Reconstruction of ancient warfare can be pursued in a variety of ways. There is a long tradition of close attention to particular engagements: the battle narratives of Herodotus or Caesar appear to permit analysis of what happened and why in particular engagements. This focus, once much more academically prevalent than now, has by no means lost its popular appeal, thanks in part to the historical appetite of competing television companies. Individual battles are also considered within the context of the campaign or war to which they belong, since the strategy and tactics of a successful general, an Alexander, Hannibal or Caesar, might suggest lessons to contemporary commanders. The military activities of the ancient world generated material evidence in the form of walls and specialist buildings as well as equipment. This evidence does not often contribute crucially to ‘battles and commanders’ studies, but rather invites questions about purpose and operation at both the detailed level of the particular item and the larger scale of strategic conception, structural organization or diplomatic framework. Military activities were also depicted in a variety of artistic media, from the grand monuments of public propaganda through the scenes on particular painted vases to graffiti, all of which require sensitive interpretation. There is an enduring interest in ‘what it was like for them’, which embraces physical aspects of wielding an ancient weapon or sitting on a rower’s bench, the personal experience of battle, and psychological questions of the place of warfare in the mental framework of the population. Close examination of ancient historical narratives, whose authors’ methods and attitudes need to be evaluated, is essential for all reconstructions of ancient warfare and the problems of this material will be central to this chapter.

Basic questions to be asked of any reconstruction are what is supported by reliable evidence, what depends on plausible inference from geography or relevant comparative material, and what is speculation based on assumptions that something must have happened along particular lines to produce a specific outcome. The inevitable shortcomings of military narratives constructed from the memories of participants were analysed by
Whatley: individuals only see a small part of an engagement, they preserve distorted recollections even of their own contributions, and are unlikely to appreciate broader issues. Ancient battles were far less complex occasions than those of the First World War which Whatley used for comparative purposes, but even the best ancient historians found some hard to describe (Thuc. 7.44.1): the reality of battle was chaotic, and the truth of every aspect of an encounter might never be known since memories would focus on the outcome and significant incidents. Our difficulties are compounded by different presuppositions of what is required of a reconstruction: we expect maps or plans to illuminate campaign strategies, tactics, and the progress of an engagement, whereas the ancient world operated very largely without these aids. Ancient visual images of war celebrated victory through selections of vignettes, for example the depiction of Marathon on the Stoa Poikile at Athens (Paus. 1.15) or the Dacian campaigns on Trajan’s column at Rome (fig. 3.1): viewers would see specific incidents, such as the fight at the Persian ships or the end of Decebalus, and adopt the intended message about divinely assisted Athenian success or disciplined organization of imperial campaigns. The Stoa Poikile and Trajan’s column were propaganda statements, as partisan as the paintings of action at Carthage in the Third Punic War which L. Hostilius Mancinus displayed at Rome to further his electoral chances in 146, to the annoyance of Scipio Aemilianus.

Another complication is the limited viewpoints we have on any one incident. It was rare for Greeks or Romans to fight an opponent who had the same concern as classical culture to construct literary records of historical events: Persians, whether Achaemenid or Sasanid, did not, although Darius’ Behistun inscription and the so-called Res Gestae of Shapur I demonstrate that there were alternative accounts to classical sources. Cunaxa in 401 was recorded by Ctesias, a Greek doctor in the service of king Artaxerxes, as well as Xenophon who accompanied the rebel Cyrus, but we can only reconstruct Ctesias’ account at second or third hand; he may have been more interested in highlighting his services to the wounded Persian king than providing a clear account of the battle. Hannibal is an exception since he employed the Spartan Sosylus to record his achievements, and this account along with that of Silenus of Caleacte, another Greek in Hannibal’s retinue, was used by Polybius. Internal conflicts in the Greek world or Roman civil wars might also have generated alternative written versions,

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1 Whatley (1964).  
2 Lepper and Frere (1988).  
3 Plin. HN 35.23, with Astin (1967) 70, 99 for the events; Pliny (35.22) refers to other military paintings at Rome, probably equally publicist and contentious.  
4 For discussion see Stevenson (1997) 84–93.  
5 For brief discussion of Polybius’ sources, with further references, see Walbank (1972) 77–84.
but in many cases history was written by the victor while the vanquished chose not to recall their misfortune in detail.

Distinct accounts may, of course, create problems. For Callinicum (AD 530) Procopius, an advisor to Belisarius, produced a version which exonerated his commander who behaved valiantly throughout but was betrayed by allied Arabs (Wars 1.18). By contrast Malalas, a contemporary bureaucrat in Antioch who could have had access to official reports, does not mention Arab treachery and has Belisarius abandon the remnant of his army during the fighting to escape across the Euphrates (18.60, 463.4–465.3). Procopius’ account long held the field, since he was a ‘proper’ classicizing historian as opposed to the chronicler Malalas, but then the balance swung with Procopius being challenged by Shahid, the expert on Rome’s Christian Arab allies whose writings consistently upheld the honesty of Arab behaviour. This verdict has then been adopted by those who wish to query the overriding authority of Procopius as historian for Justinian’s reign. The scope for Procopius’ bias is clear, but it is wrong to assume that Malalas was impartial

or the reports on which he relied an entirely fair account of events since military or court rivalries could have supervened. Our decisions on details of military actions may not be free from the influence of extraneous factors.

I. The Literary Status of Ancient Historiography

Our fullest and most regular information about ancient warfare is provided by the sequence of Greek and Latin historians whose accounts of significant public events were usually dominated by military action, but these are complex texts. A vital consideration in approaching this material is its literary status: historiography was regarded as a branch of oratory, and the structure and style of a narrative were as important for its reputation as factual accuracy. Ancient audiences did expect true accounts, and historians frequently asserted their commitment to truth, but it was much easier to assess a narrative’s literary merits than its veracity: credibility might be enough to ensure acceptance. Practical experience was recognized as an essential qualification for historiography by some writers, inevitably those who possessed it such as Polybius who devoted a long digression (Book 12) to the faults of Timaeus, of which excessive bookishness was one. Polybius stipulated that men of experience should treat historiography more seriously than was the current custom; this clearly left Polybius as the ideal historian. By contrast Agathias explained that friends convinced him that there was not much difference between history and poetry (at which he was competent), since both aimed at decorous expression and apportionment of moral praise and blame. Livy stated that new historians would justify their narratives through superior literary skill just as much as fresh material; Cicero, when searching for a writer to record the vicissitudes of his career, stressed that a straight narrative was not particularly interesting: an author had to make the most of whatever dramatic incidents were available.

A cynical review of what historiography might involve is provided by Lucian’s essay *How to Write History*: armchair invention of Roman successes might satisfy audiences’ desire for historical information on recent campaigns; hard fact was swamped by literary imitation, repeated digressions on minor details, and extravagant presentation of Roman victories. Composition might be reduced to a formulaic exercise. The consequences are illustrated by the account in Theophylact (Hist. 3.14) of the confrontation of Romans and Persians near Melitene in 576:

Then the Romans also formed up and raised their standards. Next the trumpets sounded forth, the dust was whirled aloft; the clamour poured forth and,

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7 Tacitus is a rare exception; and cf. Gilliver, ch. 4 in Volume II.
inundating the place, surging with the din of whinnying, and eddying with the clashing of weapons, it naturally transformed everything to indistinctness . . . Accordingly, a most memorable battle between Romans and Parthians occurred, the Persian disposition was broken because their ranks were not organised in depth, the rearguard of the Babylonian armament was at a loss, and there was no counter-resistance; next when the opposing force pressed heavily, the barbarians faced destruction and veered away in flight.

