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Comments on the book "Sticks, stones and broken bones: Neolithic violence in a European perspective"

Wiesław Lorkiewicz and Elżbieta Żądzińska

Department of Anthropology, Faculty of Biology and Environmental Protection, University of Łódź, Poland

Sticks, stones, and broken bones: Neolithic violence in a European perspective
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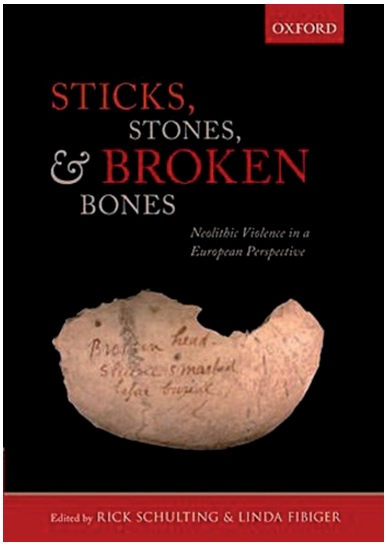
Introduction



Skeletal injuries observed in human bone remains from archaeological sites have always aroused considerable interest due to the interpretational opportunities they offer. Among them, particularly spectacular are those which are indicative of wounds intentionally inflicted by means of various weapons (or other implements used as weapons) as a consequence of interpersonal violence. Injuries of this type are found already in skeletons from the Middle Paleolithic (e.g., Wu et al. 2011), but it is difficult to interpret them in a conclusive manner, especially that features enabling distinc-

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tion between accidental and intentional (violent) injuries often require analysis of a larger number of observations rather than isolated cases. More skeletal remains with signs of injuries are known from the Mesolithic (Frayer 1997; Thorpe 2003; Roksandic 2004a; Roksandic et al. 2006), which is usually associated with the greater sedentism and territoriality of hunter-gatherer groups in that period (Roksandic 2004b). Taking into consideration the impact of such factors on the level of aggression between human communities, one could argue that the most significant developments in the evolution of human violent behavior took place in the Neolithic. The establishment of a food-producing economy led to tensions between early agricultural communities due to competition for cultivable land and pastures, while wealth accumulated in the form of crops and livestock gave rise to covetousness and temptation of easy gain of resources. The Neolithic was also a key period in terms of transformation from the egalitarianism of hunters-gatherers to the social stratification of Bronze Age societies (clearly documented by archaeological evidence) and the rise of the first states. Despite these facts, the view that the real climate of collective violence emerged during the Neolithic (Beyneix 2007) has developed only gradually, overcoming the previous stereotypical belief about the peaceful nature of early agricultural communities (motivated by, e.g., the lack of weaponry in that period). In the 1980s and 1990s a decisive role in this shift of perspective was played by the discovery of collective graves and assemblages of human skeletal remains with evidence of injuries in Talheim, Baden-Württemberg (Wahl and König 1987), Asparn-Schletz, Austria (Teschler-Nicola et al. 1996) and Herxheim, southern Germany (Orschiedt et al. 2003). Controversies around the interpretation of some of these finds and the increasing amount of data, both as a result of new discoveries and re-assessment of available skeletons from different parts of Europe, led to an attempt to review the existing state of knowledge on violence in Neolithic Europe during a 2-day meeting held at the University of Oxford on 14–15 March 2008. The main organizers of the conference were Rick Schulting and Linda Fibiger from the School of Archaeology, University of Oxford. The meeting was supported by the Leverhulme Trust, the British Academy, the Pitt Rivers Museum, Archaeopress, Oxford University Press, and the Meyerstein Fund of the School of Archaeology, University of Oxford. The papers presented at the conference were also the first contributions to the volume "Sticks, stones, and broken bones: Neolithic violence in a European perspective" edited by Rick Schulting and Linda Fibiger and published by Oxford University Press in 2012. Seventeen chapters of this monograph, comprising almost 400 pages, present studies on bone injuries observed in Neolithic skeletal series dated to 7000–3000 BC (as well as in some Mesolithic and Bronze Age skeletal remains) from 12 countries: Sweden, Lithuania, Latvia, Poland, Germany, Austria, Netherlands, France, Britain, Greece, Spain, and Portugal. Most of the chapters have been authored by anthropologists and bioarchaeologists known for their work on Neolithic bone material. Some of them are devoted to leading archaeological sites discussed in previous publications (e.g., Talheim, Asparn-Schletz and Herxheim), but supplemented with new elements of in-

terpretation and comparative analysis. Unfortunately, not all chapters enable quantitative assessment of injuries. This in particular concerns very interesting (given the variety of weapons used) and spectacular injuries in numerous Neolithic skeletal series from France.

