Fechtbücher and Xiphe: A comparative study of medieval and ancient Greek swordsmanship by Justine McLean[1]

"Technical skill is more useful in battle than strength. If training in arms ceases, there is no difference between a soldier and a civilian."[2]

Introduction

Classical Greek sword usage has seen fairly little detailed scholarly attention compared to the mechanisms of the hoplite phalanx. This is likely because the sword is commonly viewed as a backup (sometimes optional) part of the panoply and little more. In the contentious topic of Greek military training, the sword has been viewed as requiring little-no training at all to wield based on particular readings of the literary sources.[3] This paper will argue that this is incorrect, that the sword was a diverse and important part of Greek martial culture that required training to use and that this can be proved with an alternative reading of the iconographic and literary evidence. This reading comes from an underutilised comparative, that of medieval/early modern Europe. This will add a new dimension to the many ways that scholars have tried to understand classical Greek combat and our sources,[4] often drawing from their own experiences of sport, war,[5] experimental/experiential archaeology and modern parallels.[6] When reconstructions are offered,

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[2] Veg. Mil. 2.23.

[3] Wees (2004: 91); Konijnendijk (2017: 59)

[4] Both in war and interpersonal violence, the latter perhaps being more common, Draeger. (1979: 3); Draeger (1980: 8); Konijnendijk (2017: 1-7, 13, 17, 21-2, 216).

[5] Grundy (1911: 268); Schwartz (2013: 35).

[6] Schwartz (2013: 53-4); Pittman (2007).

they often focus on the use of the spear and shield and downplay the importance of the sword.[7] Scholars tend to describe a sword's use extremely generally.[8] If more exactness is attempted, such as by Cook, nuances are missed, for example, the uses of guards.[9] Schwartz states that "we lack the code or key, as it were, to decode the images"[10] of classical Greek warfare, the key to this is the burgeoning field of HEMA (Historical European Martial Arts). For those of a classical persuasion, HEMA is a broad movement of scholars and martial artists who, largely since the 1990s,[11] research and reconstruct the martial arts of the past from various sources. Of particular import are treatises from the 14th century CE and onward,[12] although some living traditions exist.[13] Furthermore, "HEMA is more than a mere martial art. It is a wide field with many possibilities and areas of interest and expertise. We strive to understand the society…"[14] The exploration of these arts and their historical context has had profound effects on how medieval and early modern society and combat should be viewed.[15] Sadly, no such treatises on personal combat from the ancient world have been found, aside from a fragmentary text on wrestling and another on Pankration.[16] However, the later treatises are still useful, HEMA has been somewhat utilised previously to study the ancient world,[17] but its potential as a comparative discipline to ancient history is largely untapped.[18]

This comparison focuses on three key areas:

1. Did the Classical Greeks train with swords? To fight for life with any weapon, the aim is to effectively strike the opponent, causing a disabling wound, and avoid being wounded in return. To do so

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[7] Pittman (2007); Schwartz (2013: 87-9).
[8] Sage (1996: xvii); Gaebel (2002: 111, 163); Snodgrass (1967: images 50-2, p. 97); Wright (1925: 54); Connolly (1998: 63).
[9] Cook (1989).
[10] Schwartz (2013: 20).
[11] Jaquet, Sorenson, and Cognot (2015: 7ff), which is not always an easy alliance, Jaquet, Dawson and Verelst (2016: 594).
[12] Although there are non-European manuscripts, they are not overly relevant, Wetzler (2016: 47).
[13] Crocker (1981: 1-3); Conroy (1981: 1-2).
[14] Schmidt (2020: 9).
[15] Price (2011); Tlusty (2011).
[16] MS P.Oxy.III.466 and LXXIX 5204, for detailed discussion see Ijäs (2020).
[17] Coulston (2007); Hermann et al (2020); Ijäs (2020).
[18] Jaquet, Sorenson, and Cognot (2015: 6).

is no mere game of chance but relies upon the skill and training of the fighters.[19] Largely untrained combatants were a known phenomenon in the pages of the treatises; not everyone who carries arms can or does learn to use them properly.[20] However, we are told such conflicts resemble "useless peasants brawling".[21] If we were to look for modern proof of this, one could examine machete fighting in various parts of the world, where it is commonplace to see blows that leave the person exposed from poor body mechanics and measure.[22] Some have said that even untrained individuals can be effective combatants and use some guards.[23] The first point depends at what point we decide a combatant is 'effective', the second is true, but they would not use them fully. With the stress of combat, training becomes paramount, even to enable what may appear to be instinctive combat abilities.[24] Shusterman, in his work on Somaesthetics states the importance of "muscle memory" in mastering skills and the negative consequences when such memory is incorrect.[25] In re-examining the view of the common Greek soldier as an "amateur" in a pejorative sense,[26] Classical Greek iconography must be examined. In so doing, core components of such swordsmanship can be brought to light, such as guard positions, which demonstrate training.

2. What can an Early Modern comparative tell us about Classical Greek Martial Culture? From the Hoplomachia and fencing masters, martial sports, dancing, hunting and practices such as sparring and test cutting (the cutting of objects such as tatami mats for practice), there are similarities beyond simply the

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[19]Molloy and Grossman (2007: 188, 193-5); Edelson (2017: 1, 19).

[20] Fiore, *The Flower of Battle*, 1r, 20r; Edelson (2017: 12); Marsden (2016: 143).

[21] Meyer, *The Art of Combat*, 42; Although we should bear in mind the class bias of our source, there is likely some truth to such statements considering the prevalence of martial training for certain social strata. Tlusty (2011: 107, 111, 133).

[22] Perhaps most particularly in the Caribbean and South America, Dimarzio (2012: 7ff). This is not to say more complex forms of martial arts do not exist in such places, *The Machete Haitian Fencing Project* has documented one such system. Domini Khan (2018) *Dominican Machete Fight Analysis* [video]. Available from https://www.youtube.com/watch?v=c7JMuzll-W4 [accessed 10 January 2021].

[23] Dawson (2016: 36-8).

[24] Swinny (2015: 179ff, 186) argues that this is partly why hunting makes for effective training. Molloy and Grossman (2007: 191-2); Amberger (1998: 75).

[25] Shusterman (2012: 91, 101, 108).

[26] Phang, Spence, Kelly and Londey (2016: 520); Bardunias and Ray (2016: 4, 81ff); Bannard (2015: 483); Wees (2004: 89-93); Serrati (2013: 317-24); Konijnendijk (2017: 39ff).

presence of training, which a HEMA comparative allows us to explore.

3. When did a Classical Greek use their sword and accompanying weapons? The Greeks' sword is often overlooked, consigned to use as a backup weapon in the phalanx.[27] Euripides even relates that with a broken spear, one is almost useless in the phalanx.[28] However, it was also used at sea, in duels, civil strife, for murder, self-defence, skirmishes and on horseback.[29] Light troops often carried swords as a backup to their spears or javelins.[30] This paper seeks to investigate sword use in these diverse contexts, not only the phalanx. In comparison to our classical sources, the HEMA treatises has something to tell us about these various uses for the Classical Greek sword. That is not to say we should overemphasise the role of the sword in Greek life; it may have been considered "beautiful"[31] but land was won by the spear, not the sword.[32] When swords are noted as used in battle, it is often a sign of intense action; its mention shows it was a noteworthy event.[33]

This endeavour is not entirely unique; others are currently working on interpretations of ancient Greek sword combat.[34] However, such efforts are

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[27] Anderson (1970: 22); Snodgrass (1967: 58, 98); Hanson (1989: 165); Lazenby (1991: 96-7); Matthew (2011: 158); Hdt. 7.224-5.

