1. INTRODUCTION

1.1 CONVENTIONS

All dates are BC unless otherwise indicated, and are written as C5 (5th century). C5e, f, m, s or l indicate early, first half, middle, second half and late respectively. I have tried to follow the abbreviations for authors used in the *Oxford Classical Dictionary* (1996³), whereas abbreviations for periodicals are those of *L'année philologique*. In transliterating, I have Hellenised rather than Latinised Greek names, although I have preferred the common English transliteration in especially well established names (Aristotle) and where it would interfere with normal pronunciation (Thucydides). This goes for citations of translations in the notes as well, where I have 'normalised' Greek names, rather than keeping their Latinised forms. On the whole, however, I have remained, in the words of Catherine Morgan, "cheerfully, and unapologetically, inconsistent".[1]

During my research, I have worked out an Inventory of 41 major hoplite battles which have served as a 'storehouse' of information and source references. The Inventory has been consulted progressively and formed the basis of the research presented below, and for this reason it has been changed and adapted until the last possible moment. Therefore, a few entries in the Inventory are not discussed in the dissertation; but all entries should be found to contain useful information. The battles are listed alphabetically by battle name, and the information of individual entries has been tabulated under 29 headings. For details, please refer to the introduction to the Inventory.

1.2 AIMS AND PURPOSES

The field of ancient military history has seen a revival of interest in recent years, though the focus of this renaissance has been mainly on the socio-political aspect of warfare. This renewal of interest is hardly surprising, given the fact that war was a fundamental aspect of daily life in antiquity. It has been calculated that Athens in the Classical age was in a state of war no fewer than two out of any three given years in the Classical period, and never experienced ten consecutive years of peace.[2] The Greeks themselves acknowledged this to a large extent. At the beginning of the *Laws,* Plato has the Kretan Kleinias say the following:

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1 Morgan (1990) viii.
2 Garlan (1975) 15.

ἄνοιαν δή μοι δοκεῖ καταγνῶναι τῶν πολλῶν ὡς οὐ μανθανόντων ὅτι πόλεμος ἀεὶ πᾶσιν διὰ
βίου συνεχής ἐστι πρὸς ἁπάσας τὰς πόλεις· εἰ δὴ πολέμου γε ὄντος φυλακῆς ἕνεκα δεῖ συσσιτεῖν
καί τινας ἄρχοντας καὶ ἀρχομένους διακεκοσμημένους εἶναι φύλακας αὐτῶν, τοῦτο καὶ ἐν
εἰρήνῃ δραστέον. ἣν γὰρ καλοῦσιν οἱ πλεῖστοι τῶν ἀνθρώπων εἰρήνην, τοῦτ᾽ εἶναι μόνον
ὄνομα, τῷ δ᾽ ἔργῳ πάσαις πρὸς πάσας τὰς πόλεις ἀεὶ πόλεμον ἀκήρυκτον κατὰ φύσιν εἶναι.[3]

It is significant that none of the great Greek philosophers ever questioned war's
raison d'être, despite their incisive analyses of almost all areas of politics: nor-
mally, Greek historians and philosophers are content with discussing the specific
causes of this or that war, never war *itself.*[4]

There are urgent cultural idiosyncracies to explain this phenomenon in part.
There is a powerful undercurrent in Greek mentality and culture in the influence
from the early epic tradition, and above all the Homeric poems. The *Iliad,* arguably
the first great literary work of Greece and Europe, is a mighty epos of war and all
its facets, and was known to all Greeks. War, fighting, strife and noble competition
are portrayed again and again in the *Iliad* as acceptable ways of achieving social
and political recognition, and martial prowess and brave deeds in combat are the
standards by which the individual is measured. This, combined with the general
agonal aspect of Greek culture, no doubt helped establish war and fighting as le-
gitimate ways of achieving one's goals; and in a civilisation so steeped in competi-
tive mentality as the Greek, it was perhaps inevitable that wars frequently broke out
between pocket states that hardly needed much by way of provocation to declare
war on each other in and out of season.

