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Skull Retrieval and Secondary Burial Practices in the Neolithic Near East: Recent Insights from Çatalhöyük, Turkey

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ABSTRACT

The retrieval and re-deposition of elements of the human skeleton, especially the skull (i.e., cranium and mandible), is a common feature of Neolithic Near Eastern funerary practices. A complicated sequence of subfloor inhumations involving both primary and secondary burial treatments at Çatalhöyük demonstrates the range of funerary practices encountered at the site and elsewhere in the Neolithic Near East. This particular sequence of burials culminated in a stratigraphically verified case of post-inhumation skull removal from a primary intramural inhumation. However, the retrieval of crania and skulls from primary burials cannot account for the total number of re-deposited crania and skulls found in a variety of depositional contexts at the site. Based on increasing evidence for an extended interval between death and burial at Çatalhöyük, the removal and circulation of skulls from unburied bodies as part of a multi-stage funerary rite is proposed as another method for obtaining them, operating in parallel with their retrieval from primary intramural burials. These divergent practices, and the range of contexts from which secondarily deposited skeletal elements are recovered, reflect multiple funerary treatments and intentions likely tied to social distinctions that remain poorly understood. In order to begin to fully understand the social and cosmological meaning(s) of the Neolithic “skull cult,” however, we must first distinguish between what are essentially equifinal processes in the archaeological record. This work will involve careful attention to the spatiotemporal contexts in which isolated skeletal elements are found, in addition to meticulous osteological and taphonomic analyses of the bones themselves.

Keywords: Neolithic; secondary treatment; funerary practices; skull retrieval; Anatolia
entièrement comprise. Afin de commencer à comprendre la ou les significations sociales et cosmologiques du «cultes des têtes», nous devons en premier lieu faire la distinction entre des processus qui se caractérisent par une équifinalité dans l’enregistrement archéologique. Ce travail nécessitera de porter une grande attention aux contextes spatio-temporels d’où proviennent les restes squelettiques, en plus d’analyses ostéologiques et taphonomiques minutieuses des ossements eux-mêmes.

Mots-clés: Néolithique; traitement secondaire; pratiques funéraires; prélèvement crânien; Anatolie

One of the most striking features of Neolithic Near Eastern funerary practices is a seeming preoccupation with skeletal elements that comprise the head. Such practices are commonly manifested in the archaeological record as deposits of isolated crania (lacking mandibles) and sometimes full skulls (including associated mandibles) found in a variety of secondary depositional contexts. Researchers in the Levant and Anatolia have long suspected that, rather than being removed from a body prior to interment, crania and mandibles were obtained from primary inhumation burials, based on the absence of these elements in otherwise complete primary inhumations (Andrews and Bello 2006; Biener 1991; Cauvin 1978, 1994; Erdal 2015; Kanjou et al. 2013; Kenyon 1953, 1956; Kenyon and Holland 1981; Kuijt 2000, 2001, 2008; Rollefson 2000; Santana et al. 2012, 2015; Stordeur and Khawam 2007; Wright 1988). Belfer-Cohen (1988) observes that the practice of cranial retrieval in the Levant dates back to the Natufian at Hayonim Cave, Upper Galilee, and to the PPNA at Netiv Hagdud in the Jordan Valley. In Anatolia, the earliest evidence for the practice derives from the Epipaleolithic occupation layers at PINARBAŞI (Baird et al. 2013). In some instances, though, these identifications appear to suffer from a problem common to many archaeological investigations, namely, the difficulty in distinguishing between disturbed burials resulting from successive inhumations and the intentional retrieval and re-deposition of skeletal elements (see Haddow et al. 2016 for discussion). The manipulation of elements of the human cranium and mandible—or, in some cases, the cranium alone—has implications for the reconstruction of social structure and a range of funerary practices linked to ritual and social interactions in the past.

At the Neolithic site of Çatalhöyük in Central Anatolia, the collection, curation, and re-deposition of crania and skulls, in addition to elements of the infracranial skeleton, is observed in a variety of archaeological contexts. In this paper, a complex sequence of subfloor intramural burials from a single location serves as the basis for an exploration of the nature of skull retrieval and other secondary funerary practices at Çatalhöyük. Within this sequence we have identified a case of post-inhumation skull retrieval, although other sources for isolated crania at Çatalhöyük must have existed, because the overall number of primary burials with evidence for cranial removal cannot account for the large number of isolated crania recovered from a wide range of depositional contexts on site. These diverse contexts likely reflect an array of social meanings and intentions that are potentially obscured when the focus of research is limited to secondary manipulations of skeletal elements of the head alone.

Burial Practices at Çatalhöyük

Çatalhöyük is a Neolithic settlement located in south-central Turkey (Fig. 1) dating from roughly 7100 to 6000 cal B.C. (Bayliss et al. 2015). The site is renowned for its large size and exceptional preservation, as well as its densely packed mudbrick houses, elaborate symbolic assemblages, and intramural burial practices (Hodder 1996, 2000, 2005, 2013a, 2013b). Beginning with James Mellaart’s work (1961–1965) and continuing with Ian Hodder’s current research project (1993–present), excavations at the site have produced vital information that has improved our understanding of early settled life in the Neolithic of Central Anatolia as well as the wider Near East. Since the current research project began, more than five hundred individuals from primary burial contexts have been excavated and recorded. In addition, many more individuals represented by disarticulated skeletal elements have been recovered from secondary and tertiary (i.e., non-burial) depositional contexts. The human remains from Çatalhöyük, as well as their burial contexts, have provided numerous insights into the lives of the prehistoric inhabitants of the site, their

1. Because of the incorrect use of the terms “cranium” and “skull” (i.e., cranium and mandible) as synonymous in many publications to date, at least two different past actions have become muddled: one involving collection of crania alone, and the other involving crania with associated—and perhaps still articulated—mandibles (see Boulestin 2015; Knüsel 2014). In order to avoid such confusion in the future, it is best to rely solely on standard skeletal element terms as indicated by the Terminologia Anatomica (Federative International Programme on Anatomical Terminologies 2011) to describe and analyze skeletonized remains.

Most burials at Çatalhöyük are found within domestic buildings, typically underneath the north and east platforms of the main room, although the burials of neonates and infants are found in more variable locations, sometimes beneath floors in side rooms or near hearths and ovens (Andrews et al. 2005; Boz and Hager 2013). In many platforms, successive intercutting primary burials result in a substantial commingling of skeletal remains. In keeping with other sites in the Neolithic Near East, the postmortem manipulation of human remains, particularly the skulls and crania of adults of both sexes as well as sub-adults, is a characteristic feature of the funerary practices observed at Çatalhöyük (Boz and Hager 2014; Hodder 2005:24). Evidence for the collection, curation, and re-deposition of skulls or crania at Çatalhöyük includes the occurrence of primary skeletons lacking skulls (although sometimes only the cranium is lacking) and the presence of isolated crania (and sometimes skulls) in a range of depositional contexts.