The whole account, composed fifty years after the event, extends for about a page of text without casting much light on what happened: standard elements of a battle are introduced, with the Persians relying on arrows while the Romans preferred close combat, and the only clear aspects are the luxurious booty from the capture of the Persian royal tent and the Persian flight. Comparison with a near-contemporary Syriac account of this campaign (Joh. Eph. Hist. eccl. 6.8–9) suggests that there was probably no battle: the victory might have been invented by Roman writers to supplement information about the dispatch to Constantinople of spectacular booty, and the drowning of numerous Persians while fleeing across the Euphrates. Theophylact’s verbose imprecision has been widely accepted as evidence for a major pitched battle.9

This is an extreme version of the problems caused by the literary character of ancient historiography, but at a lesser level the impact of the literary tradition may still distort our understanding. One example is the record of pre-battle speeches: with few exceptions speeches reported by ancient historians are their own invention, but a harangue was seen as sensible motivation for troops. Hansen, however, argued that the practice was a literary topos: this challenge is unconvincing, but it reflects the importance of always considering the possibility of literary distortion.10 Accounts of sieges are another suspect area: the influence of Thucydides’ narrative of the siege of Plataea has been identified in much later writers such as Priscus and Procopius;11 the recurrence in Diodorus of elements such as discharges of missiles, exchanged shouts, sorties, and men fighting in relays, has suggested that his siege narratives are a patchwork of literary motifs12 – indeed Diodorus’ battle narratives may be conditioned by stereotypes.13

10 Hansen (1993); response in, e.g., Pritchett (2002); the fact that Xenophon (Cyr. 3.3.49–55), advised against the practice, and the Roman tactical writer Syrianus composed a work on speeches, suggests that speeches were delivered.
11 Sensible discussion of Priscus in Blockley (1981) 54; for Procopius, see Averil Cameron (1983) 37–46. Thucydides’ account of the Athenian plague was another stimulus to imitation (Lucian, Hist. conscr. 15), including in Procop. Wars 2.22–3.
12 Hammond (1983b) ch. 1, esp. 13–16, 39–40, 47. Hammond attributes much of the invention to Diodorus’ probable source, Clitarchus, but the consequences for the narrative are the same.
A complication for this analysis is that literature influenced not only subsequent historiography but also historical participants. A standard element in preparation for war, especially for command, was the study of previous campaigns, either through narratives or collections of strategems which included extracts from literary accounts: thus Alexander would have informed his invasion of Persia through study of Herodotus and Xenophon, while Julian’s similar project could exploit the Alexander historians as well as Xenophon; a brief account of the accomplishments of Alexander and Trajan was dedicated to the young Constantius II embarking on campaign against the Persians.\textsuperscript{14} Alexander the Great’s devotion to Homer is well attested, and his actions were given an epic gloss by his court historian Callisthenes, but he also deliberately modelled his behaviour on Homeric heroes, especially his ancestor Achilles, so that the distinction between ‘reality’ and representation is bound to be complex.\textsuperscript{15} Common sense and/or subjective judgement are required to distinguish. Thus, the fact that Julian’s deathbed resembled that of Socrates (Amm. Marc. 25.3.21–3) probably reflects the wounded emperor’s deliberate imitation of his philosophical hero; by contrast a writer’s susceptibility to literary influences should account for similarities between the battlefield deaths of Epaminondas at Mantinea in 362 BC and an anonymous hero after Solachon in 586 (Theophyl. Sim. \textit{Hist.} 2.6.1–9). Alexander probably did resort to sulking in his tent like Achilles after the Hyphasis mutiny (Arr. \textit{Anab.} 5.28.3); whether he also adapted Achilles’ maltreatment of Hector’s corpse to drag Betis, the gallant Persian commander at Gaza, to his death (Curt. 4.6.29) is debated, since the story might have been invented to discredit Alexander’s changing personality.

Not all historians, however, set out to produce works of literary quality. There once existed detailed but not particularly appealing accounts of some campaigns; however, texts such as the continuation of Thucydides known as the \textit{Hellenica Oxyrhynchia},\textsuperscript{16} or scraps from a narrative of Alexander’s Balkan campaigns only survive directly on papyrus fragments.\textsuperscript{17} Their failure to satisfy audiences’ literary expectations helped to ensure their disappearance; they probably did not circulate widely in antiquity, and were not chosen for copying by medieval scribes, especially if more attractive narratives existed. Our best chance of substantial, if indirect, knowledge of their contents is if they were reused by a historical

\textsuperscript{14} The so-called \textit{Itinerarium Alexandri} (since only the Alexander section survives); see Barnes (1985) 135; Lane Fox (1997).

\textsuperscript{15} Lane Fox (1973) 60–7, 112–15.

\textsuperscript{16} If the \textit{Hellenica Oxyrhynchia} should be ascribed to Cratippus, the most plausible of several suggestions, then Cratippus’ distaste for speeches in historiography (Dion. Hal. \textit{Thuc.} 17) might have reduced the appeal of his work.

compiler. We can explain Polybius’ observation that Ephorus’ accounts of the naval battles at Cyprus and Cnidus were better than those of Leuctra and Mantinea (12.25f.1–4) since Ephorus used the *Hellenica Oxyrhynchia* for the former; although Ephorus does not survive, Diodorus used his account so that through his universal history we have a third-hand version of the *Hellenica Oxyrhynchia* in addition to the papyrus remains. Hieronymus of Cardia, secretary to Antigonus Monophthalmus and composer of an authoritative account of Alexander’s successors, also survives only through the medium of Diodorus; again Hieronymus’ attention to factual accuracy and detailed narration may have counted against him.18

Size also mattered. Polybius composed forty books of which only the first five books survive complete; there are substantial fragments from the remaining thirty-five, but much has been lost. Under a quarter of Livy’s 145 books have come down to us, much the same is true of Cassius Dio’s eighty books, and almost half of Ammianus is lost. Even the usefulness of some narratives may have helped to condemn them. In the tenth century the Eastern emperor Constantine Porphyrogenitus commissioned a massive compilation of extracts from ancient writers, of which the sections on diplomacy, plots, and moral sayings have survived. For historians such as Priscus, Malchus and Menander we have substantial fragments primarily concerned with diplomatic exchanges, which suggest that these writers would have preserved interesting accounts of military operations, perhaps of high quality. But once the Constantinian scribes had copied relevant information into the imperial collection there may have been less need to invest time and effort in recopying deteriorating manuscripts. Literary accounts of ancient warfare undoubtedly pose plenty of problems, but it is better to have the texts than not.