[28] Eur. Her. 190-5; Anderson (1970: 20).

[29] Xen. Hell. 3.2.27, 3.3.7, 4.4.3-4; Xen. Anab. 7.4.16-20; Xen. Eq. 12.11; Diod. 10.20.2, 13.33.2-3, 17.20.5-6, 17.100; Thuc. 1.6.1-3; Hdt. 8.90.2. Hornblower (1997: 25); Hanson (2005: 142, 254-5); Strauss (2000: 268); Wees (2004: 38, 63); Rawlings (2000: 233-5, 249); Snodgrass (1967: 61, 84-5); Worley (1994: 139, 185).

[30] Snodgrass (1967: 84-5); Wees (2004: 48); Diod. 15.44.3; Xen. Anab. 1.10.7.

[31] Xen. Sym. 5.3-4.

[32]Bardunias and Ray (2016: 12); Anderson (1970: 37); Connolly (2012: 21).

[33] Hdt. 7.224-5 progresses from spears to swords and then teeth and hands in increasing desperation, much as the Anon, *Gladiatoria*, manuscript begins with spears, then swords, daggers and finally ground fighting. Xen. Anab. 7.4 shows a tactical choice to employ side arms in a confined space. Diod. 13.46.1 describes the usage of swords in a particularly tense naval engagement.

[34] Such as the work of George Georgas and others George. E. Georgas (2018) *Οπλομαχία με ξίφος και οπλιτική ασπίδα* [video]. Available from https://www.youtube.com/watch?v=4VzYdbC-lsw [accessed 10 January 2021]; Cultural Association Arma (2014) *Using the spear in ultra tight phalanx formation* [video]. Available from https://www.youtube.com/watch?v=-ZVs97QKH-8 [accessed 10 January 2021]. See also the Ancient Warfare Article by Manning (2017)

often by scholars who are not HEMA practitioners,[35] or by HEMA practitioners who are less scholarly.

In summary, this paper aims to bring these fields into a closer alignment, which is no simple task, but one imagines much could be achieved if classical scholars could lay their hands on swords and the expertise to use them. Likewise, a fuller understanding of the context behind and evidence for ancient weapon usage should assist HEMA students who wish to try to understand ancient weapons. The initial practical component of this research has been completed and will be distributed online as it continues.[36]

Methodological Justifications

If similar enough weapons were used by different societies for similar reasons that would be enough to warrant curiosity, given the intrinsic limitations of biomechanics and weapon physics. What solidifies the worthiness of this comparison is the similarities between the fightbooks and our classical sources. Furthermore, if the weapons and cultures were similar enough, the embodied knowledge and practices of the HEMA community and research into the martial culture of the Medieval/ Early Modern world must prove a fascinating way to better interrogate our classical sources. Archaeologists working in areas such as Bronze Age combat have been grappling with these issues, and when it comes to sword use, they have done much more with much less than scholars of Classical Greece. This research, including the ongoing practical work that is not the focus of this paper, is set in similar methodological veins (sans metal wear analysis etc.) as the mixed approach of Molloy's "combat archaeology"[37] and his use of HEMA research[38] as well as Dolfini and Collins discussion of "skilled practice" in

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[35] Some remark on sword usage, sometimes on the correct track, but often oversimplified, Cook (1989); Shefton (1960: 173-4, 176); Coulston (2007: 34); Snodgrass (1967: 84, 97-8); Bardunias and Ray (2016: 17, 23); Schwartz (2013: 85-95); Wright (1925: 54); Matthew (2011: 158).

[36] Justine Mclean. Available from https://www.youtube.com/channel/UCxzwIWLncXSerOihCEvmBaQ [accessed 10 January 2021].

[37] Molloy (2010: 403).

[38] Molloy (2008: 118)

combined experiential and experimental analysis.[39] However, if we are to compare HEMA treatises to classical texts and artwork, one must first work through various methodological issues. Firstly how such a group of heterogeneous (temporally and geographically) can be integrated. Secondly, problems around using iconography as a source and thirdly which comparatives (in arms and treatise) would be best?

1. A Heterogeneous corpus of sources

The three main corpora of sources are the HEMA sources, the written Classical sources and the Classical iconographic sources. The latter two are unlikely to need an introduction here, but the former will, particularly in how these can be integrated. The HEMA sources are themselves heterogeneous, ranging in time, place, context and techniques. Those of interest to us, before the coming of modern warfare, range from the 14th-17th centuries, encompassing everything from snapshots of diagrams and text all the way to sophisticated didactic texts of martial systems. They were written in Latin, French, German, English and more and present techniques and theory for a wide range of weapons, from self-defence with daggers to warfare with pikes, although they mostly teach single combat techniques. These different martial systems are not necessarily compatible, but they bring into sharp focus an underlying need for martial training which would appear at first glance to be much less visible (or even derided) in our Classical evidence. That training continues today; HEMA is not just a scholarly pursuit but one of embodied practice. It is that embodied practice, never separated from the treatises, which can better interrogate the classical evidence. The Classical corpus has been examined for positions, techniques and practices that align with the treatises and HEMA. These comparisons are the main evidence this paper brings to bear.

It might be fair to object at this point that the skills required for a duel and battlefield combat are not entirely the same. The treatises often claim a usefulness for individual combat and warfare, although occasionally an author will admit their art is not suitable for battle.[40] Sometimes treatises even focus on this aspect, criticising some techniques

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[39] Dolfini and Collins (2018).

[40] Meyer, *The Art of Combat*, 37, 43; Marsden (2016: 97-99); Docciolini, *Treatise on the Subject of Fencing,* 19.

or weapons as being unacceptable for war or praising particular techniques or guards for their usefulness in warfare.[41] Although the context of the majority of HEMA texts is not specifically war, it was "ever present in the background".[42] The purpose of a complete martial arts system in these periods was to prepare the practitioner for combat in a range of contexts, using various armour and weapons (or, indeed, none).[43] While some sources focus almost wholly on one context (such as later Rapier texts on the duel),[44] the application of principles and one's practice to new contexts is well known.[45] After all, we can accept, as both medieval and ancient people did, that activities such as sports, wrestling, dancing or hunting would help prepare a person for violence.[46] Therefore, although this paper focuses on the individual, its application to warfare should not be underestimated.

Another major objection would be that martial culture and practice varies widely, and therefore such comparatives are doomed to invalidity. In HEMA terms, there are broadly two sides to the debate; the 'experiencing approach' argues that since combat is rooted in certain innate biological norms, that learning one art should help us with others, and the 'experimental approach' sees comparatives as potentially corrupting the purity of a given art form and, in the case of HEMA, its reconstruction.[47]

It is my belief that a middle course can be found wherein we accept that violence is influenced by cultural rules and norms and that martial arts have a great deal of variance without rejecting the fundamentals of biology, geometry, physics and timing as the basis of effective fighting.[48] I.33 (c1300 sword and buckler treatise) states: "all men holding a sword in hand, even if they are ignorant of the art of combat, use these seven

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[41] Silver, *Paradoxes of Defence*, Introduction; Meyer, *The Art of Sword Combat*, 141-2; Meyer, *The Art of Combat*, 223-5, 267.
[42] Marsden (2016: 197).
[43] Finley (2014: 1); Lovett (2002); Chandler (2015: 131ff).
[44] Marsden (2016: 32, 126).
[45] Meyer, *The Art of Sword Combat*, 49, 121, 249.
[46] Paus. 5.8.10; Philostr. Gym. 9; Xen. Hunt. 1.18, 12.1-9; Xen. Cyrop. 8.8.12; Plat. Laws. 7.814d; Wheeler (1982: 223ff); Finley (2014: 1, 12-3); Swinny (2015: 179ff); Bardunias and Ray (2016: 81ff); Anderson (1970: 92-3); Tlusty (2011: 217-21); Rawlings (2000: 248-9); Forgeng and Kiermayer (2007: 161); Konijnendijk (2017: 65).
[47] Talaga and Talaga (2018: 152ff).
[48] Mondschein (2021: 200); Gassmann (2021: 83); Wauters (2021).

