.

In this light, it is perhaps unsurprising that human interest in the face began to play a significant role in the ritual practices of the Levant during the Pre-Pottery Neolithic B (PPNB) (Ibáñez et al. 2010; Kuijt 2017), a period characterised by the formation of large settlements. Next to small head figurines and bone carvings, finds of modelled skulls are particularly striking. Not only were they removed from burials and circulated in the community, the flesh and skin were recreated through a skilful plastering process. It is difficult to escape the strong impact that these expressively modelled faces have on even the modern observer, and Danielle Stordeur and Rhima Khawam tellingly noted that these skulls display "une intimité qu'aucun autre type de figuration ne peut produire!" (2007, 6). The

<sup>\*</sup> Institute for Archaeological Studies, Pre- and Protohistory, Ruhr-Universität Bochum, Bochum (Germany)

roles of these faces in the social cooperation of Neolithic communities (Verhoeven 2002a, 2002b) and the intimacy of such face to face encounters with people whom we consider today as the deceased will be the focus of this paper. As such, it hopes to add some new perspectives and, perhaps, insights regarding these well-known and intensively debated plastered skulls (Fig. 1).



Fig. 1. Jericho Skull of a young female. Photo: Yosha Al Amri (courtesy of the Department of Antiquities in Jordan).

# Ancestors and trophy skulls

As the excavator of Jericho, Kathleen Kenyon was one of the first to be confronted with the modelled skulls of the aceramic Neolithic. She provided us with two rather conflicting interpretations: the skulls as trophies and as ancestors (Kenyon and Tushingham 1953, 870; Kenyon 1953, 86–87; Kenyon 1957, 84). Both interpretations are clearly inspired by the anthropological record, the latter in particular emerging from analogy with the well-known modelled ancestor skulls from New Guinea. Kenyon herself did not develop this idea much further. However, it was picked up by Jacques Cauvin in the 1970s (1974; 1994, 152–54) and by many others in the 1990s in attempts to

explain the meaning of comparable skulls from other PPNB sites.

However, the ancestor hypothesis suffered a setback as it became apparent that the modelled skulls are not restricted to older men, as the prime examples of ancestors, but included younger persons of both sexes and even children (Bonogofski 2004). Today, objections against the potential roles of women as ancestors are less dominant and, therefore, such a role is acceptable in our archaeological narratives. It is still very unusual to ascribe it to children, however, especially if we infer that status was not inherited during the aceramic Neolithic (Benz et al. 2019). In traditional descriptions of ancestor cults (Hardacre 1987), it has typically been assumed that the venerated ancestors had a particular status or role during their lifetime, a rather improbable scenario for children due to their few years of life. This induced Karina Croucher (2012) to propose a more general ancestor concept which includes all of the deceased relatives and thus somehow dilutes the idea.

In contrast, Ian Kuijt (2008, 171) takes James Whitley's (2002, 125) critique of a too "airy" use of the term ancestor veneration by archaeologists as an occasion to portray a more abstract narrative of intergenerational memory through the circulation of the skulls. Likely inspired by Maurice Halbwachs, the skulls serve here as a memorial anchor to stabilise the identity of the community and integrate the past, present and future (Kuijt 2008, 172). This interpretation addresses key cornerstones of the ancestor cult and thus pursues a very similar direction. The interpretation of these skulls as a means of memory or a reflection of ancestor veneration can be surely considered a well justified approach to the material. It tends towards overshadowing almost everything else related to the topic, however, and it would perhaps be useful to exclude it in order to permit engagement with other perspectives on the skulls and modelled faces.

# Neolithization and its demographic and social impact

The transition from foraging to farming and animal husbandry in the Levant lasted for more than 2500 years, between the 10<sup>th</sup> and the end of the 8<sup>th</sup> millennia BCE. This not only led to a fundamental change in the human subsistence economy, but to far-ranging social, ritual and demographic transformations (Benz and Bauer 2013; Gebel 2010; Goring-Morris 2000; Hershkovitz and Gopher 1990; 2008). Moreover, it led to the emergence of large settlement agglomerations of unprecedented population densities, culminating in the so-called megasites of the late PPNB (Rollefson 2004; for a recent discussion see Tsuneki 2012), such as 'Ain Ghazal (Rollefson 1987; Rollefson and Simmons 1988), Basta (Gebel et al. 1988), Wadi Shu'eib (Zeuner 1957), and Beisamoun (Lechevallier 1978) in the southern Levant, and Tell Abu Hureyra (Moore et al. 2000), Tell Halula (Molist 1996) and Tell el-Kerkh (Tsuneki 2012) in the northern Levant.

These unprecedent population densities inevitably changed how people cohabited in these communities. It is likely to have involved significant transformations in the ways that people communicated, made decisions and maintained social cohesion (Santana et al. 2012). Further indications for this hypothesis are apparent in a study by Richard Dunbar (1992) that highlighted that while humans are able to recognise 1500 people, they are only able to have meaningful contacts with ca. 150 persons in a face to face society. These restrictions must be considered when discussing the immense increase of populations in these settlements, well beyond 150 individuals. It is likely that additional measures to stabilise control and faith in communities and to ideologically integrate people became increasingly important. Rituals and their associated emotional arousal or collective effervescence were predestined as a medium for identity building, the enforcement of group cohesion

(Durkheim 1995 [1912]; cf. for the early Neolithic Benz 2010) and the development of a collective memory (Halbwachs 1950 [1939]). The elaboration of burial practises, with their focus on the heads of selected deceased persons during the PPNA and PPNB, is thus surely associated with these profound changes. The integration of the community (Kuijt 2000) and the construction of collaborative confidence must also have played roles as processes of negotiation and the establishment of loyalties.

# Funeral practices and some aspects of secondary burials

The variability of burial practices in the aceramic Neolithic of the southern Levant is well-attested (Kuijt 1996; Goring-Morris 2000; Fletcher et al. 2008, 311). Yet, there is a tendency for women, men and children to have been individually or collectively buried directly below residential areas (cf. Benz et al. 2019; Perschke 2013, 99, tab. 1, 96-104), with the exception of the funerary areas at the margins of sites such as Tell Aswad (Stordeur and Khawam 2007, 7–9) or Yiftahel (Milevski et al. 2008, Fig. 3). Further, it can be stated that corpses were predominantly deposited in a contracted lateral position and accompanied by few grave goods. In addition to this, 'Ain Ghazal provides us with interesting evidence that the location of the deceased's head was marked with red on the white lime floor (Kuijt 2001; 2008, Fig. 3). This evidently served as a marker for where to reopen the burial to remove the skull after the flesh had decayed. Burials with headless remains of the primary individuals are for instance known at Jericho (Kenyon 1957, 72; Strouhal 1973, 231), Beidha, Beisamoun and Abu Gosh (Lechevallier 1978, 35-40, supporting this interpretation 147-52), (Goring-Morris and Horwitz 2007; Kuijt 2008; Milevski et al. 2008, 39, Fig. 5; Perschke 2013, 99, Tab. 1). The skull, or in most cases the cranium without the mandible, then circulated for some time in the living community before being individually or

collectively deposited in secondary burials. Some of the skulls were treated exceptionally and were covered with plaster to recreate facial features (cf. Kenyon 1957 for Jericho). Altogether, the extraordinary effort that people invested in the removal, treatment and reburial of these examples indicates that the head and faces played a crucial role in the accompanying rites and their conceptual significance.

