War as a Cultural and Social Force

Essays on Warfare in Antiquity

Edited by Tønnes Bekker-Nielsen and Lise Hannestad



Historisk-filosofiske Skrifter 22

Det Kongelige Danske Videnskabernes Selskab The Royal Danish Academy of Sciences and Letters

Commission Agent: C.A. Reitzels Forlag. Copenhagen 2001

DET KONGELIGE DANSKE VIDENSKABERNES SELSKAB udgiver følgende publikationsrækker:

THE ROYAL DANISH ACADEMY OF SCIENCES AND LETTERS issues the following series of publications:

Historisk-filosofiske Meddelelser, 8°

Historisk-filosofiske Skrifter, 4° (History, Philosophy, Philology, Archaeology, Art History)

Matematisk-fysisike Meddelelser, 8° (Mathematics, Physics, Chemistry, Astronomy, Geology)

Biologiske Skrifter, 4° (Botany, Zoology, Palacontology, General Biology)

Oversigt, Annual Report, 8°

Authorized Abbreviations
Hist.Fil.Medd.Dan.Vid.Selsk.
(printed area 175 x 104mm, 2700 units)

Hist.Filos.Skr.Dan.Vid.Selsk. (printed area 2 columns, each 199x77 mm, 2100 units)

Mat.Fys.Medd.Dan.Vid.Selsk. (printed area 180x126 mm, 3360 units)

Biol.Skr.Dan.Vid.Selsk. (printed area 2 columns, each 199x77 mm, 2100 units)

Overs.Dan.Vid.Selsk.

War as a Cultural and Social Force Essays on Warfare in Antiquity

War as a Cultural and Social Force Essays on Warfare in Antiquity

Edited by Tønnes Bekker-Nielsen and Lise Hannestad

Abstract

The present volume owes its origin to a conference held in January 1998. Three contributions (Morgan, van Wees, and Gabrielsen) deal with the interaction between warfare and the structural development of the Greek city state. From the late fifth century a change in the attitude to war can be perceived, for example in Attic funerary reliefs (L. Hannestad). Internationalization and professionalization of warfare is characteristic of the hellenistic period (Austin, Bekker-Nielsen). The relation between army and civil society in the Roman Empire is explored from very different perspectives in three contributions (Keppie, Link and N. Hannestad). Parallels between warfare in the Mediterranean world and in contemporary northern Europe and warfare in later European societies are at the focus in the last two contributions (Hillingsø, Randsborg).

Lektor, lic.phil Tønnes Bekker-Nielsen Historisk Institut Syddansk Universitet DK-6700 Esbjerg E.mail: tonnes@hist.sdu.dk Lise Hannestad Institut for Klassisk Arkæologi Aarhus Universitet Nordre Ringgade, Bygn. 415 DK-8000 Aarhus C E-mail: klalh@hum.au.dk

The expenses of printing this volume were covered by a grant from the Carlsberg Foundation.

Preface

The present volume owes its origin to a conference held in January 1998 at the Royal Danish Academy of Sciences and Letters. The theme 'War as a Cultural and Social Force' was chosen by an interdisciplinary group formed by the Centre for the Study of Antiquity, University af Aarhus, after a series of more informal discussions on war in antiquity. We are grateful to the other members of the group: Erik Ostenfeld, Klavs Randsborg, Uffe Østergaard and in particular to Per Bilde.

The Royal Danish Academy of Sciences and Letters generously housed and sponsored the conference and this publication; thanks are also due to the Carlsberg Foundation for financial support without which the project could not have been carried out and to Mary Waters Lund for revising the English text. We wish to express special thanks to Pia Grüner of the Royal Academy for her patience and help during the whole process.

Lise Hannestad & Tønnes Bekker-Nielsen

Contents

List of Illustrations 8

List of Tables 10

Abbreviations 11

Introduction 15

Symbolic and Pragmatic Aspects of Warfare in the Greek World of the 8th to 6th Centuries BC 20
Catherine Morgan

The Myth of the Middle-Class Army: Military and Social Status in Ancient Athens 45 Hans van Wees

Naval Warfare: Its Economic and Social Impact on Greek Cities 72 Vincent Gabrielsen

War and Culture in the Seleucid Empire 99 Michel Austin War and Greek Art 110

Lise Hannestad

Science and Warfare in the Classical World 120 Tønnes Bekker-Nielsen

Army and Society in the Late Republic and Early Empire 130 Lawrence Keppie

Veteranus and Munus Publicum 137 Stefan Link

Rome and her Enemies: Warfare in Imperial Art 146 Niels Hannestad

The Rise of European Infantry 155 Klavs Randsborg

War in History. Doctrine, Leadership and Effect on Society 166 K.G.H. Hillingsø

Index 212

List of Plates

Plate I. The Chigi Vase. Museo di Villa Giulia, Rome. H. 26.2cm. *C.* 640-630 BC. The shoulder frieze showing hoplite formations about to join battle. (After *Antike Denkmaeler* II Taf. 44)

Plate 2. Detail from plate 1.

Plate 3. Red figure chalice krater by the Niobid Painter. Musée du Louvre, Paris. H. 54cm. *C.* 460 BC. Side A (After *FR* Taf. 108).

Plate 4. Dying warrior from the left corner of the east pediment of the Aphaia Temple in Aigina. *C.* 480 BC. The Glyptothek, Munich. (After Ohly, D. *Die Aegineten, Band I: Die Ostgiebelgruppe*, Munich 1976, Taf. 64).

Plate 5a-b. Red figure kylix by the Brygos Painter. Berlin F2293. D. 32cm. *C.* 490-480 Bc. (After *CVA* Berlin 2 Taf. 67-68).

Plate 6. Red figure volute krater by Euphronios. Arezzo, Museo Archeologico Nazionale inv. no. 1465. H. (including handles) 59.5cm. *C.* 510-500 BC. (After *FR* Taf. 61).

Plate 7. Black figure volute krater decorated by Kleitias, the so-called Francois vase. Firenze, Museo Archeologico inv. no. 4209. H. 66cm. *C.* 570 BC. (After *FR* Taf. 13).

Plate 8. Detail from the north frieze of the Siphnian Treasury at Delphi. Delphi Museum. *C.* 525 BC. (Photo: Niels Hannestad).

Plate 9. Detail from the north frieze of the Siph-

nian Treasury at Delphi. Delphi Museum. *C.* 525 BC. (Photo: Niels Hannestad).

Plate 10. Detail from the north frieze of the Siphnian Treasury at Delphi. Delphi Museum. *C.* 525 BC. (After G. de Miré, *Delphi*, 1943, pl. 84).

Plate II. Detail from the north frieze of the Siphnian Treasury at Delphi. Delphi Museum. *C.* 525 BC. (Photo: Niels Hannestad).

Plate 12. Red figure kylix by the Sosias Painter. Berlin F2278. *C.* 500 BC. Tondo. (After *CVA* Berlin 2 Taf. 49).

Plate 13. Black figure volute krater by Kleitias, the so-called François vase. Firenze, Museo Archeologico inv. no. 4209. H. 66cm. *C.* 570 BC. (After *FR* Taf. 1-2).

Plate 14. Black figure amphora by Exekias. Antikensammlung, Munich inv. no. 1470. H. (with restored foot) 42 cm. *C.* 540 BC. Side A (After *CVA* München 7 Taf. 351).

Plate 15. See plate 14. Side B (After *CVA* München 7 Taf. 352).

Plate 16. Red figure chalice krater by Euphronios. New York, Metropolitan Museum inv.no. 1972.11.0. H. 45.8cm. *C.* 510-500 BC. (After *Euphronios der Maler* 1991 p. 94).