Here we examine a complicated sequence of subfloor intramural burials within a single Neolithic house at Çatalhöyük. An account of the variable treatment of human remains observed in this particular series of burials serves to highlight the variation in funerary practices frequently encountered elsewhere at Çatalhöyük. The sequence of burials described culminated in a stratigraphically verified case of post-inhumation skull removal from a primary skeleton. Researchers at other Neolithic sites in the Near East have often surmised that skulls and crania were acquired in this manner (e.g., Kuijt 2000; Stordeur 2015), but very rarely has direct stratigraphic evidence been presented (see Goring-Morris and Horwitz 2007 for one example). Our ability to document and interpret funerary behaviors at Çatalhöyük has greatly increased with the aid of computer-assisted recording methods, especially Structure from Motion 3D recording techniques (for examples, see Berggren et al. 2015; Wilhelmson and Dell’Unto 2015). The use of this technology in the present case permitted the identification of a reopened grave, despite not being able to identify the disturbance created by this intervention at the time of excavation. This intervention left the hyoid and ossified thyroid cartilage, which are linked by soft tissue, ligaments, and tendons, to the mandible in the grave in correct anatomical position, evidence which substantiates that the cranium and mandible were originally present in the grave when the body was initially interred. We then present a review of the diverse archaeological contexts in which “headless” bodies and isolated crania and skulls are found at Neolithic Çatalhöyük; finally, we discuss what these differing contexts might mean in terms of how and why skulls and sometimes crania were collected.

“Heads” in the Neolithic Near East

The retrieval, curation, and re-deposition of elements of human “heads”—either the entire skull or simply the cranium—is a widely reported feature of Near Eastern Neolithic funerary practices (Benz 2010; Bienert 1991; Bocquentin et al. 2016). These have been found in a variety of contexts, including middens and other extramural contexts (e.g., Baird et al. 2016), as well as within houses and storage spaces, often in groups (Benz 2010; Goring-Morris 2000; Kanjou et al. 2013; Kuijt 2000). While some researchers have argued that this practice is a form of head-hunting, likely from dead enemies (Testart 2008, 2009), the traditional
view holds that skull collecting in the Neolithic reflects a form of ancestor veneration, potentially associated with emerging sedentism and control of local resources (Bienert 1991; Cauvin 1978, 1994; Goren et al. 2001; Kenyon 1956). More recently, however, as evidence mounts that the practice was not reserved strictly for elder, primarily male members of society and that the manner in which skulls were manipulated varies both within and between sites as well as through time, researchers have begun to question a one-size-fits-all interpretative model (Benz 2010; Bonogofsky 2003, 2004, 2005, 2006; Croucher 2006; Özbek 2009; Verhoeven 2002). Kuijt (2000, 2001, 2008) and Goring-Morris (2000), for example, have argued that the circulation of crania or skulls and other secondary funerary treatments helped to maintain social cohesion and relieve societal tensions within Neolithic communities through collective ritual practices and the creation of shared social memory. More recently, Santana et al. (2012, 2015) have highlighted an alternative range of intentions potentially reflected in similar practices observed at Tell Qarassa North, Syria, including denigration, negation, and indifference. Lastly, Schmandt-Besserat (2013) suggests that individual identities were not a factor in the selection of skulls for secondary treatments, which may have involved a variety of ritual purposes including necromancy, divination, and apotropaic protection against evil.

At several Neolithic sites in the Levant, crania over-modeled with plaster have been discovered, of which the best known are from Jericho in Palestine (Kenyon 1953) and 'Ain Ghazal in Jordan (Rollefson 2000). Apart from one example from Jericho (Schmandt-Besserat 2013; Strouhal 1973) and additional specimens from Beisamoun (Ferembach and Lechevallier 1973), Tell Ramad (Ferembach 1969, 1970), Tell Aswad (Stordeur and Khawam 2007; Stordeur et al. 2006) and Tell Qarassa North (Santana et al. 2012), the majority of plastered specimens from the Levant are represented solely by crania (Bonogofsky 2001; Goren et al. 2001). In Anatolia, however, plastered skulls (i.e., cranium and mandible) predominate, for example, among the adult specimens from Köşk Höyük in Central Anatolia (Bonogofsky 2005). Uniquely at Çatalhöyük, a plastered skull (Fig. 2) with modeled facial features and decorated with red ochre was found clutched in the upper limbs of an old adult (50+ years of age at death) female primary burial (see Boz and Hager 2013:424; Boz and Hager 2014). Replastering and repainting around the right orbit suggest that the skull had been kept aboveground for some time before it was eventually interred with the adult female (Boz and Hager 2004). In addition, an isolated mandible with traces of plaster and red pigment was recovered from a post retrieval pit in Building 89 during the 2012 excavation season (Knüsel et al. 2012). This mandible, attributed to an old adult female, may have been associated with a similarly plastered cranium, but this possibility cannot be verified (Fig. 3).

Despite only a single confirmed example to date of a plastered skull found at Çatalhöyük, there are many

Figure 2. Primary burial of an old adult female with plastered skull (reconstruction by Kathryn Killackey; source: Çatalhöyük Research Project).

Figure 3. Isolated mandible with traces of red pigment and plaster covering the anterior dentition recovered from Building 89.
more cases of isolated crania (and occasionally skulls), some decorated with red pigments such as ochre/ hematite or cinnabar (mercury sulfide). The majority of recovered isolated crania, however, are undecorated. Unlike other Near Eastern Neolithic sites, caches of crania are extremely rare. Instead, complete, isolated crania at Çatalhöyük are often found in association with primary burials. Highly fragmented crania have also been recovered from middens, post-abandonment building in-fills, and other non-burial contexts. A focus on the head is also evident across other media, including wall paintings, plastered animal installations, and anthropomorphic figurines with dowel holes for removable heads (Meskell 2008; Meskell and Nakamura 2005). Meskell (2008:374) refers to this preoccupation as “headedness”: “a particular tension surrounding heads, head removal and circulation, and the post-cranial body.” This idée fixe has also been noted by other researchers in the Neolithic Near East (e.g., Schmandt-Besserat 1997, 1998; Talalay 2004), while Chapman (2000, 2010) detects a similar relationship between fragmented bodies and objects in prehistoric southeast Europe.

As noted in previous studies, there are several instances of primary inhumations at Çatalhöyük missing crania and mandibles and, in at least one instance, bearing cut marks on the atlas (C1) vertebra (Andrews et al. 2005:269, Figs. 11.9 and 11.10). However, a new and more detailed study of cut marks on human remains, currently under way at Çatalhöyük, reveals additional evidence for bodily dismemberment or defleshing using stone tools. While cut marks associated with decapitation have been observed on cervical vertebrae at Near Eastern Neolithic sites such as Tell Qaramel in Syria (Kanjou et al. 2013) and Çayönü in Anatolia (Yılmaz 2010, cited in Erdal 2015), these occurrences are rare. The presence of cut marks may indicate that more than a single intention is at play in postmortem manipulations of the skull; it may also shed light on the state of the corpse at the time the cranium and mandible were targeted.

