

Chapter 2

Patterns of Collective Violence in the Early Neolithic of Central Europe



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Introduction

Violence targeted at the integrity of the human body may affect both individuals and populations and may be intentionally lethal or non-lethal, depending on scale and specific context. Compared to indirect archaeological evidence of violence, like weapons or defensive structures (Christensen 2004), the human skeleton is the sole direct indicator for violent episodes targeted at people that actually occurred in the prehistoric past and which thereby may provide insight into their social meanings (Martin and Harrod 2015). While isolated cases of individual victims of violence are known for several species of fossil hominids (e.g. Zollikofer et al. 2002; Wu et al. 2011; Sala et al. 2015), the archaeological evidence for collective violence, or warfare, defined here as the conscious application of potentially lethal violence by independently acting groups against other such groups, is currently restricted to roughly the last 10,000 years (e.g. Mirazón Lahr et al. 2016). This is likely influenced, in part, by the nature of the archaeological record itself, as the number and density of sites in any given area or time period are not uniformly distributed, and

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sites with preserved human remains become ever sparser with increasing antiquity, thus reducing our chances to uncover solid archaeological evidence for group violence.

In Central Europe, cemeteries or other sites containing high amounts of skeletons only became numerous with the advent of the Early Neolithic and its main cultural group, the *Linearbandkeramik* (hereafter LBK; c.5600–4900 BC). This is also the time when victims of violence become much more visible in the osteoarchaeological record. This is especially true of the victims of collective lethal violence, for which the LBK has become almost notorious since the discovery of the first Early Neolithic massacre mass grave at Talheim, Germany (Wahl and König 1987; Wahl and Trautmann 2012). Since then, several other such sites have been found and analysed. In fact, the number of individuals excavated from currently known LBK mass violence sites is such that it now allows quantitative analysis. This may be informative not only about the style of warfare practised at the time, and of the weapons used (Wahl and Strien 2007), but also about the demography of victims as well as warfare-related practices such as torture, dismemberment, and mutilation, in short, about the patterns of collective violence practised by the first farmers of Central Europe.

As shown by numerous ethnographic and archaeological studies of ancient warfare, the conscious decision to attack and violently kill others often has its ultimate roots in real or imagined competition over geographically situated and limited resources. This is especially common at times of climatic instability, when the survival of the group is perceived to be threatened by fluctuating and thereby unpredictable, agricultural productivity (e.g. Maschner and Reedy-Maschner 1998; Otterbein 2004). However, unravelling the context of each act of collective violence becomes all the more challenging with increased antiquity due to the paucity of corroborating information. When considering chronologically remote prehistoric societies, whose environments, worldviews, and perceptions of themselves and others are largely unknown to us, interpretation is difficult and will always remain speculative, at least partly. Nevertheless, robust insights into past societies and the violent events that impacted on them (both as individuals and as members of victimised groups) may be gained by grounding our analyses and interpretations in observable and objectively describable patterns. This chapter attempts such an analysis based on the human skeletal record for collective lethal violence in the Early Neolithic of Central Europe.

Burial and Violence in the Linearbandkeramik

Generally, the identification of patterns of violence is grounded in the reliable recognition of past violence itself. In bioarchaeological terms, this may be evident from either skeletal injuries or the context in which the human skeletal remains of suspected violence victims are found – and occasionally from both (Martin and Harrod 2015). Especially if skeletal remains and burial features are adversely affected by taphonomic damage, opinions are sometimes divided as to what constitutes reliable evidence for lethal violence and what is simply the result of naturally

occurring diagenetic processes (e.g. Mirazón Lahr et al. 2016; Stojanowski et al. 2016). Without going into too much methodological detail here, which would be beyond the scope of the present paper, perimortem skeletal trauma and deviant deposition have to be evaluated as objectively as possible and always within their specific context.