These secondary burials are a particular kind of funerary practice. They can be generally defined as a socially approved movement or removal of individual bones or the skeleton as a whole. In cultural anthropology, the best investigated examples of these practices surely belong to the Dayak of Borneo. While they do not serve as a direct analogy to our Neolithic examples, their practice does provide some insights into an otherwise unfamiliar burial custom. The Dayak traditionally exhume the whole skeleton of the deceased after some years when the corpse is largely decayed. A priest washes and ritually purifies the bones before the second and final burial, called "tiwah", is celebrated as a collective ritual of the village community. Early meta-studies by Robert Hertz (1907) and Arnold van Gennep (1909), as well as later research by Maurice Bloch on Madagascar (1982), promoted the idea that the decaying process is often associated with ideas regarding the transition of a kind of "soul" to an afterworld. Before this transition, during the primary burial, the person would be still situated in an in-between world.1

Another aspect which is of the greatest interest to us is the fact that the secondary burial is frequently very elaborate in comparison to the spontaneously organised, often very modest primary burial. This is, of course, related to the fact that the secondary burial can be planned over a longer period. Particularly busy periods of the year such as the harvest time can be avoided, and the necessary capital accumulated (Hertz 1907; Metcalf and Huntington 1991). These extremely costly rituals typically involve the community beyond direct kinfolk and across several generations (cf. Downs 1956; Hertz 1907; Hudson 1966; Metcalf and Huntington 1991). For instance, examples of secondary burials are known that lasted for 38 days, involved 23 families and led to the reburial of 35 people (Weiss-Krejci 2011, 74, fig. 4.2; Kuhnt-Saptodewo and Rietz 2004). With its highly emotional character, such a communal ritual certainly promotes the integration of the village community and are thus particularly suitable for such a role.

# The re-emergence of the faces

The practice of removing selected skulls from burials had already emerged during the late Natufian (Belfer-Cohen 1988). However, it is only during the middle PPNB that an actual routine can be observed alongside the elaborate modification of individual skulls with plaster (e.g., Goring-Morris 2005; Stordeur and Khawam. 2007; Kuijt 2008; Cauvin 2000, 36, 81). These modelled skulls have almost exclusively been recovered in the southern Levant (Perschke 2013, 96), and regionally

<sup>1</sup> It is nonetheless common, however, that decay has simply not been completed and the bones have to be cleaned from the remaining flesh (Leicht 2011a, 154). More outstanding is perhaps an example in New Ireland, where the skull was exhumed after just two months (Leicht 2011b, 159). Here, complete decay could not have occurred because the time was simply too short. However, the time might have been long enough for the skull to be detached from the rest of the body.

<sup>2</sup> The practice seems to revive in later periods in central Anatolia, with examples from Çatalhöyük and Kösk Höyük (Fletcher et al. 2008, 312).

Reena Perschke recorded 23 sites with 600 non-modified and more than 80 modified skulls from the Natufian until the pottery Neolithic (2013, 96).

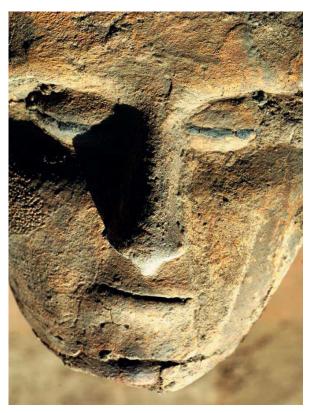


Fig. 2. Face of a Tell Aswad modelled skull. Courtesy of Danielle Stordeur and Rima Khawam; published in Stordeur and Khawam 2007, Fig. 7-2.

correlate to the "PPNB Interaction Sphere" as defined by Bar-Yosef and Belfer-Cohen (1989, 61–68).

Modified skulls make up only 5% of burials and the criteria for the selection of individuals remains ambiguous. All age groups, from children to adults, are represented apart from mature and senile individuals (Bonogofsky 2004). The lack of the latter likely owes more to life expectancy than intentional selection criteria as half of the population did not pass 20 years old (Perschke 2013, 105). The morphology of the skull similarly seems to have played no role in the choice of the individual. Rather, it was probably knowledge about in vivo skull modifications that led to

the selection of skulls D113, 110, 111 from Jericho (Fletcher et al. 2008, 315; Kurth and Röhrer-Ertl 1981, 438–39), even though they were not necessarily visible by naked eye (Fletcher et al. 2008, 318).

Twelve modified skulls were recovered from Jericho. They have thoroughly modelled faces,4 and further characteristics were probably depicted using colour (Fig. 1).<sup>5</sup> As a local peculiarity, the use of shells for the representation of eyes is known to Jericho and Yiftahel (Khalaily et al. 2008, 4-7). In general, the eyes are a prominent feature (Milevski et al. 2008, 40-44, Fig. 8), which is also reflect in the care that people exercised for the execution of the eyelash in Tell Aswad (Fig. 2; Stordeur and Khawam 2007, 10–11, 13). It is conspicuous that some faces were depicted with closed eyes, for example those from 'Ain Ghazal, Kfar HaHoresh (Goren and Segal 1995), Tell Aswad and one example with cowrie shells from Jericho, while others were depicted with open eyes, exemplified in the use of bivalve shells at Jericho (Simmons et al. 1990). At Beisamoun, faces were similarly depicted with either closed or open eyes (Griffin et al. 1998). The reasons for particular choices remain open to debate. In contrast to this rather elaborate representation, ears were sometimes simply denoted as protrusions, for example at Beisamoun, 'Ain Ghazal and one example from Jericho, while other examples from Jericho and Kfar HaHoresh were ring-shaped (Stordeur and Khawam 2007, 11-12). The mouth was often plainly indicated by a horizontal slit (Griffin et al. 1998, 67; Stordeur and Khawam 2007, 11). Gender, age or individual characteristics were not particularly emphasised, with the exception of a skull with painted moustache from Jericho (Perschke 2013, 106). What

<sup>4</sup> Goren et al. 2001; Griffin et al. 1998; Rollefson et al. 1998; Verhoven 2002a, 2002b.

<sup>5</sup> Evidence for painted surfaces is known from Jericho D110 and D114 (Strouhal 1973, 235–36); D111 and E22 (Goren and Segal 1995, 157–58); D115 (Kingery et al. 1988, 232) and Beisamoun (Goren et al. 2001, 680). Only one case of a painted eye is known, of skull D (Butler 1989, 143, Fig. 2).



Fig. 3. Lateral view on a Tell Aswad head with carefully executed hairline. Courtesy of Danielle Stordeur and Rima Khawam, published in Stordeur and Khawam 2007, Fig. 5-1).

should be stressed is that the faces are relaxed and calm. Neither mouth nor eyes show any kind of emotion, for instance fear, disgust, happiness or sadness.

With the exception of a full cranium plastered at Beisamoun (Lechevallier 1978, 151), the cranium and back head usually remained unmodified. Examples from Tell Aswad show carefully cut hairlines (Fig. 3; Stordeur and Khawam 2007, 12, Fig. 4-5) and thus clearly indicate where the modelling stops. Paint has been proposed as a possible decoration for the back head, as in the case of skull D114 (Reg. 530) from Jericho, now in the Archaeological Museum of Amman (Kenyon 1981, 437, Pl. 56; Griffin et al. 1998, 62). The use of a wig or perhaps the deceased's own hair or other ephemeral organic fibres, as known from the modelled skulls from Vanuatu in Oceania (Speiser 1923, 275), would be another potential explanation. Representations of hair are known from the extraordinary skulls of Nahel Hemar cave (Fig. 4). Though they do not possess modelled faces, they carry elaborated hairstyles designed from collagen. Black material detected in the suture and on the Wormian bones of an unmodelled skull from 'Ain Ghazal (Rollefson et al. 1998, 100-01) may indicate that such a treatment of the back of the head was more widespread.





Fig. 4. Skull with elaborate hairstyles out of collagen from Nahel Hemar cave. Courtesy of the Israel Museum.

How were the faces applied and does this throw some light on their role? An example from Jericho shows that the skull itself was deliberately filled with coarse soil (Fletcher et al. 2008, 313, Fig. 3), probably to stabilise the head, or perhaps to provide it with a weight similar to that of a living human head. Later, the eye-sockets, nose and oral cavity were filled with different materials, such as ash, bitumen, marl, sand, lime or twisted fibres and other organic materials.

Some examples from 'Ain Ghazal show evidence of having been sanded, possibly to prepare the surface and provide anchorage for the plaster (Bonogofsky 2001, 143). These procedures enabled the actual modelling of the faces. This was executed with different kinds of plaster and, in some cases, finished with a thin layer of plaster pigmented with ochre or cinnabar (Goren et al. 2001). Of particular interest to us are examples from Jericho (Fig. 5) and Yiftahel on which the bottom parts of the skulls were covered (Slon et al. 2014, 7, Fig. 10) to produce a rather flat surface. This allowed the head to stand upright without tipping towards the rounded back. Other examples from Tell Aswad were installed with bases at this point of manufacture (Stordeur and Khawam 2007, 11, 14, Fig. 8.2–3; **Fig. 6**).