Plate 17. Laconic black figure drinking cup by the Hunt Painter. Berlin 3404. Tondo. (After Stibbe Taf. 74).

Plate 18. Kouros statue from Anavyssos in Attica. Athens, National Museum inv.no. 3851. Parian marble. H. 1.94 m. *C.* 525 BC. (Photo: Niels Hannestad).

Plate 19. Grave stele of Aristion. Athens, National Museum inv. no. 29. From Velanideza in Attica. Pentelic marble. H. of shaft as preserved 2.40m. *C.* 510 BC. (Photo: Niels Hannestad).

Plate 20. Grave relief from Athens. Athens, National Museum inv. no. 737. Pentelic marble. H. 2.64m. Second half of fourth century BC. (Photo: Niels Hannestad).

Plate 21. Denarius *c.* 115 bc. Rev: rider holding severed head. (Author).

Plate 22a-b. Denarius. Obv: Augustus. Rev. crocodile. (Bibl.nat., Paris).

Plate 23. Denarius of Augustus. Rev.: Parthian Arch. (Bibl.nat., Paris).

Plate 24 Augustus from Prima Porta. (Vatican).

Plate 25a-b. Sesterce. Obv. Vespasian. Rev. Iudaea Capta. (Nat. Mus., Copenhagen).

Plate 26. Aureus of Domitian. Rev: captive Germania. (British Museum).

Plate 27. Cancelleria Reliefs, detail of frieze A: profectio of Domitian. (Vatican).

Plate 28. Sesterce of Trajan. Rev: Trajan amidst subdued areas. (British Museum).

Plate 29. Great Trajanic Frieze, Arch of Constantine: Emperor in battle. (DAI, Rome).

Plate 30 Trajan's column, scene XXIV: Battle of Tapae. (Author).

Plate 31. Trajan's Column, scene LIV: adlocutio. (DAI, Rome).

Plate 32. Panel relief of Marcus Aurelius, Palazzo dei Conservatori: clementia scene. (Fot. Un. 1956).

Plate 33. Column of Marcus Aurelius, scene XVI: rain miracle. (Anderson).

Plate 34. Column of Marcus Aurelius, scene XX: devastation of a village. (Anderson).

Plate 35. Philip I the Arab. (Vatican).

Plate 36. Tetrarchs, San Marco, Venice. (Alinari).

Plate 37a-b. Gold medallion. Obv: Constantine. Rev: Victorious Constantine. (British Museum).

Plate 38. The Hjortspring boat. Reconstruction. (Photo: Klavs Randsborg).

Plate 39. The Hjortspring boat, detail. Reconstruction. (Photo: Klavs Randsborg).

List of Tables

Table 1. Modern Greek grain yields (kg/ha) 49

Table 2. The property classes in 431 BC: numbers and landownership 52

Table 3. The property classes in 431 BC, assuming a reduced zeugite census 53

Table 4. Chronological/cultural table 155

Table 5. Weapons of the Hjortspring sacrifice, distribution according to suggested naval and military function and rank 157

Abbreviations

AA Archäologischer Anzeiger

AAWW Anzeiger der Österreichischen Akademie der Wissenschaften in Wien ABV Beazley, J.D. 1956. Attic Black-Figure Vase-Painters. Oxford.

AE Archaiologike ephemeris

AJA American Journal of Archaeology
AJAH American Journal of Ancient History
AJPh American Journal of Philology

Albizzati, C. 1925-39. Vasi dipinti del Vaticano, fasc. VII. Rome.

ANRW Aufstieg und Niedergang der römischen Welt

AntCl L'antiquité classique

APF Davies, Athenian Propertied Families

ASAA Annuario della scuola archeologica di Atene e delle missioni italiane in Oriente

BCH Bulletin de correspondance hellénique

BGU Ägyptische (Griechische) Urkunden aus den Kaiserlichen/Staatlichen Museen zu

Berlin, 1895-.

BJ Bonner Jahrbücher

BMC Mattingly, H. et al. 1923ff. Coins of the Roman Empire in the British Museum

London: British Museum.

BSA Annual of the British School at Athens

C&M Classica et Mediaevalia

CAH Cambridge Ancient History, 1st edn. 1923-29, 2nd edn. 1961-.

CIL Corpus Inscriptionum Latinarum. Berlin, 1863-.

CJ Classical Journal
ClAnt Classical Antiquity
CPh Classical Philology
CQ Classical Quarterly

CRAI Comptes rendus des séances de l'Académie des inscriptions et belles-lettres

CVA Corpus Vasorum Antiquorum. 1925-.

CW The Classical World

Delt Archaiologikon deltion

DHA Dialogues d'histoire ancienne

EA Epigraphica anatolica

EAA Enciclopedia dell'arte antica classica ed orientale, Rome 1958-

Euphronios Der Maler, eine Ausstellung, 1991, Milan

F. Jacoby, ed., Die Fragmente der griechischen Historiker. Berlin and

Leiden 1923-.

FHG C. Müller, Fragmenta Historicorum Graecorum, 5 vols. Paris, 1841-70.

FIRA S. Riccobono et al., Fontes Iuris Romani Anteiustiniani,

2nd edn. Florence, 1940-43.

FR Furtwängler, A. & Reichhold, K. 1904. Griechische Vasenmalerei. Munich.

GRBS Greek, Roman and Byzantine Studies

GSW W.K. Pritchett, The Greek State at War. 5 vols. Berkeley and

Los Angeles 1974-91.

HCT A.W. Gomme, A. Andrewes and K.J. Dover, A Historical Commentary

on Thucydides. 5 vols. Oxford 1945-81.

Hornblower, Comm. S. Hornblower, A Commentary on Thucydides, I-II. Oxford 1991-96.

IBM The Collection of Ancient Greek Inscriptions in the British

Museum. London,1874-1916.

IG Inscriptiones Graecae. Berlin, 1873-.

ILS Inscriptiones Latinae Selectae

JDAI Jahrbuch des Deutschen archäologischen Instituts

JEA Journal of Egyptian Archaeology
JHS Journal of Hellenic Studies
JRA Journal of Roman Archaeology
JRS Journal of Roman Studies
LCM Liverpool Classical Monthly

LIMC Lexicon Iconographicum Mythologiae Classicae. 1981-.

Lindos Chr. Blinkenberg, ed., Lindos. Fouilles de l'acropole 1902-1914,

II, 1-2: Inscriptions. Berlin and Copenhagen, 1941.

ML R. Meiggs and D. Lewis, A Selection of Greek Historical Inscriptions to

the End of the Fifth Century BC, rev. edn. Oxford, 1988.

Neue Pauly Der neue Pauly, Enzyklopädie der Antike 1996-, Stuttgart NuovoSER G. Pugliese Carratelli, Nuovo supplemento epigrafico rodio,

ASAA n.s. 17-18 (1955-56), 157-81.

OAth Opuscula Atheniensia

OGIS W. Dittenberger, Orientis graeci inscriptiones selectae, 2 vols. Leipzig, 1903.

PBSR Papers of the British School at Rome PPS Proceedings of the Prehistoric Society

RA Revue Archéologique

RE A. Pauly, G. Wissowa, and W. Kroll, eds., Real-Encyclopädie der

klassischen Altertumswissenschaft. Stuttgart, 1894-.

REA Revue des études anciennes REG Revue des études grecques

RFIC Rivista di filologia e di istruzione classica

RIC Mattingly, H. et al. 1923ff. The Roman Imperial Coinage. London: Spink.

RMD M.M. Roxan, Roman Military Diplomas, 1954-.

RRC Crawford, M. 1983 Roman Republican Coinage. Cambridge: Cambridge

University Press.

SEG Supplementum epigraphicum Graecum. Leiden, 1923-. SER G. Pugliese Carratelli, Supplemento epigrafico rodio',

ASAA n.s. 14-16 (1952-54), 247-316.