For the LBK, there is a near-perfect overlap between the two, as individuals with lethal perimortem injuries are mostly found as part of larger groups in disorganised mass graves or as scattered remains at conflict sites (Wahl and König 1987; Teschler-Nicola et al. 1999; Meyer et al. 2015a). These depositional contexts differ greatly from the usual single inhumation burials of the LBK, which are mainly characterised by the careful arrangement and patterned orientation of the bodies within dedicated cemetery areas. Furthermore, these graves often contain distinctive grave goods such as pottery, stone tools and weapons, and bone and shell artefacts (e.g. Nieszery 1995). Cremation burials are also known in the LBK, which show significant amounts of care and energy expended in their making (Trautmann 2006). In contrast, all mass graves and massacre sites lack any recognisable evidence for a similarly elaborate treatment of the dead, as bodies were deposited in a disorganised and commingled manner without any recognisable care, if indeed they were gathered in one spot at all. At times, the dead were not deposited in cemeteries but within settlement sites (Meyer et al. 2014). However, the mass graves discussed in this chapter do not fall into this category either due to the higher number of bodies relative to the settlement burials and their seemingly careless disposal. The practice of burying the dead within villages is now understood to be just another type of normative burial in the LBK mortuary “portfolio”, which likely aimed at providing the deceased with a respectful funerary treatment (Meyer et al. 2014). Although cemetery and settlement burials seem to differ slightly regarding demography and the number and frequency of durable grave goods (Hofmann 2009), they are overall very similar, and sometimes the distinction between them is blurred, for example, when burials are arranged in a cemetery-like pattern within a settlement site (e.g. Krause 1998; Fritsch et al. 2008).

If compared with the normative cemetery or settlement burials, be they cremation or inhumation, the mass graves, as a group, may therefore be regarded as deviant burials, which apparently followed devastating and traumatic events (Meyer et al. 2014; Hofmann 2015) including massacres (i.e. the violent killing of one group of people by another within a very short time and during more or less chaotic circumstances; cf. Dwyer and Ryan 2012) and mass execution (i.e. the systematic killing of restrained victims for reasons deemed more pragmatic than ritual; cf. Otterbein 2000; Meyer et al. *in press*).

Although individuals showing healed skeletal injuries were sometimes interred in traditional cemetery burials, the victims of lethal violence were only rarely included in such burial sites by LBK communities (Petrasch 2006; Bickle and Whittle 2013). A possible reason for such a differential treatment might be that their social units had been destroyed during collective violence events, leaving the disposal of the corpses to others, perhaps even the perpetrators of the violent acts. These “others” would not be expected to invest the same amount of care and effort into the post-mortem

treatment of the deceased, especially if there were larger numbers of them to be disposed of. However, the one LBK mass grave without recognisable perimortem skeletal trauma, namely, Wiederstedt, suggests that disorganised mass graves were possibly also used to quickly dispose of large numbers of deceased from one's own community under special circumstances (see below). This may be the case with victims of epidemic disease, starvation, accidental poisoning, or a variety of other accidents and natural catastrophes, which possibly overtaxed the capacity of the surviving community for arranging a proper burial (Meyer et al. 2014).

It is currently unclear whether violently killed people that were not part of mass fatality events received a special treatment in LBK society, as their overall numbers are still too low for meaningful interpretation (Bickle and Whittle 2013; Fibiger 2014). In isolated cases of cranial trauma, it is also difficult, and sometimes impossible, to differentiate between injuries suffered by accident and injuries resulting from interpersonal violence with a lethal intent.

This short summary of the relationship between violence and burial within the LBK shows that – as far as we currently know – the victims of collective lethal violence were usually deposited simultaneously, as a group, and in a deviant manner vis-à-vis the regular and mostly individual burials found in coeval cemeteries and settlements. Additionally, the precisely contemporaneous nature of the mass fatality population samples allows detailed insights into their demographic structure. This kind of information is especially important as it is not normally preserved in traditional burial sites, which lack the unique “snapshot” element of the mass burials (Bentley et al. 2008; Meyer et al. 2014).

Sites of Collective Violence and/or Deviant Mass Burial

The LBK mass burial sites, which, for the most part, have provided evidence for prehistoric massacres (apparently the most frequent form of lethal perimortem collective violence within LBK communities), are well described in the archaeological literature. For this reason, this chapter solely provides a brief presentation of these sites (Fig. 2.1), focussing in particular on the human skeletal remains and their cranial injuries, which are the sole lesions to be numerous enough to allow for comparative analyses. Further details are available from the literature cited, which include the original site reports as well as key comparative and analytical works. Only the mass grave site of Halberstadt, Germany, will be presented here in more detail, as it is the most recently discovered and analysed LBK mass fatality site and also displays a unique pattern of demography and skeletal injury (Meyer et al. *in press*). This mass grave will then be compared to the other sites (all listed below in the chronological order of their discovery), and the results of this comparison will be discussed, paying special attention to key similarities and differences in the osteoarchaeological quantitative data.