### II. Author-Peaceicipants

One escape from the dominance of literary tradition might be sought in the works of authors with personal experience of warfare, especially if they were reporting actions of which they had personal knowledge. Ammianus Marcellinus, an imperial protector (junior staff officer), narrated a number of military events in which he participated, between the suppression of Silvanus’ revolt in AD 354 (where the extant portion of his *Res Gestae* begins) and the death of Julian in 363. His account often conveys the conflicting emotions of direct participation, for example the swirl of a sudden cavalry skirmish and the crush of a mob seeking the safety of Amida (18.8.4–14), and the reader may be lured into accepting such pictures as an accurate

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presentation of events. But Ammianus only completed his account a generation later and his recollection may not always have been accurate: at least he forgot the orientation of Amida whose siege he witnessed (18.9.2). He was not privy to important imperial discussions: for example he categorized Julian’s destruction of his supply boats on the Tigris near Ctesiphon as folly (24.7.4), an accusation he would not have made if he had appreciated the impossibility of dragging the ships upstream. He had strong biases, especially against Constantius II and for Julian and the general Ursicinus, and these influenced his reporting. He may also have had personal reasons for keeping silent about certain events, for example his escape from Amida as it fell to the Persians (19.8.5). Above all, this soldier–historian emerges as a skilled literary author, whose delight in spectacular tableaux and manipulation of material must ceaselessly be probed.

Other author–participants present similar problems. Thucydides could have said more about the circumstances and consequences of the Athenian loss of Amphipolis in 424 BC (4.102–8), when he was commanding the fleet responsible for the city’s safety, a misfortune for which he was exiled. By contrast he brilliantly evokes the shifting emotions of the desperate Athenians watching the destruction of their fleet at Syracuse (7.71), an engagement which he would not personally have witnessed: the description is a literary tour de force. Xenophon’s account of his involvement in Cyrus the Younger’s bid for the Persian throne and the retreat of the Greek mercenaries across the Armenian highlands, for which he had been chosen as one of the generals, is analogous to Ammianus in first-hand colour, but readers must again beware the assumption that they are receiving the whole story. Xenophon had a case to argue about his actions, used the narrative to project ideas about panhellenism, wrote up his memories over a generation later, and could not, even with perfect recollection, have recorded all aspects of the expedition (e.g. An. 1.8.23 refers to Ctesias for Artaxerxes’ wound at Cunaxa). Caesar’s accounts of his actions in Gaul and during the Civil War are comparable. Particularly with regard to the Gallic conquest he presented a narrative to influence a contemporary Roman audience which included prominent opponents whose enmity might be restrained if his achievements were received enthusiastically by the wider community. Potentially contentious actions might be made to appear justified by circumstances, the magnitude of a task overstated, errors by significant individuals such as

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20 Barnes (1998); see also many of the contributions to Drijvers and Hunt (1999).
21 Noted by Gomme (1945–81) iii.584–8.
Quintus Cicero treated with restraint (5.38–40), and the drama of action highlighted, especially Caesar’s own participation.\textsuperscript{24} 

Quite apart from personal or political distortions, authors with military experience may have shaped their narratives to demonstrate the operation of what they regarded as significant factors in warfare: historians were educators as well as reporters, and so had a duty to ensure that important lessons were learnt. Lendon has urged the need to investigate what he terms the ‘grammar’ of battle descriptions since experts had different conceptions of what matters in battle.\textsuperscript{25} Xenophon observed fluctuations in morale, whereas Polybius was attentive to geographical and tactical issues which might affect the performance of Hellenistic phalanx or cavalry formations. Caesar combined these approaches, although morale was more important for him than tactics, and geographical factors are noticed less: disciplined Roman troops with a good general should take variations in conditions in their stride. The conflicting pull of such factors may confuse analyses, as for Caesar’s account of his victory at Pharsalus (\textit{B Civ.} 3.88–95); even a more straightforward description, such as the defeat of the Nervii at the Sambre (\textit{B Gall.} 2.16–28), may be little more than an artistic series of incidents whose relationship is not specifically stated but whose overall impression conveys the desired message about how victory was secured.\textsuperscript{26} 

The status or political and military experience of these authors does not guarantee the accuracy of the record. What might be termed the fallacy of military knowledge can be seen in extreme form in interpretations of accounts of Alexander’s first victory, at the River Granicus in 334 BC. Arrian, writing over four centuries later, recorded that Alexander attacked diagonally across the river in the afternoon, after dismissing advice from Parmenio to wait and plan to outflank the Persians who were massed on the opposite bank; after a fierce cavalry skirmish, Alexander managed to force his way onto the eastern side of the river and thereafter his army overwhelmed the Persians (1.13–16). According to Diodorus (17.19–21), however, Alexander’s actions paralleled Parmenio’s advice, although his battle did include a fierce cavalry skirmish similar to Arrian’s. On timing most scholars have sided with Arrian,\textsuperscript{27} the ‘better’ historian who followed named sources including the ‘military’ Ptolemy, whereas Diodorus is a compiler, whose ‘descriptions of Alexander’s other battles are patently unreliable’.\textsuperscript{28} Arrian’s account presents topographical problems, which are not resolved by local investigation: examination of the river bed may explain why Alexander had

\textsuperscript{24} See Welch and Powell (1998), especially the contributions of K. Welch, ‘Caesar and his officers in the Gallic War commentaries’ 85–110, and A. Goldsworthy, “ Instinctive genius”: the depiction of Caesar the general’ 193–219.

\textsuperscript{25} Lendon (1999).

\textsuperscript{26} Lendon (1999) 279–81 (Pharsalus); 317–20 (Nervii).

\textsuperscript{27} E.g. Hammond (1980a).

\textsuperscript{28} Brunt (1976) 450. For discussion see also Bosworth (1980–93) 1.114–16, who prefers Diodorus.
to cross the river at an angle, to move from one gently sloping gravelled approach to a comparable break in the steep banks on the other side\(^{29}\) — contrary to the sources’ explanation about the strength of the current (Arr. *Anab.* 1.14.7; Plut. *Alex.* 16.4) — but the precise locations of the Persian forces cannot be identified and it is unclear why they stationed their powerful cavalry along the river bank where it was impossible to generate the momentum of a charge. General Fuller cut through the problems by accepting Arrian as accurate and failing to recognize that there was a historiographical problem.\(^{30}\) Brunt, in an uncharacteristic credulous mode, compounded the ‘military fallacy’ by concluding his review of the sources’ tactical disagreement with an appeal to higher authority: ‘General Fuller, a practised soldier, accepted A.[Arrian] without demur.’\(^{31}\)

Alexander’s determination to maximize his personal heroic glory, especially early in his career, may have distorted accounts of the Granicus beyond all expectations: the unreliability of Diodorus has to be balanced against the implausibility of Arrian. Confidence in the expertise of Alexander’s source Ptolemy on warfare is undermined by consideration of Polybius’ critique (12.17–22) of the account of Issus (fig. 3.2) by Callisthenes, Alexander’s court historian. The relevant issue is not the specific faults which Polybius identified, since they largely involve exaggerated numbers and reveal some errors of his own — Polybius ‘at his worst’.\(^{32}\) But Polybius provides


\(^{30}\) Fuller (1958) 147–54; for criticisms, see Badian (1977).


\(^{32}\) Walbank (1957–1979) ii.364; also Bosworth (1988b) 5–6.
enough information to show that Arrian’s account (2.6–11) was essentially the same as that being criticized: thus, far from being an independent and reliable authority, Ptolemy adopted the battle narrative of his encomiastic predecessor.