Furthermore, Greece was never a predominantly rich and fertile region. Approxi-
mately 80 % are mountains, and good, arable land is accordingly scarce.[5] Natural
resources were therefore always in short supply, and border skirmishes and larger
conflicts could easily erupt over matters such as access to pasture land, although
quite often such 'territorial' wars were possibly mere pretexts for far more compli-
cated and elaborately codified matters of honour and religion. For these reasons
(and many others), war played an absolutely central role in Greek history and cul-
ture; and it pervades almost all literature or art in some shape or form.[6]

Central to Greek land warfare throughout Archaic and Classical times was
arguably the hoplite, the heavily equipped infantryman armed first and foremost
with spear and shield. The primary scope of this dissertation is to assess the mili-
tary function and fighting style of the Greek hoplite and the hoplite phalanx in the

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3 Pl. *Leg.* 625e – 626a: "He seems to me to have thought the world foolish in not understanding
   that all men are always at war with one another; and if in war there ought to be common meals
   and certain persons regularly appointed under others to protect an army, they should be contin-
   ued in peace. For what men in general term peace would be said by him to be only a name; in
   reality every city is in a state of war with every other, not indeed proclaimed by heralds, but
   everlasting" (trans. Jowett).
4 Cf. Momigliano (1969²) 120–121.
5 80 % mountains: Cary (1949) 40. For the hardships of agriculture in Greece, see in general
   Hanson (1995).
6 See Connor (1988) and Dawson (1996) 47–99 for an analysis of the many levels on which war
   permeated the Greek society.

period from *c.* 750 to 338.[7] The year 750 is chosen because of the Argos grave finds, datable to C8l. The grave contained a conical helmet with a high crest-stilt and a precursor of the Archaic 'bell' type bronze cuirass, elements of armour strongly indicative of at least 'proto'-hoplite, phalanx-like tactics. Their wearer can scarcely have been younger than 20–30 years at his death, which pushes the *terminus* back to 750. The other date is furnished by the battle of Chaironeia in 338 (inv. no. 3), in which the Macedonian forces of Philip II swept the last great Greek coalition army off the battlefield, once and for all putting an end to hegemonic *polis* rule and effectively ending the period in which the Classical Greek citizen-soldier, the hoplite, reigned supreme on the battlefield.

The study will focus on the more practical aspects of Greek hoplite warfare and deal specifically and primarily with what was physically feasible and practical under the given circumstances, both for the individual hoplite and for the phalanx as a whole, and on the development of phalanx fighting. It is my hypothesis that the shield above all was what characterised the hoplite and determined his style of fighting, so much space will be devoted to the hoplite shield and its defining characteristics.

1.3 RESEARCH HISTORY

1.3.1 The development of the hoplite phalanx

As mentioned above, warfare in antiquity is a field of research which has seen intensive activity in recent years. Modern scholarship may fairly be said to commence with German scholarship. In 1862, Hermann Köchly and Wilhelm Rüstow's *Geschichte des griechischen Kriegswesens von der ältesten Zeit bis auf Pyrrhos* appeared.[8] Hans Delbrück's monumental four-volume *Geschichte der Kriegskunst im Rahmen der politischen Geschichte* was published between 1900 and 1920, and 1928 saw another major achievement of German scholarship of that period, Johannes Kromayer and Georg Veith's *Heerwesen und Kriegführung der Griechen und Römer*.[9] In these the groundwork was laid for much of the later scholarship on the hoplite phalanx, and essentially these works defined the 'canonical' concept of the closed phalanx. They are, however, very much products of their time, and their focus is squarely on such topics as strategics, tactics, logistics and army strengths. In keeping with contemporary scholarship, these scholars regarded the study of warfare in antiquity as an extension of the attempt to understand warfare scientifically, and as a result their analyses are often of a very schematic and rigid nature, despite the fact that they put the sources to good use.

In 1911, Wolfgang Helbig put forward his thesis that the closed phalanx emerged around C7m in Chalkis on Euboia. Helbig regarded the use of javelins and

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7 All years, unless otherwise stated, are BC.
8 Köchly & Rüstow (1862).
9 Delbrück (1900); Kromayer & Veith (1928²).

light-armed troops, earlier attested in, e.g., Kallinos and Tyrtaios, as inconsistent with a closed phalanx, believing Tyrtaios' phalanx, which he dated to the second Messenian war, to be a transitional phase between wholly open fighting (as seen in the *Iliad*) and the hoplite phalanx. Nevertheless Helbig failed to acknowledge the possibility of auxiliary troops aiding a closed phalanx and, crucially, the fact that the hoplites of the phalanx on the Chigi vase actually carry javelins into battle.[10]