Fig. 2.1 Map of Germany and Austria showing the LBK sites mentioned in the chapter. The mass fatality sites are depicted by solid circles and capital letters, while the other sites discussed in the chapter are marked by open circles and lower case letters. **A** Talheim, **B** Asparn/Schletz, **C** Wiederstedt, **D** Schöneck-Kilianstädten, **E** Halberstadt, **f** Herxheim, **g** Tiefenellern, **h** Vaihingen/Enz (Image: Christian Meyer)



Talheim, Germany (Fig. 2.1, Site A) (Wahl and König 1987; Wahl and Strien 2007; Wahl and Trautmann 2012)

The first evidence of lethal mass violence from the LBK came with the discovery and analysis of the disorganised mass grave at Talheim in southwestern Germany. At this site, about 34 individuals, including similar numbers of subadults and adults of both sexes, were deposited in a pit near a probable LBK settlement. Slightly over half the skeletons showed perimortem injuries consistent with the typical ground stone weapon tools of the LBK. Most traumatic lesions were found on the parietal bones of the skulls, while the frontal and occipital bones were affected to a much lesser degree and almost equally. Overall, the right side of the skull showed slightly more injuries than the left, which might suggest that the victims were, in part, struck down from behind by right-handed attackers while fleeing. As the left half of the frontal bone is the least affected of the major skull bones, a classic face-to-face confrontation seems to have been unlikely for most individuals. Otherwise, the left frontoparietal region would likely be the one with the most injuries, as indicated by various studies of the distribution of cranial trauma (e.g. Fibiger et al. 2013). In any case, the pattern of cranial injuries encountered at Talheim, with all major cranial vault bones affected repeatedly, suggests that the blows were received during a largely uncontrolled situation, in which both victims and attackers were likely able to move about without significant restraint.

Asparn/Schletz, Austria (Fig. 2.1, Site B) (Teschler-Nicola et al. 1996, 1999, 2006; Teschler-Nicola 2012)

The LBK mass fatality site of Asparn/Schletz consists of large ring ditches which contained the partly disarticulated and scattered remains of more than 60 individuals, both subadults and adults. As the site has not been completely excavated, the total number of individuals is currently unknown. Many of the recovered bones show traces of carnivore gnawing, which indicate that the dead had been lying unburied for some time after their violent demise. Apparently, the final layout of the bodies and body parts within the ditches was the result of natural sedimentation following the scattering by carnivores. All of the 33 recovered and analysed skulls from the site show signs of perimortem violence which clearly focussed on the parietal bones, similarly to Talheim. The frontal bones are affected less frequently, followed by the occipital bones, which show the least amount of trauma. The right sides of the skulls show slightly more injuries than the left sides, but the difference is negligible. As slightly more injuries are found on the frontal than the occipital bones, the cranial trauma pattern at Asparn is slightly more indicative of a face-to-face confrontation than that described for Talheim, but overall they appear rather similar, once again suggesting an uncontrolled lethal conflict situation where both attackers and victims were able to move more or less unrestrained.

Wiederstedt, Germany (Fig. 2.1, Site C) (Meyer et al. 2004, 2013, 2014)

The disorganised mass grave found at Wiederstedt in Saxony-Anhalt, Germany, contained the articulated skeletal remains of ten individuals, eight of them biological subadults. The osteological analysis revealed no traces of blunt force cranial injuries similar to those found at Talheim or Asparn. This very much suggests that the cause of death was likely non-violent for these individuals; in any case massive cranial trauma can be excluded. Although the absence of violent injuries in skeletal remains does not equate to evidence of the absence of violence, which might have affected soft tissues only, the previously described examples of Talheim and Asparn, along with many other sites, show that Neolithic lethal violence – if present – is usually quite evident in cranial remains. Therefore, epidemic disease, starvation, poisoning, or other catastrophic events, intentional or accidental, might have been responsible for the deaths of these individuals. Despite the lack of recognisable skeletal trauma, the bodies were collected and deposited in a deviant burial feature like the violence victims from Talheim and likewise did not receive any careful funerary treatment.