At Çatalhöyük, evidence for the retention and possible display of some isolated crania or skulls occurs with the observation that many of those that were re-deposited are often weathered, crushed flat, and have lost their single-rooted anterior teeth and portions of the facial skeleton and cranial base. Their condition supports the argument that such specimens had been kept above ground for some time (i.e., presumably long enough to skeletonize completely and dry out) before they were eventually reburied and crushed by the weight of the grave fill. This state contrasts with the majority of individuals in primary depositions at Çatalhöyük (presumably buried in a largely fleshed condition), where the cranial vault typically maintains its shape and the single-rooted teeth are still in place.

One of the main difficulties in studying postmortem manipulations of crania and other skeletal elements at Çatalhöyük is the frequent occurrence of highly commingled skeletal remains beneath house platforms as a result of successive intercutting interments. As such, differentiating between the intentional targeting of skeletal elements within a primary burial and unintentional disturbances of earlier interments by subsequent inhumations is often problematic (Haddow et al. 2016), although it is likely that the inhabitants of Neolithic Çatalhöyük used the digging of new graves as an opportunity to retrieve bones from earlier burials. By taking a more conservative approach than that of previous studies at Çatalhöyük (e.g., Boz and Hager 2013), we have identified 12 cases of intentional skull retrieval (represented by “headless” primary burials) and 3 more of cranial retrieval only (a previous analysis identified 14 cases in total [Pilloud et al. 2016], but an additional individual has been identified since then). Furthermore, 10 isolated crania and 6 skulls from secondary depositional contexts and at least 43 individuals represented by crania and/or mandibles from tertiary (i.e., non-burial) contexts have been recovered. The following discussion of burials from Building 129 serves as a starting point for a discussion of the variable patterning of skeletal element retrieval at Çatalhöyük.

The Building 129 “Skull Retrieval Pit”

Building 129 is located in the North Area of the site and is attributed to Level North H (preliminarily dated 6400–6000 cal B.C.). The burials discussed here were located in Space 77, the eastern area of the central room (Tung 2014). This area corresponds to the location of the east and northeast platforms—the most common location of subfloor interments at Çatalhöyük (Boz and Hager 2013). Four discrete burial sequences (Fig. 4) were excavated here during the 2012 and 2015 seasons. These represent a minimum of 10 individuals (based on the number of crania recovered), 5 of which were found in a primary or primary disturbed burial context. We focus primarily here on the southernmost sequence of interments, which concluded with the digging of a retrieval pit targeting the skull of a primary inhumation.

Feature 3643

Feature 3643 represents the primary disturbed burial of a child (8 years +/- 2 years of age at death), SK. 19451 (Fig. 4). This burial appears to be the earliest in the southern sequence of interments. Only the skull, cervical, and superior-most thoracic vertebrae and associated ribs were in articulation; the remainder of the skeleton was found scattered throughout the fills of
Figure 4. Plan of Building 129 showing locations of individual burial features.

subsequent Features 3645 and 3686. Given the labile nature of the cervical vertebrae that were found in situ, this individual was likely disturbed early in the process of decomposition and its remains scattered by subsequent burials in this location. Feature 3643 appears to have been partially truncated at its western end by the later grave cut for Feature 3645.

The incomplete, disarticulated remains of a neonate were found in the grave fill of Feature 3643. The bones of this individual may derive from an earlier burial in this location that was subsequently disturbed by later interments. However, given that this individual is represented solely by cranial elements, as well as the right scapula and humerus, it likely represents a secondary re-deposition of skeletal remains at the time Sk. 19451 was interred—no other skeletal elements potentially associated with this individual were found in any of the subsequent grave fills in this sequence.
Feature 3645

Feature 3645 contained the primary disturbed burial of a middle adult male, Sk. 20457. Only the feet, ossa coxae, forearms, and hands were found articulated and in situ (Fig. 5). The rest of the skeleton appears to have been disinterred when the grave cut for the subsequent interment of Sk. 20430 (Feature 3686; see below) was dug. Isolated skeletal elements found in the fill of Feature 3686 and also the fill of the later cut, Feature 3639, likely belong to Sk. 20457. The skeleton appears to have been placed in a flexed position on its left side with the head oriented to the west. No artifacts were found in association with this burial.

Feature 3686

Directly above Feature 3645 lay Feature 3686, which contained the primary disturbed burial of a middle adult male, Sk. 20430 (Fig. 6). The body was placed on its back (supinely but leaning slightly toward its left side) in a tightly flexed position with the head oriented to the west. No artifacts were found in association with this burial. The skull, atlas, and axis were not recovered, but the presence of the hyoid bone and ossified thyroid cartilage in anatomical position indicates that the skull must have been intact at the time of interment. Furthermore, a lack of cut marks on the remaining cervical vertebrae and no apparent displacement of the infracranial skeleton suggest that the ligaments and other soft tissue structures holding the skull in place were decayed sufficiently to allow the removal of the skull and first two cervical vertebrae with little effort. Based on this evidence, the missing skeletal elements of Sk. 20430 appear to have been intentionally removed at some point after the body was initially interred, likely via a retrieval pit (see below).

Skull retrieval pit, Feature 3639

Feature 3639 (Fig. 7) consists of a circular pit lined with the disarticulated and poorly preserved skeletal remains of at least two individuals represented by...
long bones, additional infracranial elements, and two crania, Sk. 19450 and Sk. 19493. Sk. 19450 is a poorly preserved adult cranium (possibly male) found on the northwest edge of the cut. The first cervical (atlas) vertebra was found under the cranial base, but there were no cut marks present, which would seem to indicate that these elements were moved after initial decomposition of the articulation between the atlas and axis. Sk. 19493 is represented by a poorly preserved cranium of an adult of indeterminate sex. It was found isolated on the southern edge of the cut.

With the aid of a series of georeferenced 3D models taken at multiple stages during the excavation of the burials in Building 129, the sequence of events becomes clearer (Fig. 8). The cut for this pit can be seen clearly above the region of the head of the underlying primary interment Sk. 20430 in Feature 3686 and appears to represent a “skull retrieval pit” that was dug in order to access and remove the skull of this earlier burial (Fig. 8, left). The disarticulated skeletal elements found in the grave fill of Feature 3639 (Fig. 8, middle) were carefully placed within the cut after the retrieval of the skull of Sk. 20430 (Fig. 8, right).

Discussion

The final stage in a series of funerary acts carried out in the southeast area of Building 129 entailed the deliberate targeting of the skull of the primary interment in Feature 3686. Unlike some cases of missing crania in primary burials observed at Çatalhöyük, the disturbance of Feature 3686 did not result from the cutting of a grave for a subsequent burial, but rather from an excavated pit expressly targeting the skull of Sk. 20430. This represents one of the few times that the access point dug to facilitate the retrieval of a cranium and mandible has been stratigraphically demonstrated in the Near East (see Goring-Morris and Horwitz 2007 for an example from Kfar HaHoresh in the Levant).