guards."[49] In other words, there are only so many ways an attack (or defence) can be launched, and only so many positions to launch it from that make biomechanical sense with any given weapon.[50] Although it is ultimately true that "we cannot presume that Bronze Age bodies and Medieval/Renaissance bodies would act in the same ways while fighting because fighting is a socially constituted activity, which is predicated upon a corpus of embodied knowledge unique to each society",[51] this surely applies more to the minutia of combat than general outlines. It seems ludicrous to suggest a Xiphos-wielding Greek was likely to perform a perfect *Passata Soto*,[52] but less so a fallen Greek thrusting effectively against an oncoming foe.[53]

To summarise, if embodied practice, HEMA comparatives, and textual/ iconographic evidence match up, there is likely something worth exploring, even without a period treatise. By using the different parts of Marsden's HEMA Hierarchy (a ranking of different kinds of evidence for reconstruction) in tandem with each other and not alone, we can be assured that those results are as valid as they can be, given the dearth of period treatises for swordplay (Fig. 1).

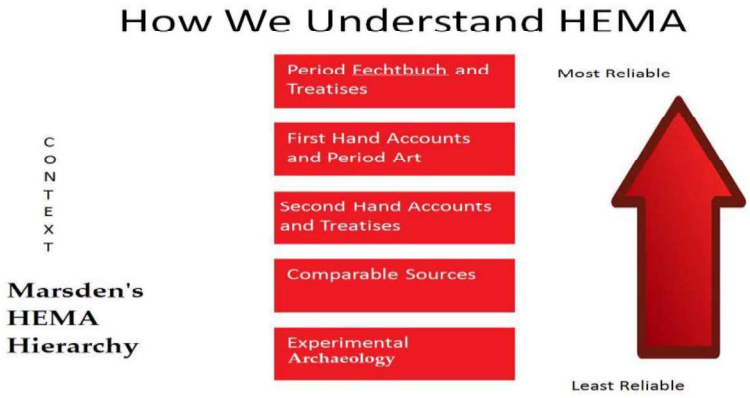

Fig. 1: Marsden's HEMA Hierarchy. Used with kind permission from Mr Marsden.

[49] Anon, *Royal Armouries MS I.33*, 34; Dave Rawlings (2016) *I.33 Wards* [video]. Available from https://www.youtube.com/watch?v=UCHbDsTu0hk [accessed 10 January 2021], this is a geometrical observation on effective positions.
[50] Dawson (2016: 40); Molloy (2008: 117).
[51] Hermann et al (2020).
[52] A commonly recurring technique under different names which involves suddenly dropping under an opponent's sword and stabbing them.
[53] Metropolitan Museum, Accession 40.11.23, c.390BC, Grave Stele.

2. Issues of using iconography

Iconographic representations in this discussion include vase painting, sculpture and coinage.[54] The use of artwork or historical accounts as a source for HEMA practitioners can be contentious, its purpose is not didactic and it can be prone to an artistic licence one may not expect in a treatise, such as metal armour being defeated by sword cuts, which is perhaps not impossible, but surely improbable.[55] Likewise, classical scholarship has a history of disagreements about the proper interpretation of artwork that can sometimes dramatically change our conceptions around classical Greek warfare, an emblematic example would be around if weapons and grips shown in the overhead position are generally javelins being thrown or spears being wielded.[56]

If these sources are, by and large, valid depictions of Greek swordsmanship, then those who created them, and those who viewed them, had to have knowledge of swordsmanship (or have seen it exhibited) to create or demand accuracy in their art.[57] Of those who consumed art, many presumably could afford swords[58] and were expected to fight for their Polis. If we take art to be representative of ancient material culture in many respects,[59] surely we can do the same for swordsmanship.

The problem lies in knowing precisely what we are looking at; even though non-technical medieval manuscripts have recognisable HEMA positions, a scholar may well miss that. To take this a step further, imagine the difficulty of reconstructing sword and buckler combat from manuscript images alone. This is, in many ways, a similar position to Classical scholars trying to understand warfare from non-didactic iconographic sources. What the Classical Greeks may have seen as X or Y

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[54] Cook (1972: 277); Boardman (1995: 29-30). The medium is not inconsequential, Dawson (2016: 35).

[55] See the Morgan Crusader Bible, *MS M.638*, 1240's 10v, 12r, 23v for some examples; Lowe (2020: 219ff).

[56] Matthew (2011: 19ff).

[57] Anderson (1970: 87); Cook (1989: 57, 61); Shefton (1960: 173); Oakeshott (1960: 63-4) others argue art is not always intended to be accurate Dawson (2016: 31).

[58] The bar may not have been high, Xen. Hell. 3.3.7; Underhill (1900: 100) and vases were inexpensive, Sparkes (1996: 36).

[59] Such as weaving, Roth (2008: 33ff); and spear combat, Torres-Hugon (2018: 148); Matthew (2011: 19, 238).

position, we must name and explore ourselves. This is why the HEMA parallel is so crucial, it gives us a tool to expand on our evidence rationally. But which treatise and weapons could we compare to the Classical Greek iconography?

3. What comparative HEMA treatises and weapons should be used?

Sword usage changes not only based upon the context of the combat but also the weapon itself,[60] even if certain principles remain fixed. Therefore, we must find some similar swords to Greek examples.[61] For our case, the two main comparative weapons are Meyer's Rappier and Dussack for the *Xiphos* and *Kopis*, although, with Meyer's being a complete martial system, elements from all his weapons will be required as each section ties into the others.[62] There are many references in the HEMA texts about using skills from one weapon (or unarmed skills) and transferring them to others.[63] Sometimes, this is explicit and applies obviously to similar weapons,[64] other times it is more implicit and complex.[65] It is, therefore, in keeping with this thinking to seek this comparative.

Meyer's 1570 printed work with luxurious woodblock prints is the key work, but the 1561 and Lund are all influential because they form part of the author's "skilled practice".[66] The choice of Meyer may seem to HEMA specialists to be an odd choice, as he is from a later period than other sources, often thought to be of a more 'sporting' nature (particularly in relation to preparation for martial arts tournaments, *Fechtschulen)* and enmeshed in a very particular martial context of the Holy Roman

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[60] Draeger (1980: 7-8).

[61] Matt Eastern (2021) How to use the Viking Dane Axe: A methodology for research [video]. Available from https://www.youtube.com/watch?v=doqsgJIv8J4 [accessed 27 July 2021]. He discusses many of the methodological issues, although similar weapons do not always entail completely the same usage, the comparison is still worth undertaking.

[62]Ted Elsner (2020) *Where to start with Meyer* [video]. Available from https://www.youtube.com/watch?v=fYxVMRZVoIc [accessed 10 January 2021].

[63] Lovett (2002); Price (2011: 132, 165, 248).

[64] Paurñfeyndt, *Founding of the Chivalric Art of Swordplay*,. A3r, G2, I2; Meyer, *The Art of Combat*, 49, 121, 249, 260; Falkner, *Kunste Zu Ritterlicher Were*, 62rff shares techniques for various polearms.

[65] Fiore, *The Flower of Battle*, 10r.

