

# Interpretation of Trauma in Archaeological Skeletons

4732714

June 1, 2017

## 1 Noble Male Warrior death by sword

(Forsom, Warner Thorum Boel, Jaque, & Mollerup, 2017) describe a 25-30 year old medieval male skeleton that they interpret as a being a Danish warrior killed by one or multiple opponents in battle. They describe some very severe peri-mortem sharp force trauma injuries (several cranial ones that would likely have been independently lethal) before attempting a costumed reenactment of what they believe to be the likely course of the battle. They surmise that his injuries are likely caused by sword since swords were common around that time and his injuries seem consistent with sword injuries. They surmise that he was likely a warrior himself since 1) lack of amputation to his forearms suggests he wore armour and 2) lack of blows to his torso suggests he bore a shield. They surmise that he was likely nobility (or regarded by them so a church burial) since only nobility (or footsoldiers etc of nobility) had swords and recieved church burial.

I would like to see some force analysis of the kinds of cranial injuries that were sustained. It seems to me from the photographs that such extensive cranial injuries are unlikely to have resulted from a one-handed sword unless it were wielded by a giant or (for example) swung from horseback to increase the momentum. If it were a heavier weapon then the lighter injuries to the forearms could be explained by only glancing blows being delivered since a heavier weapon would result in observable momentum needing to be gathered before the blows were landed and arms are quick moving. The lack of injury to the torso could be explained by the man hunching or folding himself forwards in an attempt to protect his torso - exposing his (heavily injured) head. The man may have been passively slaughtered, rather than being a warrior, in other words. He might have even been a monk (hence the church burial).

## 2 Male Warrior Death by Boomerang

(Westaway et al., 2016) describe a number of traumatic injuries to a skeleton found in New South Wales. Radiocarbon dating of the skeletal remains and optical dating of the grave infill indicate that the person (Kaakutja) lived during the pre-European contact period in the mid thirteenth century - 600 years before European settlers reached the area. They describe evidence for ante-mortem trauma to the skull and provide photographs of well healed fractures that they state are consistent with healed trauma from an edged weapon or from an elongated depression fracture. They also describe significant peri-mortem injury to the right-hand side of the frontal bone, maxilla, zygomatic and mandible, as well as the right humerus and five of the left ribs. There is an extensive description of these injuries with supporting photographs.

The peri-mortem injury and ethnographic evidence of inter-tribal conflict documented in rock art 25km from the site are interpreted by the authors as suggesting that he was some kind of warrior / fighter. They infer that several of his injuries were likely part of the same blow due to their alignment (e.g., along the right side of the skull, maxilla and mandible) and that if this is correct then the main frontal wound is around 150mm long which suggests the blade of the weapon is at least this length. Ethnographically they consider the weapons and describe how the predominant weapons in the region make the likely candidate a boomerang as an axe and 'Lil-lil' have blades that would be too short and also that axes would be too heavy. Whether a boomerang could have caused damage this extensive is thought to depend on the hardness of available wood together with how they were heat treated and how their edges were sharpened. The lack of defensive wounds on his forearms suggests he was either struck unaware (e.g., while sleeping) or that (as would be consistent with oral legend), the boomerang was thrown by a very highly skilled warrior such as to hook around behind his shield thus effectively disarming him before killing him.

## 3 Domestic violence vs Warfare critical review

(Redfern, 2017) This paper is a case study evaluating the injury patterns in 964 post-medieval adult females from London. The paper concludes that the majority of injuries that conform to the clinical model of domestic violence (where domestic violence is that caused by intimate partner or family member violence) have robust alternative explanations. The paper is a critical review of how this type of abuse towards victimised females has been identified in past populations from the earliest days of paleopathology.

Identification of domestic violence even during life is problematic, however, as there are different ways of defining it (from fractures to soft tissue injuries to psychological) and differences in how these different aspects are reported (e.g., whether people seek medical care and whether the injuries are interpreted as (for example) assault vs victimisation). The authors state that domestic violence is not limited to physical assault and its frequency is not constant over the course of a relationship, particularly a long-lasting one. Marriage, having children, gaining employment, and old age are all critical periods of change and the extent to which we can map these onto the life courses of past societies is questionable. Describe different patterns for different stages of life (p. 17-18).

## 4 Female victim of trophy scalping

(Bengtson & O’Gorman, 2017) The authors reevaluate existing osteological and mortuary data regarding the 264 Native American Indian (pre-European contact) individuals recovered from the Norris Farms number 36 cemetery, Fulton County, Illinois. They describe how of the 43 individuals whose bones reveal direct evidence of violent, traumatic, death, both women and men were equally represented. There was evidence of blunt and sharp force trauma, scalping, decapitation, embedded projectile points, and other cut marks associated with dismemberment / trophy taking. The authors state that since trophy taking is part of the spoils of war and since trophies were taken from both males and females this is evidence of females as well as males playing an active part of defending the village from attack rather than differentially being the passive victims of violence.