SGDI H. Collitz and F. Bechtel, Sammlung der griechischen

Dialekt-Inschriften, 5 vols. Göttingen, 1884-1915.

SIG³ W. Dittenberger, Sylloge Inscriptionum Graecarum, 3rd edn.,

4 vols. Leipzig, 1915-24.

SO Symbolae Osloenses

TAM Tituli Asiae Minoris. Vienna, 1901-.

TC M. Segre and G. Pugliese Carratelli, 'Tituli Camirenses',

ASAA n.s. 11-13 (1949-51), 141-318.

TCSuppl G. Pugliese Carratelli, 'Tituli Camirenses Supplementum',

ASAA n.s. 14-16 (1952-54), 211-46.

ZPE Zeitschrift für Papyrologie und Epigraphik

ZRG Zeitschrift der Savigny-Stiftung für Rechtsgeschichte, Romanische Abteilung

Introduction

'War is too serious a matter to be left to the military', Lloyd George told Aristide Briant—summarizing two key elements in the equivocal attitude to war which has characterized European thinking over the last few centuries. The perception of war as 'serious', and the idea that there is a separate social entity known as 'the military' which is somehow set aside from the rest of society and different from the rest of us, and whose business is war.

To the ancient world, too, war was a serious matter. In fact, the perception of war as serious was one of the traits distinguishing (to their own eyes, at least) civilized Greeks and Romans from the uneducated barbarians. The eagerness to go to war over trifling matters was part of the 'barbarian' stereotype, e.g., the Celts of Polybius or the Centaurs of Greek mythology.

But while the ancients had commanders and armies, even professional commanders and professional armies, the concept of 'the military' is a modern one. The Athenian stratege was not a part of 'the military'; nor were the trierarchs. The consuls of republican Rome and the legates in the provinces did not belong to a separate 'military'. In the utopian world of Plato's Republic, the 'guardians' form a separate caste within society; in reallife Athens or Rome, civilian and military functions were filled by the same persons. The farmer or artisan went to war as a soldier, the political leaders as military leaders. A male member of the Roman elite could in turn serve as a civilian magistrate, as pontifex, and as military commander. The division of society into watertight civilian, military and religious compartments was developed by St Benedict of Nursia but not fully evolved until the 18th century. As history has shown, it involved the risk that civilian society could lose control over the military establishment—or end up being dominated by it. It also, however, made it easier for the inhabitants of one

compartment to shirk their own historical responsibility and pass the blame to the others. Field commanders have reviled the politicians for their lack of nerve and failure to 'hold the home front', e.g., the British command during the Boer War, or the German Army after the defeat of 1918; and the politicians have, on other occasions, been equally quick to blame 'the military'.

The idea of a separate 'military' sphere has also imposed itself on historical scholarship, and the academic community has shown a similar readiness to pass the responsibility for the study of war to 'military historians', who are seen not as colleagues practising a specific subdiscipline, with its own methods and sources (like ancient history, or agrarian history, or economic history) but representing a special culture and ethos, a field at once unattainable, unsuitable and uninteresting for those engaged in 'proper' historical research. The post-1968 antagonism between 'humanists' and the military establishment, and the rejection by modern historical scholarship of traditional political history as 'kings and battles' have only served to reinforce this division.

When the idea for this conference was first formulated in the autumn of 1996, it was based on a realisation that the study of war, as Lloyd George might have said, was a serious subject; far too serious to be ignored by students of ancient history, philology, archaeology, philosophy, or religion. It was felt that a conference bringing together Classical scholars, prehistorians, historians of later periods and scholars of military history and strategy might open new discussions on a subject which, however serious and unplesant, has been of great importance through European history. At the same time, it was hoped that some traditional academic misconceptions and stereotypes about military history and historians could be eradicated.

That the organizing committee was not entirely at ease with the subejct, nor themselves immune to such stereotypes, can be seen in the paper which was drawn up in the autumn of 1996 to outline the aims of the conference. 'War involves not only military history', it states, 'and decline and fall of cultures but apparently also a potential of cultural creativity. This experience seems to offer new possibilities for a positive approach to the study of war. This need not be the monopoly of those who glorify war or support violence, but may be of importance to all scholars who want to dig deeper into the history of culture'. The Peloponnesian war, Alexander's expedition against Persia and the Roman wars of conquest are cited as examples of war which have had profound cultural and social consequences.

Comparing this draft with the conference as it actually took place, two points are striking. First, none of the participants made any attempt to 'glorify war or support violence'. Second, despite its title, the conference did not primarily deal with *war*, that is to say wars as individual events, but with *warfare*, the process or method of making war. In the long-term view, preparation and preparedness for war have probably been greater forces in the transformation of society than the wars themselves.

Two textbook examples of the interrelation between the development of military tactics and society are taken from the political history of Athens. First, developments in land warfare and introduction of the heavily armed hoplite soldiers led to a dependence on middle-class soldiers which eventually led to a transfer of power from the aristocrats to the propertied middle class, that is, to democracy; later, with the increased reliance on oared warships in the grand stregy of the Athenian empire, it was the turn of the less privileged *thetes*, among which the rowers were recruited, to secure significant political concessions.

Like other Great Hypotheses of classical scholarship, the 'hoplite revolution' has to some extent been a self-confirming model, as new evidence was interpreted against the background of the established theory. The idea of a close link between hoplite warfare and the rise of the *polis*, and its logical converse, the absence of hoplite tactics and social values in the *ethne* of central and northern Greece, seemed to find support in the literary

evidence, e.g., Thucydides; but then most of the writers on fifth-century history are outspokenly Athenocentric and quick to represent their peripheral compatriots as 'backward'. In current scholarship, the idea of the introduction of hoplite tactics as a watershed in Greek history no longer finds general acceptance, and the three papers by Catherine Morgan, Hans van Wees and Vincent Gabrielsen which open this volume are each in their way concerned with re-evaluating the connection between personal wealth, political status and military service.

Although the introduction of the hoplite phalanx was decisive for the development of Greek warfare, Dr Morgan suggests that what we have is rather a 'hoplite evolution', disparate in time and space. There is much evidence to suggest that in marginal regions of, e.g., the Peloponnese, military innovation was diffused through the institution of mercenary service. Further, the archaeological distribution of graves with weapon deposits will not support a clear-cut distinction between *ethne* (primarily in Thessaly and the North) and *poleis* (in Central Greece and the islands), and the pictorial evidence from pottery, often cited as evidence of middle-class solidarity and changed attitudes to war, is also in need of critical re-evaluation.

In the traditional view of the hoplite army, the soldier's place in the line of battle was closely linked to his place in the tax census, and the development of Athenian democracy in turn linked to society's increasing military dependence on the hoplite middle-class. This idea of the hoplite phalanx as a socially homogenous unit is questioned by Hans van Wees, drawing on quantitative data to show that property classes in fact did not coincide with the categories of military service: apart from the *zeugitai*, a large number of poorer citizens from the *thetes* also served as hoplites. This leads van Wees to reject not only the traditional picture of the middle-class hoplite army, but also the connection between increased military recruitment and the extension of the franchise.

Military service, taxation and social divisions also form the starting-points of Vincent Gabrielsen's study of naval warfare, comparing classical Athens with Hellenistic Rhodes. In the early fifth century, the Athenians broke with an older tradition of privately owned warships, replacing it with a navy financed from public funds, captained by trierarchs who in theory are volun-

teers, in practice often compelled to accept this onerous *leitourgia*. Rhodes, on the other hand, remained loyal to the privateering tradition, basing its naval power on individual citizens financing and operating their own ships. The difference between the two policies is reflected in naval tactics and in the ships themselves: classical Athens preferring the formal naval battle and the specialised warship, the trireme, whereas for the Rhodians, naval action means raids, a view reflected in a preference for the light and multifunctional *triemolia*.

