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Unreviewed Mixed Matters Article:

Book Review: Bronze Age Combat: An Experimental Approach by Raphael Hermann et al

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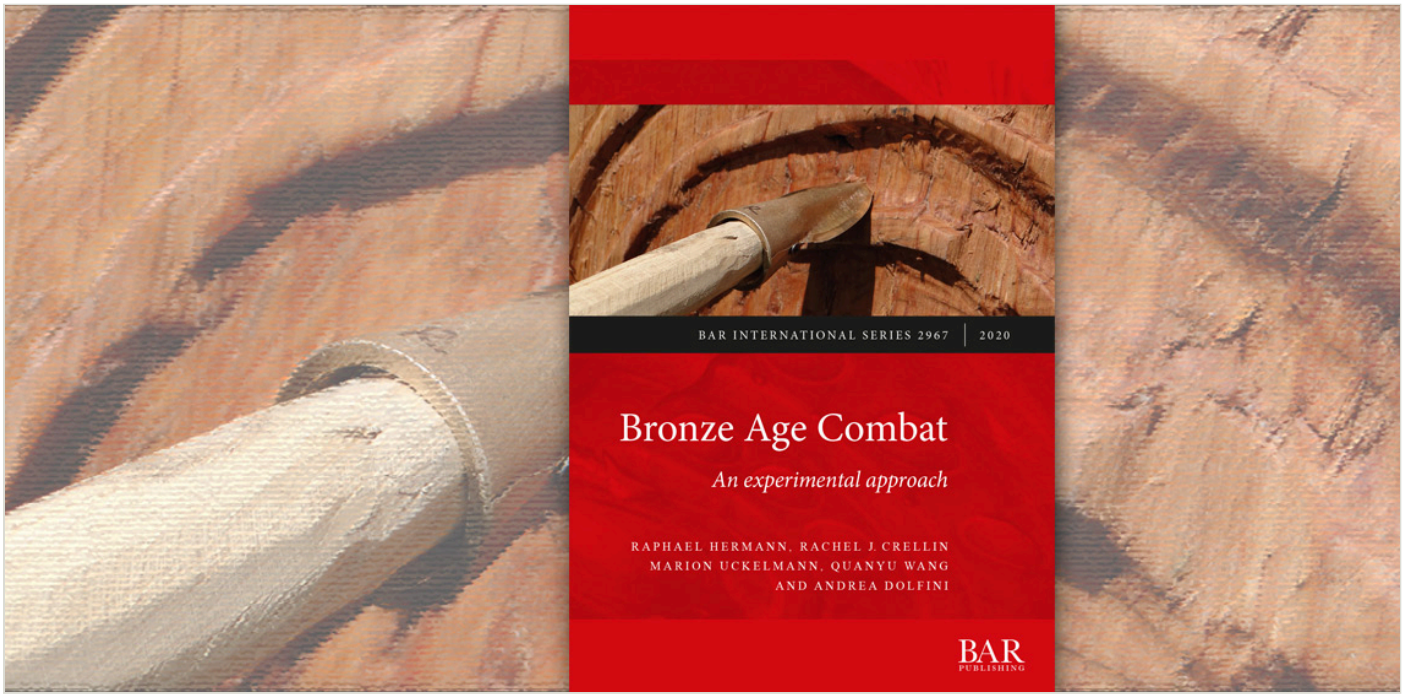
Author(s): Rena Maguire [1] ✉

[1] UCD, School of Archaeology, Newman Building, Belfield, Dublin 4, Ireland.



Cometh the hour, cometh the book? There was a considerable anticipatory kerfuffle on archaeological social media about the release of *Bronze Age Combat: an experimental approach,* and rightly so. It is much more than just an experimental archaeology book with rather gorgeous photographs of swords, spears and shields (although it is that too!). It is a rare publication which manages to straddle the worlds of academia and experimental archaeology deftly. The authors, Hermann, Crellin, Uckelmann, Wang and Dolfini, have been

at the forefront of experimental work on weaponry since 2013, with the launch of the Bronze Age Combat Project in Newcastle University, United Kingdom. The project may have taken its inspiration from the pioneering use-wear research on Bronze Age weaponry by Roberts and Ottaway (2003), and of course Bridgford (2003), but it has very much taken on its own research identity, as is shown by this publication.

> “One of the strengths of this book is its timely and thorough analysis of combat with spears, as well as defensive use of shields. The research places them in context, working in conjunction with spears and swords. After all, a warrior of the Bronze Age would be trained in the use of them all.

The research itself took its impetus from existing work on combat methods by Bronze Age scholars such as Molloy (2011; 2018) and O’Flaherty (2007; 2011) seeking to create not just an analysis of use-wear on weapons, but a manual of sorts, cataloguing what damage would be expected on weaponry and shields, and the circumstances which created it. To achieve this, the authors used micro and macro use-wear analyses of metal damage caused by clashes and parries of weapons. It also looks at production signatures and depositional treatment to gain a full cradle to (often watery) grave biography of the weapon, and by doing so, gain insights into the daily life of the people who used it.

Archaeology occasionally sets up untested theories as canon, and in the past, it was thought that the slender dirks and rapiers of the Middle Bronze Age could only be used for stabbing, while swords were only for slashing, when in fact both swords and rapiers have shown evidence of both actions. To prove or disprove such ideas, experimental archaeology has tended to attract the risk-takers, those who think outside the box; O’Flaherty’s sheep-skull halberd impacts (2007) and Molloy’s pig carcass and straw padding stabbing experimental work (2011) are but two recent examples of unconventional methods used to analyse how these objects of war were used. Along with Gentile and van Gijn’s (2019) ongoing research on combat techniques, these experiments have given a better idea of the experiential aspect of reconstructed warfare. What has been needed was a text which merged discoveries made via the experiential path of research– which is also valuable – alongside both controlled and actualistic weapon tests.