It has been postulated previously at Çatalhöyük that skeletal elements removed from a burial context are often re-deposited in the same location at a later date, often at the end of a house occupation or platform use-life (Haddow et al. 2016). It is possible that one of the crania and some of the infracranial remains originate from the first burial in this sequence, that of Sk. 20457 in Feature 3645; much of the skeleton of this individual was removed during the interment of Sk. 20430. Due to the poor preservation of the skeletal elements lining the retrieval pit, it is impossible to confirm this scenario. However, even if 2 of the 7 isolated crania/skulls found in Building 129 derive from the primary disturbed skeletons (Sk. 20457 and Sk. 20430) found here, there are still 5 additional crania/skulls for which infracranial skeletons have yet to be accounted. Feature 3684 (Fig. 4) contained the primary skeleton of a mature adult male along with 2 isolated crania and a large number of disarticulated infracranial bones. Feature 3630 (Fig. 4), located immediately to the north of Feature 3684, contained the primary skeleton of a child along with an isolated cranium, a skull, and numerous disarticulated and partially articulated infracranial skeletal elements, including a fully articulated forearm and hand. As these burials immediately to the north of the skull retrieval sequence have not disturbed any earlier inhumations, the isolated crania and skull (along with the other disarticulated skeletal elements) must have been introduced from another location.

“Headless” Bodies

The relatively small number (n = 15) of “headless” primary skeletons recovered to date (3% of all primary skeletons; Table 1), and the complete absence of empty
or robbed-out grave cuts in buildings preclude primary inhumations as the main source of isolated crania and skulls at Çatalhöyük. The skull was completely removed from 12 of these individuals, including 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. In the other 3 cases, only the cranium was removed; these individuals include 2 old adult females (50+ years of age at death) and 1 adolescent (Pilloud et al. 2016:4, with an additional individual since added to the tally). In the case of the 2 old adult females and 1 of the adolescents, only the crania were removed. In terms of temporal distribution, the occurrence of “headless” primary burials fluctuates throughout the occupation of Çatalhöyük, only ever exceeding 5% of the total number of stratified individuals in Level North J/South S-T (6400–6000 cal B.C.; Fig. 9).

Except for one case, each of these individuals was interred beneath the floor of a house. The exception is Sk. 19593 (Fig. 10), which was found in the post-abandonment infill of Building 114. The cranium and the first six cervical vertebrae of Sk. 19593 were missing, along with the left upper limb, but the mandible and hyoid bone remained in anatomical position. A number of single-rooted maxillary teeth were also recovered, which attests to the erstwhile presence of the cranium. The lack of a burial cut and the partially extended and prone position of the skeleton suggest that this individual, an adolescent, was dumped unceremoniously onto the floor prior to the infilling of Building 114 after its abandonment (see Farid 2014a:92–93 for discussion of house closure practices at Çatalhöyük). The body of this individual may have been left to decompose before the cranium and cervical vertebrae were removed and the building infilled, as there is no stratigraphic evidence for a retrieval pit targeting the head, and no cut marks are visible on the

Table 1. Temporal distribution of “headless” individuals from primary burials (N = 15), and isolated crania and skulls in secondary (N = 16) and tertiary (MNI = 43) contexts in relation to all stratified individuals at Çatalhöyük (calibrated 14C dates are subject to change).

<table>
<thead>
<tr>
<th>All Stratified Individuals (N = 485)</th>
<th>Headless Individuals (N = 15)</th>
<th>Secondary Crania (N = 16)</th>
<th>Tertiary Crania (MNI = 43)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TP</td>
<td>24</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>North J/South S-T</td>
<td>14</td>
<td>1</td>
<td>North J/South S-T</td>
</tr>
<tr>
<td>North I/South R</td>
<td>39</td>
<td>0</td>
<td>North I/South R</td>
</tr>
<tr>
<td>North H/South P-Q</td>
<td>86</td>
<td>4</td>
<td>North H/South P-Q</td>
</tr>
<tr>
<td>North G/South N-O</td>
<td>214</td>
<td>4</td>
<td>North G/South N-O</td>
</tr>
<tr>
<td>North F/South L-M</td>
<td>86</td>
<td>4</td>
<td>North F/South L-M</td>
</tr>
<tr>
<td>North E/South G-K</td>
<td>22</td>
<td>1</td>
<td>North E/South G-K</td>
</tr>
</tbody>
</table>

Figure 9. Chart showing temporal changes in proportion of “headless” individuals and secondary and tertiary isolated crania and skulls at Çatalhöyük.
mandible or cervical vertebrae. In addition to cattle, sheep/goat, and pig bone, a large amount of disarticulated and partially articulated human bone was recovered from this infill, including two isolated human crania (neither of which belongs to Sk. 19593, based on age estimates). This case bears a resemblance to the “funerary feast” described by Goring-Morris and Horwitz (2007) at Kfar HaHoresh, in which the headless skeleton of a young male was found above a large deposit of wild cattle (aurochs) bones. The skull of the individual had apparently been removed at a later date via a targeted retrieval pit (Goring-Morris and Horwitz 2007:906).

Isolated Crania and Mandibles

Unlike many Levantine Neolithic sites such as Jericho (Kenyon and Holland 1981), ‘Ain Ghazal (Rollefson 1983), Tell Qarassa North (Santana et al. 2012), Beisamoun (Ferembach and Lechevallier 1973), Tell Ramad (Ferembach 1969, 1970), and Tell Aswad (Kuijt and Goring-Morris 2002; Stordeur and Khawan 2007), as well as Anatolian sites such as Köşk Höyük (Bonogofsky 2005; Özbek 2009), Çayönü (Özdoğan 1999; Özdoğan and Özdoğan 1998) and Nevali Çori (Hauptmann 1999), isolated crania and skulls found at Çatalhöyük are rarely found in caches. There are cases of multiple isolated crania (and sometimes skulls) found in association with disturbed primary interments as the result of successive intercutting burials in the same location, but it is likely that these derive from the disturbed primary skeletons themselves, rather than being true secondary re-depositions (see, e.g., burial Feature 3010 in Farid 2014b). In these contexts, it is often difficult to re-associate isolated crania with the disturbed infracraniac skeletal elements with any degree of confidence; as such, these ambiguous cases were excluded from the tally of isolated crania presented here. As a result, the number of true isolated crania at Çatalhöyük may be under-reported here, but we feel it is preferable to be conservative in our estimations.