The Seleucid kingdom, which is at the focus of Michel Austin's contribution, was neither democratic nor aristocratic; it was essentially a military monarchy, where the rôle of the king was at once defined and legitimised by his leadership in war. The king's person was the locus of state authority, a fact reflected both in the importance and influence of doctors at the royal court, and conversely, in the lack of any Seleucid ideological policy. The diffusion of Greek culture, or indeed any uniform culture, was not high on the royal agenda. There was a circle of court intellectuals: poets, *literati*, geographers, but compared with their contemporaries in Pergamon or Alexandria, Seleucid patronage of the arts and sciences—even of military technology—was unimpressive. In the environment of the Near East, mobility and leadership were more important than poliorketics and naval power.

In any Greek state, war was a recurrent fact of life, just as warfare was a recurrent motif in the visual arts. Indeed, many artists must at least once in their lives have experienced war at first hand. Lise Hannestad explores the evidence of Greek art for contemporary warfare. Visual art has often been invoked in the study of e.g., technology and fighting techniques—but at least as important are its sociological and ideological implications. As in Greek literature and philosophy, visual art, too, is focused on the fate of the individual: on 'the face of battle' and the ultimate individual battle-experience, death. The viewpoint represented is that of the individual soldier. War as seen from the perspective of the commander—representations of massed, impersonal formations, as on the famous Chigi vase—are exceptional.

This focus on the individual enables Lise Hannestad to follow the evolution of the male rôle-model as reflected in grave reliefs. Surprisingly, as early as in late fifth century Athens, the civilian citizen, not the warrior, is the dominant type on Athenian funerary monuments. Later, in the Hellenistic period, military representations on grave reliefs are even rarer, reflecting an evolving division of labour between the peaceful citizen of the *polis* and the mercenary soldier.

Education, being concerned with the formation of the individual, can also provide information about prevalent rôle-models in ancient society. As a case study, Tønnes Bekker-Nielsen examines the place of geometry in the academic curriculum and in practical warfare. The contrast between the philosophical Greeks and the practical Romans is a cliché which has often been overelaborated, and in this case, at least, there is little difference between the Greek, Hellenistic or Roman periods. Geometry was taught as a core subject in the schools, and considered a prerequisite for a number of other subjects. There is no direct relation, however, between academic geometry and its practical applications on the field of battle or in military strategy. The most obvious practical application of geometry in the Roman army is for castrametation, but even here, the military application of geometry was primarily inspired by civilian town-planning.

In the Hellenistic world, citizen armies on the model of classical Athens or Sparta were by and by displaced by mercenary forces: the defence of the state was now in the hands of paid foreigners. At Rome, developments followed the same overall trend, but with significant differences. In Lawrence Keppie's paper, we see how the Roman army evolved from a conscripted citizen militia composed of landowners to a professional volunteer army in the course of the second century, and how this was followed by a change in recruitment patterns from the time of Augustus onwards. The proportion of Italians dwindled, and provincials moved in to take their places, attracted by the opportunities of social advancement offered by army service. By the second century AD, Rome and Italy were defended by armies of non-Italians, but loyal to the Roman Empire from which they were recruited.

This loyalty was ensured in a variety of ways, often grouped under the generic label of 'Romanisation'. Veterans were a powerful factor in creation of loyalties and links between Rome and the provinces. In return for

their service to the state, veterans received not only a cash donation on discharge, but immunity from various local taxes and liturgies. This immunity was ostensibly a gift from the Emperor, but in practice at the expense of other, less fortunate fellow-citizens. As Stefan Link's study of veterans and the *munus publicum* demonstrates, the early emperors were clearly aware of this and took pains to keep the number and the extent of exemptions at a reasonable level. Veterans, on the other hand, would like *all* veterans to be exempt from *all* liturgies, an idea that seems to gain some acceptance in the later second century. Even then, however, Imperial rescripts set clear limits to the number and duration of exemptions, and expressly stipulate that veterans' families are not included.

To Edward Gibbon, the early Empire, especially the second century, was a 'golden age'. As Niels Hannestad demonstrates in his detailed examination of Roman state art, however, the emperors did not always share this complacent view of their times. A comparison of Trajan's column with that of Marcus Aurelius shows an increasing preoccupation with the grim horrors of war, and with the inhuman brutality of enemy as well as Roman forces. There are few attempts to disguise the campaign of Marcus as a 'gentleman's war'. Whatever the civilians living far from the frontiers of the Empire may have thought, the emperors clearly appreciated the growing pressure on the borders and the precariousness of the Roman military superiority over the barbarians. By the third century, their civilian subjects, too, had realized this; and the ideal portrait of an emperor had changed from the bearded philosopher of earlier times to a coarse and aggressive physiognomy suggesting brutal efficiency.

Military and social developments in the Mediterranean world dominate our view of the period c. 600 BC – AD 500, but this is largely due to the nature of our sources. Decisive military innovations, more difficult to follow but no less important for the history of Europe, took place on the northern fringes of the Greek and Roman world. In Klavs Randsborg's paper, taking the boatfind at Hjortspring in southern Denmark as the starting-point, the development of Northern European infantry fighting is traced—a parallel, in social as well as in tactical terms, to the introduction of hoplite tactics in the classical world. Randsborg argues that in the North as in

Greece, the transition to fighting with lance and shield in close formation is closely correlated with a decline in aristocratic norms and the rise of new, more complex forms of social organization.

In the final chapter of this volume, K.G.H. Hillingsø reviews the development of European warfare. As he points out, the evolution of land tactics is not a unidirectional process, and change of doctrine is not a logical development towards still higher combat efficiency. Lessons learned by one generation of commanders are sometimes forgotten, to be rediscovered much later. A striking example is the use of heavy cavalry to support infantry charges and harass the enemy infantry, applied on a large scale by the Macedonians. This was not developed by the Romans; on the contrary, Roman tacticians of the late Republic and early Empire used cavalry to a far lesser extent than their Hellenistic predecessors. Then, under the later Empire, the striking power and manoeuvrability of heavy cavalry were once more discovered and exploited by the Roman army. In fact, the result which emerges from this survey of European military development over three millennia is that the soldier of today faces problems and challenges which are surprisingly similar to those facing his Greek or Roman predecessor. This comes out particularly clearly at the personal level, where we are dealing with concepts such as leadership, uncertainty or psychological stress.

This has important implications for the historical study of warfare as well. At the level of the supreme command, it is difficult for a modern student to penetrate the thoughts and motives of long dead commanders. Having extensive sources at our disposal does not necessarily make the task easier. An endless number of causal factors, as well as the elusive but important factor which historians term 'mentality', are interwoven in the decisions of Alexander, Mithridates and Titus-of Frundsberg, Wallenstein or Lloyd George. At the level of the field soldier, where sources of any sort are scarcer, it may nonetheless be easier to reconstruct, in broad outlines, the situation of the individual at a given time and place in history. No amount of training or education will, at the end of the day, transcend the limitations of the human condition.

The nexus between warfare and civilian society is the individual fighter, who is at once a citizen of the *polis* (or

of the *ethne*, or of the Roman Empire) and a soldier. If the soldier was fighting for anything at all apart from his own immediate survival, it was for enrichment, for a piece of land on which to settle, or to save himself and his relatives from destitution and slavery. Even a mercenary cannot function in empty space, and the notion of mercenary service itself presupposes the notion of money, and thus of a *polis* type society.