Short review of the book's content

Data from southern Scandinavia (the island of Gotland), reported by Ahlström and Molnar, concern the Pitted Ware Culture, which was chronologically Neolithic, but Mesolithic in terms of mode of subsistence (maritime hunting-gathering). Among 109 skulls of adults, 12 revealed lesions of traumatic origin, most often depressed fractures of the vault bones. No injuries caused by projectiles were found, even though bows and spears were certainly used by the PWC population, as both arrowheads and spearheads were found among artifacts attributed to this culture. The authors conclude that their findings constitute further evidence for the existence of violence in human communities in all stages of their development.

Data on 249 skeletons from the East Baltic region dated to a period from the Mesolithic to the Bronze Age (all available skeletons from Lithuania and the burial ground at Zvejnieki in Latvia) are presented by Jankauskas. Most of the injuries observed in that material are interpreted as accidental, resulting from everyday life events. Generally, the examined series indicate a low incidence of violence in the Mesolithic and Neolithic. This situation apparently changed in the Bronze Age, as some skeletons from that period show clear evidence of violent death. The author explains this phenomenon by changes in climate, and also in technologies and subsistence – connected with the final transition to agriculture.

Poland is represented by skeletal series belonging to the Brześć Kujawski group of the Lengyel Culture from the area of Brześć Kujawski and Osłonki in Kujawy. A series of 109 skeletons, examined by Lorkiewicz, exhibits a typical pattern of injuries (mostly depressed fractures of the cranium, more frequent in males than in females), some of which may be regarded as resulting from interpersonal violence. Of particular interest is the opportunity to relate the triple burial of individuals with peri-mortem injuries of the skull to the archaeological record of destruction and fires in the Osłonki settlement and to the probable identification of the weapons with which the injuries were inflicted (antler-beam mattocks, typical of the Brześć Kujawski Group of the Lengyel Culture). This indicates a conflict between agricultural communities, as in the case of Talheim.

Wahl and Trautmann present both previous and current findings concerning the mass grave at Talheim, southwest Germany from the late stage of the Linear Pottery Culture (LBK), which was discovered in 1983/84. This site, called by the authors "the pivotal find in conflict archaeology," contains skeletons of 34 individuals, probably comprising the entire local community (population of a small hamlet) exterminated during a single event (killed and buried at the same time). This skeletal series constitutes the second largest (after Asparn/Schletz) collection of lethal peri-mortem injuries (multiple in some individuals). A detailed analysis of injuries and wound patterns made it possible to reconstruct the event (attacks carried out from be-

hind), identify the tools used (mainly flat axes and other tools with a blunt edge), and thus indicate the likely attackers (another LBK group). The authors also report attempts to use the latest isotopic analyses to verify one of the hypotheses explaining the cause of the attack on the settlement as revenge for the abduction of a woman from another group. While hypotheses of this kind will probably never be conclusively confirmed, isotopic and aDNA analyses of the Talheim skeletons make this group one of the best studied populations representing the LBK.

Similarly spectacular evidence of a violent conflict that put an end to a settlement as a result of extermination of its inhabitants is provided by the Asparn/Schletz site in Lower Austria. Skeletons of 67 individuals were found strewn around the trench system of the settlement, without signs of regular burials. Anthropological analysis conducted by Teschler-Nicola revealed the presence of multiple peri-mortem cranial traumas and animal gnaw marks on postcranial bones. The appearance of skull fractures proves the use of mainly blunt weapons. The lack of young females among the victims is deemed to be the consequence of their abduction by the aggressors. The fact that the Talheim and Asparn/Schletz sites date back to roughly the same time is treated as evidence of a crisis at the end of the Linear Pottery Culture resulting in an increased level of intergroup violence.

Herxheim, southwest Germany is the third very well known and similarly dated site from the same region of Europe. It contained the remains of at least several hundred individuals (MNI=325) discovered in the ditches of the settlement enclosure and is cited by some researchers as further evidence of violent events related to the collapse of the socioeconomic system at the end of the LBK. However, in their study of skeletal remains from Herxheim, Orschiedt and Haidle firmly reject this interpretation, arguing that the observed bone injuries were inflicted in the process of manipulation of human corpses (involving intentional separation of the cranial base and facial bones of the skull, cut marks related to removal of the scalp, and perhaps also disarticulation of the bodies), and as such they probably constituted part of a mortuary rite.