Finds of isolated crania and skulls at Çatalhöyük can be divided into two main depositional contexts: (1) secondary deposits accompanying primary burials and (2) tertiary (i.e., non-burial) deposits occurring in post-abandonment building infills, external spaces such as middens, as well as construction layers within occupied buildings. The most striking difference between these two contexts is that crania found in association with primary burials, while often fragmented, are largely complete, typically retaining elements of the facial skeleton and much of the dentition (although single-rooted anterior teeth are often missing postmortem). Crania and mandibles recovered from tertiary contexts, however, especially from middens, are usually extremely fragmented and incomplete; they are often represented only by calvaria—the facial skeleton, dentition, and cranial base are rarely present.

Secondary contexts

There are 6 recorded examples of isolated skulls and 10 crania found in association with primary burials at Çatalhöyük (Table 2). Of the isolated skulls, 4 belong to adults (1 probable female and 3 male or probable male individuals), and 2 belong to children (3–12 years of age). Of the isolated crania, 7 belong to adults (2 female and probable female individuals, 1 probable male, and 4 individuals of indeterminate sex), 2 to children, and 1 to a neonate. In most cases it is clear that these skulls or crania were placed in the grave with the primary skeletons at the same time, as in the case of the plastered skull Sk. 11330 in burial Feature 1517 (Building 42) (Boz and Hager 2013; Sadarangani 2014), the neonate cranium Sk. 30190 found above the shoulder of child burial in Feature 7330 (Building 108), and the two crania found within burial Feature 3684 (Building 129). Based on stratigraphic evidence, however, some of these primary burials appear to have been reopened at a later date in order to place isolated crania (and sometimes other skeletal elements) near the earlier primary inhumation. For example, the skull retrieval pit Feature 3639 in Building 129 (described above) was also used to re-deposit two crania and a large number of disarticulated infracraniac skeletal elements directly on top of the adult male primary burial, Sk. 20430 in Feature 3686. Another example is the burial of an adult female primary skeleton Sk. 20832 in Feature 7011 (in Building 96) that

Figure 10. Adolescent Sk. 19593 with missing cranium. This individual was found in the post-abandonment infill of Building 114.
was reopened to place the cranium of an adult probable female (Sk. 20830) next to it.

With regard to temporal distribution (Fig. 9), the proportion of isolated crania found in association with primary burials relative to the total number of individuals peaks during Level North H/South P-Q (6400–6000 cal B.C.) and declines rapidly in subsequent occupation levels. The plastered and painted skull from Building 42 (Level North I/South R, 6400–6000 cal B.C.) represents the latest occurrence of an isolated cranium and mandible associated with a primary burial found to date at Çatalhöyük.

Tertiary contexts

Crania and mandibles recovered from tertiary (i.e., non-burial) contexts can be divided into three main categories: those found in (1) middens, (2) post-abandonment building infill, and (3) building construction layers. Because the crania and mandibles found in these contexts are typically incomplete and highly fragmented, only the most intact specimens could be assigned to clear-cut age ranges and sex categories (for adult specimens). The numbers reported here are presented as a minimum number of individuals (MNI) per “space,” which in the Çatalhöyük excavation system refers to a bounded area generally defined by building walls (Farid 2014c:46). At least 43 individuals represented primarily by fragmentary cranial vaults and/or mandibles have been recovered from 37 separate spaces at Çatalhöyük (Table 3). The majority (88%) of the skeletal remains recovered from tertiary contexts derive from post-abandonment building infills (n = 20) and external midden spaces (n = 18). A smaller proportion (n = 5) were found in the construction layers of house platforms and hearth installations. As with the isolated crania and mandibles from secondary contexts, adults comprise the bulk (81%) of the tertiary remains recovered at Çatalhöyük. The most complete crania, those that retain portions of the facial skeleton and/or cranial base, are recovered almost exclusively from building infills, while the more fragmented and incomplete specimens derive from middens.

With regard to temporal change across the site (Fig. 9), tertiary deposits of isolated crania and/or mandibles occur throughout the various occupation levels of the site, always in equal or higher proportions than “headless” primary burials or secondarily deposited crania associated with primary burials. Their occurrence, however, increases dramatically after the Level North I/South R occupation (6400–6000 cal B.C.), reaching a peak of 36% of the total number of individuals excavated in Level North I/South S-T.
Apart from tertiary deposits of isolated crania and/or mandibles, which reach a peak during the later levels of the site, the removal of crania from primary burials and the re-deposition of isolated crania (with or without mandibles) in primary burials appear to have occurred most frequently in the middle occupation levels of the site (Levels North G/South N-O and North H/South P-Q, 6500–6400 cal B.C.); this trend is consistent with other data sets that show increasingly elaborate and substantial houses, greater symbolic complexity, and higher population densities in these middle levels (Hodder and Doherty 2014).

The consistent surplus of isolated secondary and tertiary crania/mandibles in relation to “headless” primary burials at Çatalhöyük accords with synthesized burial data from other Near Eastern Neolithic sites (Bocquentin et al. 2016). At Boncuklu Höyük, for example, a site 10 km north of Çatalhöyük and at least a thousand years older, isolated crania are often recovered from external spaces, but “headless” primary skeletons have, to date, not been recovered (Baird et al. 2016). These findings indicate, again, that post-inhumation skull retrieval was not the only means of obtaining crania.

Digging for Answers

Recent observations at Çatalhöyük, in combination with a reappraisal of some of James Mellaart’s previous ideas regarding secondary burial practices (e.g., Mellaart 1964:92–93), have provided increasing evidence for a period of delay between the death and burial of certain individuals, perhaps tied to seasonal activities, such as the replastering and painting of house walls, benches, and platforms, or to generational events, such as the periodic abandonment and reconstruction of houses (Fairbairn et al. 2005; Haddow et al. 2016; Matthews 2005). The evidence for protracted liminal funerary rites derives primarily from

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**Table 3.** Isolated elements of the skull (crania and/or mandibles) found in tertiary contexts at Çatalhöyük. Ranked by occupation level in descending order.