Schöneck-Kilianstädten, Germany (Fig. 2.1, Site D) (Lohr 2013; Meyer et al. 2013, 2014, 2015a; Lohr et al. 2017)

A disorganised mass grave containing the skeletal remains of at least 26 individuals was discovered at the site of Schöneck-Kilianstädten in Hesse, Germany. Preservation of the bones was partly poor; therefore it could not be determined if all remains were still articulated (but most apparently were). Additionally, some evidence of trauma will undoubtedly have been destroyed over time, probably more so than at other mass fatality sites, where bones seem better preserved. Nevertheless, a multitude of cranial injuries were recorded, which not only affected the major bones of the cranial vault but also frequently the mandible and temporal bones. Overall, the left side of the skull shows more injuries than the right side, which is in contrast to the other massacre sites of Talheim and Asparn. With the left parietal and the left half of the frontal bone sustaining most injuries, this pattern is more similar to that expected for a face-to-face confrontation. But apart from the parietal bones, the left-right difference is rather small, resulting, as it does, from a rather uniform distribution of injuries all over the skull. Once again, this indicates that the cranial injuries seem to have occurred within an uncontrolled situation, like at Talheim and Asparn, which is in contrast to the pattern of the numerous perimortem postcranial fractures that have been observed in this population sample, but not in others. Although some upper limb bones do show perimortem trauma, there is a clear and statistically significant dominance of fractured lower leg bones. As tibia and fibula seem to have been specifically targeted, this strongly suggests a controlled situation for these particular injuries, in which victims were unable to protect their legs, probably because they had already been killed or incapacitated by the cranial blows likely received earlier. Methodologically, ante-mortem torture and post-mortem mutilation cannot be differentiated from skeletal remains; thus this problem cannot currently be resolved with any confidence.

Further Sites

A few other LBK sites may also be mentioned in the wider context of collective violence, as these were interpreted by certain authors as being connected to Early Neolithic warfare, mainly based on preliminary, outdated, and sometimes misrepresented data (e.g. Golitko and Keeley 2007). The enclosure site at Herxheim in Rhineland-Palatinate, southwestern Germany (Fig. 2.1, Site f), is the most intriguing of these. Here, several hundred individuals have been systematically processed and dismembered, in what is now commonly interpreted as evidence for ritual cannibalism and human sacrifice (Zeeb-Lanz et al. 2016). In addition, some perimortem cranial injuries, which survive underneath the slightly more recent traces of extensive post-mortem dismemberment, might also suggest violent deaths for at

least some of the individuals from this site (Boulestin and Coupey 2015). In any case, the repeated and periodic deposition of the skeletal remains within the pits and ditches of the enclosure, mixed with pottery and selected animal bones, strongly indicates some form of ritual practice focussing on the bodies, which is unlike that encountered at the massacre sites discussed above, all of which lack complex post-mortem treatment. At Herxheim, the bodies and body parts were not just dumped into the nearest conveniently placed pit or left lying where they fell. Instead, a lot of effort and energy were invested into their processing and transformation (Zeeb-Lanz et al. 2016), but such practices are difficult to fathom without any reliable knowledge of the multifactorial and highly complex contextual background surrounding their performance.

The cave site of “Jungfernhöhle” near Tiefenellern, southeastern Germany (Fig. 2.1, Site g), has also been interpreted as a location connected to violence, sacrifice, and possible cannibalism in the earlier literature (Asmus 1955; Buhmann 1979). However, a recent re-examination of the site and of the spoil heaps of the original excavation, along with a re-evaluation of the quality of the old excavation practices, has revealed that many small skeletal elements had been missed or disregarded during the 1950s excavations, so that any modern reinterpretation of the site has to wait until the new finds are analysed (Seregély 2012).

The enclosed LBK settlement and cemetery site of Vaihingen/Enz, southwestern Germany (Fig. 2.1, Site h), has also sometimes been interpreted as violence related (Golitzko and Keeley 2007), as most of the human remains were found in close association with the ditch surrounding the settlement. However, in contrast to the other enclosure sites mentioned above, the skeletons from Vaihingen were mostly found in regular burials, with only a few of them seemingly being deviant (Bentley et al. 2003). As the results of the osteoarchaeological analysis have not yet been fully published, a final assessment of the site and its burials is still pending (Welge 1997; Krause 1998). In contrast to earlier claims, however, Vaihingen appears to have been, for the most part, a regular burial place, which offers further evidence of the blurred boundaries separating cemeteries and settlements in LBK society.