However, the debate over hoplite phalanxes began in earnest in 1947 with Hilda Lorimer's article "The Hoplite Phalanx with Special Reference to the Poems of Archilochus and Tyrtaeus".[11] On the basis of extant Archaic poetry and archaeological finds Lorimer argued that hoplite weapons and phalanx tactics were inseparable, dating the invention and subsequent swift introduction of hoplite arms and armour to C7e.[12] Prior to this, she argued, there were neither hoplites nor phalanxes. The sudden invention of the arms sparked the birth of a new warrior type, who was in turn unable to function outside his chosen type of formation. Lorimer largely rejected iconographical evidence, as this in her opinion was likely influenced by the Homeric poems, while at the same time rejecting the presence of 'hoplite' weapons in them, on the ground that these were interpolations in the 'original' poems.[13] She thus in effect acknowledged the presence of hoplitic elements in the *Iliad,* but assuming a unitarian interpretation of Homer insisted that there were watertight partitions between the poem and the early hoplite phalanx.

This theory was challenged with the Argos grave find, excavated in 1957.[14] Based on stylistic analyses of ceramics in the tomb, the grave was dated to C8l; yet the armour – a bronze cuirass and a conical helmet – bore a strong likeness to hoplite equipment. Anthony Snodgrass countered Lorimer's theory with another approach: basing his arguments on the Argos grave find and the archaeological material, he proposed a longer period of gradual ('piecemeal') development of the armour, which did not immediately bring about a change in tactics.[15] Snodgrass thus maintained that armour and tactics were *not* inseparable: on his interpretation, parts of the equipment were gradually adopted. The next stage was then the adoption of decidedly hoplite tactics. While Snodgrass' assessment of the gradual adaptation is doubtlessly correct, there are certain problems with his theory: what would be the motivation for inventing pieces of equipment (above all the shield) if they were unfit for single combat?[16]

A further analysis of the development of hoplite armour saw the light of day with J.K. Anderson's *Military Theory and Practice in the Age of Xenophon.*[17] Here,

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10 Helbig (1911).

11 Lorimer (1947).

12 Lorimer (1947) 76, 128–132.

13 See esp. Lorimer (1947) 82 n. 4, 108, 111–114. The 'sudden change' theory has had its defendants: see, e.g., Greenhalgh (1973) 73 and Cartledge (1977) 19–21, correctly stressing the ambiguity of iconographical evidence.

14 For a full excavation report see Courbin (1957). The find has since been corroborated by more finds of a similar type in Argos: *infra* 66.

15 Snodgrass (1964a), (1965) 110–111.

16 Snodgrass (1965) 111 argues, however, that the hoplite shield was adequate in solo fighting.

17 Anderson (1970).

Anderson analysed literary sources and iconograhical evidence from C5l–C4e and convincingly showed that hoplite equipment underwent a notable change towards lightness and less protection in this period: body armour such as cuirasses and greaves are often lacking on vase paintings and funerary reliefs.

Joachim Latacz' pioneering work *Kampfparänese, Kampfdarstellung und Kampfwirklichkeit in der Ilias, bei Kallinos und Tyrtaios* from 1977 opened the discussion of the value of the Homeric poems for an understanding of early massed fighting.[18] Latacz convincingly showed that despite the immediate appearance of duel-based fighting between the heroes in the *Iliad*, there are in fact frequent references to fighting in φάλαγγες or στίχες, i.e. ranks of warriors, arrayed behind each other and led by πρόμαχοι (warriors in the front ranks), thus interpreting the parts identified and rejected by Lorimer as an integral part of the poem. His work demonstrated that the *Iliad* does indeed represent early massed fighting, some of which may actually be hoplite fighting: this is not surprising, since the Homeric poems are ultimately products of an oral tradition, weaving together many layers from different historical periods. Hoplitic elements will at some point have been included in the tradition. Furthermore, Latacz demonstrated that massed fighting is not only present, but is in fact a decisive element in the *Iliad*.[19] It is thus reasonable to assume that hoplite equipment was developed in response to needs perceived in such massed fighting.

Countering this, Hans van Wees has argued that *phalanx* in an *Iliad* context means a more loosely organised group of warriors, comparing the fighting to that found in primitive societies such as those in Papua New Guinea.[20] This, however, ignores the patent references to close ranks and massed fighting which are also on display in the *Iliad*, as demonstrated by Latacz. The two components are essentially different and difficult or impossible to reconcile; but at any rate the presence of both must preclude the notion that the *Iliad* presents a homogenous and consistent image of fighting.