The modelling process, recipes of the plaster and in some cases necessary pyrotechnological knowledge attests to the great skill required of the craftsperson (Goren et al. 2001, 687–88). The complexity of the craft,



Fig. 5. Bottom side of a skull from Jericho. Courtesy of the British Museum.

as well as the knowledge indispensable to its ritual function, speaks against its execution by any person. It is more probable that the community chose a specific and experienced member for this role. This aligns with more recent modelled skull traditions, such as those of the ancestor skulls from the Solomon Islands (Rosendahl 2011, 185) and of the Iatmul of Papua New Guinea (Leicht 2011a, 154), in which only persons of high rank and specialized knowledge are intrusted with that task.

It is clear that the modelling did not strive for an accurate reconstitution of the individual's facial features as we expect from modern forensic facial approximation. The skulls from Kfahr HaHoresh, 'Ain Ghazal, Yiftahel and usually Jericho were only modelled on the upper part of the face, with the lower jaw missing. With this procedure, a rather squat face is generated (Griffin et al. 1998, 62), the proportions of which can at most have been an approximation of the deceased's face. Indeed, the modelled facial features of skull 14 from Tell Aswad were



Fig. 6. Basis of a skull from Tell Aswad. Courtesy of Danielle Stordeur and Rima Khawam, published in Stordeur and Khawam 2007, Fig. 8-7.

offset; the nose covers the mouth of the skull such that the original proportions of the facial elements could have hardly been achieved (Kuijt 2008, 179-81). Therefore, Jacques Cauvin (1978, 135–36) and Ian Kuijt (2008) argue for a rather idealised representation of the deceased. From this perspective, it is thus perhaps surprising that the Iatmul aim towards a detailed representation of the facial features and the greatest individuality possible. In their narrative, the artwork will be reviewed by the deceased during the night and the respective parts destroyed in the case of dissatisfaction (Leicht 2011a, 154). However, there are also examples in which the portrayal of an individual's character was not targeted, for example the ancestor skulls of New Ireland. Nonetheless, a diversity of executions (Leicht 2011b, 158-61, Fig. 1-5) and, therefore, individuality of the modelled faces is clearly apparent in this case. For the Neolithic, it remains difficult to assess if indeed a specific person was meant to be depicted by the modelling, particularly if we keep in mind that they could be indicated by simply naming the face.

Ian Kuijt highlights the similarities of the modelled skulls from Tell Aswad, which, in his opinion, could only be achieved by intention (2017). Nonetheless, it remains difficult to

decide whether this is the result of a certain ideal of beauty, a habitualised manufacturing process or indeed an intended similarity. In any case, their similarity would make it almost impossible for a non-inaugurated person to match a head to an individual person within the community. The manufacturer leaves this open instead of clearly indicating through specific features that a grandfather or aunt, for instance, is depicted by the model.

# Maintenance and presentation of the modelled faces

What happened to the skulls after they were modelled? In the beginning of the 1980s, Kenyon suggested that the plastered skulls were kept for a rather short period, namely as long as the people associated with the skulls could be remembered (1981, 77). This interesting thought is of course based on Kenyon's interpretation of the skulls as the material bases of ancestor veneration.

Indeed, there are several observations that hint at the fact that at least some skulls were in use for longer periods. For instance, a skull from Jericho, today in the Royal Ontario Museum in Toronto, was provided with an additional plaster layer that covered parts of



Fig. 7. Skull from Jericho with conservational treatment. Courtesy of the Royal Ontario Museum, Toronto.

the earlier pigmented paste (Fig. 7). This later remodelling can be considered a reparative or conservational treatment (Goren et al. 2001, 686). Ian Kuijt argues in the same direction for other modelled faces (Kuijt 2008, 184), for instance the Homo 1 from Kfar HaHoresh. Analysis of this skull shows that the specimen was covered by at least four distinct plaster layers, which can be interpreted as evidence for repeated remodelling events (Hershkovitz et al. 1995a; 1995b). Altogether, these potential conservation treatments hint at longer periods of circulation and use within the Neolithic community. However, it also shows that people cared about the faces and that their intact surface was clearly of importance. Unless it is reduced to aesthetic desires, we must consider that it was somehow crucial that the "flesh" and "skin" of the plastered faces did not decompose.

Nonetheless, it remains difficult to explore how the skulls were integrated in the ritual sphere of the Neolithic community. The smooth bottom surfaces of some examples, allowing them to rest (Griffin et al. 1998, 66), hints at their placement on any kind of horizontal shelf, platform or simply the floor. An important example of this is the aforementioned Jericho skull D113 (Fig. 5), the plaster of which covered the full extent of its base including the creation of a modelled chin. This flat base enabled the head to sit upright without any support (Fletcher et al. 2008, 313, Fig. 4). A similar observation was made by Strouhal for the Jericho skulls D114, 112 and 118 (1973, 236, 238, 240). Without a flat base, these modelled faces would slope backwards. The modelled skulls from Tell Aswad attest to another technical solution for the same aim as they rest on oval bases constructed of yellow soil (Fig. 6). That this soil did partly enter the skull shows that the bases must have been prior constructed during the manufacturing process (Stordeur and Khawam 2007, 11, 14, Fig. 8.2-3). Hence, it was aimed from the very beginning to present the skull on a horizontal surface. A similar form of display can be

interpreted for some unmodelled crania from Mureybet in Syria, which were also found on clay supports (Cauvin 1974). For each of the three examples, it was clearly of importance that the faces were presented upright, similar to a living person. Depending on the height of the skull's installation, an observer could have been confronted face to face with them. These technical solutions also permit a certain mobility for the display of the modelled faces. This may hint at their use in different contexts, but was also likely to have facilitated an easy exchange or replacement of the heads in case they were not suitable anymore. This potential for replacement would have had a major effect on perceptions of the faces during social or ritual events.

Further insights into the use of at least some modelled skulls is provided by the examples from Tell Ramad (**Fig. 8**). Together with the later pieces from Köşk Höyük (de Contenson 1967, Pl. I-III; Özbek 2009, 384), they possess a kind of neck projection that can be compared with the necks of the PPNB plaster figures



Fig. 8. Skull with a neck-like projection from Tell Ramad. Courtesy of the Damascus Museum.

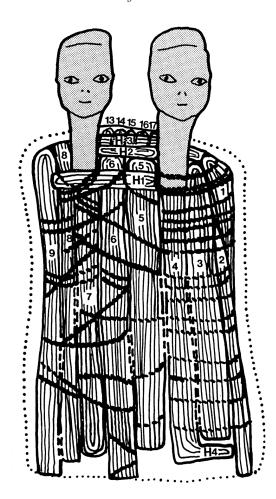


Fig. 9. Technical drawing of the plaster figure from 'Ain Ghazal. Courtesy of Carol Grisson; published in Grissom 2000, 29, 31, Fig. 4, 6.

from 'Ain Ghazal. In the latter case, the neck was designed as a kind of peg to anchor the head into the body of the figure (Griffin et al. 1998; Grissom 2000, 29, 31, Fig. 4, 6; Fig. 9). Analogising, one could argue that the neck projections of the Tell Ramad examples were used in a similar way (de Contenson 1967; 1969; 1992; Cauvin 1994, 154). This would have allowed the presentation of the skulls on figures or any other kind of wooden appliance, both of which are known for the modelled skulls of the Iatmul (Aufderheide 2009, 98, Fig. 3–9; Leicht 2011a, 155, Fig. 2).

Not all of the archaeological contexts of the skulls necessarily reflect the intentional final deposition, which will be discussed in the next paragraph. Stordeur and Khawam argue that the finds reflect different stages of the ritual (2007, 22). For instance, modelled skulls that were still accessible to the inhabitants should be considered "living". Examples of this are the seven modelled skulls from Jericho that were discovered stacked on top of each other, and a skull from 'Ain Ghazal found on the floor of a burned house (Stordeur and Khawam 2007, 14–22).