[66] Dolfini and Collins (2018).

Empire.[67] Having said this, his texts are also immensely detailed, with clear illustration and written not just as an aide-mémoire but as a set of instructional teachings for beginners and intermediate students. Many of the staple techniques of swordplay are replete in his works, alongside much more complex material, unlike the commentaries on the *Zettel* ('recital', a poetic work on martial arts supposedly created by Liechtenauer in the 15th century), or I.33, where a great deal of knowledge seems to be assumed.[68]

The 'standard' Greek sword of the period was reasonably short, double-edged with a leaf-shaped blade coming to a fairly acute point.[69] Snodgrass calls it "crude" but "stout and effective… for in-fighting".[70] The first judgment merely shows his aesthetic prejudice; however, his second comment that a shorter blade will be easier to disengage, and attack or defend again, has some basis.[71] Unfortunately, there are no treatises specifically for an arming sword without a buckler, which is probably most similar to a *Xiphos*. However, the Dussack of Meyer is "an origin and basis of all swords used with one hand"[72] and Paurñfeyndt says:

> "how one should use the messer advantageously… a predecessor and main source of the other weapons that are used with one hand, such as the tessack [Dussack, Messer?][73] or the dagger, the straight cutting sword or the thrusting sword and many more one-handed weapons."[74]

It would therefore not be strange to utilise Dussack and Messer in this comparative investigation as they can be similar in feel and abilities to the reconstructed Greek practice swords the author has utilised.[75]

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[67] Tlusty (2011): 210ff.
[68] Pseudo Peter von Danzig, Zettel, 1; I.33, assumes you know, for example, how to perform a 'step through', 'shield strike' or 'thrust strike' etc and offers limited explanation.
[69] Snodgrass (1967: 84, 97); Sekunda (2000: 16-17).
[70] Snodgrass (1967: 84).
[71] Silver, *Paradoxes of Defence*, 2.
[72] Meyer, *The Art of Combat*, 121.
[73] Norling (2012); Meyer, *The Art of Combat*, 14; Castle (1885: 229, 247).
[74] Paurñfeyndt, *Founding of the Chivalric Art of Swordplay*, G2.
[75] Robert Brooks of the Hotspur School of Defence as well as Alan Ethell of Wolf Heart Historical Martial Arts were consulted on the feel of the reproductions and agreed that this seemed reasonable.

Fig. 2: Drawing of a Messer, The Art of Messer Fencing, 1482. Bayerische Staatsbibliothek, Cgm 582, cc by-nc-sa 4.0.

Fig. 3: Surviving Dussack, c. 1580-90. Wallace Collection, inv. A715, cc by-nc-sa 4.0

The Rappier[76] of Meyer is a double-edged sword, but rather unlike a leaf-shaped blade it comes to a more acute point. The hilt furniture of the Rappier tends to put more weight toward the hand, and the pommel of the *Xiphos* achieves a similar nimbleness of the point, even if they look very dissimilar. These parallels are not perfect, but are, arguably, the best we have (Fig. 3 and 4).[77]

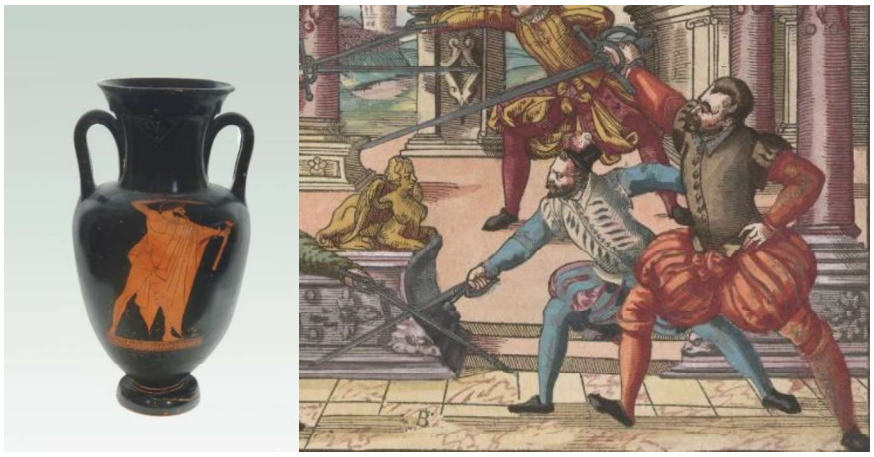

Fig. 4: Ox Guard with a scabbard. 525-475 BC, Italy. With kind permission and photographs from the Museo Arqueológico Nacional, Madrid. Inv. 11118. Foto: Antonio Trigo Arnal.

Fig. 5: Ox Guard with rapier. Meyer, A Thorough Description of the Art of Fencing, 1570 Straßburg. © Leipzig University Library, VD16 M 5087, public domain.

[76] Meyer, *The Art of Combat*, 17-8.
[77] Clements (1997: 23).

The '*Kopis*'[78] is a primarily single-edged one-handed curved sword, with much of the mass being near the tip and the edge usually being on the inside of the curvature of the blade.[79] Like most swords, it can cut and thrust, although its cutting power is often remarked upon.[80] The Messer[81] or Dussack is a fair but imperfect comparative,[82] although the edge is conversely most commonly on the outside of the curvature and the weight distribution closer to the tip, they are both cut-centric swords with some added hand protection and of a similar size.

The Treatises and the Greek literary sources

Although we do not have surviving treatises in the art of arms from this period, we do have a marvellous array of texts that mention warfare and the use of swords in the ancient world. Moreover, HEMA parallels can help us mine them for information. Included below is a selection of important passages that can tell us something about classical sword use when so investigated.

In the *Cyropaedia*, the idea of cutting objects for practice is found, comparable to 'test cutting' in modern HEMA.[83] Cutting effectively is contentious within the modern HEMA community, however, certain criteria occur repeatedly. A cut requires structure with the body (for example, the wrist, elbow, shoulder, hips and legs all working together) and edge alignment.[84] All of these things require tuition and practice, an untrained individual is likely to inflict less damage or cut in such a way that leaves them exposed, even if cutting attacks come instinctively.[85] This is particularly true against armoured opponents because one must target vulnerabilities precisely, much like in the medieval and early

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[78] Snodgrass (1967: 97-8); Sekunda (2000: 16-17). I have chosen to refer to this general category of swords as a 'Kopis' for ease of use, for a more detailed discussion see Sanz (1994).
[79] Snodgrass (1967: 97); Bardunias and Ray (2016: 22); Baitenger (2001: Tafel 65); Connolly (2012: 21).
[80] Schwartz (2013: 94-5); Oakeshott (1960: 49-50); Connolly (2012: 22).
[81] Meyer, *The Art of Combat*, 14; LaRocca (2012: 47).
[82] The Gurkha Kukri and later sabers have also been compared to the *Kopis*, Oakeshott (1960: 49-50).
[83] Xen. Cyrop. 2.3.10; Molloy (2008: 122-3).
[84] Edelson (2017: 1, 25-64); Molloy (2008: 122-3).
[85] Edelson (2017: iii); Swinny (2015: 179ff, 186); Oakeshott (1960: 31).

modern period.[86] Even if one received no formal training, one might still desire to practice with one's arms to attain essential skills. When Van Wees' says training was "mainly informal, private exercise, most of it aimed at general physical fitness rather than specialist combat skills",[87] he may be partly right, but it is easy to underestimate the skill needed to use arms or to miss parallels in the sources to martial arts practices. Although he does not deny a soldier's wish to "pick up basic weapons skills",[88] he does not address what is 'basic' and how complex even that can be.