In an important article, Victor Davis Hanson in 1991 stressed the logical causality in matters of weapons development.[21] He noted that while scholars agree that the reduction in armour in C5l–C4e – as shown by Anderson – reflected new strategic needs in infantry employment, "strangely they do not allow for this same phenomenon in reverse chronological order: the preference (well before 700–650 BC) for massing shock troops in close formation led to demands by combatants for new, heavier equipment."[22]

Hans van Wees has presented his view of an extreme 'piecemeal' theory in an article from 2000.[23] According to van Wees, the crucial evidence is iconographical, showing a motley crew of combatants on the battlefield, fighting in no particular

18 Latacz (1977).
19 Latacz (1977) 30–31 (citing earlier, but disregarded scholarship – that of Kromayer and Lammert – to the same effect), 46–49.
20 Van Wees (1994) and most recently (2004) 153–158.
21 Hanson (1991), esp. 63–67.
22 Hanson (1991) 64.
23 Van Wees (2000).

order. This development, according to van Wees, possibly did not halt until after the Persian wars, and he maintains that Archaic poetry and even Herodotos show similar signs of loose-order combat. He takes this to be a natural continuation of the loose-order, chaotic fighting which he sees in the *Iliad* and to which he finds parallels in primitive societies. There are several problems with this approach, chief among which the objection that this presupposes a homogenous and consistent Homeric portrayal of society and warfare. Furthermore, it is difficult to argue *chiefly* from iconography, since we cannot always be certain that we can appreciate the artist's intentions and the operative artistic conventions. Very recently, van Wees has also further expounded these views in a monograph with the telling title *Greek Warfare. Myths and Realities*,[24] in which he offers a synthesis of the above-mentioned and a number of other articles.

Most recently, Jon E. Lendon has published a monograph entitled *Soldiers and Ghosts. A History of Battle in Classical Antiquity*.[25] This is an ambitious attempt at analysing the underlying causes of warfare in Greece and Rome. Lendon argues that Greek warfare was above all influenced by two factors: the competitive spirit native to almost all aspects of Greek culture, and more especially as embodied in the Homeric poems. Lendon accordingly argues that the impact of the poems shaped not only the ideals of subsequent Greek warfare, but also its actual practice, to the extent that he more or less ignores such factors as technological advance, socio-political changes and foreign influence. Interesting and refreshingly thought-provoking though it may be, his thesis is somewhat focused on a single cause. His perception of phalanx fighting may illustrate this:

> The phalanx should not be viewed as the submersion of the individual in the mass but as creating in mass combat a simulacrum of individual combat. … Fighting in the phalanx was hardly a perfect form of individual competition or of competition between states. But it was the best way the Greeks could discover to have men and city compete at the same time in the same way in a form of fighting that worked as a competition in the real world for both.[26]

Strangely, however, Lendon himself hints that if this were the true objective of inter-state 'competing', another outcome would have been more logical: "If the Greeks had wanted a more perfect competition between individuals, they could have surrounded one-on-one fighting with rules and taboos and gone down the road upon which feudal Europe and Japan would travel a good distance."[27]

Sometimes this method leads to putting the proverbial cart before the horse, as when Lendon claims that the cooperation of a phalanx was only "superficially cooperative, for those who fought in the seemingly unheroic phalanx conceived of what they were doing in Homeric terms,"[28] because of 'epic' epitaphs and Homeric heroes in hoplite gear on vases. It is at least as likely, however, that Homeric scenes were portrayed in contemporary garb; and it is hardly surprising that patterns of formal expression should be sought in poetry. Most importantly, however, Lendon

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24 Van Wees (2004).
25 Lendon (2005).
26 Lendon (2005) 64–65.
27 Lendon (2005) 57.
28 Lendon (2005) 45.

himself admits that the perceived radical influence of the Homeric poems must remain a theory: "in no indiviual case can Homeric inspiration conclusively be proved, but the wider pattern is beyond doubt."[29]

1.3.2 The course of hoplite battles

In 1978, George Cawkwell stirred up controversy by challenging the traditional conception of how hoplites fought.[30] The frequent references to 'shoving' (ὠθισμός), Cawkwell argued, were misconstrued by scholars who interpreted them as a distinct phase of battle, since this would interfere with the use of weapons. Instead, Cawkwell visualised hoplite battle as essentially consisting of series of weapons duelling between individual hoplites, ending perhaps in a final bout of shoving.[31] One problem with Cawkwell's approach was that, on his interpretation, hoplites would have to open their ranks after marching forward, then join the shields later on for the push, surely impracticable in real life. Nonetheless, Cawkwell's rejection of the bodily shove has been followed by Krentz,[32] Goldsworthy,[33] and, most recently, van Wees.[34] This notion has been countered, above all by Hanson, who in his *The Western Way of War* (1989, second ed. 2000) vividly described the implications of this brutal aspect of hoplite battle.[35]