### III. Priorities and Assumptions

The dominance of literary convention affected even the earliest historians, Herodotus and Thucydides, since they were still subject to the influence of earlier traditions of narrative, especially the Homeric poems in the case of Herodotus: he was tackling an epic project of preserving great deeds from oblivion, and poetic accounts such as the ‘New’ Simonides had already given epic treatment to the Persian Wars. Thucydides in addition worked against the background of Herodotus and Athenian tragedy. Herodotus was attracted by the actions of individuals who could illustrate wider themes, and by intriguing stories. Thus he notes that Cleomenes defeated the Argives at Sepeia, a victory relevant to Greek opposition to Persia, in order to explain the divine punishment suffered by Cleomenes (6.75), for acts such as his treacherous murder of Argive fugitives after the battle (6.79). The only specific information about the battle is the way in which Cleomenes fooled the Argives into believing that the Spartans were about to eat breakfast (6.77–8); Argive casualties are reported much later (7.148.2).

Sparta’s league of Peloponnesian allies, the backbone of Greek resistance to Xerxes, was a fact of life for Herodotus’ audience, and he saw no need to explain its evolution: again he focused on interesting stories. The acquisition of the bones of Orestes explains how Sparta triumphed over neighbouring Tegea (1.67–8), which had previously humiliated her in the ‘battle of the Chains’ (1.66). We do not know precisely where or how this battle was fought, nor how Sparta subsequently secured the upper hand: modern scholars suggest, plausibly, that Sparta moved from a policy of conquest to diplomatic domination with Tegea as one of the first states to be secured for the Spartan network of alliances, but Herodotus does not record this and instead refers to Spartan successes in battle. Herodotus also assumed that his audience understood what a hoplite battle entailed: thus he describes the unusual battle of the Champions, which pitted 300 Argives and Spartans against each other (1.82), but not the full-scale encounter which followed.

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34 The campaign is reconstructed on the basis of sound geographical knowledge and inferences from Herodotus by Cartledge (1979) 128–9.

and decided the issue in Sparta’s favour. Herodotus shared this assumption with other ancient writers: for example Xenophon commented that the battle of Coronea was unlike any other battle (Hell. 4.3.16), but presupposed that his readers would know what he meant. As a result we lack specific information about the normal progress of a hoplite encounter, and scholars disagree about the role of the othismos, the ‘shove’. Latin historians are no better, and our understanding of the operation of Roman units depends on military handbooks rather than idealized or vague claims in historians (e.g. Livy 8.8).

Herodotus’ primary concern was the triumph of the Greeks through half a dozen major engagements: colourful details are recorded, for example the medical attention which the Persians provided for a heroic Greek (7.181), but other issues remain obscure, for example the actual contribution of the 35,000 light-armed helots who accompanied the Spartans to Plataea. The discrepancy between modern and Herodotean interests is particularly evident with regard to strategy: Herodotus says little about the principles behind Greek resistance to Xerxes. Modern scholars assume that the Greeks recognized the need for cooperation between land and sea, so that occupation of the defile of Thermopylae was coordinated with the fleet’s station at Artemisium and the use of Salamis as a base assisted the defence of the Isthmus of Corinth. This overall strategy seems so plausible that it is worrying to see signs in Herodotus that the Greeks were not always aware of it: the first proposal, to oppose the Persians at the Vale of Tempe (7.173), offered no opportunity for the Greek fleet to confront the Persians along the open coastline of Thessaly. Herodotus does not note a strategic link between Thermopylae and Artemisium, although he knew that the engagements were contemporary and that the Greek fleet withdrew after hearing of Leonidas’ death. His reports of Greek discussions about withdrawing the fleet from Salamis do not contain any suggestion of strategic thought in the selection of the site: Salamis had in fact been chosen as the fleet’s base to assist in the evacuation of Attica (8.40), and its advantages for an engagement are only noted at a later conference of the commanders (8.60). Modern reconstructions of Greek campaign strategy may be correct, but the Greeks’ thinking, especially that of their Spartan leaders, may have been conditioned by cultural assumptions about the primacy of hoplite warfare: these would have encouraged them to concentrate on possible land barriers, Tempe, Thermopylae, and the Isthmus, whereas the conditions for successful naval warfare were recognized belatedly and only by some participants.

Our ideas about strategic planning may help to articulate a facet of warfare which ancients did not highlight, even if they recognized it on occasions. On the other hand there are dangers in imposing modern preconceptions on ancient evidence, as shown by explanations for Spartan behaviour in 490. According to Herodotus the Spartans could not respond to the Athenian plea for help at Marathon until after the full moon (6.106), a reason now regarded as flimsy by some. This can be associated with other occasions when the Spartans appear reluctant to commit themselves to action outside the Peloponnese (Hdt. 7.206: Thermopylae; 9.7: before Plataea), and with the Thucydidean dictum that they were slow to go to war unless compelled (1.118.2), to produce a theory that structural considerations determined Spartan behaviour: fear of the helots made Spartiates wary of external commitments. Religion may have concealed other motives, and Herodotus suggests as much before Plataea since the Spartans were both enjoying the celebration of the Hyacinthia and working hard to finish the wall at the Isthmus (9.7). However, the strength of Spartan commitment to correct religious practice is illustrated on the field of Plataea, where their contingent endured heavy fire from Persian archers while waiting for sacrifices to sanction an advance (9.60; 72). Modern scepticism on religious matters can seriously distort reconstructions of tactics and strategy.

If any ancient historian were to provide us with a reasonable basis for reconstructing an ancient war, Thucydides would be the prime candidate since he secured a reputation for accuracy and reliability, partly at least because of his own assertions about his methods (especially 1.22). However, even though Thucydides set himself high standards for research and reporting, this did not result in a comprehensive account of the Peloponnesian War: his narrative is sometimes paradigmatic, ‘a highly stylised and selective treatment of key incidents and individuals’. Recent excavations at Nemea have revealed evidence for fighting at the sacred site in the latter years of the Peloponnesian War which is unreported by any ancient source. On religion Thucydides imposed his own rationality and disregarded a factor which influenced contemporary opinion; his treatment of oracles is in marked contrast to Herodotus. Persia is a further issue of general relevance to the Peloponnesian War whose importance Thucydides may initially have underrated; in this case, though, there are signs that

40 E.g. the advice of the tactical writer Celsus on how best to attack Persia by means of a rapid advance from the north, advice which Lydus (Mag. 3.33–4) implies was known to the emperor Constantine.
41 Note the important discussion by Parker (1989).
Thucydides realized his error so that adjustments might have been made if he had ever completed his work.\textsuperscript{47} Thucydides, though, was exceptional among ancient writers in recognizing that wars cost money, especially naval expeditions, and he provided specific evidence on Athenian revenues and resources at the start of the war (2.13); his figures for imperial receipts (2.13.3) and the first tribute to the Delian League (1.96.2) have been questioned, but the available evidence does not demonstrate that Thucydides has provided exaggerated totals.\textsuperscript{48} And yet Thucydides is guilty of a serious, and probably deliberate, financial omission which affects our assessment of the war’s course and of the individuals involved. According to Thucydides, Pericles alone understood how to lead the Athenians and win the war, but after his death his careful strategy was subverted by the competitive ambitions and lesser talents of his successors (2.65). From Athenian inscriptions, however, it is clear that the Periclean strategy came close to bankrupting Athens in the early stages of the war and that energetic financial reorganization was necessary.\textsuperscript{49} Cleon was certainly involved in this overhaul and was probably its architect, but Cleon was used by Thucydides as the archetype of the new breed of demagogic politician who destroyed the golden age of Periclean leadership; there may also have been personal reasons for the hostility, since Thucydides was active in Athenian public life when Cleon was at the height of his influence. Thucydides may also have denigrated Cleon’s abilities as a commander, so his biases could distort his presentation of military events at a tactical as well as a strategic level.\textsuperscript{50} Individuals profoundly influenced Thucydides’ narrative, contrary to his protestations of objectivity.