This volume does not claim to provide one coherent picture of the relation between warfare, culture and soci-

ety in the ancient world. It is not the last word on this subject, or on any other. Instead, we hope that it may provide the first few words for new discussions and indicate some possible methodological directions for future studies. If, in addition, it has helped, in its small way, to break down some stereotypes about 'military' and 'civilians', it will have served its purpose.

September 1999 Tønnes Bekker-Nielsen

Symbolic and Pragmatic Aspects of Warfare in the Greek World of the 8th to 6th Centuries BC

Catherine Morgan

For over sixty years now, discussion of hoplites has taken pride of place in the study of Early Iron Age and Archaic Greek warfare. The emergence and military significance of the phalanx tactic have attracted particular interest, but attention has also focused on the social role of hoplites in relation to the rise of the polis, and to a lesser extent, in forging overseas links via mercenary service (see, e.g., Andrewes 1969 ch.3; Cartledge 1977; Forrest 1966, 88-97, 104-22; Holladay 1982; Salmon 1977; Snodgrass 1965; Snodgrass 1980, 99-107; Snodgrass 1993; Bowden 1993). That the political significance of military service has consistently been considered alongside strategy and tactics is one of the most positive aspects of this approach, since early soldiers cannot be isolated from the 'civilian' societies of which they were members. Yet the general direction of most approaches to hoplites, and more specifically, assessment of their role in the political context of the polis, tends to produce a partial and biased view. An increasing weight of archaeological evidence from regions such as Thessaly (which lay outside the confines of the polis world as conceived in modern scholarship and only rarely enter into discussion of early warfare), combined with growing recognition of the need to consider Greece within its wider Mediterranean context, presents a highly complex picture. Furthermore, as Victor Davis Hanson has stressed (1991a, 7-11), the experience and attitudes of fighting men, amply attested through Archaic poetry and their own treatment of equipment and booty, must play a more influential role in assessing the nature and social impact of early warfare.

At the heart of this problem lies the model of hoplite reform, developed initially through the 1920s by Martin Nilsson (Nilsson 1929) and archaeologically elaborated by Hilda Lorimer (Lorimer 1947). Both saw the adoption of equipment and tactics as a sharp change, and one inextricably linked to socio-political developments, especially the rise of tyranny. Various aspects of this equation have long been debated, and in recent years the entire model has been subject to extensive methodological criticism, to the extent of being described by Frank Frost (1984, 293, citing the work of Anthony Snodgrass and Robert Drews among others) as 'among the great nonevents of history'. Objections have been raised to the treatment of archaeological data, and especially to the conflation of material evidence from different regions, and to treatment of ceramic iconography which disregards function and syntax (Morgan 1999a, ch. II.4; van Wees 1994, 138-46). Equally, critiques have focused on the mismatch between an idealised 'hoplite class' and the variety of social and economic statuses represented within the phalanx (Foxhall 1997; van Wees, this volume), and also on evidence for massed combat in Homer and the Archaic poets, with very varied assessments of its nature and role (Latacz 1977; Hanson 1991b; Pritchett 1985, 7-44; Snodgrass 1993, 47-56; van Wees 1994. Raaflaub 1997 further assesses the implications of such critiques).

It is not my intention here to revisit such well-trodden ground. Instead, I merely note that even though important insights have emerged from more broadly based

assessments of the role of military force in early Greek poleis, there is surely more to be gained from setting them within the context of the wider Mediterranean world. Indeed, the intensity and complexity of interaction between individuals and communities ostensibly very different in character is one of the most striking features of our period, before any oppositionally defined Hellenic identity acquired political salience (Purcell 1990; Hall 1997, 40-51). Depending on the purpose of a particular conflict, it would surely be wrong to underrate the significance of factors such as demographic mobility and shared social codes for the organisation and role of warfare. War of conquest, for example, is attested in a variety of forms in the early Greek world. Territorial acquisition is exemplified by the Spartan conquest of Messenia (Cartledge 1979, 113-19; Morgan 1990, 99-103), and the obliteration (or near so) of a single community following the sack of Asine (Pausanias 2.36.4-5; 3.7.4; 4.14.3; Frödin & Persson 1938, 15-20, 149-51, 437).2 By contrast, war can serve both as a mechanism for structuring external and internal relations and as an economic opportunity with significant implications for manpower mobility, the manufacture and circulation of equipment, and the circulation of men and material wealth as booty (discussed generally by Fried 1968; Carman 1994; Keegan 1993, ch.2; in the case of the Maya by Freidel 1986; in Greece by Rihll 1993). In this last sense, war is a continuation of commodity trade and gift exchange by other means.

It is these last issues, and specifically the contribution of the material record to the understanding of early warfare, which lie at the heart of this chapter. The following discussion will review the distribution and treatment of military equipment across Greece in an attempt to trace common traits as well as distinctive local patterns of behaviour. Arms and armour will be seen to have been regarded more as commodities, valued for their metal, than as symbols of the role of military force in defining personal status and group identity. Previous associations between patterns of deposition in graves and sanctuaries and emergent polis identity thus require a more nuanced approach. Stressing the contrast between material behaviour and social values, the place of warfare in defining aristocratic status is considered in the ostensibly different cases of Athens and Thessaly, revealing striking similarities transcending political boundaries. Finally, human mobility is considered as an integral part of the socio-economic organisation of warfare.

However, before moving to consider archaeological interpretations, it is worth pausing to note important historiographical questions arising from traditional approaches to the hoplite reform. As formulated by Nilsson and interpreted at least as late as the 1960s by scholars such as Forrest and Andrewes, the reform model may seem to owe more to contemporary experience of European military dictatorships and their mobilisation of the middle classes than to Aristotle (Pol. 1297b16-28). Yet while the direct intellectual impact of such experiences may wane with the passage of time, certain perceptions of the role of force in a legitimate political society appear more deeply rooted. Plato's notion (Leg. 625e-626e) of the constancy and centrality of war for Greek states, the relationship between war and law, and the meaninglessness of peace as a concept, may seem to foreshadow Hobbes' discussion of Warre (Hobbes 1651, ch. 17 [noting also Tuck 1991, xvi-xvii]). At least in the Archaic and Classical Greek world, peace was not a well defined concept but at best a utopian ideal ('more propaganda than religion' according to Burkert 1985, 186; Shipley 1993, esp. 19). Even in Athens, which has provided our fullest and earliest evidence, the personification of Peace appears first in the works of Euripides and Aristophanes in the last quarter of the fifth century, and her cult is attested only in the fourth (Stafford 1998, ch. 6; Spiegel 1990, 99-125; Shapiro 1993, 45-50). It is, however, a major step beyond this evidence to accord order maintenance the same central place as it is assumed to hold within modern state systems, and to suggest that early Greek states can be seen in Weberian terms as those agencies within society which possess a monopoly of legitimate violence, thus removing force from the hands of private individuals or sectarian interests (Weber 1978, 901-10). There are certainly cases in the modern record where this monopoly, if it existed, was not exercised, although this is usually interpreted as a matter of expediency, or a failure of will or means, rather than as a challenge to the theoretical ideal or perception of entitlement (Gellner 1983, 3-4). In the case of early Greece, however, a number of scholars (notably Frost 1984, discussed below), have cast doubt on whether specialisation

of order maintenance really was a major function of states, a view that accords well with a recent trend (exemplified by Foxhall 1997, 118-22) towards diminishing emphasis on institutions *per se* in favour of concentration on the diverse rôles of the elite who ran them. This is not to deny that warfare was central to Greek society, but rather to suggest that its complex and varied nature entwined it inextricably with many other areas of thought and activity, making it important to understand the relationship between the value structures inherent in

each. To deal fully with this question requires detailed consideration, case by case, of issues such as the balance of force and other 'control' devices such as law or divination (Morgan 1990, 151-58; Hölkeskamp 1992; Osborne 1997; Thomas 1996). Also related is the role of sanctuaries in articulating these connections, for example as contexts for the display of written law (Effenterre 1994) or booty, and possibly also for the hiring of mercenaries. These are important issues for research, although beyond the immediate scope of this chapter.