The Mass Grave of Halberstadt

In 2013, another Neolithic mass grave was discovered at the site of Halberstadt, Saxony-Anhalt, Germany (Fig. 2.1, Site E; Meyer et al. 2015b, in press). The whole feature was block lifted and later meticulously excavated under controlled conditions. The mass grave contained articulated skeletal remains of nine individuals, which were deposited haphazardly in a sub-circular pit (Fig. 2.2). Certain skeletal elements were already missing upon discovery due to post-depositional disturbances of the burial feature. A similar fate had befallen some individuals from the LBK mass grave at Wiederstedt, located c.40 km to the southeast, where the removal of one cranium could be attributed to eighteenth-century grave-digging activity (Meyer et al. 2012). In the case of Halberstadt, however, the observed



Fig. 2.2 The mass grave of Halberstadt, Saxony-Anhalt, Germany, where nine individuals were deposited in a pit feature. Some skeletal elements are missing due to animal activity and later anthropogenic disturbance (Image: State Office for Heritage Management and Archaeology Saxony-Anhalt)

anthropogenic disturbances could not be traced to a specific event or cause, but it is very likely that they were mainly the result of later (pre)historic farming or settlement activities, as the area was coveted for both throughout the centuries (Meyer et al. 2015b). Durable grave goods were absent from the pit. The small fragments of pottery found scattered throughout the feature are typical of Neolithic settlement debris accidentally included in the infill or later introduced by burrowing animals. Similar observations were made at the other LBK mass grave sites, all located near settlements. The same holds true for the Halberstadt mass grave, which was found only a short distance from a roughly contemporary LBK settlement, which encompassed a rather high number of settlement burials (Fritsch et al. 2008).

Except for one individual, a probable female, all other skeletal remains from the mass grave could be determined as male. The age range excludes subadults below the age of 16 years and does not exceed *c.*40 years of age at death. Carnivore-gnawing damage was noted on several limb bones, mostly those from the edge of the feature, and the distal parts of the affected limbs were usually missing. Scavenging carnivores seem to be responsible for at least some of the missing elements of the appendicular skeleton. Smaller bones were likely dislocated and scattered by burrowing animals, whose tunnels and skeletal remains were observed throughout the feature during the excavation. The carnivore-gnawing marks found

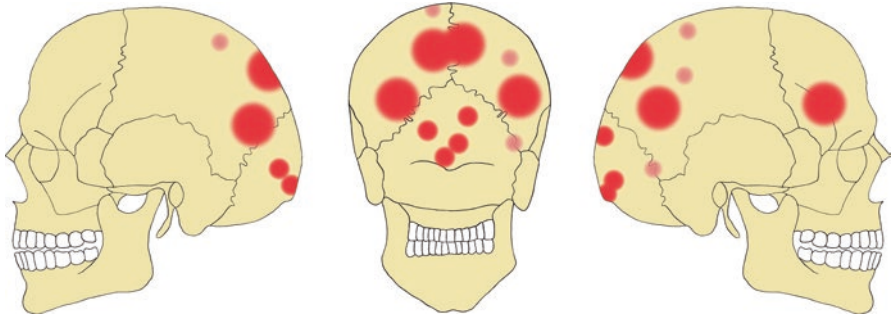


Fig. 2.3 Compilation of perimortem cranial injury locations of the individuals from the mass grave of Halberstadt. Larger dots signify larger injuries, while smaller dots signify smaller injuries. Likewise, darker spots signify securely identified trauma, while lighter spots stand for likely trauma. With the exception of one instance of trauma on a frontal bone, all cranial injuries identified from the site are clustered at the back of the head (Image: Christian Meyer)

on the human skeletal remains at Halberstadt are reminiscent of those observed on the Asparn skeletons (Teschler-Nicola et al. 1996, 1999), which might indicate that the bodies were not completely covered with soil upon deposition.

A few long bones of the upper and lower extremities showed perimortem fractures which probably occurred before deposition, as suggested by their anomalous layout. Overall, pathological lesions are rare and rather insignificant with the exception of cranial trauma, which could be diagnosed in all seven individuals who still retained complete skulls or skull fragments. Again, as in all other LBK violence-related mass fatality sites (see above), the parietal bones show the highest frequency of injuries. In this, they are closely followed by the occipital bone, while a single instance of perimortem trauma was observed on a frontal bone. The right side of the skull was hit almost twice as often as the left side, which, in accordance with the massacre sites of Talheim and Asparn and assuming largely right-handed attackers, indicates that the trauma was inflicted from behind. This is further supported by the evidence that almost all injuries are located at the back of the head in a tightly circumscribed area (Fig. 2.3), with some of them even being very similar in shape. If we contrast this evidence with the massacre sites of Talheim, Asparn, and Kilianstädten, the cranial trauma pattern from Halberstadt strongly suggests that these younger men were apparently killed in a much more controlled manner, likely to be an execution (Meller 2015; Meyer et al. *in press*). As isotope analysis has shown, the individuals buried in the mass grave had a different diet and geographical origins from the village population buried within the settlement, thus indicating that they were outsiders (Meyer et al. *in press*).