Causation was important to Thucydides, and he presented a masterly analysis in Book 1, but this also served to defend his idol Pericles against accusations, reflected in Aristophanes, of responsibility for the discomforts and misfortunes of war (\textit{Ach.} 496–555; \textit{Pax.} 603–14). Thucydides chose to disregard key developments in the growth of Athenian power in the decade before the war, for example the foundation of Amphipolis or the decision to apply pressure to Megara, since these were initiatives which could be directly connected with Pericles;\textsuperscript{51} he also overstated the security of Pericles’ domination of Athenian politics by ignoring challenges which nearly unseated him (Plut. \textit{Per.} 31–2). Instead Thucydides baldly stated that Pericles was supreme and focused on the earlier stages of the Athenian rise. Pericles may also be relevant to Thucydides’ disregard for religion, which was used to attack Pericles in the 430s, and perhaps also Persia which

was not important in Pericles’ strategic thinking. The modernity of many Thucydidean interests and presumptions, and the general quality of his narrative, may blind readers to difficulties; his very intelligence may be a problem, since he knew how to use his narrative to justify his views. By contrast Xenophon’s defence of Spartan actions in the early fourth century can be dissected, at least in part, without reference to external information since he failed to write his narrative consistently to match his views.

Thucydides was capable of producing a clear military narrative of specific events, as in his account of operations in north-west Greece and the Gulf of Corinth in 429 (2.80–92). This combines analysis of Spartan strategy to increase their influence in the area with a description of relevant local conditions, and then provides a detailed description of the tactics of Peloponnesian and Athenian fleets to highlight the importance of naval skill. The brilliance of Phormio in handling his small Athenian squadron underlines points which Thucydides had made earlier about Athenian and Spartan strengths (1.18.2; cf. 4.12.3), and his overall contrast between cautious Spartans and energetic Athenians (8.96.5). It is not surprising that Thucydides provides our clearest account of a hoplite battle, the Athenian defeat by the Boeotians at Delium in 424, where the overall Athenian strategy for a coordinated attack on Boeotia (4.76–7), the preliminaries to the battle (4.89–95), the actual fighting (4.96), and the aftermath (4.97–101) are clearly described.

Thucydides, though, is not perfect. He deserves considerable credit for generally providing plausible numbers for the military forces, but he sometimes declined to record numbers which he apparently knew, for example Ambraciot losses in 426 (3.113.6: too large to be credited) or Athenian light-armed casualties at Delium (4.101.2). His most problematic military numbers are for the Spartan contingent at Mantinea in 418, of whose reckoning he was in fact quite proud in the light of Spartan secrecy over such matters (5.68). The issue is controversial, but it is at least plausible that Thucydides omitted one whole level of organization in the Spartan army, in which case the Spartan numbers at the battle were almost double what he calculated. The uncertainty is not significant for Mantinea itself, but affects our analysis of the decline in Spartan citizen manpower, an important issue for their armies in the early fourth century. Overall, though, such is Thucydides’ reputation for accuracy that scholars are tempted to correct his text rather than admit error. Thus the figures which he gives (4.8.6) for

52 Cf. Keegan (1976) 68, for the superiority of Thucydides’ style of narrative, even over Caesar’s.
53 For analysis of this see Hornblower (1987) 194–202.
56 Andrewes in Gomme et al. (1945–81) iv.111–17 argues for this; against Cawkwell (1983) 387ff.
The size of Sphacteria (15 stades) and of the channels at its northern (sufficient room for two or three triremes to sail in) and southern ends (eight or nine triremes) are incorrect. Emendations to the text have been suggested, but too many corrections are required here for any defence of Thucydides to be conclusive. Thucydides is our best ancient military narrative, but even he presents a literary text informed by subjective analysis which must be treated with caution at all times.

IV. KNOWLEDGE AND MEMORY

The basic business of gathering information created problems for constructing a clear narrative, both of the chaos of battle and the wider dimensions of warfare; in addition to the ‘Whatley’ problem of the partial memory of any participants, personal interests of key informants and national agendas must be considered. When Herodotus began to collect information on the Persian Wars, at least a generation had elapsed from the latest event. Marathon illustrates the problems. Herodotus’ account is compatible in all significant respects with Cornelius Nepos’ biography of the Athenian general Miltiades, and the site of the battle is clear even if Herodotus appears to know nothing of local topography; archaeological investigation of the funeral mound on the Marathon plain confirms that the Athenian dead were cremated and buried there. Questions remain, however, about where the Persian cavalry were, and why the Athenians chose to attack when Spartan help, for which they had been waiting, was on its way. One approach is to step back from the ancient narratives and consider the overall geographical position, in particular the time required for the Persian fleet to sail from Marathon round Cape Sunium and up to Phalerum, an approach argued by Hodge. Hodge corroborated an older hypothesis that the Persian cavalry had embarked before the land battle started: the Athenians had to attack at once since they feared treachery in the city. Scholarly attention to the tactics of the actual engagement, while helpful in clarifying the details of what happened on the Marathon plain, may have ignored the conditions which gave rise to the battle.

The interests of available informants were undoubtedly relevant: although there were Ionian Greeks on the Persian side and a few hundred Plataeans assisting the Athenians, the story was controlled by the Athenians since the victory entered their national mythology, to be appropriately commemorated in the Stoa Poikile alongside Theseus’ defeat of the Amazons (Paus. 1.15.1–4). The role of Miltiades may have been highlighted by his son Cimon, the most successful Athenian leader of the next generation, who

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57 For the problems and complexities, see Hornblower (1991–6) II.159–60.
58 Hodge (1975).
also commissioned the Stoa Poikile. It was also not in Athenian interests to suggest that they had only beaten part of the Persian army and, even if accusations of Medism helped to fuel contemporary Athenian political disputes, the notion that treachery was a major danger in this bastion of Greek resistance was not something to be remembered in the longer run. Herodotus, in particular, may have been helped in this direction by the interests of some sources, since he preserved material connected with the Alcmeonids, one of the families strongly suspected of Medizing.  

The naval engagement at Lade in 494 is another Herodotean battle obscured by the memory of his main informants. He had good contacts with the Samians, most of whose ships abandoned the battle and escaped the catastrophe: Herodotus noted Samian concern for indiscipline among the Ionians as well as their recognition of Persian superiority (6.13), but then skirted over the details of the engagement, ‘once the fight had begun, I cannot say for certain which of the Ionian contingents fought well and which fought ill; for the reports are confused, everybody blaming everybody else’ (6.14). With regard to Thermopylae, once one discounts his enormous numbers for Persian forces (a failing for which he was criticized in antiquity, but which he shared with most ancient writers), Herodotus provided quite a clear account of the stages of the confrontation which can be related to the local topography. On the other hand, while he acknowledged that other Greeks were present, the impression of his narrative is that it was virtually Spartans against Persians, partly because he naturally focused on the actions of Leonidas, the Greek leader. The exiled Spartan king Demaratus, who accompanied the Persian expedition, also ensured that Xerxes saw the contest as one between himself and the Spartans (7.209; 234): Demaratus, or a member of his family or entourage, was very probably an important source of information for Herodotus, which helps to explain why this quisling received such favourable treatment. It was to be the sacrifice of Leonidas and the Spartan 300 whose memory dominated the engagement.  