Another example from the *Cyropaedia* is when Xenophon has his character proclaim that nobody needed to teach him how to hold his sword but that he learned to do so and fight from instinct.[89] This has mistakenly been used as evidence that a hoplite expected no direct military training.[90] In actuality the idea of being taught such things is not presented as unusual. Indeed, the passage makes such training appear the norm, particularly when taking into account the "rhetorical"[91] purpose of the passage. An untrained person may easily make mistakes in holding a sword which will render them a less effective combatant:[92] holding it as a hammer, and trying to cut with it will likely hyperextend the wrist and cause injury, while being less likely to injure the opponent.[93] The correct grip on the sword is crucial.[94] Indeed, shortly after this speech a scene is

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[86] Fiore, *The Flower of Battle*, 35r "strike him… either under his arm, under his coif… into the buttocks… or into the back of the knee."
[87] Wees (2004: 89).
[88] Wees (2004: 93).
[89] Xen. Cyrop. 2.3.10-11.
[90] Bardunias and Ray (2016: 89); Konijnendijk (2017: 58-9) believes it shows no need for training with swords.
[91] Krentz (1985: 57).
[92] Marsden (2016: 142).
[93] Blood and Iron HEMA (2016) *How to properly grip a sword - Understanding HEMA* [video]. Available from https://www.youtube.com/watch?v=_kSGKraWTf8 [accessed 10 January 2021]; Blood and Iron HEMA (2016) *Broken Wrist Positions - Understanding HEMA* [video]. Available from https://www.youtube.com/watch?v=PKuUekNjxqU [accessed 10 January 2021] Hermann et al (2020) recommended the hammer grip as suitable. Although I cannot speak for bronze age swords, in my own testing and in some (but not all) of the fine iconographic examples (EG Beazley 204499, 206391), the 'sabre grip' of Hermann et al was most suitable and clearly shown, but without the extension of the finger onto the blade. This may be a mere semantical difference.
[94] Oakeshott (1960: 35); Edelson (2017: 76-81).

presented in which groups of soldiers take turns using wooden weapons to practice their fighting, showing that the idea of sparring was known to Xenophon.[95]

Philostratus tells us that the Spartans adopted boxing as a method for training to cover the head with the shield in war.[96] Wrestling techniques are important in armed HEMA with people from many social classes training to wrestle in the medieval world, in preparation for war and conflict and we are also told that pankration and wrestling were considered useful for war, particularly in close quarters.[97] When we consider the sophistication of their unarmed arts[98], it seems strange to suppose that the ancient Greeks did not have sword arts of their own.

In Plato's *Laches*, the view is expressed that the learning of martial skills could be valuable, but also that bravery should be held in high esteem.[99] The *Laches* is not without its complexities, however, despite its focus on bravery, it seems clear that training comparable to HEMA was occurring. In Plato's *Laws,* the idea of monthly training and what perhaps alludes to sparring is posited.[100] Of even greater importance is a passage in the *Republic*, where Plato suggests someone unpractised in the art of arms would not be very useful on the field,[101] clearly suggesting training and practice are important. Aristotle also tells us that those mercenaries of experience and skill are at a significant advantage over less experienced members of a militia.[102] Plutarch states, "the struggle came to swords and the work required skill no less than strength"[103], demonstrating that swords could be viewed as weapons requiring skill. The extent to which

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[95] Xen. Cyrop. 2.3.17-20; Anderson (1970: 92); Pritchett (1974: 221) posits such activities were uncommon, considering the importance of sparring activities, this seems uncertain, particularly as sources mention mock combat. Polyaenus, *Strat.* 3.9.32; Plat. Laws. 8.829a-831b.

[96] Philostr. Gym. 9.

[97] Philostr. Gym. 11; Nep. Epam. 2; Finley (2014: 5-8); Molloy (2007: 9); Peatfield (2007: 28); Forgeng and Kiermayer (2007: 161).

[98] Philostr. Gym. 14; Wright (1925: 30-1); There are even, much as in the HEMA treatises, regional differences in martial arts style.

[99] Plat. Lach. 181e-184c.

[100] Plat. Laws. 8.829a-831b; Wees (2004: 90).

[101] Plat. Rep. 2.374c-d*;* Konijnendijk (2017: 63).

[102] Aristot. Nic. Eth. 1116b; Konijnendijk (2017: 63).

[103] Plut. Vit. Tim. 28.2. Although Plutarch is writing from well beyond the Classical period.

more complex training permeates society at large and not primarily elites is hard to judge however.[104]

This comparative field also offers avenues into explaining ancient ambivalent attitudes to the *Hoplomachia* discussed in Plato's *Laches* by comparing them to medieval and early modern martial arts masters. The *Hoplomachia* are a somewhat obscure phenomenon, they appear to have been professional sophists teaching martial skills to wealthy patrons. One gets the idea that their teachings went beyond what an 'average' hoplite would have been known. Like their medieval and early modern counterparts, they were viewed with some suspicion by society at large.[105] An element of pageantry or display seems to be common to Early Modern Germany with its own masters giving displays and lessons in *Fechtschulen* both to train and entertain participants and viewers. This appears similar to the discussion of public displays in the *Laches*, giving us an idea of what such an event might have looked like.[106] Indeed, the 'scythe spear' of one unfortunate *Hoplomachos* is similar in tone to some of the more outlandish depictions in the HEMA treatises.[107] Although we cannot prove it without more evidence, the instructors of the arts of arms of the classical period may have lived lives every bit as mercenary, daredevil and innovative as some of their later counterparts.

Compared to the people who studied martial arts in the medieval and early modern period, how skilled might a Greek have been? The systems the treatises demonstrate are often complex,[108] covering different weapons in and out of armour.[109] To master a system takes instruction and time. Whether most people fought like this is difficult to ascertain, but we are told of common or vulgar fencers, combatants not unskilled, but not privy to particular training.[110] The advent of the printing press and social change also increased information dissemination.[111] For a 16th century

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[104] Rawlings (2000: 243).
[105] Wheeler (1982: 224-5); Marsden (2016: 142-3, 160-2); Tlusty (2011: 215-7).
[106] Tlusty (2011: 189ff); Plat. Lach. 178a.
[107] Plat. Lach. 183d- 184a; Talhoffer MS Thott.290.2º: 15v-44r.
[108] Gassmann, Gassmann and Coultre (2017: 119); Verelst, Dawson and Jaquet (2016: 10).
[109] Marsden (2016: 147-2, 169-72); Lovett (2002); LaRocca (2012: 56).
[110] Anon, *Royal Armouries MS I.33*, 38; Pseudo Peter von Danzig, *Zettel,* 89; Acutt (2020: 53-4, 69-70, 127).
[111] Meyer, *The Art of Combat*, 14, 41; Forgeng and Kiermayer (2007: 159) although traditional manuscripts still persisted.

burgher in the Holy Roman Empire or knights of the 15th century, it was normal to attain high levels of martial skills appropriate to their social rank and position within the military.[112] We should also bear in mind the legal requirements in the medieval and early modern periods for weapon ownership;[113] if a 16th century militiaman could be skilled, why not a hoplite? The level of skill and training will have varied considerably with the individual,[114] particularly in cities without a training program or that did not select 'chosen men'.[115] However, for those with time,[116] they could have trained in complex martial arts, including sword use, considering the many references to Greek military training, direct and indirect, in particular the *Hoplomachia*.[117] Indeed, the basics were probably assumed knowledge for a hoplite, perhaps taught by one's father, much as Theocritus has Amphitryon do.[118] Some significant training may also have been done while on campaign on the orders of conscientious commanders.[119] This shows not only that the sword and combat arts were viewed as skills that ought to be learned, but also that they expected tuition.[120]