Altogether, we can summarise that the modelled skulls circulated long enough for conservational treatments to be necessary in order to maintain the faces and their skin. Presented in an upright position, it was possible to achieve a literal face-to-face encounter if the modelled skulls were mounted in an appropriate height – on a shelf or any other device. Still, it remains open to discussion whether they were presented in public or domestic contexts. Most of them were not firmly installed and were thus mobile and could be re-arranged and exchanged if new political or social relations made that necessary.

# Depositional practice

In the following discussion we focus on those examples that were no longer accessible to the community. They seem to have fulfilled their ritual functions and were finally deposited in a process that has been termed by Cauvin as "désaffection" (1994). Plastered skulls and crania were deposited in clusters, rows or, more seldom, individually. In several cases, they were found together with just painted or completely undecorated skulls, for instance at Jericho, 'Ain Ghazal, Kfahr HaHoresh, Aswad, Beisamoun and possibly Tell Ramad (Griffin et al. 1998, 60; Kurth and Röhrer-Ertl 1981; Kenyon 1981; Rollefson and Simmons 1984, 25; Ferembach 1969; Bonogofsky 2001, 144; Stordeur and Khawam 2007, 21), which reveals a direct ritual relationship with unmodified skulls.

Stordeur and Khawam (2007) emphasise the collective character of these deposits.

One of the best examples that they cite are the skulls from Tell Aswad, where the deceased were not buried below their houses but in funerary areas at the margin of the site. Two caches of plastered skulls, each arranged in a half circle, are clearly related to several sequential burials, potentially expressing a social relationship or kinship. Beyond this, Stordeur and Khawam (2007, 21) also argue for the communal character of deposits within buildings at other sites, such as Beisamoun, Jericho, 'Ain Ghazal and possibly Tell Ramad, by pointing out the number of surrounding inhumations as evidence against their use as ordinary houses. This hypothesis finds its best parallel in the so-called "Skull Building" at Çayönü in modern Turkey, where the remains of over 400 individuals were found, including over 90 crania, in a cellar in the second phase of use of the building (Özdoğan 1995). A concentration of 71 crania were also recovered from a small room in the third phase of use (Özbek 1988). Moreover, a social arrangement, and thus a communal character, has been also interpreted for three modelled skulls from Yiftahel (Milevski et al. 2008, 44) and for the deposition of three modelled skulls in the funerary area of Kfahr HaHoresh (Goring-Morris 2005, 94.).

Cauvin's (1994) concept of "désaffection" fits well with Nigel Goring-Morris' (2005) observations regarding the plaster of a modelled skull deposited at Kfar HaHoresh. Due to the fact that the plaster seemed to have already been dissolved, he proposed that the skull had "symbolically died" and was therefore ultimately ritually buried (Goring-Morris 2005, 96). In light of the conservational treatments discussed above, we may infer that the moment the "skin and flesh" were not maintained the face ran the risk of "decay" and thus finally dying. The careful burial of the modelled skulls has parallels in the burial of other PPNB ritual objects such as the plaster figurines (Garfinkel 1994; Simmons et al. 1990). The

latter were carefully deposited after they were damaged (Griffin et al. 1998, 61, 67).

The important role of the facial plaster is also expressed by some finds from 'Ain Ghazal. The facial plaster of three modelled skulls was discovered having been carefully deposited in a row and facing downwards. The deposit was undisturbed, no bones were recovered and ca. 40% of the plaster was missing. That the undercuts generated through the plastering process were broken speaks to an intentional removal of the plaster and against the notion of slow decay (Griffin et al. 1998, 62). The care with which this happened provides insights into the importance of the facial plaster. A similar find was made in the funerary area of Tell Aswad (Griffin et al. 1998, 60; Stordeur and Khawam 2007, 9, 13), and here Stordeur and Khawam raise the question as to whether the plaster was perhaps more important than the skull itself (2007, 19). The question why the plaster faces were not maintained anymore remains open. Did the modelling not correspond to the conception of the deceased, as in the narrative of the Iatmul, and needed to be removed? Did the political and social situation change and result in a mutilation of the modelled faces? The latter may have a structural parallel in the deposition of unmodified skulls from Tell Qarassaa. These skulls, of young men between 18-25 years old, had completely destroyed facial bones (Santana et al. 2012), potentially relating to a similar symbolic expression.

While it is difficult to trace the reasons for this action, the disposal of the plaster faces shows that it was indeed significant whether the facial bones were covered in plaster or not. It was not simply "nice to have" and thus a superficial addition to the far more widespread and usual practice of secondary burial. It seems to have been a decisive moment, possibly coining a certain status of the ritual. While there is certainly a strong relationship to the more widespread practice of skull

removal, Hans-Dieter Bienert's suggestion (1991) that the modelling was simply its enhancement and further development should perhaps be reassessed in this light.

## Discussion

Despite the many implicit and explicit references to anthropological studies, the discussion surrounding modelled skulls and PPNB burial customs often remains subject to a rather western and modern perspective. We tend to forget that it is not only the idea of an afterworld or any kind of soul concept which is culturally engraved, but also the definition of the moment of death itself. Where runs the border between life and death, and, moreover, does such a border always exist? From a contemporary perspective, the individuality of a person corresponds to a Cartesian mindset and is thus strongly related to the functioning of the brain. As soon as the reflexes of the brainstem cannot be measured anymore, a person is considered dead, independently from the expiration of other bodily functions that occur many hours later. The death of the brain can only be clinically diagnosed, and its single aspects are defined through the Harvard criteria (Hofmann 2008, 94; cf. Schneider 1998). Other, traditional determinants of death require longer periods of time to be assigned and have thus become marginalised. Hence, it is only within recent years that the rather slow process of dying became a defined moment, a red line which can be crossed at a certain point in time (Hofmann 2008, 92-96).

For most of us today, this very recent idea is rather difficult to suppress. However, the anthropological example of the Toraja on Sulawesi can show us quite plainly that the moment of death and the transition to the afterworld can follow an entirely different rhythm. Within the community of the Toraja, a person is considered "ill" or "hot" after their last breath. He or she is immediately moved into a sitting position, wrapped in cloth and seated facing west at the southern wall of the

house. A priest applies small rods to allow gases and liquids to escape. From this point, relatives care for the person with food and drink. This situation, surely unusual to us, can last for years. Meanwhile, the "hot" family member still takes part in the social life of the household. It is not until the funerary priest turns the head of the deceased towards the south, that the actual, ritual death comes. Numerous rituals, dances and sacrifices then accompany the deceased until he or she is deposited in a rock chamber tomb. By this time the person has not yet reached the afterworld. During the regularly conducted Ma'nene' ritual, the corpses of the community are taken out of the chamber tombs, unwrapped, cleaned, freshly enrobed, watched and presented. They spend the day with their relatives who notably care that the corpses are preserved for as long as possible because their early decay is considered to be a disaster for the family. Only when the corpse is completely decayed does the communal ritual end and with it the ceremonial duties and grief. The soul now leaves the corpse, enters the afterworld and can possibly become an ancestor if the status of the deceased allows this (Berger and Kottmann 1999).

Several aspects of this ritual are particularly intriguing for contemporary, western perspectives on death. While the person is "hot", he or she remains an integrated part of the household. Moreover, the transition to the afterworld is related to the decay of the body. Thus, during the Ma'nane' community ritual, the body should be preserved as well as possible, allowing them to remain in the intermediate world. Similar links between

the decomposition of the body and the transition to the afterworld have already been observed in the aforementioned metastudies on secondary burials by van Gennep (1909) and Hertz (1907). It is perhaps worth taking a similar consideration into account for the deceased of the Neolithic communities of the Levant. Moreover, we should not start from the assumption that death happened in a singular, restricted moment, but consider it as a process during which the "deceased" can remain an active part of the household or community for a certain amount time. Indeed, several aspects of the archaeological evidence hint at such possibilities.