The treatment of equipment in *poleis* and *ethne*

In view of the perceived connection between warfare and polis formation, it is of obvious interest to compare archaeological evidence from regions of Greece characterised in modern scholarship as poleis and ethne. Before doing so, however, it is worth pausing to examine certain preconceptions about differences in the role and conduct of warfare in such regions. Drawing largely upon Thucydides' description (1.5-6) of endemic raiding in fifth century Aetolia, Akarnania and Lokris as typical of the politically and socially primitive conditions of previous centuries, a variety of historians concerned with constitutional development, from Victor Ehrenberg (1969, 22-24) to Jacob Larsen (1968, 6-7) and Giovanna Daviero Rocchi (1993, 107-12), have stressed piracy and individuals' carriage of arms as symptomatic of a lack of secure authority outside the confines of the polis, and thence suggested that ethne in general lacked the political structures that would enable warfare to be brought under state control.3 Clearly, there are fundamental historiographical problems in assessing the extent to which Thucydides' generalities were based on detailed knowledge of the regions he describes and/or were conditioned by their rhetorical context (Hansen 1997a; Hornblower 1991, 23-25 and pers.comm.). Criticism should indeed be levelled against such far-reaching interpretation of Thucydides' very brief remarks, although it may be noted that occasional comments by other (generally later) authors could also be seen in the same light. In the case of Achaia, for example, Pausanias (7.7.1) remarks on the fact that (with the exception of Pellene) the disasters of war and pestilence touched the region less than any

other part of Greece, and that (7.6.3-9) Achaia was only very selectively involved in other Greek conflicts.

Yet connecting these references and selectively citing post-Geometric archaeological evidence for supposedly different patterns of treatment of arms and armour in ethne carries the real danger of creating a false picture. Every aspect of this equation has a wider context and alternative explanations. To take but one example, the early seventh century panoply burial at Ag. Konstantinos in Arkadian Azania, near modern Kalavrita (Delt 17, 1961-62, 131-32, pl.156) has been cited (e.g. by Snodgrass 1980, 100) as evidence for the continuity in ethne of burial with arms, a practice which in future poleis had ended in Late Geometric (an argument discussed further below). But this is a unique case in an area where most other Archaic and early Classical graves contain only pottery, and given continuing research in this area, it is increasingly hard to dismiss this pattern as bias of discovery (Morgan 1999b, 416-24). Equally, in Achaia immediately to the north, where Archaic burials are somewhat more plentiful (albeit often disturbed; Morgan and Hall 1996, 169-93), only one grave from a group (dating с. 700 вс or slightly later) near Kato Mavriki (possibly a deme of Aigion) contains weapons, a late Naue III sword and an iron knife (Kourou 1980). Two isolated cases, barely post-Geometric, hardly suggest a continuing practice. Offensive weapons do continue to appear in graves in certain specific areas, albeit often for particular reasons (see below). But it must be emphasised that significant collections of weapons, let alone panoply burials, are exceptional wherever and whenever they occur, be it eighth century Argos (where the evidence for three panoply burials from the Theodoropoulou and Stavropoulou plots and Tomb 45 of the Odeion area, dating from LGI onwards, is summarised by Foley 1988, 86-88), seventh century Achaia or Eretria (the Heroon at the West Gate; Bérard 1970), early fifth century Corinth (where the earliest evidence for defensive equipment, a bronze helmet and fragments perhaps of a cuirass or boots, appears in Grave 262 of the North Cemetery; Blegen et al. 1964, 215-16; Dickey 1992, 91-92), or fourth century Athens (Kolonnos Hippios: Alexandri 1973). To find a break in this pattern one has to move far north into Macedonia (e.g. Sindos from the sixth century onwards: Snodgrass 1999, 138-39; or the contemporary cemetery at Ag. Paraskevi near Thessaloniki: Sismanidis 1987, e.g., pl. 164:1), a region closer to Thrace in this respect (Archibald 1998, ch. 8). Further south, not even a remote area like Azania, regarded by ancient commentators as a particularly wild, primitive and ill-known part of Arkadia (Pikoulas 1981-82; Heine Nielsen & Roy 1998), is an exception.

As noted, offensive weapons are more common than defensive in Archaic graves, and do indeed tend to occur in areas conventionally described as ethne. Nonetheless, even by contrast with the already patchy eighth century picture (further discussed below), their distribution is restricted, and certain militarily active regions (such as Thessaly)4 have produced relatively little evidence. As comparison between Thessaly and Epirus highlights, the deposition of weapons in graves tends to occur in regions which show high levels of metal consumption overall, and while it may reasonably be argued that these weapons reflect a continuation of earlier gender symbolism, the decision to include them in graves is surely symptomatic of an attitude to a resource rather than to warfare per se. In Epirus, preliminary excavation reports of the Archaic and Classical cemetery on the Ioaninna University campus indicate that, regardless of grave type or date, male burials (including some child graves) usually contained at least one spearhead and a knife (often a strigil too), while women had jewellery and often phialai.5 Whilst it would be unwise to generalise from preliminary accounts of a small sample of graves, the fact that some burials contained few or no goods implies some hierarchy of resource disposition, although it is not

yet possible to identify how this operated. The location of the cemetery in a small gorge meant that burials were densely packed together and often cut into each other, and under these circumstances, later, fifth and fourth century, evidence tends to be best preserved, with most Archaic finds displaced into fill between graves. There are at least two instances where Illyrian helmets were used as ossuaries; one, however, is a child burial (tomb 52), and since children were usually buried in vessels, it is unclear whether the helmet was more than a convenient receptacle (Delt 32, 1977, 151). Archaic finds, which include many iron spearheads, knives, strigils and tools, along with much bronze sheet and such luxuries as a late seventh century griffin protome (Delt 31, 1976, 209), suggest no fundamental change from Classical practice. Immediately north of Ioannina, the Vitsa cemeteries present a broadly similar (if less rich) picture (Vokotopoulou 1986, 291-305). In view of the Early Iron Age weapons finds from this cemetery, discussed by Randsborg in this volume, the extent to which Archaic mortuary offerings represent a basic continuity of values is a matter of some interest. It should, however, be noted that Archaic evidence from both sites dates mostly to the sixth century, and the seventh is still poorly represented throughout Epirus. Furthermore, since exploration in the region as a whole is still relatively limited, it is hard to assess the significance of the fact that at present, rich metal finds in graves seem to be largely confined to these two extensive cemeteries in one small part of the region. A late sixth or fifth century grave at Prakio, Koutseli contained one Illyrian helmet (Delt 23, 1968, 292), but isolated graves elsewhere have not produced weapons. In other regions, such as Thessaly, Phokis, or Lokris, where metal offerings per se decline, there is also a marked posteighth century decline in weapons burials, and the few exceptions which prove the rule are significant phenomena in their own right (as will be discussed).