The Treatises and the Greek iconographic sources

This section will compare the Greek iconographic evidence to the fight books. Although an image only demonstrates a small part of the action, and can be hard to interpret,[121] many of the parallels should become

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[112] Tlusty (2011: 1); LaRocca (2012: 52-4, 56).
[113] Eibach (2007: 18). Cities in the HRE often demanded their denizens remain armed so as to serve as watchman and in the military, not that such rules were always obeyed, but such laws were common in all of Europe Tlusty (2011: 21, 47, 272).
[114] Pritchett (1974: 230-1).
[115] Plut. Vit. Pel. 18; Diod. 11.75, 12.75.7, 17.2.3; Aeschin. 1.49; Aristot. Const. Ath. 42; Paus. 4.11; Thuc. 5.67, 5.69; Hornblower (2008: 177); Xen. Hell. 5.3.17, 6.5.23; Ridley (1979: 514); Pritchett (1974: 221-4); Cook (1989: 59); Smaller more professional units to assist the militia is hardly unique to the ancient Greek world Tlusty (2011: 274).
[116] Diod. 17.11; Wees (2004: 93).
[117] Aristot. Const. Ath. 42; Plat. Lach. 178a, 179d-e, 181c, 181e-82d; Wheeler (1982: 224); Anderson (1970: 86); Jones (1999: 127); Rawlings (2000: 238-43); Serrati (2013: 325); Konijnendijk (2017: 66); Sekunda (2000: 9).
[118] Theoc. 24. 125-6; Wheeler (1982: 225); Anderson (1970: 87).
[119] Konijnendijk (2017: 41); Pritchett (1974: 219-21); Xen. Cyrop. 2.3.17-19, 6.2.4.
[120] This is in sharp contrast to what has oft been presented in classical scholarship, Bardunias and Ray (2016: 81); Wees (2004: 89).
[121] Forgeng and Kiermayer (2007: 154-5); Schwartz (2013: 20, 24).

obvious once highlighted. First, an overview of the biomechanical principles elucidated by the ancient iconography will be explored in comparison to the treatises. Then guard positions will be identified from the iconography which align with HEMA treatises. For consistency and in line with the methodology, I have tried to mostly use Meyer's terminology, simply to give a name to the positions, not because the iconography entails the same usage of these positions within a martial system. These taken together demonstrates swordsmanship skills. All weapon combinations will be included, single sword, alongside a cloak, shield or scabbard.[122] These accompanying tools with the sword may well have occurred alongside each other, and of course against spears; one does not always have the luxury of matched weapons.[123] A small selection of images will be included, but there are many more which are referenced.

Certain Greek artistic examples, HEMA texts and medieval and early modern art show many similarities in the ways swords were used. When we can match art and HEMA texts they likely represent some sort of reality (Fig. 6 and 7).

Fig. 6: Wrath guard shown in a medieval manuscript. Anon, *The Gorleston Psalter, 1310-1324 AD*, Suffolk, *Used with the kind permission of the British Library © British Library Board BL. Add. 49622 f. 149v.*

Fig. 7: 2nd Ward Of I.33. Anon, *Walpurgis Fightbook, c. 1300 AD, Franconia, © Royal Armouries,*

FECHT 1, Open access.

None of that is to say that the art of the fight books and Classical Greece existed for the same purpose, nor was their military training in the same context and with the same methods. However, with our HEMA

[122] These are rarely discussed Wright (1925: 53) notes the use of the scabbard but not the cloak and Oakeshott (1960: 63) is the reverse.
[123] Bas (2013: 185-9).

comparatives, we can unlock more, finding the common "essential nucleus".[124]

Biomechanics

Since it has been convincingly argued that scenes of unarmed fighting in Greek iconography point to an understanding of biomechanical principles,[125] the same is likely true for armed scenes. A few key areas of biomechanics will be discussed in turn.

The importance of a correct grip has already been discussed, and it should come as no surprise that our iconography shows this clearly on several occasions.[126]

Let us examine footwork: the weight of at least one of the feet is very often shown to be on the balls of the foot, and not unbalanced on the heels.[127] Alongside this, images sometimes show the rear foot turned away from an opponent, and perhaps the front foot raised and likewise turned away, much as is seen in parts of Fiore's treatise.[128] The below example may appear to show the sword on 'the wrong side' but in the authors experience the strikes flow well (Fig. 8 and 9).

[124] Vlassopoulos (2014: 5).
[125] Peatfield (2007: 28-30).
[126] Beazley 204499; 1863; British Museum accession 1863,0728.242, c.540-480, black figure lekythos
[127] Beazly 209062, 205048, 205119, 207551, 207459; British Museum accession 1842,0822.1, 490BC-460BC calyx-krater.
[128] Fiore, *The Flower of Battle*, 23v-24v; Beazley 201792, 351531, 203454, 212792.

Fig. 8: Wrath guard held on the left side. 500-450. Athens. ABDUA:67074 (Beazley 203454) My thanks to the museum of the University of Aberdeen for permission to use the photograph.

Fig. 9: One of Fiore's Posta Di Donna. Fiore, Flower of Battle, c.1400, Italy, © *Getty Open Content Program*, Ms. Ludwig XV 13.

This allows the practitioner to step forward or backward and to turn, generating power for the defences or strikes one may wish to achieve;[129] it also gives the illusion to an opponent that you are open to being struck.[130] Similar ideas can be found in the wrath guard in Meyer, with the foot extended and the body torqued ready to strike.[131]

Less complex footwork occurs in abundance, with the torso facing forward, a few such images perhaps show a "passing step" or a "simple step" (to either advance, changing the lead leg, or keeping the lead leg in place) in action, possibly to deliver an attack.[132] Weight can be distributed evenly, or mostly on one leg, depending on tactical considerations or the system that is being used, and the artwork demonstrates some variety on this front, which is to be expected.[133] Often the knees are bent and ready to spring into action. To sum up on the footwork, the Greek iconography generally shows a significant level of martial knowledge when compared to our HEMA treatises.

When examining the torso and shoulders, the ancient Greek examples tend to be held upright or in alignment with the hips and legs, projecting their power.[134] A common issue amongst beginners in HEMA is to overly tense and hunch their bodies.[135] This overly contracts the muscles and prevents comfortable breathing, both of which will prevent proper cutting.[136] Such issues are largely absent from our extant ancient examples.

Guards

[129] Fiore, *The Flower of Battle*, 23v.
[130] Meyer, *The Art of Combat*, 145.
[131] Meyer, *The Art of Combat*, 113.
[132] Edelson (2017: 55); Cook (1989: 59); Meyer, *The Art of Combat*, 68-9; Beazley 207390, 209532, 207526.
[133] Edelson (2017: 47).
[134] Beazley 203900, 205048, 207459, 207551.
[135] Edelson (2017: 48-9, 59-60).
[136] Edelson (2017: 25, 54).