With the exception of the funerary areas of, for example, Tell Aswad (Stordeur and Khawam 2007, 7–9), the primary burials of the aceramic Neolithic were typically conducted nearby or directly below domestic quarters (Perschke 2013, 99) and, therefore, in the direct vicinity of the living (Benz 2010). This warranted a proximity to the household and at the same time protected against abuse. The buried persons were still easily accessible and, in some cases, markers of stone or colour hinted at the location of their head (Kuijt 2001; 2008, Fig. 3). After the decay of the flesh, three to seven years later at the earliest, the burials were reopened and the skull of the person removed.6 In such a short period the personal memory of the deceased person, his or her sayings and doings, would most likely be still alive and the skull remained associated with them. Nonetheless, it remains open to discussion to what extent the deceased person and his or her life was indeed decisive within this ritual. As discussed above, sex and

<sup>6</sup> The special case of Körtik Tepe (PPNA) in eastern Turkey might additionally indicate that the detachment of the flesh from the bones had an important meaning within these practices. These depositions are composed of complete burials, skeletons without skulls and scatters of bones. Of special interest is that the bones show markers which indicate that the deceased were systematically defleshed and afterwards covered with gypsum in the correct anatomical compound (Özkaya 2009). The intention or meaning behind this practice is, of course, hardly accessible to us. However, it was evidently important to quickly get rid of the decaying flesh in these cases. Perhaps, the people wanted to anticipate the decaying process to fulfil the requirements for the secondary burial as quickly as possible and thus end the intermediate phase.

age, important aspects of a social role, were not relevant to the choice of the skull. In contrast, several studies point out that in vivo skull modification, despite not necessarily being recognisable to the naked eye, was a probable selection criterion (Fletcher et al. 2008, 315, 318; Kurth and Röhrer-Ertl 1981, 438-39). As this treatment happened during early childhood, the choice of the skull is probably not related to ones' doings or status gained in life. Therefore, the role of the person in life, relevant for most ancestor narratives, should perhaps take a back seat in discussions about the selection of skulls. Instead, it is worth asking who is responsible for the choice and what are the possible motives.

After the skulls circulated in the community, some were partly plastered and presented on horizontal devices or on figures. The modelling was surely not a profane act. The responsible person must have had not only outstanding practical capabilities (Goren et al. 2001, 687-88), but also ritual skills. Thanks to the transformation of the skull into a modelled face, the latter not only embodied the presence of the deceased, it also allowed sensual interactions with him or her. In this context of display and interaction, the hypothesis that the decay of the flesh is a marker for the transition to the afterworld can perhaps be reversed. The re-furnishing of a skull with flesh and skin could be understood as an inversion of decomposition and a measure to keep the deceased in life or an accessible intermediary world, thus detained from the afterworld. The process of plastering would hence become a magical act through which the deceased is kept alive. The modelled faces thus remain an active actor in the rituals and cohabitation of the community and allow the people to maintain face to face communication. This communication only finished when the faces decayed. This marked a symbolic death and the need to be finally buried (Cauvin 1994; Goring-Morris 2005, 96). Evidently, this process could also be accelerated as in the case of the three intentionally removed

plaster faces carefully buried in 'Ain Ghazal (Griffin et al. 1998, 62). Altogether, the metamorphosis from a blank skull to a modelled face and back can be also understood as a transformation from a rather abstract, unspecific skull, to the intimacy of a living human face with its ability to communicate, and back to anonymity.

A more detailed look at the faces, can reveal further insights about their potential role within the community. The installation of the face at an appropriate height on their flat bottom or base permits the observer to look directly into an upright face in a similar way to a living person. The skulls' faces are depicted calm and relaxed; no emotions or characteristics of a specific person are expressed. At first glance this is rather surprising, but further consideration reveals it to be a particularly insightful act. From cognitive investigations we know that the interpretation of neutral facial expressions is predominantly guided by previous knowledge of the observer (Suess et al. 2014). The multivocality of the faces thus allows the community to perceive those expressions that are suitable to the practices being performed. The rituals being conducted and their narrations and songs frame the performance and are thus decisive for the perception of emotion within the faces.

It nonetheless remains open to discussion why the Neolithic communities of the southern Levant suddenly started to model faces on the skulls. Of course, there is the option that emotional ties, the desire to carry on seeing, talking and having an intimate relation with the deceased played a major role. The later example of a female arranged in contracted position around a plastered skull of a man from Çatalhöyük has been often interpreted in such a way (Perschke 2013, 107). Evidence against this as the main impetus is apparent in the selection of the skull based on its in-vivo modification, thus depending on a decision that was taken almost directly

after birth, either by the parents or some-body else. If this selection does not depend on the life, gained status and/or relations of the deceased, it must have relied on the group or its decisionmakers. An example of one such constellation is Metcalf's (1976) study of the Berewan of Borneo. The decision to inter the deceased in an up to 10m high mausoleum greatly depends on the person who has built the structure. Central to this act is this individual's desire to raise his or her status and to possibly become the next chief of the community, with the identity of the deceased rather irrelevant (Metcalf 1976).

If we take this possibility into account for the PPNB of the southern Levant, we must ask what the decisionmaker, group, kin or even single person would have gained through such a practice. What would it mean to a family or group to get hold of such a modelled face and display it? What great admiration could be bestowed on the person who transforms or commissions the transformation of a rather anonymous skull into a ritually living face?

If such a transformation did indeed detain the deceased from transition to the afterworld, the modelled face would not only be a sign of

the group or person's ritual power, but would stabilise the group's internal relations and networks. As long as the modelled skull was an actor within the social life of the group, upheavals, instability and power-shifts due to the loss of a member could be prevented or at least postponed. Communication, social and political networks could be perpetuated and performed in a face to face interaction. Moreover, the faces' multivocality permitted the evocation of an atmosphere according to the told stories and performed rituals, thus supporting the dominant group and their narratives in the sense of Gramsci's hegemonic knowledge (1991 [1948-1951], 1502, journal 12, § 1). The modelled faces remain actors on the political stage of the community. They can stabilise power relations and cohesion within the Neolithic communities whose rapid generational changes and large size were steady sources for inner conflicts and negotiations of power between kingroups. If this ceased to be necessary, the maintenance of the faces stopped and they were finally buried in publicly available places or communal buildings; a ritual that can, in return, serve again as a means of establishing social cohesion and reconciliation between rival groups.

# References

Aufderheide, Arthur C. 2009. Overmodeled Skulls. Duluth: Heide Press.

Bar-Yosef, Ofer, and Anna Belfer-Cohen. 1989. "The Levantine "PPNB" interaction sphere." In *People and Culture* in Change: Proceedings of the Second Symposium on Upper Paleolithic, Mesolithic and Neolithic Populations of Europe and the Mediterranean Basin, Part i, edited by Israel Hershkovitz, 59–72. BAR Int. Series 508. Oxford: Archaeopress.

Belfer-Cohen, Anna. 1988. "The Natufian Graveyard in Hayonim Cave." *Paléorient* 14 (2): 297–308. DOI: 10.3406/paleo.1988.4476.

Benz, Marion. 2010. "Beyond death - the construction of social identities at the transition from foraging to farming." In *The Principle of Sharing. Segregation and Construction of Social Identities at the Transition from Foraging to Farming*, edited by Marion Benz, 249–76. Studies in Early Near Eastern Production, Subsistence, and Environment 14. Berlin: ex oriente.

Benz, Marion, and Joachim Bauer. 2013. "Symbols of power - symbols of crisis? A psycho-social approach to Early Neolithic symbol systems." *Neo-Lithics* 13(2), 11–24. https://www.exoriente.org/repository/NEO-LITHICS/NEO-LITHICS 2013 2.pdf.