An obvious and simple explanation for the rarity of military equipment in graves is its cost and inheritance value. Our earliest piece of direct evidence for equipment costs is a late sixth century Athenian decree (*ML* 14), according to which Kleruchs on Salamis were obliged to provide their own arms to the value of 30 drachmae. If this is a fair reflection of the level of expenditure normally required by an average hoplite (and as-

sessment of the wider literary tradition would tend to support this; Jarva 1995, 148-54), then the equipment itself must have been of some monetary worth, quite apart from the symbolic value of inheritance within the family. There is therefore no absolute necessity to infer any accompanying change in statements of military values per se, be they direct expressions of personal interest or identification with particular divine characteristics, but at best a change of means. Miniature terracotta and bronze arms and armour continued to be dedicated at a wide range of sanctuaries, including a significant number sacred to Apollo or located in regions such as Arkadia where mercenary service was an important economic activity (see below). Equally, military imagery is prominent when painted or sculpted decoration becomes popular in elite tombs from the fourth century onwards, most strikingly in the lunettes of the Tomb of Lyson and Kallikles (c. 200 BC) which may represent an array of typical equipment or captured trophies, and thence apotropaic, status and triumphal values well paralleled in other public, non-funerary contexts (Miller 1993, 48-59).

Yet while the practical and financial aspects of resource management were clearly very important, one should not forget the ideological stress on metal stemming from the symbolic/moral qualities conferred by its gleaming brightness—a consistent theme in literary sources from very early times (Constantidou 1992). Hence for example, Homeric images of brightness (*Iliad* 19.359-63; 14.340-3), developed to the point of fantasy in the description of the equipment of certain heroes (van Wees 1994, 131-37), or the description of the mercenaries who aided Psamettichus as 'men of bronze' (Herodotus 2.152). In a much-cited passage, Alkaios (Lobel-Page Z34) refers to the gleam of the armour and weapons hanging in the great hall, a description which, while sometimes taken as evidence for the state of contempo-

rary equipment (Page 1955, 209-33), surely shows a romanticised appreciation of the equipment and the heroic status it implies (Burnett 1983, 123-26; van Wees 1995, 148-54). The basic context of display and the status thus reflected are plausible enough. As Page points out (1955, 222), Alkaios' description bears comparison with Herodotus' reference (1.34.3) to weapons hanging on the wall of Croesus' palace. And if Viviers (1994, 244-49) is correct in his interpretation of the so-called 'sanctuary' at Afrati on Crete as an andreion, with the rich arms finds from the site (Hoffmann and Raubitschek 1972, ch. V) hung on its walls rather than offered as votives, then we would have a rare and striking archaeological instance of what may have been a much wider phenomenon. It is rather the heroic tone of Alkaios' description that places it in a register above the straightforwardly documentary.

Finally, it is worth citing one passage which, while ostensibly reflecting a very different attitude to the value of equipment, also fits within the context of this close equation of practicality and morality. In Ep. 6, Archilochus describes how he discarded his shield to save his own life, accepting that the shield is now the property of one of his Saian adversaries. As Burnett notes (1983, 41-42), the juxtaposition of the anti-heroic and the realistic, of shame and practicality, highlights the difficulty faced by the poet in choosing life over an outdated form of honour. The significance of this choice is also reflected in the tradition (spurious or not) reported by Plutarch (Moralia 239b) that it was this action that caused the Spartans to drive Archilochus out of their territory when he travelled there, since Sparta, where the suppression and defence of a conquered territory lay in the hands of an armed minority, is precisely the region where one would expect to find old values, equating valour with preservation of equipment, most keenly defended.

The significance of dedication

In short, whereas there is no apparent diminution in desire to symbolise what arms and armour represented to those who used them, when it came to disposing more or less permanently of a valuable resource, in a wide vari-

ety of Greek communities practicality, and thence morality, intervened. And so like many truisms, the view that ethne continued to bury arms and weapons after southern poleis had ceased to do so presents a basic truth

in a highly deceptive fashion. In view of the unevenness of the picture and the complexity of likely underlying factors, it is dangerous to seek an explanation in terms of fundamental political differences in attitudes to warfare. Nonetheless, Anthony Snodgrass, for example, has sought to trace a relationship symbolic of emergent polis values in the apparent chronological coincidence between the decline in burial with arms in a number of early poleis, the introduction of the hoplite panoply and the transfer of metal dedications to sanctuaries (see most recently Snodgrass 1980, 53-54, 99-101). In particular, he stresses the communal-symbolic dimension of the decision to deposit those items of equipment deliberately removed from circulation in the public context of the shrine rather than the private context of the grave, and regards this as a recognition of a communal, state, right to a monopoly of force. Yet apart from difficulties with the concept of monopoly of force raised earlier, and also the negative fallacy of implying that states which did not match up to this 'polis' ideal were somehow retarded (Archibald forthcoming), there are significant chronological problems with this proposition.

Arms and armour dedications do indeed appear during the late eighth and early seventh century at a number of shrines belonging to single communities or regions (whether or not one regards these as poleis), including Ano Mazaraki (Gadolou 1998), Kalapodi (Felsch 1987, figs. 18, 19) and Aigina (Maaß 1984). Yet they are by no means as popular as at Delphi (Perdrizet 1908, 98-99: Kilian 1977) and especially Olympia (Kunze 1956; 1958, 118-38; 1967b; 1991, 7-23; 1994; Jarva 1995, 111, fig. 61), and numbers generally remained low at all of these shrines (Olympia included) at least until the latter part of the sixth century (see also Pritchett 1979, 290-91 on inscribed dedications). At Isthmia, for example, the only Corinthian shrine to receive arms and armour in any quantity, the earliest three items date around the very end of the eighth or the early seventh century (Jackson 1999), but finds remain rare until the sixth century. This is striking when one considers that in the Corinthia as a whole, the almost total disappearance of grave offerings from the mid-eighth to the late seventh century (Dickey 1992, 101-8) left shrines as the principal, if not the only, contexts for the display of wealth, status and group affiliation (Morgan 1994)—and when grave goods resumed, they included occasional instances of weapons (notably the fifth century panoply burial noted above). At Isthmia, the second half of the sixth century and the first decades of the fifth saw a peak of armour and weapons dedications. Over half of the extant helmet dedications made before the temple fire of c. 470-450 BC (over 130 of at least 200 which survive in very fragmentary condition) date after 550, for example, although no evidence has yet been discovered of types which developed after the 470s (Jackson 1992). Furthermore, in cases such as Isthmia or Olympia where the sample is comparatively large, there seem to have been a bias towards particular pieces of equipment, especially helmets and to a lesser extent, shields, which does not compare with earlier patterns of funerary offering (Jarva 1995, 111-12; cf. Snodgrass 1999, 136). This pattern of dedication is not unusual, although in the case of Isthmia it is necessary to consider the factor of the shrine's panhellenic role following the foundation of the Isthmian Games c. 582/o. Alastar Jackson (1992) is surely right to attribute both the extent of sixth century armour dedication and the swift decline in the post-Persian war period (echoed at Olympia) to this international aspect (although when one considers armour in the broader context of votive behaviour it is also necessary to take into account the general decline in votives during the fifth century discussed by Snodgrass 1989-1990). In short, if the evidence for a rapid symbolic removal of warfare from the private to the collective domain is as tenous as this in a region which has produced, in the work of the Macmillan Painter, what is sometimes seen as the earliest visual evidence of any form of phalanx⁶ (and certainly a diverse collection of early military imagery)7 then it is hard to think of a better case elsewhere. Indeed, the extent to which evidence is focused on a few key sites, and especially Olympia, at least through the seventh century, is a matter of some note.

As Snodgrass (1980, 100-2) acknowledges, this shift in the context of weapons dedications may reflect a concern to conserve resources, not least since it allows a freer choice of occasion. But clearly, even allowing for local variation, this was at best a more gradual process than might be implied by a simple interpretation in terms of state-politics, and one which should be nuanced by consideration of interrelated symbolism in other contexts.

Displays of equipment in the halls of the elite, as mentioned above, which are most unlikely to be represented in the archaeological record (Afrati is at present unique), should not be overlooked. Equally, it would be a mistake to reject death as a continuing context for military symbolism, and the assumption of translatable meaning in dedications at 'public' sanctuaries and 'private' graves is not so clear. It is therefore worth exploring the role and meaning of military dedications in these two contexts more fully, to assess the extent to which they represent different strands of behaviour or different nuances within an overarching complex of elite values.