The Guard of Wrath

This guard is, along with the guard of the boar, by far the most well represented position in our iconography, and appears often with the sword alone, cloaks and shields, and is used with both the *Kopis* and the *Xiphos* (Fig. 10).[137]

Fig. 10: Ox (left) and Wrath (right) guard with a shield. Attica, 500-400 BC. With kind permission from National Museums Scotland Image © National Museums Scotland A.1887.213

It has previously and somewhat nebulously been dubbed the "Harmondios blow"[138], but it can be further explored. It is formed by bringing the sword behind the head and pointing it down diagonally behind the back, over either shoulder. The hand is protected, and the body is wound up to strike. It threatens, most obviously, large cuts with the long edge (the edge the knuckles point too) from the shoulder it is held behind. However, the guard is deceptive, for Fiore's *Posta Di Dona*, an analogous guard position, can strike any blow or thrust;[139] Meyer gives us similar advice.[140] Schwartz argues that in order to cut, one must draw back the sword and leave oneself vulnerable, however, the drawn back position helps protect the most exposed parts of the body.[141] Cook and Shefton both see this guard as an exposed position from which one may make a risky attack, perhaps best suited to finishing off downed opponents (which of

[137] Beazley 204408, 206391, 207390, 201756, 209532.
[138] Shefton (1960: 173).
[139] Fiore, *The Flower of Battle*, 22r-23v.
[140] Meyer, *The Art of Combat*, 54, 145-7.
[141] Schwartz (2013: 93).

course, it can do);[142] in fact they have been taken in by the deceptive appearance of this versatile guard.

The Guard of the Boar

This guard is formed by pointing the tip of the weapon at the opponent and drawing the hand backward then raising it slightly with the left leg being forward; it can be done with a shield, cloak, and/or a scabbard as well as with the sword alone (Fig. 11 and 12).[143]

Fig. 11: The Boar guard with outstretched arm. Attic, 470–460. Used in accordance with the metropolitan museums open access policy. Metropolitan Museum 76.12.7. Beazley 206396.

Fig. 12: The Boar guard from Dussack. Meyer, A Thorough Description of the Art of Fencing, 1570 Straßburg. © Leipzig University Library, VD16 M 5087, public domain.

This position from Meyer's Dussack has many similarities with the Plow guard of the earlier fight books and Meyer's Plow, which is "essentially just a low thrust, but as a posture".[144] This position most obviously threatens a powerful thrust while keeping the hands safe and keeping the body prepared for stepping. However, this guard can launch other attacks and can easily move to defend an opening that is threatened, particularly into hanging parries when attacked from above.[145] This guard seems more appropriate for the *Xiphos* considering that the point of a *Kopis* would make it awkward to thrust from this position due to the forward curve of the blade and the point not aligning with the wrist, unless the edge was on the outside of the blade curvature, which may explain

[142] Cook (1989: 57-8); Shefton (1960: 173).
[143] Beazley 207526, 202257, 206396; Oakeshott (1960: 64); Boardman (1995: 29-30, 145).
[144] Meyer, *The Art of Combat*, 177.
[145] Meyer, *The Art of Combat*, 157.

why the *Kopis* in its traditional form has not been seen by the author in this position.[146]

Guard of the Roof

Also called the 'High Guard for the cut' in the Rappier section,[147] or 'Watch' in the Dussack section,[148] this guard is less commonly seen in the iconography.[149] It has the sword held above the head, the point facing behind or above the wielder, but not held as far back as in the Wrath guard.[150] This guard attacks most obviously with cuts from above,[151] but can also cut from below or the middle, and can easily parry in numerous ways.

Guard of the Ox

Called the Steer, in the Dussack section,[152] this guard is also uncommon, with very few extant examples; it is held by pointing the sword at one's opponent and holding the hilt above or by the side of one's head (Fig. 4, 13 and 14).[153]

It most obviously threatens a high thrust, "for the Ox is essentially just the position for a thrust from above".[154] However, it "is one of the best postures, from which all kind of techniques can be appropriately executed".[155] We also know that the Greeks made use of the high thrust as it appears in the iconography.[156]

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[146] Beazley 207551 may show the guard using a sword with the curvature on the outside of the blade which makes the position more practicable. Alternatively, the sword may be intended to be a straight edged blade because of the type of scabbard depicted.
[147] Meyer, *The Art of Combat*, 175-6.
[148] Meyer, *The Art of Combat*, 137-8.
[149] Beazley 205509.
[150] Meyer, *The Art of Combat*, 175-6; Boardman (1995: 119).
[151] Meyer, *The Art of Combat*, 137-9, 175-6.
[152] Meyer, *The Art of Combat*, 140.
[153] Meyer, *The Art of Combat*, 53, 140, 175.
[154] Meyer, *The Art of Combat*, 175.
[155] Meyer, *The Art of Combat*, 140.
[156] Beazley 204087.

Fig. 4: Ox guard with a scabbard. 525-475 BC, Italy. With kind permission and photographs from the Museo Arqueológico Nacional, Madrid. Inv. 11118. Foto: Antonio Trigo Arnal.

Fig. 13: The Steer with Dussack. Meyer, A Thorough Description of the Art of Fencing, 1570 Straßburg. © Leipzig University Library, VD16 M 5087, public domain.

Fig. 14: Ox with Rappier. Meyer, A Thorough Description of the Art of Fencing, 1570 Straßburg. © Leipzig University Library, VD16 M 5087, public domain.

Scabbards

Scabbards gripped in the left hand alongside a sword are ubiquitous in the surviving vase paintings, clearly demonstrating a real practice, as they have also been used in HEMA treatises.[157] A scabbard, perhaps assuming it has a wooden and/or metal element, would prove useful to set aside thrusts, to hold off opponents as seen in Fiore, potentially protect against cuts, or even to strike with it. In the extant Greek examples, it appears as if the scabbard was being held in a position ready to parry an opponent's strikes, although there are some exceptions (Fig. 15 and 16).

[157] Jakob Sutor von Bade, *New Künstliches Fechtbuch*, 76-7. Greg Mele of the Chicago Swordplay Guild contributed greatly to this understanding and demonstrated the prevalence of techniques that fight from the draw.

Fig. 15: A use of the scabbard. Fiore, Flower of Battle, c.1400, Italy, © *Getty Open Content Program*, Ms. Ludwig XV 13.

Fig. 16: Possible ancient Roof guard with scabbard. 525-475. Italy. With kind permission and photographs from the Museo Arqueológico Nacional, Madrid. Inv. 11118. Foto: Antonio Trigo Arnal.

Cloaks

Cloaks are used in the HEMA treatises in several ways, such as to defend with, to entangle an opponent's weapon or thrown as a distraction.[158] In the ancient iconography it seems to be used similarly to the scabbard, and both could be deployed simultaneously (Fig. 17 and 18).

Fig. 17: Cloak and scabbard with Plow. 475-425. Italy. Beazley 207389, used with the kind permission of the National Museum of Antiquities, Leiden.
Fig. 18: Techniques using Rappiers and Cloaks in Meyer. Meyer, A Thorough Description of the Art of Fencing, 1570 Straßburg. © Leipzig University Library, VD16 M 5087, public domain.