- Benz, Marion, Julia Gresky, Denis Stefanisko, Hala Alarashi, Corina Knipper, Christoph Purschwitz, Joachim Bauer, and Hans Georg K. Gebel. 2019. "Burying power: New insights into incipient leadership in the Pre-Pottery Neolithic from an outstanding burial at Ba'ja, southern Jordan." PloS ONE 14(8): e0221171. DOI: 10.1371/journal.pone.0221171.
- Berger, Peter, and Rainer Kottmann. 1999. Die lange Reise der Toten. Zwei Studien zu Ideologie und Praxis des Todes in Süd- und Südostasien. Hamburg: Kovacs.
- Bienert, Hans-Dieter. 1991. "Skull cult in the prehistoric Near East." Journal of Prehistoric Religion 5: 9-23.
- Bloch, Maurice, ed. 1982. Death and the Regeneration of Life. Cambridge: Cambridge University Press.
- Bonogofsky, Michelle. 2001. "Cranial Modeling and Neolithic Bone Modification at 'Ain Ghazal: New Interpretations." *Paléorient* 27 (2): 141–46. DOI: 10.3406/paleo.2001.4734.
- Bonogofsky, Michelle. 2004. "Including Women and Children: Neolithic Modelled Skulls from Jordan, Israel, Syria and Turkey." *Near Eastern Archaeology* 67 (1): 118–19. <u>DOI: 10.2307/4132367</u>.
- Butler, Carol. 1989. "The plastered skulls from 'Ain Ghazal: Preliminary findings." In People and Culture in Change: Proceedings of the Second Symposium on Upper Paleolithic, Mesolithic and Neolithic Populations of Europe and the Mediterranean Basin, Part i, edited by Israel Hershkovitz, 141–45. BAR Int. Series 508. Oxford: Archaeopress.
- Cauvin, Jacques. 1974. "Troisième campagne de fouilles à Tell Mureybet (Syrie) en 1973. Rapport préliminaire." Annales Archéologiques Arabes Syriennes 24: 47–58.
- Cauvin, Jacques. 1978. Les premiers villages de Syrie-Palestine du IXe au VIIe millénaire avant J.-C. CMO 4, Série Archéologique 3. Lyon: Maison de l'Orient.
- Cauvin, Jacques. 1994. Naissance des divinités, naissance de l'agriculture : la révolution des symboles au néolithique. Paris: CNRS Publications.
- Cauvin, Jacques. 2000. The Birth of the Gods and the Origins of Agriculture. Translated by Trevor Watkins. Cambridge: Cambridge University Press.
- de Contenson, Henri. 1967. "Troisième campagne à Tell Ramad, 1966. Rapport préliminaire." Annales Archéologiques Arabes Syriennes 17: 17–24.
- de Contenson, Henri 1969. "Quatrième et cinquième campagnes à Tell Ramad, 1967–1968. Rapport préliminaire." Annales Archéologiques Arabes Syriennes 19: 25–30.
- de Contenson, Henri. 1992. "Les coutumes funéraires dans le Néolithique syrien." Bulletin de la Société préhistorique française 89 (6): 184–91.
- Croucher, Karina. 2012. Death and Dying in the Neolithic Near East. Oxford: Oxford University Press.
- Downs, Richard Erskine. 1956. The Religion of the Baré'e-speaking Toradja of Central Celebes. The Hague: Excelsior.
- Dunbar, Robin Ian MacDonald. 1992. "Neocortex size as a constraint on group size in primates." *Journal of Human Evolution* 22 (6): 469–93. DOI: 10.1016/0047-2484(92)90081-J.
- Durkheim, Emile. 1995 [1912]. The Elementary Forms of Religious Life. Translated by Karen E. Fields. New York: Free Press.
- Ferembach, Denise. 1969. "Etude anthropologique des ossements humains néolithiques de Tell-Ramad (Syrie)." Annales Archéeologiques Arabes Syriennes 19: 49–70.
- Fletcher, Alexandra, Jessica Pearson, and Janet Ambers. 2008. "The Manipulation of Social and Physical Identity in the Pre-Pottery Neolithic: Radiographic Evidence for Cranial Modification at Jericho and its Implications for the Plastering of Skulls." *Cambridge Archaeological Journal* 18 (3): 309–25. DOI: 10.1017/S0959774308000383.
- Garfinkel, Yosef. 1994. "Ritual Burial of Cultic Objects: The Earliest Evidence." *Cambridge Archaeological Journal* 4 (2): 159–88. DOI: 10.1017/S0959774300001062.
- Gebel, Hans-Georg, Mujahed Muheisen, and Hans Jörg Nissen. 1988. "Preliminary report on the first season of excavations at the late Aceramic Neolithic site of Basta." In *The Prehistory of Jordan. The State of Research in 1986*, edited by Andrew N. Garrad and Hans Georg Gebel, 101–34. BAR Int. Series 396. Oxford: BAR.

### Constance von Rüden

- Gebel, Hans-Georg. 2010. "Commodification and the formation of early Neolithic social identity. The issues as seen from the southern Jordanian Highlands." In *The principle of sharing. Segregation and construction of social identities at the transition from foraging to farming*, edited by Marion Benz, 35–80. Studies in Early Near Eastern Production, Subsistence, and Environment 14. Berlin: ex oriente.
- van Gennep, Arnold. 1909. Les rites de passage: étude systématique des rites de la porte et du seuil, de l'hospitalité, de l'adoption, de la grossesse et de l'accouchement, de la naissance, de l'enfance, de la puberté, de l'initiation, de l'ordination, du couronnement, des fiançailles et du mariage, de funérailles, des saisons, etc. Paris: Nourry.
- Goren, Yuval, Adrian Nigel Goring-Morris, and Irina Segal. 2001. "The Technology of Skull Modelling in the Pre-Pottery Neolithic B (PPNB): Regional Variability, the Relation of Technology and Iconography, and their Archaeological Implications." *Journal of Archaeological Science* 28: 671–90. DOI: 10.1006/jasc.1999.0573.
- Goren, Yuval, and Irina Segal. 1995. "On Early Myths and Formative Technologies: A Study of Pre-Pottery Neolithic B Sculptures and Modeled Skulls from Jericho." *Israel Journal of Chemistry* 35: 155–65. DOI: 10.1002/ijch.199500023.
- Goring-Morris, Nigel. 2000. "The quick and the dead: The social context of aceramic Neolithic mortuary practices as seen from Kfar HaHoresh." In *Life in Neolithic Farming Communities: Social Organization, Identity, and Differentiation*, edited by Ian Kujit, 103–36. New-York: Springer Science.
- Goring-Morris, Nigel. 2005. "Life, death and the emergence of differential status in the Near Eastern Neolithic: evidence from Kfar HaHoresh, lower Galilee, Israel." In *Archaeological Perspectives on the Transmission and Transformation of Culture in the Eastern Mediterranean*, edited by Joanne Clark, 89–105. LSS 2. Oxford: CBRL & Oxbow Books.
- Goring-Morris, Nigel, and Liora Kolska Horwitz. 2007. "Funerals and feasts during the Pre-Pottery Neolithic B of the Near East." *Antiquity* 81: 1–17. DOI: 10.1017/S0003598X00095995.
- Gould, Stephen Jay. 1996. The Mismeasure of Man. New York: W. W. Norton & Co.
- Gramsci, Antonio. 1991 [1948–1951]. Gefängnishefte. Hamburg: Argumentverlag.
- Griffin, Patricia S., Carol A. Grissom, and Gary A. Rollefson. 1998. "Three late eight-millennium plaster faces from 'Ain Ghazal, Jordan." *Paléorient* 24 (1): 59–70. <u>DOI: 10.3406/paleo.1998.4669</u>.
- Grissom, Carol A. 2000. "Neolithic Statues from 'Ain Ghazal: Construction and Form." *American Journal of Archaeology* 104 (1): 25–45. DOI: 10.2307/506791.
- Halbwachs, Maurice. 1950 [1939]. La mémoire collective. Paris: Presses Universitaires de France.
- Hardacre, Helen. 1987. "Ancestor worship". In *Death, Afterlife and the Soul*, edited by Lawrence E. Sullivan, 62–69. New York: Macmillan Pub Co.
- Hershkovitz, Israel, and Avi Gopher. 1990. "Paleodemography in the southern Levant." *Mitkufat Ha'Even* 23: 13–31.
- Hershkovitz, Israel, and Avi Gopher. 2008. "Demographic, biological and cultural aspects of the Neolithic revolution: A view from the southern Levant." In *The Neolithic Demographic Transition and its Consequences*, edited by Jean-Pierre Bocquet-Appel and Ofer Bar-Yosef, 441–79. London: Springer Science Business Media B.V.
- Hershkovitz, Israel, Irit Zohar, Irina Segal, M.S. Speirs, O. Meirav, U. Sherter, H. Feldman, and Nigel Adrian Goring-Morris. 1995a. "Remedy for an 8500 years-old plastered human skull from Kfar Hahoresh, Israel." Journal of Archaeological Science 22: 779–88. DOI: 10.1016/0305-4403(95)90007-1.
- Hershkovitz, Israel, Gopher, Irit Zohar, S. Wish-Baratz, Yuval Goren, Anna Goring-Morris, et al. 1995b. "High resolution computed tomography and micro-focus radiography on an eight thousand year old plastered skull: How and why it was modelled." In *Nature et Culture : actes du colloque international de Liège, 13-17 décembre 1993*, edited by Marcel Otte, 669–83. ERAUL 68. Liège: Service de préhistoire, Université de Liège.
- Hertz, Robert. 1907. "Contribution à une étude sur la représentation collective de la mort." *Année sociologique* 11/10: 48–137.