<table>
<thead>
<tr>
<th>Building</th>
<th>Space</th>
<th>MNI</th>
<th>Level</th>
<th>Deposition Context</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>404</td>
<td>1</td>
<td>TP</td>
<td></td>
<td>building infill</td>
<td>adult cranial vault fragments</td>
</tr>
<tr>
<td>416</td>
<td>1</td>
<td>TP</td>
<td></td>
<td>midden</td>
<td>adult cranial fragments</td>
</tr>
<tr>
<td>61</td>
<td>438</td>
<td>1</td>
<td>TP</td>
<td>building infill</td>
<td>adult cranial fragment</td>
</tr>
<tr>
<td>72</td>
<td>428</td>
<td>1</td>
<td>TP</td>
<td>midden</td>
<td>adult cranial vault fragment</td>
</tr>
<tr>
<td>420</td>
<td>1</td>
<td>TP</td>
<td></td>
<td>midden</td>
<td>adult cranial vault fragments</td>
</tr>
<tr>
<td>119</td>
<td>1</td>
<td>North J/South S-T</td>
<td>midden</td>
<td>building infill</td>
<td>adult cranial vault fragments</td>
</tr>
<tr>
<td>44</td>
<td>1</td>
<td>North J/South S-T</td>
<td>midden</td>
<td>building infill</td>
<td>adult cranial vault fragments</td>
</tr>
<tr>
<td>129</td>
<td>2</td>
<td>North J/South S-T</td>
<td>construction (platform)</td>
<td>child cranial vault fragments</td>
<td></td>
</tr>
<tr>
<td>279</td>
<td>1</td>
<td>North I/South R</td>
<td>midden</td>
<td>adult mandible fragments from two individuals</td>
<td></td>
</tr>
<tr>
<td>56</td>
<td>122</td>
<td>1</td>
<td>North I/South R</td>
<td>building infill</td>
<td>adult cranial fragments</td>
</tr>
<tr>
<td>45</td>
<td>238</td>
<td>1</td>
<td>North H/South P-Q</td>
<td>building infill</td>
<td>adult cranial vault fragments</td>
</tr>
<tr>
<td>260</td>
<td>1</td>
<td>North H/South P-Q</td>
<td>midden</td>
<td>adult cranial vault fragment and right mandible</td>
<td></td>
</tr>
<tr>
<td>261</td>
<td>1</td>
<td>North H/South P-Q</td>
<td>midden</td>
<td>adult probable female left mandible (no teeth)</td>
<td></td>
</tr>
<tr>
<td>132</td>
<td>1</td>
<td>North H/South P-Q</td>
<td>midden</td>
<td>adult cranial vault fragments</td>
<td></td>
</tr>
<tr>
<td>329</td>
<td>1</td>
<td>North H/South P-Q</td>
<td>midden</td>
<td>adult frontal bone</td>
<td></td>
</tr>
<tr>
<td>344</td>
<td>1</td>
<td>North H/South P-Q</td>
<td>midden</td>
<td>adult cranial vault fragment</td>
<td></td>
</tr>
<tr>
<td>371</td>
<td>1</td>
<td>North H/South P-Q</td>
<td>midden</td>
<td>adult cranial vault fragment</td>
<td></td>
</tr>
<tr>
<td>372</td>
<td>1</td>
<td>North H/South P-Q</td>
<td>midden</td>
<td>adult male cranial vault and mandible</td>
<td></td>
</tr>
<tr>
<td>427</td>
<td>1</td>
<td>North H/South P-Q</td>
<td>midden</td>
<td>neonate cranial vault fragments</td>
<td></td>
</tr>
<tr>
<td>59</td>
<td>311</td>
<td>1</td>
<td>North G/South N-O</td>
<td>building infill</td>
<td>adult cranial vault fragments</td>
</tr>
<tr>
<td>1</td>
<td>71</td>
<td>1</td>
<td>North G/South N-O</td>
<td>construction (platform)</td>
<td>child cranial vault fragment</td>
</tr>
<tr>
<td>77</td>
<td>336</td>
<td>2</td>
<td>North G/South N-O</td>
<td>building infill</td>
<td>cranial fragments (one adult and one child)</td>
</tr>
<tr>
<td>114</td>
<td>87</td>
<td>2</td>
<td>North G/South N-O</td>
<td>building infill</td>
<td>Two crania (one adult probable male and one adolescent)</td>
</tr>
<tr>
<td>114</td>
<td>88</td>
<td>1</td>
<td>North G/South N-O</td>
<td>building infill</td>
<td>adult cranial vault fragments</td>
</tr>
<tr>
<td>3</td>
<td>86</td>
<td>1</td>
<td>North G/South N-O</td>
<td>construction (platform)</td>
<td>neonate cranial vault fragments</td>
</tr>
<tr>
<td>3</td>
<td>86</td>
<td>2</td>
<td>North G/South N-O</td>
<td>building infill</td>
<td>two crania (one young adult female and one adolescent)</td>
</tr>
<tr>
<td>60</td>
<td>1</td>
<td>North G/South N-O</td>
<td>midden</td>
<td>adult cranial vault fragments</td>
<td></td>
</tr>
<tr>
<td>79</td>
<td>134</td>
<td>1</td>
<td>North G/South N-O</td>
<td>building infill</td>
<td>adult probable male cranium</td>
</tr>
<tr>
<td>80</td>
<td>135</td>
<td>1</td>
<td>North G/South N-O</td>
<td>building infill (post retrieval pit)</td>
<td>adult cranial vault fragment</td>
</tr>
<tr>
<td>97</td>
<td>469</td>
<td>1</td>
<td>North G/South N-O</td>
<td>building infill (storage bin)</td>
<td>adult cranial vault</td>
</tr>
<tr>
<td>89</td>
<td>379</td>
<td>1</td>
<td>North G/South N-O</td>
<td>building infill</td>
<td>older adult female plastered mandible</td>
</tr>
<tr>
<td>119</td>
<td>512</td>
<td>1</td>
<td>North F/South L-M</td>
<td>building infill</td>
<td>adult cranial vault fragments/mandible and teeth</td>
</tr>
<tr>
<td>49</td>
<td>100</td>
<td>1</td>
<td>North F/South L-M</td>
<td>construction (hearth)</td>
<td>adult cranial fragments</td>
</tr>
<tr>
<td>49</td>
<td>334</td>
<td>1</td>
<td>North F/South L-M</td>
<td>construction (platform)</td>
<td>adult cranial vault fragments</td>
</tr>
<tr>
<td>52</td>
<td>94</td>
<td>1</td>
<td>North F/South L-M</td>
<td>building infill</td>
<td>adult cranial vault fragments</td>
</tr>
<tr>
<td>17</td>
<td>170</td>
<td>1</td>
<td>North E/South G-K</td>
<td>building infill (post retrieval pit)</td>
<td>old adult female cranium (matched with primary burial in B.17)</td>
</tr>
<tr>
<td>199</td>
<td>1</td>
<td>North E/South G-K</td>
<td>midden</td>
<td>adult cranial vault fragments</td>
<td></td>
</tr>
<tr>
<td>181</td>
<td>1</td>
<td>North E/South G-K</td>
<td>midden</td>
<td>adult right mandible</td>
<td></td>
</tr>
</tbody>
</table>
the variation in the articulations among skeletal elements and the degree of flexion observed among skeletons found in primary burials. Some are fully articulated, while others are missing certain skeletal elements and/or show signs of paradoxical disarticulation of joints, with labile joints such as those of the hands and feet remaining in articulation but with normally more persistent joints, such as those of the weight-bearing joints of the limbs, showing signs of disarticulation (e.g., Maureille and Sellier 1996; Sellier and Bendezu-Sarmiento 2013). Additionally, many individuals were interred in extremely hyperflexed positions, with their knees close to their chest and their femora, tibiae, and fibulae in parallel alignment. Such positions would be nearly impossible to achieve with a fully fleshed body. Based on these observations, it is likely that some bodies were processed postmortem in such a way as to reduce or remove soft tissue mass, while attempting to maintain the anatomical integrity (i.e., articulation) of the body itself. The manner in which this processing may have taken place is currently unclear, although our hypotheses include manual defleshing of the corpse with stone tools, desiccation, and exposure of bodies to vulture scavenging (see Pilloud et al. 2016 for detailed discussion). The degree of skeletal articulation, the completeness of the skeleton, and its preservation state may provide some indication of the interval between death and interment. In fact, a number of ostensibly primary inhumations have been excavated recently that bear taphonomic indications of having been kept aboveground for a substantial amount of time. For example, within the sequence of burials in Building 129, Feature 7714 (Fig. 4) contained the poorly preserved, prone, and hyperflexed skeleton of an adult of indeterminate sex, Sk. 22620, located immediately to the east of Feature 3630. The skeleton was largely complete except for most of the right upper limb and left forearm. The cervical vertebrae were also absent, suggesting that the skull had been placed in a position approximating anatomical position. Disarticulated infracranial remains of an additional adult of indeterminate sex were also found in direct association with the Sk. 22620. Overall, the preservation and the extremely hyperflexed and partially articulated positioning of the remains give the impression of a tightly bundled package of bones containing at least two adult individuals (for additional examples of potentially delayed burials see description of burials from Building 132 in Haddow et al. 2015).