They acknowledge that only males (49%) were buried with arrow tips as grave inclusions where those grave inclusions were typically linked to warrior status. They point out that this doesn’t preclude their being non-socially sanctioned warrior class of women, however, and that while fractures to the hands and forearms might be interpreted as defensive injuries they could also be the result of non-violent occupational hazards and compression fractures to vertebrae are likely to be degenerative.

The main points that the authors are making is that prevalent assumptions about warriors as inherently male-bodied can lead archaeologists to systematically exclude female-bodied individuals from their investigations, even when convincing lines of evidence for their participation - both osteological and historical - may exist. Defining acts of violence *as warfare* is not necessarily straightforward. They state that it is hard to know who delivered the blows, cuts, and projectile injuries to the female bodies but that unless we want to unquestionably paint a picture of women as passive recipients

of male aggression then we must consider the possibility of the Morton Village women as actively engaged in warfare activities despite the apparent lack of female-associated warriorhood symbolism in the cemetery. In other words, even if women were not ideologically identified as warriors, they apparently participated in warfare in some significant way.

We know from various ethnographic sources that Native American women sometimes were warriors. Women were as likely as men to be represented in the subsample of those individuals who were dismembered and whose body parts were presumably taken as trophies. If we consider trophy-taking to be part of the commemoration of warfare from the perspective of those who perpetrated these particular acts of violence, it would seem that the body parts of Morton Village women were as readily imbued with and integrated into the material commemoration of warfare in other communities as those of their male counterparts. A forensic differentiation between offensive and defensive injuries might help to characterise the nature of women's violent encounters. Five women and nine men sustained injuries to the frontal and parietal bones suggesting they were facing their attacker. Injuries at multiple stages of healing. Aggressors, defenders, or both. Can't assume warrior class - but can't assume victim class, either.

## 5 Comparative perimortem weapon trauma, Ireland

(Geber, 2015) The nature, prevalence, and distribution of trauma from two early medieval burial grounds (Mount Gamble, and Owenbristy, Ireland) are described. 281 from Mount Gamble four percent of adults showed evidence of death inflicted by sharp weapons. There were 75 burials at Owenbristy and seventeen percent showing evidence of death inflicted by sharp weapons including two adolescents and two adult females.

Attempts were made to classify the weapon trauma by type including stab wounds caused by knives or spears, knife cut marks, and sword or axe chop marks. None of the pre-pubescent skeletons showed evidence of perimortem weapon trauma. The age distribution wasn't significant. The male to female ratio at Mount Gamble was significantly less than at Owenbristy but both populations include a large proportion of unsexed adults, however, suggesting that the difference may be coincidental. Two separate occasions at Mount Gamble and that all but one case from Owenbristy are potentially contemporaneous. The prevalence of perimortem weapon trauma at Mount Gamble is similar to those observed in contemporary Irish populations, by comparison the rate at Owenbristy is exceptionally high.

In the Mount Gamble population the neck region displayed the highest frequency

followed by torso, lower limbs, head, and upper limbs. Two individuals showed clear evidence of decapitation. Two appeared to have been stabbed in the back. Owenbristly displayed a significantly higher prevalence of decapitation and the neck in general was the most commonly attacked anatomical region of the body followed by the head and torso, the upper limbs and lower limbs. The two adult females were both decapitated and one of them had stab wounds around her orbits.

(Lovell, 1997) (Blau, 2017) (Timmins, Serèville-Niel, & Brickley, 2017)

## References

- Bengtson, J., & O’Gorman, J. (2017). Women’s participation in prehistoric warfare: A central illinois river valley case study. *International journal of osteoarchaeology*, 27, 230-244.
- Blau, S. (2017). How traumatic: a review of the role of the forensic anthropologist in the examination and interpretation of skeletal trauma. *Australian journal of forensic sciences*, 49, 261-280.
- Forsom, E., Warner Thorum Boel, L., Jaque, B., & Mollerup, L. (2017). The death of a medieval danish warrior. a case of bone trauma interpretation. *Scandinavian journal of forensic science*.
- Geber, J. (2015). Comparative study of perimortem weapon trauma in two early medieval skeletal populations (AD 400-1200) from ireland. *International journal of osteoarchaeology*, 25, 253-264.
- Lovell, N. (1997). Trauma analysis in paleopathology. *American journal of physical anthropology*, 40, 139-170.
- Redfern, R. C. (2017). Identifying and interpreting domestic violence in archaeological human remains: A critical review of the evidence. *International journal of osteoarchaeology*, 27, 13-34.
- Timmins, S., Serèville-Niel, C., & Brickley, M. (2017). Childhood cranial trauma from a late roman and merovingian context from michelet, lisieux, france. *International journal of osteoarchaeology*.
- Westaway, M., Williams, D., Wright, D., Wood, R., Olley, J., & Bates, W. (2016). The death of kaakutja: A case of peri-mortem weapon trauma in an aboriginal man from north-western new south wales, australia. *Antiquity*, 90(353), 1318-1333.