- Hofmann, Kerstin. 2008. Der rituelle Umgang mit dem Tod. Untersuchungen zur bronze- und früheisenzeitlichen Brandbestattungen im Elbe-Weser-Dreieck. Oldenburg: Isensee.
- Hudson, Alfred B. 1966. "Death ceremonies of the Padju Epat Ma'anyan Dayaks." *Sarawak Museum Journal* 13: 341–416.
- Ibáñez, Juan José, Jesús E. González-Urquijo, and Frank Braemer. 2014. "The human face and the origins of the Neolithic: the carved bone wand from Tell Qarassa North, Syria." *Antiquity* 88: 81–94. DOI: 10.1017/S0003598X00050237.
- Jang, Daisung, and Hillary Anger Elfenbein. 2015. "Emotion, Perception and Expression of". In *International Encyclopedia of the Social & Behavioral Sciences*. 2<sup>nd</sup> ed., edited by James D. Wright, 483–89. Amsterdam: Elsevier.
- Karsten, Rafael. 1935. The Head-hunters of Western Amazonas: The Life and Culture of the Jibaro Indians of Eastern Ecuador and Peru. Helsingfors: Centraltryckeriet.
- Kenyon, Kathleen Mary. 1953. "Excavations at Jericho 1953." *Palestine Excavation Quarterly* 85: 81–96. DOI: 10.1179/peq.1953.85.2.81.
- Kenyon, Kathleen Mary. 1957. Digging up Jericho. London: Benn.
- Kenyon, Kathleen Mary. 1981. Excavations at Jericho 3. The Architecture and Stratigraphy of the Tell. London: BSAJ.
- Kenyon, Kathleen Mary, and A. Douglas Tushingham. 1953. "Jericho Gives Up Its Secrets." *National Geographic Magazine* 104/6: 853–70.
- Khalaily, Hamoudi, Ianir Milevski, Nimrod Getzov, Israel Hershkovitz, Omry Barzilai, Alla Yarosevich, Varda Shlomi, Arfan Najjae, Omar Zidan, Howard Smithline, and Roy Liran. 2008. "Recent Excavations at the Neolithic Site of Yiftahel (Khalte Khalladyiah), Lower Galilee." *Neo-Lithics* 2: 3–11. <a href="https://www.exoriente.org/docs/00070.pdf">https://www.exoriente.org/docs/00070.pdf</a>.
- Kingery, David W., Pamela B. Vandiver, and Martha Pickett. 1988. "The Beginnings of Pyrotechnology, Part II: Production and Use of Lime and Gypsum Plaster in the Pre-Pottery Neolithic Near East." *Journal of Field Archaeology* 15, 219–44. DOI: 10.1179/009346988791974501.
- Krawszyk, Daniel C. 2018. "Social Cognition: Reasoning with others." In *Reasoning. The Neuroscience of How We Think*, edited by Daniel C. Krawczyk, 283–311. London: Academic Press.
- Kuhnt-Saptodewo, Sri, and Henrike Rietz. 2004. "Helbigs Beobachtungen zu den Ritualen der Dayak und der heutige Stand der Forschung." In Karl Helbig. Wissenschaftler und Schiffsheizer: Sein Lebenswerk aus heutiger Sicht. Rückblick zum 100. Geburtstag, edited by Werner Rutz and Achim Sibeth, 178–97. Hildesheim: Georg Olms Verlag.
- Kuijt, Ian. 1996. "Negotiating Equality through Ritual: A Consideration of Late Natufian and Pre-Pottery Neolithic A Period Mortuary Practices." *Journal of Anthropological Archaeology* 15(4): 313–36. DOI: 10.1006/jaar.1996.0012.
- Kuijt, Ian. 2000. "Keeping the peace: Ritual, skull caching, and community integration in the Levantine Neolithic." In *Life in Neolithic Farming Communities: Social Organization, Identity, and Differentiation*, edited by Ian Kuijt, 137–63. New York: Kluwer Academic/Plenum Publishers.
- Kuijt, Ian. 2001. "Meaningful masks: Place, death, and the transmission of social memory in early agricultural communities of the Near Eastern PrePottery Neolithic." In *Social Memory, Identity, and Death: Intradisciplinary Perspectives on Mortuary Rituals*, edited by Meredith S. Chesson, 80–99. Washington, D.C.: American Anthropological Association.
- Kuijt, Ian. 2008. "The Regeneration of Life: Neolithic Structures of Symbolic Remembering and Forgetting." Current Anthropology 49: 171–97. DOI: 10.1086/526097.
- Kuijt, Ian. 2017. "Constructing the Face, Creating the Collective: Neolithic Mediation of Personhood." In *Verbs*, Bones, and Brains: Interdisciplinary Perspectives on Human Nature, edited by Agustín Fuentes and Aku Visala, 190–98. Notre Dame, IN: University of Notre Dame Press.
- Kurt, Gottfried, and Olav Röhrer-Ertl. 1981. "On the Anthropology of the Mesolithic to Chalcolithic Human Remains from the Tell es- Sultan in Jericho, Jordan." In *Excavations at Jericho 3*, 409–99. London: BSAJ.