If the practice of delayed burial is confirmed at Çatalhöyük, it would likely have necessitated the temporary storage of the dead until such time as the interment took place. In some burials, especially from burned house contexts where organic preservation is enhanced, there is evidence for the use of cordage, reed mats, and basketry, as well as textiles and animal hides used to package the body and maintain its hyperflexed position. However, unlike the Neolithic Anatolian site of Çayönü, with its so-called skull building (Le Mort et al. 2000; Özbek 1986; Özdoğan 1999; Özdoğan and Özdoğan 1998), no direct evidence for the temporary storage or processing of human remains has been found to date at Çatalhöyük. In addition to the fragmentary cranialia and mandibles described above, tertiary deposits of disarticulated infracranial skeletal elements have also been recovered from middens and other external spaces at Çatalhöyük, indicating that some of these areas may have been used to process and dismember bodies. A cursory assessment of skeletal part representation from these contexts (a more detailed analysis is currently under way) shows that most of the adult infracranial skeletal elements consist of smaller bones such as those of the distal extremities (i.e., hands and feet)—precisely the type of elements that can be left behind when bodies are processed and relocated as part of a secondary funerary treatment. This interpretation seems more plausible than their occurrence resulting from the wholesale disinterment and dumping of skeletons from primary intramural burials, as there is no evidence at Çatalhöyük for empty or robbed-out graves within any of the excavated houses. It is also conceivable that corpses were stored or processed away from the settlement. Test excavations conducted near the base of the mound in the 1990s revealed a series of external pits containing a sizable concentration of fired clay objects and animal bone, as well as a smaller amount of disarticulated human bone “apparently treated no differently in terms of discard to the other bone” (Roberts et al. 2007:570). An initial study of part representation seems to indicate that these were once primary burials. However, the stratigraphic and chronological relationships of these off-site deposits to the settlement itself are still poorly understood and require further investigation.

A number of researchers have raised the possibility that segments of the population were never afforded primary burials within Pre-Pottery Neolithic B settlement sites elsewhere in the Near East, where numbers of burials recovered are often low in relation to overall settlement sizes (Banning 1998; Bienert et al. 2004; Goring-Morris 2005; Rollefson 2001). At Çatalhöyük, however, population estimates based on occupants per building and overall site size are not incompatible with the proportion of burials excavated to date (Cessford 2005). Furthermore, previous demographic analyses have failed to demonstrate any age or sex biases among the excavated primary skeletal assemblage (Hillson et al. 2013; Molleson et al. 2005). If the practice of delayed burial did occur at Çatalhöyük,
however, many of what are currently considered primary burials should be reclassified as secondary burials, because these individuals would have been kept aboveground for a period of time before their final deposition under house floors. The possibility that a subset of the population was selected for delayed burial had not been considered previously when demographic profiles were created for the Çatalhöyük skeletal assemblage. Thus, while the overall skeletal assemblage may lack discernible demographic anomalies, there may be selection biases present within the secondary burial category that have not yet been revealed. While the prevalent narrative of Neolithic social organization at Çatalhöyük and other Near Eastern sites typically emphasizes a “fierce egalitarianism” (Hodder 2014:5), such differential burials may point to emergent social distinctions between inhabitants of Çatalhöyük, in which members of society received differing funerary treatments based on status, ascribed or achieved.

Archaeological and ethnographic parallels

The variable depositional contexts and the anatomical representation observed at Neolithic Çatalhöyük—decapitation, isolated crania, isolated skulls, and partially articulated and isolated infracraniial skeletal elements—are suggestive of multiple intentions and motivations on the part of the Neolithic inhabitants of Çatalhöyük. A number of researchers have documented increasing evidence for postmortem manipulation of human remains in prehistoric European funerary contexts. Rather than a single rite involving rapid interment, these may consist of a series of multi-stage rites/treatments that occur over an extended period of time—perhaps generations. These practices may involve element removal and potentially other treatments such as desiccation/mummification (Booth et al. 2015; Booth and Madgwick 2016; Parker Pearson et al. 2005), defleshing (Bello et al. 2016; Robb et al. 2015; Russell 1987a, 1987b; Toussaint 2011), and, in some cases, cannibalistic behaviors, both exocannibalism (the consumption of flesh from out-group members, i.e., enemies, for ritual or nutritional purposes; e.g., Cáceres et al. 2007; Fernández-Jalvo et al. 1996; Villa et al. 1986a, 1986b; Villa and Mahieu 1991) and ritualized endocannibalism (the consumption of flesh from in-group members as part of a mortuary ritual; e.g., Bello et al. 2015; Boulestin et al. 2009), which has recently been reinterpreted as exocannibalism (Boulestin and Coupey 2015). Although these examples come from better-studied European contexts stretching from the Palaeolithic to the Bronze Age, similar rites have been identified in the Neolithic Near East, including, to date, defleshing of the dead (Erdal 2015) and funerary cannibalism (Croucher 2010; Gauld et al. 2012; Kansa et al. 2009), in addition to skeletal element removal.