Seven sword reconstructions were made by Neil Burridge (http://www.bronze-age-craft.com), which included Late Bronze Age Wilburton and Ewart Park types as well as carps tongues. The six spearheads reproduced were Group II British types and the four shields were based on the leather Cloonbrin shield from Ireland and the copper alloy Athenry/Eynsham and Nipperweise types. The Bronze Age Combat Project broke down the potential scenarios which produced use-wear into controlled and actual weapons testing. The two categories of analysis were then sub-classified into static parrying, where one person holds a sword or spear in motionless defence; kinetic parrying, where calculated responses are made against weapon strikes, and finally dynamic parries, where the reactions made are to actual, spontaneous

attacks. Each of these scenarios produced damage from metal on metal (or leather, in the case of the Cloonbrin shield), which were recorded diligently.

The chapter dealing with the controlled weapon tests is extremely valuable for those wishing to understand the differences between the ritualised destruction and damage of deposition practices, and those caused by a lifetime of genuine, active combat. The group recruited Jon Allison, a small group combat specialist, as a consultant for the simulation of Bronze Age warfare. The authors acknowledge that much of the swordplay was initially based on techniques detailed in medieval texts, but as they gained confidence with swords, spears and shields, their movements became more intuitive, and likely closer to those of combatants of the Bronze Age.

Some would argue you can never have enough research on swords, and it cannot be denied that many projects in the past have concentrated purely on them to the detriment of research into other weapons. Swords are charismatic objects, capable of attracting attention and creating a buzz with archaeologists, re-enactors and laypersons alike, but spears and shields complete the picture and deserve attention too. One of the strengths of this book is its timely and thorough analysis of combat with spears, as well as defensive use of shields. The research places them in context, working in conjunction with spears and swords. After all, a warrior of the Bronze Age would be trained in the use of them all.

The authors have admirably avoided the pitfalls of basing the expected results of spear combat purely on historical European methods of warfare. By examining and comparing the use of spearheads fitted to short shafts, as some African cultures have, they demonstrate how spears can be quite lethal in combat. There has been some presumption in the past that the spear was more of a hunting tool rather than an object of warfare – the results of both controlled and actual tests casts doubt on this. Likewise, comparison of parry damage on the replica bronze shields with genuine Bronze Age specimens indicates that shields were regularly used in warfare.

So far, so good, but for such an exacting and precise project it is not enough for a weapon to look the part – it must *be* the part. For accurate results of use wear, a metal object needs to be made of a similar copper alloy as the original prehistoric specimens. Modern alloys differ considerably from those used in the past and behave differently with metal-on-metal strikes and pressures. In fact, one of the 'new' kinds of damage noted within the experiments was a bulging of metal, which was likely due to some variation in the bronzes produced.

Burridge's beautiful replicas were scrutinised for composition of alloys, microstructure and microhardness, to be compared to original Bronze Age weapons. There is a dizzying diversity in alloy qualities during the Bronze Age (especially the Late Bronze Age, where lead is utilised for 'slip' in picking up cast details). It is noted that the diversity reflects not just the skill and experience of the metalworker, but also regional expectations of what a weapon should look

like, so there is an aesthetic and cultural expression aspect to their creation as well. The replica swords and spear heads had low microhardness values, possibly as a result of limited cold-working of the metals. Interestingly, this made them closer in comparison to earlier British Bronze Age spearheads. The shields, however, were extremely close to the Bronze Age examples from which they were copied.

Both Uckelmann and Dolfini have established themselves as specialists in their fields, with each known to use thorough and original approaches to understanding artefact manufacture and use, while the early career researchers, Hermann, Crellin and Wang have been producing impressive work from their own fresh perspectives. The combination of these talents means that this volume can be seen as a contemporary and complementary addition to research by Ottaway, Molloy, Gentile *et* al., cited within this review. The illustrations of the recorded damage, next to images of what actions caused them, is particularly useful for both experimental archaeologist and material culture scholar alike. In particular, 'the science bit' of Chapter Six, which details the metal analysis of the replica weapons and their comparison to prehistoric originals, is accessibly written in plain English, with good explanations of methodology used, why it was used and what the results may mean for the tests themselves. The few necessary technical terms and concepts are well explained, which is exactly how such a chapter should be, but too often isn't.

The book's strength is that it is effectively a catalogue of damage and how it happened. It is, as stated, much more than that, but as a summary of the experiments, it allows us to understand the nature of wear and damage, and how it got there. For crafters and metalworkers, the metal analysis is comprehensive and excellent, providing a springboard for many possible experiments. However, so many questions have been generated by this text, it appears to have created a rabbit-hole for future researchers to vanish into, possibly for several lifetimes. The authors are wise enough in their summary to accept that the work goes on. There is much to delight and stimulate here. It is very likely to find its way onto the workshop shelves of many EXARC readers, as well as those of Bronze Age academics. It is unlikely to disappoint.

Book information:

Hermann, R., Crellin, R.J., Uckelmann, M., Wang, Q, and Dolfini, A. 2020. *Bronze Age Combat: an experimental approach. BAR International series 2967.* Oxford: BAR Publishing. (Paperback). Illustrated throughout in colour and black and white. 7 tables, 270 figures. 158 pages.
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Corresponding Author

Rena Maguire
UCD, School of Archaeology
Newman Building
Belfield, Dublin 4
Ireland
E-mail Contact