Latin historians constructed an account of the successes of the Roman Republic whose distortions are very difficult to unravel, especially for the period before the Punic Wars when Polybius provides some control. Family traditions played their part, since much information about the earlier centuries of Roman history passed down within families, being recalled for example in the context of funeral celebrations (Polyb. 6.53–4). In the case of the Fabii the fact that Rome’s earliest historian was Fabius Pictor will have compounded the distortions. Politics also contributed. Events might be rewritten to elevate or blacken the ancestor of a prominent figure of later times, or to provide warning against later developments: different stories

60 Hdt. 6.121–4 presents an unconvincing argument against Alcmeonid treachery.
61 Mitchell (1975).
grew up around the death of Sempronius Gracchus in 212 (Livy 25.16–17), perhaps because of the reputations of his descendants, the reforming tribunes, and stories about populist tyrants like Manlius emerged for similar reasons (6.11.1–20.16). For Latin writers Rome went to war for good reasons, secured victories when commanders behaved properly but was rewarded with defeat if leaders were irresponsible, populist, or offended the gods. Comparison between Polybius and Livy on the early years of the Hannibalic War illustrates the nature and extent of change. Polybius could describe battles and narrate campaigns with great clarity and was particularly interested in the complexities of causation, whereas for Livy Hannibal was responsible for the conflict and his early victories were the result of poor leadership: before Lake Trasimene Flaminius ignored clear warnings against the Roman march (Livy 22.3.11–13; contrast Polyb. 3.83.5–7). Livy sometimes preferred to disregard Polybius in favour of more congenial material in the Latin tradition, or at least to include its exaggerated information: for Cynoscephalae, he preserved the inflated Macedonian casualty figures in Valerias Antias and Claudius Quadrigarius (33.10.7–10) as well as the more measured 8,000 of Polybius (18.27.6). Livy also might misunderstand Polybius’ Greek, with alarming consequences: again at Cynoscephalae, Polybius recorded that the Macedonians lowered their sarissas to charge (18.24.9), but Livy thought they put them down and so invented an explanation for this surprising action, namely that the Macedonians found their long weapons an encumbrance and wanted to use their swords (33.9.12).

V. ALTERNATIVES TO LITERATURE

One leading expert on Greek warfare declared that we must ‘proceed cautiously before we jettison the battle accounts of ancient historians which run counter to our preconceptions’, but the preceding consideration of the literary tradition indicates that there are various possible distortions in even the most authoritative accounts. Important supplementary sources of evidence such as inscriptions and artistic depictions have already been mentioned, but their limitations as well as insights need to be highlighted. Athenian inscriptions enable us to interrogate Thucydides’ presentation of Athenian finances (see above), and illustrate the parlous state of the Athenian navy in the fourth century: Xenophon (Hell. 6.2.11–14) and forensic oratory (Demosthenes 50) reveal problems in maintaining even a small fleet in the 370s and 360s, but the dockyard superintendent lists record the full extent of the equipment crisis. Inscriptions are also important for understanding diplomacy, for example the propaganda campaigns among Greek

63 Derow (1994) 73–90.
65 Extract in Harding (1985) no. 47.
cities which accompanied the military competition of Hellenistic monarchs or the operation of Roman power on the eastern Mediterranean. However, they rarely provide direct evidence for warfare: the Athenian inscription honouring Callias of Sphettus for his efforts on behalf of Athens in the 280s and 270s is a rare example, but needs to be read as a propagandist text relevant to Athenian preparations for the Chremonidean War. The Roman army is much better illustrated by epigraphy, and we have a reasonable dossier of evidence on such things as the disposition of legions, officers’ career patterns, relations with emperor and civilians, and religious practices, especially for the period down to about AD 250. This material is most useful in revealing the background to the army’s military activities, but less so about active warfare.

The propagandist nature of some artistic evidence has already been noted. It is important to see how emperor Arcadius and his ministers wished the people of Constantinople to remember the expulsion of Gaínas and his Goths through divine assistance (fig. 3.3), but this is merely one representation of the action and we can only approach the sequence of events more closely by unpicking the various literary texts. Less public items may be

more neutral, but also less revealing. Thus the Chigi vase, which is prominent in discussions of the date for the introduction of hoplite equipment and tactics, does not add to our knowledge of the nature of hoplite warfare with its depiction of men marching in time to music in orderly ranks, with overlapping shields. There was no sufficiently detailed and clear depiction of a Greek trireme to resolve scholarly disputes about the operation of the tiers of rowers and guide efforts at reconstruction. Art often chose to depict the general rather than the specific, the encounter of two orderly hoplite units or the patriotic departure of the young warrior from home to defend his country, but not a particular engagement. Even when an identifiable battle or war may be represented, as for example in the Issus mosaic, what is shown may be a distillation of Alexander’s triumphs rather than a single battle. Similarly the rock relief at Naqsh-i Rustam represented Shapur triumphing over Gordian, Philip and Valerian, the collective result of Roman defeats over a period of fifteen years; the three emperors were never simultaneously humiliated in this way. Art found it no easier than literature to display the complexities of military reality, and so either generalized or selected symbolic highlights.

Archaeology might seem to offer a better escape from the dominance of literature, and in certain areas it has produced useful insights. Without archaeological recovery of artifacts the study of ancient weapons would be dependent upon literary descriptions and artistic representations; survival

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68 Cf. Gilliver, ch. 4 in Volume ii, for a contrast between metropolitan monuments and better-informed provincial works.
69 See discussion in Wheeler, ch. 7 in this volume.
70 Cohen (1997).
71 Ghirshman (1962) 152, pl. 195.
of actual equipment gives a better idea of how material developed over time, even though there is still disagreement about how specific items, for example the Macedonian sarissa, might have been used.\textsuperscript{72} Analysis of fortifications may reveal aspects of the defence of a particular region, for example Attica in the fourth century, which do not receive comment in the surviving literary evidence,\textsuperscript{73} or permit the construction of overarching hypotheses about defensive strategies, for example how Roman imperial planning evolved in the first four centuries AD.\textsuperscript{74} On the other hand archaeological evidence is not neutral, and scholarly interpretations are likely to be contested.\textsuperscript{75} A wide-ranging critique of Procopius’ panegyrical account of Justinian’s defensive constructions foundered because the material evidence was not presented fairly; although Procopius undoubtedly magnified Justinian’s actions and allocated him credit which belonged to others, his information did have some basis in fact.\textsuperscript{76} Our understanding of Roman attempts to conquer Scotland is largely informed by the physical remains of defensive walls, major bases such as Inchtuthil and Ardoch, and the numerous marching camps, since Tacitus’ account of his father-in-law Agricola’s actions only covers a small part of the struggle and had a strong personal interest. The material evidence points to the implementation of different strategies at different times, close supervision of the Highland Line in the late first century whereas in the early third century a widespread protectorate over southern Scotland and thorough ravaging and even deliberate depopulation of areas beyond may have been practised; but different interpretations are possible, however, and the chronology of sites can be disputed, especially where aerial survey has not been backed up by excavation.\textsuperscript{77}