The question of *othismos* has thus been a bone of contention in recent years. Hanson's *The Western Way of War* offered an interesting analysis of the sources describing the gritty reality of hoplite battle. This study focused on the experience of a hoplite battle from the individual hoplite's point of view, stressing especially the extreme physical exertions and the gruelling, bloody chaos in the front ranks. Particularly important in this respect was his focusing on the amateur aspect of battle between citizen-soldiers. In Hanson's view, hoplite battle was a logical, if chaotic and grim, way of fighting wars between farming *poleis,* since it required no particular technical skill or drill and limited warfare largely to a single day's worth of fighting, and in a way that actually kept casualties on both sides at a minimum.

The individual stages of battle are meticulously analysed by Johann Peter Franz, who, inspired by Snodgrass, Latacz and Anderson, has subdivided his study into chapters dealing with sharply limited periods, assessing the evidence for each separately. In Franz' opinion, this enhances the possibility of determining the development of hoplite arms and armour, but also of the tactics and phases of battle. While this is ostensibly true, it must be said that it is problematic to accept unhesi-

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29 Lendon (2005) 159.
30 Cawkwell (1978) 150–165, followed up by (1989). The question had been addressed earlier by Fraser (1942), but this article has had little impact.
31 Cawkwell (1978) 152–153.
32 Krentz (1985b), (1994).
33 Goldsworthy (1997).
34 van Wees (2000) 131–132, (2004) 152, 180–181 and esp. 188–191.
35 Hanson (2000²) 28–29, 156–158, 169–178, (1991) 69 n. 18; but see also Holladay (1982) 94–97; Luginbill (1994) 51–61; Lazenby (1991) 97–100; Anderson (1984) 152, (1991) 15–16; Pritchett (1985a) 65–73, 91–92; Franz (2002) 299–308.

tatingly, as Franz does, an historical Homeric society, and furthermore, that it can be safely dated to C8. The evidence for this period must of necessity be limited to Homer, Hesiod and a number of archaeological and iconographical items; and in this respect it is a weakness that there is nothing which decisively links material evidence from C8s with the epic poems. Furthermore, Franz oversteps his own sharply drawn limits time and again, including sources from entirely different periods.[36]

It should also be mentioned that W.K. Pritchett, in this field, as in others, has made considerable contributions, chiefly with his monumental five-volume survey *The Greek City-State at War,* in which he has collected the data on a vast array of pertinent topics.[37]

1.4 SOURCES AND METHODS

1.4.1 Literary sources

The most important sources for this study are literary, and of the Classical period. Literary sources have the great advantage over 'visual' evidence that we can be certain that hoplite activity is actually referred to. It should be obvious that contemporary sources are to be preferred over 'later' sources, i.e. historians and others writing in Hellenistic and later times. This gives natural precedence to authors such as Herodotos, Thucydides and Xenophon. The special importance of Thucydides and Xenophon rests on the fact that they were both military commanders and so doubtless possessed considerable experience in military matters, even when compared with their contemporary audience.[38] In the case of Thucydides, he even claims to have begun his work immediately at the outbreak of the Peloponnesian war, thus ostensibly offering a near-perfect recollection of events. It is a pet criticism of scholars that Xenophon is somewhat naïve and that he displays a 'pro-Spartan' and 'anti-Theban' tendency, but this is highly exaggerated: while biased in his seemingly haphazard selection of events for a number of reasons, it cannot be sufficiently demonstrated that Xenophon actively even disliked Thebes.[39] Certainly Xenophon offers important knowledge about the famously secretive Sparta, which he knew intimately and about leadership of soldiers, a subject that evidently interested him greatly.

Valuable sources are by no means limited to historians. Important information, likely based on first-hand experience, can be found in the great playwrights: Aischylos, Sophokles, Euripides and Aristophanes make frequent allusions to the hoplite experience, which they must have expected a great part of their audience to recognise and understand; and the same applies to numerous fragments of other playwrights. Sophokles served as general twice; and Euripides' tragedies are especially

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36 See, e.g., Franz (2002) 121, 214 n. 69, 249 n. 37.
37 Pritchett (1971), (1974) (1979) (1985a) and (1991).
38 Thucydides' command: Thuc. 5.26; Xenophon's command: Xen. *An. passim.*
39 See esp. Christensen (2001).

relevant for the warfare of the Peloponnesian war, since they were doubtless influenced by recent events: the horror of war is palpable in many of Euripides' tragedies. It should be noted, however, that care has to be taken in ascertaining the poetic context: since the 'dramatic date' is normally a distant mythical past, elements may occur which were certainly blatant anachronisms in C5; but such details of 'local colour' are normally easily identified: combat details, intended to be recognisable to a contemporary audience, are culled from the shared experience of warfare.[40] C5–C4 logographers and politicians such as Lysias, Demosthenes and Isaios often also offer glimpses into the world of hoplite warfare. Another important element of written sources is the evidence from epigraphy: casualty lists and peace treaties are often preserved on stone, a political decree or a commemoration frozen for posterity.