Lidke gives a description of seven skulls from megalithic graves of the Single Grave Culture in northern Germany. Five of them exhibit signs of trepanation, while the other two reveal evidence of injury (one healed, the other one with no signs of healing). The author sets the results against the broader background of the Corded Ware Culture, concluding that in that period injuries and trepanations more often occurred in males, but were usually non-lethal, while violence rarely affected females, but if so, then with more serious consequences.

Ample data for the same culture horizon (the Late Neolithic Corded Ware Culture) in central Germany are presented by Wicke et al. Among 170 examined individuals, 21 exhibit healed antemortem skull defects (possible peri-mortem injuries are not included in the analysis). The fact that injuries occurred mostly in men and were characteristically located, indicating face-to-face combat, and the co-occurrence of skull defects and stone battle axes in the studied burials are interpreted by the authors as the development of a warrior-like, axe-carrying élite in this culture.

Fibiger reports a study of the skeletons of 186 individuals from Late Neo-

lithic Wartberg Culture burials in central Germany. Cranial injuries (both healed and peri-mortem, without signs of healing) were found in 20 individuals – males, females, and children. The high incidence of injuries, a lack of differences between sexes, and a peri-mortem head trauma in a juvenile show that interpersonal violence was a common feature during the Wartberg cultural horizon and may have had a significant impact on the life of communities in that period.

Smits presents results concerning 34 skeletons from one Middle Neolithic and two Late Mesolithic sites in the Netherlands. Evidence of trauma was found in three individuals: a healed depression fracture of the skull, non-healed cut marks on an isolated clavicle (probably due to a peri-mortem decapitation), and an extensive lethal peri-mortem injury of the skull. Despite the atypical features of the burials from which the aforementioned skeletons were recovered, isotope analysis revealed that the individuals were autochthonous.

Beyneix gives an overview of the most important Neolithic sites containing human skeletons with evidence of injuries in France and offers some broader reflections concerning violence in past societies and the beginnings of war. Both French Neolithic skeletal series and bone finds exhibiting injuries (from about 60 sites!) are some of the richest in Europe. However, they are not very well known in the world literature as the results of studies are mostly published in the French language. What distinguishes the injury profile of the Neolithic series from France is the high incidence of wounds caused by arrows (including the most spectacular examples of arrowheads lodged in bones). However, in order to correctly interpret this phenomenon, it is necessary to comprehensively analyze and quantitatively assess also other types of skeletal injuries. According to Beyneix, explicit evidence of warlike trauma was not common in the Early and Middle Neolithic, and collective violence in the first farmer communities of Europe should not be called authentic war, which did not emerge until the Bronze Age.

Schulting considers possible variation in the prevalence and forms of violence between different regions of Britain and between different mortuary contexts (grave forms). One of the arguments for this variation is the occurrence of causewayed enclosures in southern England, which probably reflects a higher level of socio-political integration of Neolithic societies in that region. Although the presented results are preliminary, the author indicates possible differences in the incidence of injuries between skeletal series from northern and southern Britain, as well as between individuals buried in mortuary monuments and non-monumental graves.

The oldest data presented in the reviewed volume come from Greece and concern, among others, such well-known sites as Franchthi Cave (also Mesolithic) and NeaNikomedeia. Papathanasiou's study encompasses all available human skeletal remains from the Mesolithic (21 individuals) and the Neolithic (370 individuals) in Greece. The author interprets cranial injuries (mainly depressed fractures) as evidence of interpersonal violence, and post-cranial injuries (relatively rare) as accidental. An interesting observation is the greater incidence of cranial injuries in the Mesolithic as compared to the Neolithic at Franchthi site. According to Papathanasiou, the observed profile of injuries indicates

sporadic non-lethal confrontation rather than generalized warfare.

Very comprehensive data from San Juan ante Portam Latinam, an interesting site in northern Spain, are contributed by Vegas et al. The authors discuss 338 skeletons of men, women, and children discovered in a small rock shelter used as a collective burial place at the end of the fourth millennium BC. The identified injuries are both depressed fractures and arrow injuries (the latter in 11 individuals), while the many arrowheads found among the bones may indicate additional wounds to soft parts of the body, so the number of deaths from this kind of weapon may have been greater. According to the authors, many individuals were concurrently interred in the collective burial site, which, given its unusual location, suggests a sudden need to bury a larger number of individuals killed simultaneously in an act of violence.