Furthermore, the ability for spare material to hang down also acts as something of an emergency shield.[159] As a tool in self-defence (against humans or animals) it was probably used much as it was in the early

[158] Meyer, *The Art of Combat*, 223-4; Docciolini, *Treatise on the Subject of Fencing,* 64-71; Clements (1997: 62-3).
[159] HEMA experts Matt Eastern and Martin Fabian have described using textiles in the off-hand, Martin Fabian (2018) *Learn Rapier 8 - The Fabulous Cape* [video]. Available from https://www.youtube.com/watch?v=oQ88cuzsyqE [accessed 10 January 2021]; Matt Easton (2013) *Cloaks used with swords in historical fencing styles* [video]. Available from https://www.youtube.com/watch?v=iTPrpTGEqeg [accessed 10 January 2021].

modern world.[160] Skirmishers may also have used cloaks or pelts in warfare making this possibly applicable beyond self-defence.[161]

Shields

When it comes to battlefield encounters, sword and shield would surely have been the most common combination, either when one's primary weapon had been lost, or if lines closed. The shield of the hoplite was large, and was probably used both passively and actively, much as shields and bucklers are used in the HEMA treatises. As a passive almost stationary obstacle it closes openings for an opponent.[162] For a more active usage, which may have been somewhat abnormal but is documented by Herodotus and Euripides,[163] and argued for by Wees,[164] a shield can also be used to pin an opponent's shield and/or weapon, as well as to strike an opponent (Fig. 19 and 20).[165] Some have argued that active use of the shield was limited by its weight, of between six and nine kilograms.[166] Rotella, our closest parallel, have varying weights, perhaps a few kilograms and are generally smaller and lighter than hoplite shields.[167] Some have argued based on iconography that the shield, much like the Rotella, was held extended whilst moving and fighting,[168] although it seems doubtful this would be useful in the phalanx. This parallel presents an alternative picture to previous ones drawn by Schwartz,[169] demonstrating its possible use in single or smaller group combats, which some scholars have argued was not practicable.[170] One should see Sean Manning's as well as Stephen

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[160] Marsden (2016: 71, 154, 157); Lowe (2020: 98-99).
[161] Beazley 10878, 12132, 203837, 204513, 205858.
[162] Snodgrass (1967: 53); Oakeshott (1960: 63); Lowe (2020: 77-8).
[163] Hdt. 9.74.2; Although some have doubted Herodotus, Schwartz (2013: 40-54, 147); Eur. Phoen. 1390-1424; Eur. Andr. 1125-1160; Pittman (2007: 69-70).
[164] Wees (2004: 190).
[165] Pittman (2007: 71); Snodgrass (1967: 79); British Museum accession 1865,1211.5, c.350BC Freize from the Mausoleum of Halikarnassos; Lowe (2020: 76-7, 84-5).
[166] Schwartz (2013: 31, 38-9, 53-4); Groote (2016: 198); Rawlings (2007: 57); Rawlings (2000: 247-8); Contra Pittman (2007: 69-71).
[167]Royal Armouries accession V.33, 18th century shield, V.72 1600 shield; Schwartz (2013: 28-32); Sekunda (2000: 10).
[168] Oakeshott (1960: 63-4).
[169] Schwartz (2013: 53-4) seeks out an ingenious practical parallel in riot policing which should not be discounted, but perhaps tempered.
[170] Serrati (2013: 323); Schwartz (2013: 230); Sekunda (2000: 8); Viggiano (2013: 113ff).

Hand's and Paul Wagner's research and commentary for greater depth than space allows.[171]

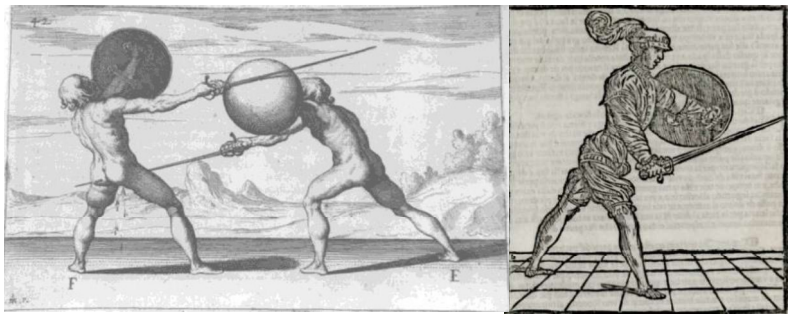

Fig. 19: A shield being used actively. Ridolfo Capo Ferro, Great Representation of the Art and Use of Fencing, 1610, Siena, Scanned by the Getty Research Institute, not in copyright.

Fig. 20: A shield held in guard being used more passively. Marozzo, New Work, 1536, Bologna, Used with kind permission from Münchener Digitalisierungszentrum, BV001451632.

This is of course not the only shield being used in ancient Greek warfare, aside from the possibly imagined lighter Boeotian shield,[172] the peltast's shield was smaller, lighter and presumably more manoeuvrable.[173] If skirmishers did end up at close range, then a peltast may have used their sword, if they had one, in conjunction with their shield.[174] The Rotella or buckler remain excellent parallels for such shields.

Miscellaneous Techniques

The grasping of a weapon in order to neutralise it, or come to a wrestling technique, such as a disarm, is a ubiquitous category of technique within the treatises.[175] We do have a few examples of weapons or shields being grasped that shows the ancient Greeks understood such techniques (Fig. 22).[176] This is unsurprising considering the importance of wrestling in the Greek world and helps underline its importance to armed combat.

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[171] Manning (2017); Hand and Wagner (2002); Hand (2005).
[172] Rawlings (2007: 57); Snodgrass (1967: 44-5, 54-5, 96).
[173] Everson (2013: 162-3).
[174] Diod. 15.44; Snodgrass (1967: 84-5).
[175]For a very small sample, Meyer, *The Art of Combat*, 169, 171, 230-1 Fiore, *The Flower of Battle*, 28r-30v.
[176] British Museum accession 1842,0822.1, 490BC-460BC calyx-krater.; British Museum accession 1857,1220.268, c.350BC Freize from the Mausoleum of Halikarnassos; Beazley 202454, 207587, 205719, 209566; MFA Boston accession 98.916, c.560bc, Tyrrhenian amphora.

Fig. 21: A grasping of a sword perhaps leading to a disarm. Attic, 500-450 BC. 202454 Beazley. Used with kind permission from bpk-Bildagentur.

Conclusion

This paper has argued that here are medieval/early modern weapons, contexts and treatises that are close enough to the Classical Greek examples as to be a fruitful comparison. When one is proposing or using a somewhat novel methodology, it would be easy to claim it was a fool proof silver bullet that can render answers to scholarships tricky problems. Rather, it would be better to suggest that the confidence with which our classical literary sources have been interpreted to try to demonstrate overarching views and practice is probably misplaced. Similarly, it would also be true to say that we are yet to fully mine the iconographic evidence for Classical Greek sword use, nor perhaps warfare in general. This bringing together of deeply heterogeneous sources, methodologies and disciplines is not easy, nor without risks of cross contamination, but it is worthwhile because this paper has contributed to our understanding in three key areas:

1. Both the iconographic and textual evidence, when interrogated using this HEMA comparative, suggests that arms training with swords was more commonplace than has been previously thought. Indeed, textual evidence that has been used to suggest a lack of training may actually show the opposite. This may well have included test cutting and sparring practice, activities that historical martial artists still use to hone their skills. Iconographic evidence demonstrates intriguing similarities to HEMA treatises, not only paving the way to a tentative reconstruction of the basic guards, but also once again suggesting some significant amount of training. This clearly cannot be fully divorced from the issue

of training with the Greek's other arms, why would a Greek train with their sword but not their primary arms?

2. Aspects of the martial culture of Classical Greece, such as the *Hoplomachia* are more readily understood through a comparison to the martial arts masters of Europe and their colourful lives and writings. Furthermore, societal attitudes to training and instruction can be understood in a more balanced way. A range of views existed alongside various formal and informal, direct and indirect, training in the early modern world, so why not the Classical?
3. The other finding of this investigation is the diverse ways and contexts in which the Greek's used their swords. They fought in contexts comparable to some Medieval or Early Modern martial artists. Not just a battlefield backup, the sword must be seen as part of a suite of tools (such as cloaks) at the disposal of Classical Greeks to defend themselves or harm others. This is not to say that the sword played exactly the same role across cultures, but why should the Classical sword not have its own rich history worthy of closer exploration?

This is, of course, just a starting point, and not the end. There is much work to be done working from a HEMA basis in Ancient History and Archaeology, expanding our reconstructive efforts beyond the treatises, but never separate from them.

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