The above-mentioned sources of course all concern the Classical period. There are, however, also a number of literary sources from the Archaic period, and they should be assessed separately in order to determine whether they reveal change or continuity from the Archaic to the Classical period.

The *Iliad,* for example, contains a great many passages which are surprisingly replete with massed fighting, far more so than is immediately apparent from a glance at the largely duel-based fighting between protagonists of the poem. Many of these contain vivid similes whose *tertium comparationis* is based on the concepts of extreme closeness, contiguity, solidity and powerful forward surges. It is reasonable to assume that these may be connected with phalanx warfare, and even more so since there is a possibility that the Homeric poems were not fixed in writing until perhaps as late as C7.[41]

Elegiac and lyric poets also present an abundance of testimony about hoplite warfare, especially with regard to the Archaic age: poets like Tyrtaios, Kallinos, Mimnermos, Pindar, Archilochos, Alkaios and Simonides are certainly important in this respect. Even when authors such as these are not actually based on first-hand experience, they are, although secondary, in all likelihood at least influenced by actual eye-witness accounts. Epigraphy also plays a role in Archaic sources, as when we have testimonies in the shape of Greek mercenary graffiti from Egypt.

Of decidedly lesser importance are post-Classical sources, of which there is a multitude. Historians such as Polybios, Plutarch and Diodoros lived long after the hoplite era, but discuss much valuable information retrospectively. They may well have preserved relevant information compiled from earlier sources, lost to us. Unless they specify their sources (as is sometimes the case), however, they remain essentially suspect; although the case is somewhat better if they at least are precise with regard to the date of battle in question. When speaking of hoplites and phalanxes, they may do so only in an indirect manner, and actually refer to the Macedonian phalanx, which, for all the similarities, was a different formation, made up

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40 One example may suffice: in Eur. *Suppl.* 650–730 a messenger reports a battle in which chariots play a predominant role.

41 As the Homeric poems present an especially complex problem in this connexion, they are treated separately below: see chap. 3.1.2 and 3.1.3.

of different warriors altogether.[42] Diodoros is particularly problematic when it comes to the difficult question of battle duration.[43] Plutarch, though very late, is especially interesting because of his *Parallel lives* and *Spartan aphorisms,* in which he collected pithy sayings of the Spartans. The gnomic character of the aphorisms probably testifies to their validity, and the collection itself to their popularity in antiquity.[44]

Even more problematic are the so-called tacticians: Arrian, Ailian and Asklepiodotos all lived in late antiquity, and their writings are suspect for a number of reasons, chief among which is their highly theoretical approach to the subject.[45] Further exacerbating the problem is the fact that we cannot know for sure whether they deal with the Macedonian phalanx or the Greek hoplite phalanx of earlier times (though the former seems likelier). However, all such later sources must of course be re-evaluated when they refer to events in their own time, or when they describe experiences or phenomena common to or valid at all times.

1.4.2 Archaeological evidence

The archaeological sources may for the present purpose be divided into two main groups: (1) representations of hoplite arms, armour and fighting in works of art, and (2) original weapons or pieces of armour. For an understanding of the weight and size of weapons and armour, original weapons are normally to be preferred, but iconography may assist in making plain the tactics or fighting technique employed.

(1) Warfare is frequently portrayed in Greek art, and many of these images are important for an understanding of the fighting and, to an even higher degree, the equipment. I maintain, however, that iconography is fundamentally difficult to interpret. To put it simply, very early Greek vase painting (C8 and earlier) is often too crude and primitive to determine what is happening with any certainty. As for the painting technique, in many cases it is not until proto- or mature Corinthian vases that the painting technique becomes sufficiently advanced to allow a safe judgment of the contents.