If we cross-examine this evidence, it appears that the mass grave at Halberstadt did not include massacre victims like those found at Talheim, Asparn, and Kilianstädten and therefore is not representative of a local residential community, but instead possibly contained the remains of a failed raiding party of outsiders. As already noted, the demography of those killed at Halberstadt is strongly skewed

towards young adult males, which is currently unique for the LBK evidence. To explore this further, the demographic patterns established for each mass fatality site will be examined below in more detail and also contrasted with one another.

Demographic Patterns of Collective Violence Victims in the Early Neolithic

Upon comparing the demographic composition of the population samples found at the different LBK mass fatality sites, several patterns do emerge, which can be utilised to support the overall interpretation of the interrelation of collective violence and deviant mass burial in LBK society (Table 2.1). Importantly, the “snapshot” nature of these samples allows a tightly focussed look at people who truly lived and died contemporaneously at each site – something that is impossible to achieve from more traditional burials (Meyer et al. 2014).

Firstly, individuals of the *senilis* age category (older than 60 years) are almost absent from the mass fatality sites – an occurrence that fits well with the average life expectancy known for the Early Neolithic, which was below 30 years (Trautmann 2006). Individuals of the *maturus* age class (between the ages of 40 and 60 years) are much more common at LBK mass fatality sites but are still less numerous than younger adults or children at most sites. Among the skeletal samples examined here, mature individuals are found at Talheim, Schöneck-Kilianstädten, and Asparn. At the latter location, there is a balanced ratio of males (53%) and females (47%) for this age class, while females slightly dominate at the former two sites. However, as absolute numbers for this age group are very low at both Talheim and Kilianstädten, this datum is not particularly informative. This clearly changes in the *adultus* age class (between 20 and 40 years); here, the situation is reversed, as there are fewer females than males at all four mass fatality sites. The sex imbalance is least pronounced at Talheim (1.75:1; males 64%, females 36%), is more evident at Asparn

Table 2.1 Demography of the mass fatality sites discussed in the chapter. Age and sex data have been compiled from the literature cited herein (the few individuals lacking reliable age and sex determinations are not included in the table)

Site	Inf. I	Inf. II	Juv.	Ad.	Ad.	Mat.	Mat.	Sen.	Sen.
				Male	Female	Male	Female	Male	Female
TH	7	6	3	7	4	2	3	1	–
AS	12.5	8.5	5.5	16.5	5	9.5	8.5	–	–
KS	10	2	1	9	–	–	2	–	–
WS	1	5	2	1	1	–	–	–	–
HS	–	–	1	7	1	–	–	–	–

TH Talheim, AS Asparn/Schletz, KS Schöneck-Kilianstädten, WS Wiederstedt, HS Halberstadt. Age classes are those commonly utilised in continental Europe (e.g. Herrmann et al. 1990). *Inf.* infans, *Juv.* juvenis, *Ad.* adultus, *Mat.* maturus, *Sen.* senilis

(3.3:1; males 77%, females 23%) and Halberstadt (7:1; males 88%, females 13%), and is most obvious at Schöneck-Kilianstädten, where no females of this age group were identified, which is in stark contrast to the nine male individuals of the same age. This discrepancy is commonly interpreted as a result of the differential treatment of younger women during collective violence events. Rather than being killed outright during the massacres, as ostensibly happened with the younger, older, and male population segments, women of reproductive age may have been preferentially captured alive – a practice that is well known from ethnographic studies (Otterbein 2000). This was probably followed by forced inclusion into the attacker's own communities, although the further fate and status of these women remains unknown. The selective capture of women is currently the most likely explanation for the imbalanced adult sex ratios encountered at Talheim, Asparn, and Schöneck-Kilianstädten, which also contain numerous subadult individuals who were violently killed just like the adults.