Ethnographic and archaeological evidence also illustrates the diversity of motivations behind the practice of cranial collection and secondary burial practices within a single social group, for example, divination, memorialization, and status among Torres Strait Islanders (Bonney and Clegg 2011), and veneration of ancestors and head-hunting of enemies in the Marquesas Islands (Valentin and Rolland 2011). However, in light of the very similar use of skulls and crania from tribal members and enemies alike in Melanesia, Bonogofsky and Graham (2011) highlight the problems archaeologists face in attempting to differentiate between the skulls of ancestors and enemies based on treatment alone. Schulting (2015) notes the same problem for Mesolithic European treatments in which the head could be targeted within groups for ritualistic reasons as well as between groups in a conflict situation (cf. Testart 2008, 2009). In South American contexts, Duncan (2005) makes a similar point, while noting that distinguishing veneration from violation based on the manner in which bodies of the deceased were manipulated is difficult because the treatments mimic one another, despite clearly separate intentions on the part of participants. Comparative biomolecular and stable isotope analyses of isolated crania and “headless” skeletons are potential means of addressing these issues. For example, a recent strontium, carbon, and nitrogen isotope study of isolated crania from precontact central California (Eerkens et al. 2016) suggests that they derive from the same local population as the primary burials themselves and thus are less likely to represent trophy heads taken from outsiders. Returning to the Neolithic Near East, Pearson’s (forthcoming) carbon and nitrogen stable isotope analysis of isolated crania at Boncuklu Höyük indicates that these individuals had a different diet than that of individuals recovered from primary intramural burials and may represent outsiders to the community, or a subset of the community who consumed different types of food (Baird et al. 2016). The decipherment of such social distinctions, so often very subtle, are vital to our understanding of prehistoric patterns of funerary variability.

At Neolithic Tell Qarassa North in Syria, Santana et al.’s (2012) analysis of a cache of crania and mandibles with what they characterize as intentionally mutilated facial skeletons suggests a further range of motivations for skull retrieval, including denigration, negation, punishment, and indifference. However, while such motives may well have existed, our observations of isolated crania in similar states of preservation at Çatalhöyük lead us to believe that, rather than being intentionally mutilated or defaced, they are the result of long-term curation and use that
eventually led to the disintegration of the facial skeleton. The corresponding lack of a cranial base might also be explained by intentional modification/removal of parts of the basicranium in order to mount the cranium for display purposes. Modifications to the cranial base for mounting and display have been observed in a number of contexts worldwide, for example in Spanish Colonial Georgia, (Stojanowski and Duncan 2011:185), as well as trophy heads from Peru (Forgey and Williams 2005:261–262), Borneo (Okamura and Siew 2013:689–690), and the Marquesas Islands (Valentin and Rolland 2011:108–111, Table 4.1).

By focusing primarily on treatments of the skull, however, we run the risk of overlooking the equally frequent secondary manipulations of elements of the infracranial skeleton observed at Çatalhöyük and other Near Eastern Neolithic sites, such as Kfar Ha-Horesh (Goring-Morris 2005) and Tell Qarassa North (Santana et al. 2015) in the Levant, and Nevali Çori and Çayönü in Anatolia (Özdoğan and Özdoğan 1998). The presence of isolated or partially articulated infracranial bones in association with a secondarily deposited cranium, for example, may have entirely different implications for the nature of the funerary rite than if the cranium was found without them. Such patterns of funerary behavior have parallels in the practices of mummification, delayed burial, re-opening of graves, and circulation of bones observed at pre-Columbian Moche sites in northern Peru (Millaire 2004; Nelson 1998); these practices have been interpreted as facilitating the manipulation of ancestral remains for use as funerary offerings (Millaire 2004). Furthermore, Booth et al. (2015) argue that the creation of partial or ephemeral mummies from the bodies of genealogically significant ancestors in Bronze Age Britain may have helped legitimize access to land and resources. Mummification of adult males and females was also practiced among the Torres Strait Islanders; such mummies were intended to last the duration of the funerary rites, up to a year after the death of the individual (Bonney and Clegg 2011). Eventually the mummified body would begin to fall apart, at which time the head was removed and sometimes curated for divination purposes, while the rest of the body could be disposed of in a number of ways, including exposure, burial, or cremation (Aufderheide 2003:281–284; Bonney and Clegg 2011). In many of these examples, display seems to be a distinguishing feature of trophy heads, while storage and only occasional exhibition tend to mark venerated crania. These case studies will contribute to the development of an interpretational framework that may eventually illuminate the deeper social meanings of corpse and skeletal manipulations at Çatalhöyük.

**Conclusion**

The variable dispositions of human skeletal remains observed in Building 129 and elsewhere at Çatalhöyük are significant because they provide further intuitions of a more complex and variable set of funerary behaviors than previously discerned. The larger number of isolated crania and skulls recovered from a variety of depositional contexts clearly demonstrates that they cannot have been retrieved from primary burials alone. In their synthesis of skull retrieval data from other Near Eastern Neolithic sites, Bocquentin et al. (2016:43) have reached a similar conclusion. This surplus of crania, in combination with the equally frequent occurrence of isolated and partially articulated infracranial bones in similar contexts, suggests a number of intriguing possibilities, chief among them the practice of delayed burial, wherein the bodies of some members of the Neolithic population were retained as part of an extended, multi-stage funerary rite incorporating a liminal period, possibly seasonal in nature, perhaps much longer. At the end of these rites, the bodies of certain individuals were buried relatively intact, while others appear to have been dis-articulated, the body parts, especially cranial and mandibles, redistributed across a range of depositional contexts, including primary burials (as grave inclusions) and construction layers (perhaps as transitional markers in the life course of houses [e.g., Haddow et al. 2016]), as well as external midden spaces and building abandonment infills (perhaps as ritually discarded objects). This variability in bodily treatment and depositional context reflects a range of postmortem treatment options, some of which have been put forward by Chapman (2010) for the Balkan Neolithic and Chalcolithic periods, including fragmentation of the corpse, removal and recombination of skeletal elements, and the eventual reintegration or substitution of such elements. Such practices have also been described at Tell Qarassa North (Santana et al. 2015:12). Each of these bodily treatments and spatial contexts must have had a particular significance, perhaps related to the status (or some other social marker) of the decedent or those performing the rituals. Our ultimate aim is thus to establish the criteria used by the Neolithic inhabitants of Çatalhöyük to select particular individuals for specific funerary treatments; for example, why were some individuals buried intact and undisturbed (sometimes after a period of delay), while other graves were revisited and bones removed? And why do some individuals appear not to have received primary burial at all? The data and discussion presented here represent the initial stages of a larger program of ongoing bioarchaeological research, including the continued application of thorough excavation, recording, and
comparative methods (including 3D modeling of burial sequences and GIS spatial analysis of the various depositional contexts in which human remains occur), in addition to a detailed archaeoanthropolological approach to the skeletal remains themselves and the burial micro-environment. This interdisciplinary study of skull retrieval, curation, and re-deposition, as well as other secondary burial treatments at Çatalhöyük has the potential to disentangle not only the complex range of funerary behaviors observed at the site but will also be fundamental in elucidating the palaeodemographic composition and social distinctions implicit in the funerary deposition of human remains at the site and, through comparison, elsewhere in the Near East. Only then, through data-driven testing and analyses, combined with cross-cultural comparisons, can we truly begin to address the larger social and cosmological implications of these fascinating socio-cultural practices.

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