There are limitations to what archaeology can provide. Naval battles cannot be elucidated by underwater archaeology, which has done much to improve other aspects of our understanding of ancient seafaring. The trireme, the main element of most battles, was a fragile craft but was unlikely to sink completely since it relied on its crew’s weight as ballast: boats would be overwhelmed in storms, wrecked on shore, or incapacitated in battle, but they would not end up on the sea bed to be preserved in silt for modern discovery. \textit{Olympias}, the modern reconstruction of a Greek trireme (fig. 3.5), was designed on the basis of a few and partial depictions of ancient ships, coupled with intelligent speculation.\textsuperscript{78} The results of the investigation have enhanced our understanding of triremes, the prime importance of training, the factors affecting performance, and their susceptibility to poor weather, but the exercise might not have been initiated if there had

\textsuperscript{72} Markle (1978); \textit{contra} Hammond (1980c).
\textsuperscript{73} Ober (1983a).
\textsuperscript{74} Luttwak (1976).
\textsuperscript{75} E.g. the debate about the nature of Roman frontiers, with Isaac (1990) and Whittaker (1994), among others, challenging the fundamentals of the Luttwak hypothesis.
\textsuperscript{76} Croke and Crow (1983); response by Whitby (1986a), (1986b), and (1987); see fig. 3.4.
\textsuperscript{77} General survey in Richmond (1965) 41–60.
\textsuperscript{78} Morrison and Coates (1986).
been sufficient archaeological evidence to establish the ship’s appearance in the first place. Reconstructions have also been used to demonstrate the operation and effectiveness of ancient artillery, a process which has combined the information of ancient technical treatises, narratives of sieges and common sense.79

Battlefield archaeology has been of minor help. Part of the problem is that many engagements cannot be placed with sufficient precision for detailed investigation to be undertaken: this applies to such major battles as Ipsus, Raphia, Magnesia, Mursa, Adrianople, whose general locations are known; some such as Mons Graupius float across a range of possible sites. At others, topographical change has affected the landscape to varying degrees: at Thermopylae the combination of centuries of silting and a rise in sea levels makes it impossible to dig down to fifth-century levels, at least without expensive pumping.80 Granted that most battles occurred at points along major communication routes, it is not uncommon for more than one engagement to have been fought at a particular site in antiquity

(e.g. Chaeronea, Thermopylae, Mantinea) as well as more recently, with consequent complications for any investigation. Further, it is likely that many battlefields were quite effectively cleared: pillaging by the victors and subsequent scavenging by camp-followers and others in the vicinity removed most valuable or reusable items, corpses were usually collected for burial, not necessarily at or near the actual battlefield, and temporary constructions associated with an engagement, for example a palisade or ditch, might disappear quickly. The experience of the embassy on which Priscus served in 449, where they found outside Naissus that the whole area towards the river banks was covered with the bones of those killed in the fighting (Priscus fr. 11.1.54–5) was probably abnormal: there had not yet been the opportunity to bury the dead, or the people interested in doing so, though if one pressed Priscus’ words it would seem that the bodies had been efficiently ransacked.

One exception, however, is the Varian disaster of AD 9 in the Teutoburger Forest. The site was not precisely known: the narratives in Cassius Dio (56.20–2) and Tacitus (Ann. 1.61–2) left open several possibilities, and even if the regular discovery of gold and silver coins pointed to a location near Osnabrück other places were still canvassed. A combination of survey and limited excavation confirmed a site on the Kalkreiser-Niewedder depression, and clarified the progress of an engagement which was poorly known from the literary sources: the scatter of finds indicated where the main fighting occurred as the army struggled to continue its march until it became divided and units attempted to save themselves. The battlefield had been thoroughly plundered, so significant remains were only discovered in the burial pits dug by Germanicus’ army in AD 15 and near the Germans’ temporary turf walls, which had already begun to collapse during the battle as the desperate Romans attempted to escape. The bones showed signs of a period of exposure. The small finds reflected the diverse personnel of a large expeditionary force, not only fighting units but varied craftsmen, surveyors, clerks and medical personnel.

This site survived reasonably well since the battle was fought in a sparsely populated area on marginal land where the prevailing agricultural practice for most of the next two millennia consisted of dumping increasing quantities of organic material to improve the poor soil: ancient levels were preserved from interference, even if the conditions were not good for preserving organic remains. Another positive factor was that the fighting had some affinities with a siege, since the Germans used barricades to hem the Romans in. Sieges are slightly more likely than battles to produce archaeological evidence, since at least the location of the engagement can usually be identified. The evidence for many sieges was probably cleared quickly, since defenders

81 See Schlüter (1999) for a very useful summary of the various investigations.
would not want other attackers to exploit offensive works, whether the fortification was captured (e.g. Amida: captured by Persians in AD 502/3, Roman counter-siege 503/4) or resisted attack (Edessa in 544). But, where a site remained deserted after a successful siege, or only partially occupied, the remains might be considerable. At Old Paphos on Cyprus (498 BC) and Dura-Europus (c. AD 257) the remains of the Persian siege-works include ramps and tunnels, including at Dura the Roman counter-tunnels which contained the corpses of those killed in fierce fighting underground. At Masada (AD 70–3) the enormous scale of a Roman siege is revealed through the circumvallation with its associated forts and the siege mound up to the hilltop fortress.

The case of Julius Caesar’s attack on Alesia in 52 BC demonstrates the potential of archaeology at an abandoned site as well as various complications. Caesar himself provided a detailed account, including the complex siege-works around the hilltop (B Gall. 7.68–89), but there are sufficient imprecisions in the text to permit different identifications of the location. Partly because the site was of great symbolic significance for Gallic national identity, there was fierce provincial rivalry to claim it between Alesia in Burgundy and Alaisa in Comté. Napoleon III patronized excavations at Alesia, and even visited the site on 19 June 1861 to tour the trenches and listen to a translation of Caesar’s narrative on the summit; finance was available, but there was also strong imperial interest in results so that the integrity of the investigation might be challenged. Many found the results conclusive and a statue of Vercingetorix was erected as a memorial to a unified Gaul, but there was still sufficient argument between Burgundy and Comté to thwart a national bimillenary celebration in 1949. Subsequent archaeological work has confirmed beyond doubt that Napoleon’s investigators were right, but also revealed how their reconstructions had been shaped by Caesar’s descriptions (B Gall. 7.72–4), which in fact contained certain inaccuracies: the location given by Caesar for some of the outer obstacles proved to be wrong, and, although the various items recorded by Caesar did exist, their disposition varied around the circumvallation. Caesar produced a homogenized description which embraced what might be found at certain points on the circumference but did not correspond precisely to any of the areas investigated. The constraints of memory, or perhaps the demands for literary clarity affected the written record, but the text then influenced the interpretation of the material remains for over a century.

Archaeological discoveries provide our main insight into the routine of military service, camp life with patrols, and the occasional skirmish which would be too minor to attract the notice of an ancient author. The writing

tables from Vindolanda, the archive of Abbinaeus, and the papyrus records of the camel corps at Nessana reveal the realities of the Roman army’s presence in different provinces at different times, the economic importance and social connections of the army in terms of supplies, local patronage, ownership of property, delivery of justice, and maintenance of order (fig. 3.6).  