The last two chapters contain data on bone injuries examined from collective burials in Portugal. Oosterbeek and Tomé present a study of bone remains of about 60 individuals from three cave burials in central Portugal, dated to 6000–3000 cal BC. Among the individuals whose sex was determined, cranial injuries (healed blunt force depressed fractures) were found exclusively in males, which suggest their violent origin (although their location does not correspond to typical face-to-face confrontation). A broader overview of injuries linked to interpersonal violence, based on skeletal assemblages from Late Neolithic collective burials in Portugal (16 sites, about 620 individuals), is given by Silva et al. Also here, injuries (mostly depressed fractures) are predominantly found in skulls, in adult individuals, and in males. The authors report an interesting time trend in the occurrence of injuries in the studied skeletons: most cases were identified in bone material dated to the period during which remains of settlements are difficult to detect, while fewer in skeletons dated to periods during which the settlements were equipped with clearly defensive structures (walls and ditches). Stabilization of settlement probably decreased the risk of raids and unexpected attacks, which the authors termed a "period of deterrence".

Final remarks

A focus on violence in the Neolithic is convergent with the general interest in the period of the so-called Neolithic revolution and its impact on the European gene pool and the biological condition of human populations. It is to be expected that the spread of the new model of social and economic organization gave rise to some tensions and conflict opportunities, irrespective of whether it proceeded by migration (colonization) or by acculturation. An overview of the scope and degree of these phenomena in different parts of Europe provides additional and very important information on the mechanism of Neolithization, relations between allochthonous farmers and autochthonous hunter-gatherers, population density, the occurrence of economic crises, etc. Injuries to the skeleton are the best direct evidence for interpersonal violence in past populations, despite frequent difficulties with interpreting the context in which such injuries occurred (intentional versus accidental) and identifying peri-mortem damage (these problems are also mentioned in the volume reviewed). "Sticks, stones, and broken bones" provides ample evidence of this kind: its 16 chapters (passing over the in-

troduction) discuss findings concerning over 3,400 Neolithic skeletons from all major European regions, although not all of them are equally well represented. For instance, some Central European countries with rich collections of Neolithic skeletons (e.g., Hungary and the Czech Republic) have been left out, whereas including them in an English-language publication would greatly increase the availability and knowledge of these materials. It is also regrettable that the book does not contain data for the very large skeletal series from the Middle Elbe-Saale region belonging to the Linear Pottery Culture horizon, as their systematic re-evaluation would make it possible to, e.g., put the finds from the Talheim and Asparn/Schletz sites in a broader population context.

Such a large collection of cases of injury from the Neolithic enables preliminary analysis concerning regional differences in terms of this phenomenon. One of the most striking aspects of this variation is the fact that so many injuries were caused by ranged weapons (projectiles and arrowheads) in western Europe, and especially in France. These differences may be due to omission of other types of injury (which is mentioned by Beyneix), but they may also reflect the Mesolithic substrate of the Neolithic in this part of Europe.

The authors of most chapters usually avoid the term "warfare" in describing cases of interpersonal violence, sometimes stressing their ritual, non-lethal nature. On the other hand, the evidence given for the emergence of a warrior-like elité whose attributes included offensive weapons (e.g., stone axes in the Corded Ware Culture and antler-beam mattocks in the Brześć Kujawski Group of the Lengyel Culture), the level of aggressiveness revealed in the collective graves at Talheim and Asparn/Schletz, and the degree of organization and involvement of human communities in offensive and defensive activities fit some elements of the definition of warfare. Similar concerns about the dividing line between feuding and warfare (and the need to make such a distinction) were raised in a BAR International Series monograph devoted to interpersonal violence in the Mesolithic (Roksandic 2004c).

The presented evidence of collective violence gives rise to the obvious question about the parties to the conflicts. In a work published several years ago, Golitko and Keeley (2006) proposed that burial trauma and the fortification of sites from the LBK period are signs of intense conflicts between early farmers and indigenous hunter-gatherers. However, this hypothesis is not confirmed in the reviewed monograph. The injuries discussed indicate the use of weapons typical of Neolithic farmers, while the latest anthropological and archaeogenetic data suggest an early assimilation of agricultural groups and the adoption of the new economic model by the Mesolithic population.

The collective publication of such extensive data, so far dispersed among different journals and monographs and often available only in local languages, is extremely valuable not only from the standpoint of the main subject matter of the volume, but also with a view to dissemination of general anthropological knowledge on the Neolithic in particular European countries. The reviewed volume is also an important contribution to the paleopathological literature. Despite being yet "another book on violence in prehistory" (Roksandic 2004c), it is undoubtedly an excellent point of departure

for a new perspective on the extent, context and social impact of interpersonal aggression and violence in the Neolithic and human history in general.

Corresponding author

Wiesław Lorkiewicz, Department of Anthropology, Faculty of Biology and Environmental Protection, University of Łódź, Banacha 12/16, 90-237 Łódź, Poland.
e-mail address: wlorkiew@biol.uni.lodz.pl

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