This objection goes only for the representation of objects. The interpretation of tableaux and scenes is even more complicated, though – as with simple objects – identification becomes far easier from C7 onwards. All too often, however, we lack the code or key, as it were, to decode the images. Scenes that may have been perfectly logical to contemporary Greeks are enigmatic to us. We cannot know what conventions were operative, or what elements were simply required, or perceived to be so, in the representation of a particular scene. Worse, we have no way

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42 See Lazenby (1991) 88.

43 *Infra* 217–218.

44 See Fuhrmann (1988) 137–140 for a review of likely Classical sources and Hammond (1979–80) 108: "In most of the extant classical sources, the *exemplum* [Plut. *Mor.* 241f 16] simply accounted for the Spartan toughness and discipline, that is, it was primarily historical in intention."

45 The tacticians are discussed more fully *infra* 157–159.

of knowing whether battle scenes are intended to show contemporary reality or a mythical battle scene, and this problem is exacerbated exponentially as we go back in time. As a rule of thumb, it may be said that the earlier the representations, the worse the insecurities in interpreting the images 'correctly'. The difficulty remains the same: we cannot determine with any confidence whether an image contains archaising, romanticising or mythologising elements for all the reasons mentioned above, often nor even what the scene is intended to represent.

A single example may suffice to show the sheer amount of ambiguity inherent in interpreting Greek iconography: in Franz' assessment of the source value of vases, he seems to believe as a matter of course that archaising elements are not present in C7 vases: "die Vasen geben … die Bewaffnung und die Kampfesweise der Zeit, in der sie gemalt wurden, wieder. Archaisierungen oder ähnliche Phänomene, die zumindest ein geringes historisches Verständnis voraussetzen, sind in der für unser Thema relevanten Bildkunst nicht zu erkennen", adding that scholars are generally too quick to discard relevant material "ohne ausreichende Begründung".[46] Yet only two pages later, he claims that vase images are not realistic, but rather portrayed "als heroisches Geschehen".[47] Quite apart from being unsubstantiated, these two principles seem somewhat difficult to reconcile.

The problem with using iconography is exacerbated by the fact that no representations of massed fighting are attested for C5–C4. While hoplites are represented on vases often enough, they are typically portrayed singly or in pairs, and frequently in arming scenes or other non-combat motifs. There are many different potential reasons for this absence; but the fact of the matter is that such scenes do not play any appreciable role in Classical art, thus rendering iconography a very difficult source for a diachronic analysis of phalanx fighting in its later stages.

(2) A fairly large number of ancient weapons have been preserved, chiefly arms and armour from such Panhellenic sites as Delphi and especially Olympia, and these are of course highly important. It was customary to dedicate captured enemy weapons after a victory (a frequent, macabre expression is ἀκροθίνιον ["the best pick of the harvest"]), and consequently we possess a great amount of weapons and especially armour – above all from the Archaic period; but Classical finds, such as, e.g., the Pylos shield excavated in the Athenian agora, are also attested, so that weapons finds actually cover the entire period C8l–C4.[48]

The remains of weapons testify especially to measurements, but can also reveal a great deal about how they were worn or handled in combat. Metal parts of shields have often been partially preserved, including the outer bronze sheathing and the armband, although the organic components – the wooden core, the inner layer of leather and the handlegrip – have long since disappeared. However, there are preserved organic remains of an Etruscan shield from Bomarzo in Italy, both wood, leather and bronze, in the Vatican museum; and the same applies to a Greek shield, found in Sicily and now in Basel. One is an actual hoplite shield, and the other at

46 Franz (2002) 16 and n. 85.
47 Franz (2002) 18.
48 See esp. Jackson (1991) 228–232.

least similar in build and structure, and as such they can be used for measurements and assessments of qualities, characteristics and mode of production.

There are also several hundred items of body armour: cuirasses, greaves and supplementary armour such as arm-guards or ankle-guards were frequently dedicated at sanctuaries, presumably because of the value and impressive sight of polished bronze. Again, estimates of weight and measurements of metal items may at least be approached, and such pieces of armour also help establish a relative chronology of the development of weapons. The same goes for helmets: fairly large quantities of helmets have been dedicated at Olympia, and it is thus possible to establish a fairly certain chronology. Furthermore, helmets of the Corinthian type are by far the most frequent, proving its popularity in much of the hoplite era.

With offensive weapons, the conditions are less favourable. By far the most important offensive hoplite weapon was the thrusting spear, and since the shaft was made of wood, we are left with nothing more than iron spear-heads and bronze butt-spikes. However, the diameter of the shaft may be estimated from the sockets, and the length with aid from iconography. Iron swords of several types are also preserved almost intact, if rather corroded. The original weapons and armour are extremely important if we are to understand how hoplites fought and what physical limitations they imposed on their owners. As such, they will be included to a large extent.