Even on active campaign there was considerable tedium: the story of Socrates’ protracted immobility at the siege of Potidaea is preserved to show his devotion to knowledge (Pl. *Symp.* 220), but the interest which his odd behaviour generated among fellow besiegers also points to the boredom of a protracted blockade. Camp life required its diversions, as the antics of young Athenians on garrison duty illustrate (Dem. 54.3–4): we know about them because the victim went to court and employed a famous speech-writer, but otherwise such behaviour would pass unrecorded. Even here there is no escape from literary texts.

Ancient evidence has to be supplemented wherever possible by other information. Sound geographical knowledge of the battlefield or the area of a campaign is an obvious prerequisite: Polybius’ critique of Callisthenes shows its relevance was recognized by some writers in antiquity, but even the careful Thucydides made mistakes, and it appears that Herodotus, for all his enthusiasm for Greek triumphs, may not have visited Marathon. Modern reconstructions must rectify these deficiencies: without detailed local knowledge of relevant sites ancient descriptions of battle tactics will remain obscure, while the realities underlying brief mentions of marches or campaigns cannot be appreciated unless the ground traversed is familiar. Ancient writers occasionally recorded the problems of a march, but these tend to be exceptional cases such as the struggle of Alexander’s army to cross the Pamirs in a winter storm (Curt. 7.3), his notorious crossing of the Gedrosian desert (Arr. *Anab.* 6.22–6), or the crossing of marshes (Hannibal: Polyb. 3.79; Caecina: Tac. *Ann.* 1.63–5). The armchair narrators of Lucian’s pamphlet might misrepresent events without even realizing their error. An extreme example is provided by Theophylact’s narratives of Roman campaigns in the Balkans during the AD 590s, where the energy of the defence conducted only emerges when the armies’ moves are plotted on a map; Theophylact had been misled by a biased source.

Logistics is another crucial aspect of military activity which can be informed by modern calculations but is poorly recorded by ancient writers: many armies travelled with wagon trains, but numbers are rarely noted.

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84 Bowman (1994); Bell et al. (1962); Kraemer (1958). See also the discussion by Adams, ch. 6 in Volume ii.
86 An army of 15,000 has 520 wagons (Marc. Com. *sub anno* 499); Romans capture 2,000 Gothic wagons in AD 479 and do not need requisitioned transport (Malchus fr. 20.226–56).
Figure 3.6 Cohort strength report on a writing tablet from Vindolanda (c. AD 100, north Britain).
civilians regularly provided food for soldiers, but the massive preparations at Edessa in AD 504/5 are an isolated record (Ps.-Joshua Stylites 54, 77). Attention to supplies had always been essential, even in the much more localized warfare of classical Greece. Inadequate arrangements contributed to the Athenian disorganization at Aegospotami in 405 BC (Xen. Hell. 2.1.27; contrast 6.2.28–9). Scattered evidence can be assembled to produce synthetic accounts of how Roman Republican and imperial armies functioned, but the only campaign for which we have reasonably sustained information is Alexander’s conquest of Persia; even here the ancient evidence has to be supplemented by assumptions about the composition of the baggage-train, the nature and quantity of food consumed, and the availability of local produce. Armies acted as economic magnets, for those keen to purchase Alexander’s booty or to supply imperial forces at the exorbitant prices bemoaned in the preamble to Diocletian’s Edict on Maximum Prices, but this vital aspect of military life was not preserved by many authors, especially those with little experience of war.

Common sense and comparisons from more recent warfare are a further supplement for defective ancient evidence, although they need to be applied with caution. Numbers in ancient sources, especially for enemy armies, are often impossible and reductions have to be made, but at a debatable scale. Marathon is again relevant: in contrast to Hodge’s application of geography, Holoka argued that it was physically impossible for the victorious Athenians to return to Athens on the day of the battle, so that the ancient evidence (Plut. Arist. 5.4) has to be discounted, the stories of treachery disregarded, and the problem of the missing Persian horses left unsolved. But Holoka’s common sense is itself vulnerable: a march of 26 miles after a battle would be extremely arduous, but the Athenians’ physical condition might not have been better the following day when limbs and wounds had stiffened. Study of early modern warfare may help in understanding the mechanics of combat before battlefields were dominated by gunpowder, but such comparisons can only be illustrative rather than conclusive: conditions may have been sufficiently different to weaken the parallel and there may be uncertainties in our knowledge even of the more recent events. A good example of the dangers of applying modern studies to ancient warfare is provided by Goldsworthy’s work on Roman warfare. He accepted American combat experience in the Second World War which suggested that no more than a quarter of men in a unit were likely to participate actively in

87 Statements of principle in Xen. Cyr. 1.6.9–12; Plut. Mor. 178a.
88 Erdkamp (1998); Roth (1999).
89 See Engels (1978); some of his assumptions, for example that the Macedonian training regime described at Frontin. Str. 4.1.6, was normal practice on campaign, are questionable.
90 Discussion in Corcoran (1996) ch. 8; cf. Xen. An. 1.5.6.
an engagement, and reconstructed Roman battles around the belief that there was a limited number of active champions in each unit. But the modern analyses are far from conclusive, and the comparison is flawed.\(^\text{93}\) For Roman warfare the application by Luttwak of concepts from modern strategic planning has been more fruitful in provoking debate about the Roman conceptualization of war and the role of armies and frontiers in the maintenance of their Empire. Luttwak’s modern ideas are not accepted wholesale by many, but they have influenced the terms of the scholarly debate.\(^\text{94}\)

\section*{VI. Conclusion}

With reference to early Greek warfare, Cartledge referred to an unfortunate tendency to use, or abuse, every scrap of evidence,\(^\text{95}\) and it is necessary to accept the limits to our ability to appreciate the varied nature of ancient warfare across a period of a millennium and a half involving many different societies and forms of combat. Literary evidence is regularly problematic: Herodotus chose warfare as the central theme for his \textit{Histories} and his work was a monumental achievement, but bias, at both national and personal levels, a tendency to focus on personalities and their disputes but to ignore broader questions of strategy, and a lack of awareness of relevant geographical and logistical factors, distort the account which is presented to us, quite apart from his inevitable ignorance about certain aspects of the conflicts, or disregard for events which were not of central importance or which did not attract his attention in other ways. Commanders such as Julius Caesar may have understood the progress of a campaign and the nature of opposing strategies, but they might have decided that other matters were of greater interest to their audiences. Battle would have been confusing for participants such as Xenophon or Ammianus, probably impenetrable for those without the experience. The horror of the results will have been recognized, if only from gory descriptions of wounds in Homer, but the panic or desperation of the actual event, revealed in a graffito from the doomed city of Sirmium c. AD 580 (God smite the Avars and preserve Romania), will have passed by most people in the ancient world with the education to produce a historical narrative. Our reconstructions of ancient warfare must always be tentative and recognize the significant gaps in our understanding.

\textsuperscript{93} See Wheeler (2001) 173. \textsuperscript{94} Luttwak (1976); Mann (1979); Isaac (1990); Whittaker (1994).
\textsuperscript{95} Cartledge (2001) 154.