### Constance von Rüden

- Lechevallier, Monique. 1978. Abou Gosh et Beisamoun: Deux Gisements du VIIe Millénaire Avant l'Ère Chrétienne en Israël. Paris: Association Paléorient.
- Leicht, Bernd. 2011a. "Übermodellierte Schädel der Iatmul." In Schädelkult. Kopf und Schädel in der Kulturgeschichte des Menschen, edited by Alfred Wieczorek and Wilfried Rosendahl, 153–58. Regensburg: Schnell und Steiner.
- Leicht, Bernd. 2011b. "Zeremonialschädel aus Neuirland." In Schädelkult. Kopf und Schädel in der Kulturgeschichte des Menschen, edited by Alfred Wieczorek and Wilfried Rosendahl, 159–62. Regensburg: Schnell und Steiner
- Lozada, Fantasy T., and Amy G. Halberstadt. 2015. "Early Emotional Development and Cultural Variability." In *International Encyclopedia of the Social & Behavioral Sciences*. 2<sup>nd</sup> ed., edited by James D. Wright, 746–51. Amsterdam: Elsevier.
- Metcalf, Peter A. 1976. "Who are the Berewan?" *Oceania* 47 (2): 85–105. DOI: 10.1002/j.1834-4461.1976.tb01274.x.
- Metcalf, Peter, and Richard Huntington. 1991. Celebrations of Death: The Anthropology of Mortuary Ritual. Cambridge: Cambridge University Press.
- Milevski, Ianir, Hamoudi Khalaily, Nimrod Getzov, and Israel Hershkovitz. 2008. "The Plastered Skulls and Other PPNB Finds from Yiftahel, Lower Galilee (Israel)." *Paléorient* 34 (2): 37–46. DOI: 10.3406/paleo.2008.5255.
- Mills, James Philipp. 1937. The Rengma Nagas. London: Macmillan.
- Molist, Miquel M., ed. 1996. Tell Halula (Siria) Un yacimiento neolítico del Valle Medio del Éufrates. Campañas de 1991 y 1992. Madrid: Ministerio Educación y Cultura/Instituto del Patrimonio Histórico Español.
- Moore, Andrew M.T., Gordon C. Hillman, and Anthony J. Legge, eds. 2000. Village on the Euphrates: From Foraging to Farming at Abu Hureyra. Oxford: Oxford University Press.
- Özbek, Metin. 1988. "Culte de crânes humains à Çayönü. Round table on Aceramic Neolithic in S.E. Turkey." Anatolica 15: 127–37.
- Özbek, Metin. 2009. "Remodelled human skulls in Köşk Höyük (Neolithic age, Anatolia): a new appraisal in view of recent discoveries." *Journal of Archaeological Science* 36: 379–86. DOI: 10.1016/j.jas.2008.09.032.
- Özdoğan, Mehmet. 1995. "Neolithic in Turkey: status of research." In *Reading in Prehistory: Studies Presented to Halet Çambel*, edited by Jacob Roodenberg, 41–59. Istanbul: Graphics.
- Özkaya, Vecihi. 2009. "Excavation at Körtik Tepe. A New Pre-Pottery Neolithic A Site in Southeastern Anatolia." *Neo-Lithics* 2: 3–8. https://www.vorderasien.uni-freiburg.de/dokumente/benz-pdf/Oezkaya2009Neolithics.
- Pardo, Italo. 1989. "Life Death, and Ambiguity in the Social Dynamics of Inner Naples." *Man (New Series)* 24 (1): 103–23. DOI: 10.2307/2802549.
- Perschke, Reena. 2013. "Kopf und Körper der "Schädelkult' im vorderasiatischen Neolithikum." In *Irreguläre Bestattungen in der Urgeschichte: Norm, Ritual, Strafe* …?, edited by Nils Müller-Scheeßel, 95–110. Bonn: Habelt.
- Ried, Vincent M., Kirsty Dunn, Robert J. Young, Johnson Amu, Tim Donovan, and Nadja Reissland. 2017. "The Human Fetus Preferentially Engages with Face-like Visual Stimuli." *Current Biology* 27: 1825–28. DOI: 10.1016/j.cub.2017.06.036.
- Rollefson, Gary O. 1987. "Local and external relations in the Levantine PPN period: 'Ain Ghazal (Jordan) as a regional center." In *Studies in the History and Archaeology of Jordan III*, edited by Adnan Hadidi, 29–32. Amman: Department of Antiquities.
- Rollefson, Gary O. 2004. "The character of LPPNB social organization." In *Central Settlements in Neolithic Jordan.*Studies in Early Near Eastern Production, Subsistence, and Environment 5, edited by Hans-Dieter Bienert, Hans-Georg K. Gebel, and Reinder Neef, 145–55. Berlin: ex oriente.
- Rollefson, Gary O., and Alan H. Simmons. 1984. "The 1983 Season at 'Ain Ghazal: Preliminary Report." Annual of the Department of Antiquities of Jordan 28: 12–30.

- Rollefson, Gary O., and Alan H. Simmons. 1988. "The 1988 season at 'Ain Ghazal. A preliminary report." *Annual of the Department of Antiquities of Jordan* 33: 9–26.
- Rollefson, Gary O., Denise Schmandt-Besserat, and Jerome C. Rose. 1998. "A Decorated Skull from MPPNB 'Ain Ghazal." *Paléorient* 24 (2): 99–104. <u>DOI: 10.3406/paleo.1998.4681</u>.
- Rosendahl, Wilfried. 2011. "Von heiligen Booten, hölzernen Fischen und kleinen Häuschen. Schädelkult auf den Salomonen." In *Schädelkult. Kopf und Schädel in der Kulturgeschichte des Menschen*, edited by Alfred Wieczorek and Wilfried Rosendahl, 185–98. Regensburg: Schnell und Steiner.
- Santana, Jonathan, Javier Velasco, Juan José Ibáñez, and Frank Braemer. 2012. "Crania with mutilated facial skeletons: A new ritual treatment in an early Pre-Pottery Neolithic B cranial cache at Tell Qarassa North (South Syria)." *American Journal of Physical Anthropology* 149: 205–16. DOI: 10.1002/ajpa.22111.
- Santoro, Giuseppe, Marc D. Wood, Lucia Merlo, Giuseppe Pio Anastasi, Francesco Tomasello, and Antonio Germanò. 2008. "The Anatomical Location of the Soul from the Heart, Through the Brain, to the Whole Body, and Beyond: A Journey through Western History, Science and Philosophy." *Neurosurgery* 65 (4): 633–43. DOI: 10.1227/01.NEU.0000349750.22332.6A.
- Schneider, Werner. 1998. ""So tot wie nötig so lebendig wie möglich!". Sterben und Tod in der fortgeschrittenen Moderne. Eine Diskursanalyse am Beispiel der öffentlichen Diskussion um den Hirntod in Deutschland." Habilitationsschr., University of Munich.
- Simmons, Alan H., Ann Boulton, Carol Butler, Zeidan Kafafi, and Gary O. Rollefson, 1990. "Field Report: A Plastered Human Skull from Neolithic 'Ain Ghazal, Jordan." *Journal of Field Archaeology* 17: 107–10. DOI: 10.1179/009346990791548574.
- Slon, Viviane, Rachel Sarig, Israel Hershkovitz, Hamoudi Khalaily, and Ianir Milevski. 2014. "The Plastered Skulls from the Pre-Pottery Neolithic B Site of Yiftahel (Israel) A Computed Tomography-Based Analysis." *PLoS ONE* 9 (2): e89242. DOI: 10.1371/journal.pone.0089242.
- Stordeur, Danielle, and Rima Khawam. 2007. "Les crânes surmodelés de Tell Aswad (PPNB, Syrie). Premier regard sur l'ensemble, premières réflexions." *Syria* 84: 5–32. <u>DOI: 10.4000/syria.321</u>.
- Speiser, Felix. 1923. Ethnology of Vanuatu. An Early Twentieth Century Study. Bathurst: Crawford House Publishing.
- Strouhal, Eugen. 1973. "Five Plastered Skulls from Pre-Pottery Neolithic B Jericho: Anthropological Study." *Paléorient* 1–2: 231–47. DOI: 10.3406/paleo.1973.4169.
- Suess, Franziska, Milena Rabovsky, and Rasha Abdel Rahman. 2014. "Perceiving emotions in neutral faces: expression processing is biased by affective person knowledge." *Social Cognitive and Affective Neuroscience* 10 (4): 1–6. DOI: 10.1093/scan/nsu088.
- Tsuneki, Akira. 2012. "Tell el-Kerkh as a Neolithic Mega Site." Orient 47: 29-66. DOI: 10.5356/orient.47.29.
- Verhoeven, Marc. 2002a. "Ritual and its investigation in prehistory." In *Magic Practices and Ritual in the Near Eastern Neolithic*, edited by Hans Georg K. Gebel, Bo Dahl Hermansen, and Charlotte Hoffmann Jensen, 5–42. Berlin: ex oriente.
- Verhoeven, Marc. 2002b. "Ritual and Ideology in the Pre-Pottery Neolithic B of the Levant and Southeast Anatolia." *Cambridge Archaeological Journal* 12 (2): 233–58. DOI: 10.1017/S0959774302000124.
- Weiss-Krejci, Estella. 2011. "The Formation of Mortuary Deposits Implications for Understanding Mortuary Behavior of Past Populations." In *Social Bioarchaeology*, edited by Sabrina C. Agarwal and Bonnie A. Glencross, 68–105. Chichester: Wiley-Blackwell.
- Whitley, James. 2002. "Too many ancestors." Antiquity 76: 119-26. DOI: 10.1017/S0003598X00089870.
- Zeuner, Frederick E. 1957. "Stone Age Exploration in Jordan, I." *Palestine Exploration Quarterly* 89: 17–54. DOI: 10.1179/peq.1957.89.1.17.