1.4.3 Methods used

My method can by now perhaps be guessed from the above. Hoplite weapons did change gradually, as shown by Anderson and Franz; but for a period of some 400 years, there is nonetheless a large degree of consistency within the primary hoplite weapons, chiefly spear and shield. Furthermore, since weapons and tactics are inseparably intertwined, it is assumed that hoplites throughout this period were characterised more by similarities than differences.

In this respect I differ from Franz, who believes that a sharp distinction between more or less arbitrarily defined periods is the only way to achieve precise knowledge.[49] Apart from the problems inherent in using Homer as a historical source, it remains difficult, despite Franz' claims to the contrary, to demonstrate continuity in the development, if we cannot juxtapose sources from two different periods. If, for example, Herodotos cannot be cited to establish anything meaningful about hoplites in the period 479–362, we risk ending up with a lot of *membra disjecta* that cannot be combined to form a whole; and even the analysis of the individual segments suffers. Assuming that hoplites were unable to rally again in this period simply because it is not mentioned directly in the sources while at the same time accepting it for the preceding and following period, is an argument *e silentio:* "Für die Zeit vom 7. bis zum 5. Jh. hatten wir angenommen, daß die Hopliten ihre Schilde wegwarfen, um auf der Flucht schneller laufen zu können und somit ihre Überlebenschancen zu verbessern. Gegen Ende des 5. Jh. konnten sie den Schild

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49 Franz (2002) 4–7, 11–12.

auf der Flucht offensichtlich wieder mitnehmen." Franz' approach, although un-
conditionally puristic, is therefore not entirely unproblematic. I maintain that it is
possible to regard literary sources from *any* point within these 400 years as valid
for an understanding of hoplite tactics and fighting. The following table may help
explain the basic approach:

ARCHAIC PERIOD	Texts	Weapons	Iconography
CLASSICAL PERIOD	Texts	Weapons	–

Since there is a definite diachronic typological consistency of the most important
hoplite weapons – namely the spear and shield – throughout the Archaic and Clas-
sical periods, and since weapon typology and fighting style are arguably interde-
pendent, this provides the basis for an analysis of other types of sources, such as
textual evidence and iconography. There can be no doubt that typologically identi-
cal hoplite weapons, as attested by weapons finds ranging from C8l to C4, were in
use during the entire period, and consequently texts from the entire period are valid
sources in the analysis of weapons use. Ultimately, the interpretation of the texts
must take place in the light of what can and cannot be done with these weapons; but
it should be clear that if it is accepted that there is consistency, there is no contra-
diction involved in using, e.g., Classical sources to evaluate fighting with typologi-
cally similar weapons at any given point of this entire period.

The rather small amount of Archaic texts consists almost exclusively of poetic
texts, with different aims and often a more or less fixed vocabulary, sometimes re-
sulting in ambiguity or outright obscurity. Moreover, much of the source material
has survived only in fragments and thus often lacks the necessary context for a
proper analysis. Nonetheless, the glimpses afforded of hoplite fighting in Archaic
poetry are by no means irreconcilable with what Classical sources tell us and are
therefore also included.

Conversely, the textual sources from the Classical period (in particular the his-
torians) describe warfare relatively fully and in usually fairly detailed prose, as
warfare – to a large extent, hoplite warfare – is the backbone of most historical
works and a significant factor in other writings. The fact that Thucydides structured
his work by winters and summers[50] – around campaigning seasons – is in itself re-
vealing; and few would dispute the fact that the fullest sources for hoplite fighting
are to be found in this period.

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50 Thuc. 2.1.

Iconography may also be informative in this light but is frequently ambiguous, especially with regard to early images. A major problem here is that there is a tendency to focus on fighting in pairs, possibly even dueling, in Archaic imagery, while apparently there are not even true representations of fighting in larger formation for the Classical period.

Therefore, the weapons themselves, coupled with texts, above all from the Classical period, must form the backbone of the following analysis of hoplite fighting. Iconography and Archaic texts will naturally be discussed as well, but it should be clear that the focus is primarily on the weapons. It is not normally disputed that there is consistency between hoplite weapons and the type of fighting portrayed in Classical texts; but if this is so, and there is a typological similarity between weapons of the Archaic and Classical periods, it follows that Classical texts must also be valid for analysing *earlier* hoplite combat.