Normally, the sex of subadults cannot be reliably determined by osteological analyses alone, hence the difficulty of knowing if male and female children are equally represented in mass fatality samples. Although some older children might have occasionally been captured (something that is perhaps indicated by an age gap within the Kilianstädten sample; Meyer et al. 2015a), they are among the victims of lethal violence identified at all three massacre sites. However, this was not the case at Halberstadt, where, in contrast to Talheim, Asparn, and Schöneck-Kilianstädten, children were completely missing from the mass burial feature. The youngest individual deposited at Halberstadt has been determined as a 16–20-year-old male. Although this age range is covered by the age class *juvenis* (13–20 years), which technically characterises the individual as a biological subadult, it is highly likely that a person of this age would already be considered a social adult within their LBK community, especially considering the rather low average life expectancy documented for this period (Bickle and Fibiger 2014). Paired with the overall 89% male sex estimation, the demography of the Halberstadt mass grave sample is clearly unusual, highly selective, and thereby different from all the other sites discussed in this chapter (Fig. 2.4). Indeed, the demographic pattern is an important factor in the contextual interpretation of this mass grave as an execution rather than a massacre site, which is independently supported both by cranial trauma patterns (see above) and isotope analysis (Meyer et al. [in press](#)).

Focussing specifically on the age classes *infans I* (0–6 years) and *infans II* (7–12 years), subadult individuals belonging to either group are numerous at Asparn (32%), Talheim (38%), and Kilianstädten (46%). While they are clearly outnumbered by older individuals at Talheim and Asparn, their ratio is evenly balanced at Schöneck-Kilianstädten (Fig. 2.5). Despite such slight differences between the sites, the respective demographic patterns of subadults vs. adults are very suggestive of complete (or near-complete) settled communities that were violently destroyed (Duering and Wahl 2014). The only mass fatality site where subadults actually outnumber the older individuals, regardless of whether the age class *juvenis* is counted as biological subadult (80%) or social adult (60%), is the mass grave of Wiederstedt. As mentioned above, no signs of lethal perimortem violence could be detected in

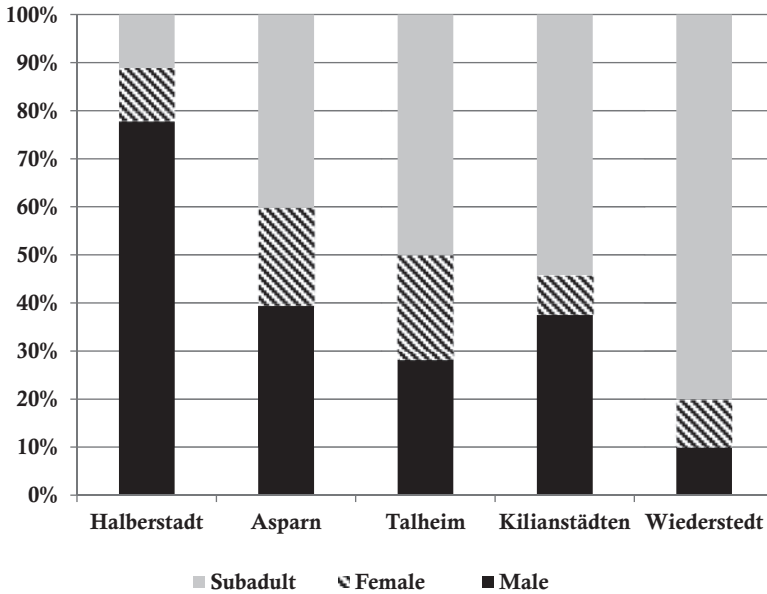


Fig. 2.4 Relative demographic structure of the mass fatality sites discussed in the text; only precisely age- and sex-determined individuals have been included in the graph. The category “subadult” is used in the biological sense and includes all individuals below the age of *c.*20 years. This is not necessarily consistent with social understandings of this age group in LBK society (Image: Christian Meyer)

the skeletal remains from this site, which indicates a likely non-violent cause of death for these individuals. In this regard, Wiederstedt evidently differs from the massacre sites – a fact that is also reflected in the demographic structure of the skeletal sample. It is quite likely that the Wiederstedt mass burial contains some of the physically weakest members of the community, who were most prone to fall victim to infectious disease, poisoning, or other types of natural catastrophes.

As mentioned above, Halberstadt is the other mass grave whose demographic pattern clearly deviates from the three massacre sites. In contrast to Wiederstedt, however, such skewing towards younger adult males cannot be interpreted as reflecting physical weakness. It is much more likely that the non-local male individuals from this site were originally chosen by their community because of their prowess in warfare (Meller 2015; Meyer et al. *in press*). If this was indeed the case, these individuals represent a counterpoint to the massacre victims of Talheim, Asparn, and Kilianstädten, by being possible outside aggressors who might have failed in their attack. By comparing and contrasting the patterns of demography, perimortem injury, and deviant burial available for the site, this currently appears to be the most likely explanation, which of course does not mean that alternative interpretations have to be categorically rejected. Further research, re-evaluation of older sites, and new discoveries will in the future doubtlessly refine the picture of LBK collective violence and deviant burial painted in these pages.

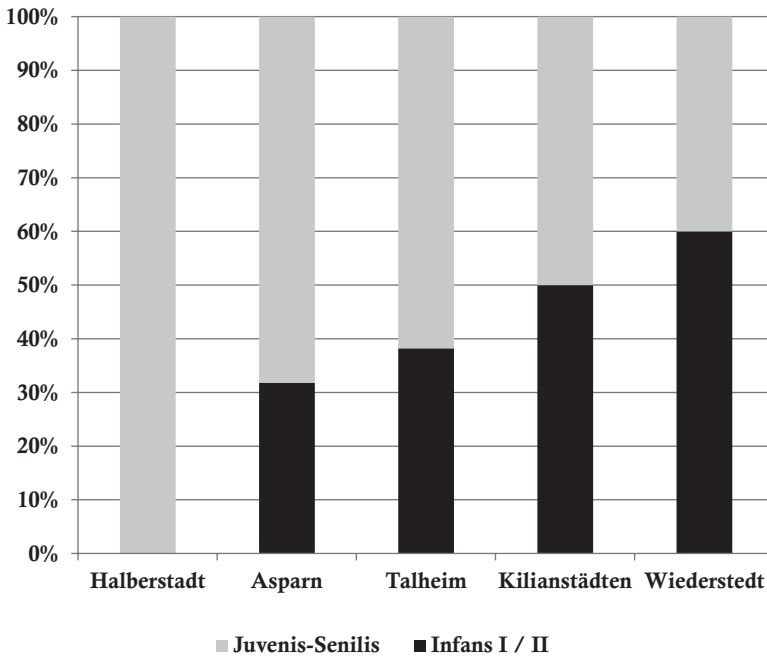


Fig. 2.5 Percentages of younger children (age classes *infans* I and II) in relation to older individuals from the mass fatality sites discussed in the chapter. Only precisely age-determined individuals have been included in the graph (Image: Christian Meyer)

Conclusion

Based on the sites discussed above, it is now clear that the victims of mass fatality events display demographic patterns that can be interpreted meaningfully by reference to one another. The mass grave at Halberstadt, in particular, stands out in this cluster of sites in terms of demographic structure as females are very much under-represented and children are completely absent from the sample, while conversely both females and children are numerous at all other mass fatality sites. This demographic peculiarity clearly suggests a different context for the violent deaths met by the Halberstadt individuals compared to Talheim, Asparn, and Schöneck-Kilianstädten. Overall, the latter sites appear rather similar to one other in probably representing the remains of near-complete village communities that were destroyed by unknown attackers during short-term massacres. Unlike any of these, Wiederstedt can instead be interpreted as a mass fatality episode, in which a lethal infectious disease or some other non-violent event must have brought death to the weakest members of the community, first and foremost the children.

Generally, the mass fatality sites discussed above show that subadults were frequent targets of lethal collective violence, as indeed were men of all age groups and older women. It would appear that only young women and possibly (female?) adolescents were routinely spared during the attacks, probably to be captured alive.

Judging from the cranial trauma patterns, lethal attacks were mostly conducted in largely uncontrolled, chaotic melee clashes, and injuries commonly affected all major skull areas. Once again the mass grave at Halberstadt stands out from this trend. Here, cranial injuries are overwhelmingly clustered at the back of the head as to likely indicate the execution of the victims in a deliberate and controlled manner. Regardless of whether the cause of death was violent or non-violent, however, the post-mortem deposition of mass fatality victims seems to have been a common element at all these sites. This is the lack of careful treatment of the deceased, which clearly differentiates deviant mass burials from the normative cemetery and settlement interments found throughout the LBK world.

In LBK communities, group deaths seem to have effectively caused the identity and individuality of the victims to be erased. This stands in stark contrast to more traditional burial treatments, in which selected information pertaining to the role and standing of the deceased was routinely preserved through an individualised funeral rite. However, by being denied this treatment, the dead dumped in the mass graves discussed in this chapter have preserved other kinds of information, which can shed new light on the episodes in which lethal collective violence broke out and on the social choices made during these short-lived and dramatic events.

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