It is certainly true that personally owned equipment could be dedicated at sanctuaries, but in so far as we have direct evidence for the purpose of such dedications, they are generally given as thank offerings or prayers seeking reciprocity from the deity. Thus, for example, two epigrams of Simonides preserved in the Palatine Anthology record the dedication of a bow used in the Persian wars (Bergk 143) and a soldier's dedication to Zeus Panomphaius of an ashen spear, its point worn by long use in battle (Bergk 144), and an epigram by Anacreon (Bergk 107) celebrates the dedication to Athena of a shield which had protected its owner, Python. A helmet dedicated to Zeus at Olympia bore signs of wear (Jeffery 1991, 229), and an inscribed bronze strip (SEG XI.1214, dating to the third quarter of the sixth century and probably, but not certainly, from Olympia) may be a label attached to a dedication of arms by the Spartan Eurystratides, and bore the formulaic prayer for reciprocal reward 'do thou also give grace'.

Yet such cases are few in number when compared with dedications of booty (captured weapons or material goods or ransom acquired after battle) which account for the great majority of military dedications especially from the sixth century onwards (Jackson 1991; Pritchett 1979, 290-91). There is no reason to assume that these automatically carried communal significance. The stripping of bodies for personal gain was a battlefield practice of long standing, attested from Homer onwards (Pritchett 1979, 277-78), as also the ransoming of prisoners. Such practices may indeed benefit the community as a whole. Thus, for example, an inscription from the Athenian acropolis (Raubitschek 1949, no. 168, *c.* 505-500 BC) records the erection of a monument funded by a tithe of

the ransom paid for those taken prisoner after an Athenian victory over the Chalkidians and Boiotians which, if it is that described by Herodotus (5.77) when 700 Boiotians and an unknown number of Chalkidians were captured and ransomed for 2 minas each, was one of the first major victories by the new democracy and the first to be publicly commemorated in this way. Nonetheless, since there is ample evidence that these practices continued to enrich individuals (see e.g. Miller 1997, ch. 2 on Persian War spoils), there is no reason to assume that dedications of equipment and spoils did not reflect a wide spectrum of interests, ranging from the purely personal to the purely communal. Indeed, I have argued (Morgan 1993) that at least until the sixth century, and arguably even until the post-Persian war formalisation of panhellenism as a political concept (Sinn 1994), both Olympia and Delphi lay to a significant extent outside the formal structure of most of the communities whose members frequented them (whatever that structure may have been). At least at Olympia, however, it is possible to set military dedications within a wider trend in material values. As Snodgrass notes (1980, 105), weapons dedications increase markedly from c. 675-650 BC, coincident with a decline in the personal dedication of native as opposed to imported eastern tripod dedications (Amandry 1987). This raises the possibility of inter-related changes in status symbols and metal consumption reflecting a shift in the nature of expression of status via control of equipment and resources in living circulation (Langdon 1987), or perhaps more precisely, via symbolic recognition of the opportunities offered by conflict. Related to this is the process by which Later Archaic tripod dedications tend to be focused on shrines in comparatively few areas (Delphi and Athens, for example, rather than the Peloponnese) and to serve as rulers' offerings and victory monuments (choregic monuments in the case of Athens), changes which reflect less a simple decline in tripod offerings per se than an evolution in their meaning (Amandry 1987). Whatever the case, it is important to stress that treatment of arms and armour should not be considered in isolation, but as part of a broader complex of practical and ideological responses to different aspects of personal wealth and status.

Finally, while questions of propaganda and display have rightly been emphasized in assessments of the development of certain sanctuaries in particular as contexts for military dedications, it is also worth considering the wider role of sanctuaries as places for mercenary hiring and metallurgy (in the sense of equipment supply and maintenance). Evidence for metalworking at shrines is considerable, and it is clear that at least some sanctuaries (Kalapodi and Philia, for example) were involved in weapons production (Risberg 1997; Kilian 1983). An added factor in the potency of military display is the real and constant fear that, whatever the sanctions of impi-

ety, sanctuaries could become arsenals if dedicated weapons fell into the wrong hands (Pritchett 1991 160-68; Hornblower 1991, 197-98, 229, commenting on Thucydides 1.143.1). Thus mutilation or 'killing' of weapons and armour (noted at Kalapodi by Felsch in Hägg 1983, 147, and also evident at Olympia, Delphi and on the Athenian Acropolis, Jackson 1983) was both a symbolic and a practical means of removing or at least diminishing their power.⁸

The Athenian exception? Warfare and aristocratic values

My observations so far have tended to downplay, or at least to nuance, the idea that there was any significant change in attitudes to warfare during the eighth to sixth centuries, however this may have been reflected in the deposition of material goods. Yet at first sight, the case of Athens may seem to contradict this conclusion, not least since the ending of burial with arms here provides one of the sharpest disjunctions in the material record of any contemporary region. Nonetheless, I suggest that if Early Iron Age and early Archaic data are considered in their wider social (and indeed archaeological) context, then much of the disjunction inferred from weapons alone disappears. Indeed, the case of Athens illustrates the way in which attitudes to war and individual status came to be so closely bound up within a complex of aristocratic values that they can be inferred from other aspects of funerary practice, irrespective of the simple presence or absence of weapons (the latter governed rather by cross-cutting, but not coterminous, attitudes to material possessions).

Recent analysis of arms and armour in Early Iron Age Athenian graves has highlighted the selectivity evident in their deployment, and their strong symbolic connection with aristocratic male gender roles (van Wees 1998, with bibliography). Athens is not unusual in this respect. At Lefkandi, far from being common, weapons (daggers, swords, axes, knives, spearheads and arrowheads) are found clustered together in a limited number of graves (Catling & Catling 1980, 252-58, noting that the association of different weapons types argues against specialisation in different forms of warfare). In the North Ceme-

tery at Knossos, almost all weapons are made of iron and are found in male graves; as Snodgrass (1996) notes, this reflects a strong hierarchy of disposition which correlates with other funerary accourtements, and also tends to be hereditary since burial with arms was most often a recurrent feature in re-used tombs (in T285, for example, it recurs over the 200 years or so of the tomb's use).

In the case of Athens where the Archaic literary and iconographical record is unusually full, there is strong evidence to suggest that, despite an apparent shift in the nature of grave goods, social attitudes to war and its connection with personal status may have been slower to change than has traditionally been supposed. The iconographical case has recently been made by Hans van Wees (1998), and here I merely note one further point which expands upon his argument. Given the bonding and educative role of the symposium, it is hardy surprising to find that the military values expressed in the lyric poetry performed there (Bowie 1990) are reiterated in a variety of Archaic funerary epigrams and votive inscriptions, allowing for the generally fragmentary condition of the latter (Robertson 1997; Guarducci 1988, esp. no.36; see also e.g. IG i³ 1240 (epitaph of Croisus from Anavyssos); Raubitschek 1949, e.g. no. 13). Considered in this light, the emphasis placed upon banqueting and symposiastic values by Sanne Houby-Nielsen in her analysis of funerary offerings in the Kerameikos from the late eighth century onwards (Houby-Nielsen 1992; 1995) appears both persuasive and suggestive. If warfare was indeed an integral part of the complex of aristocratic individualistic values reiterated in a range of interconnected contexts in Archaic Athens, then the physical presence or absence of weapons seems almost irrelevant, since war cannot be thought out of the sphere of death and the ancestors.9 However, a basic discrepancy between the practical treatment of equipment and ideological attitudes to warfare is evident here, as throughout the Archaic Greek world. If ideology carried with it ideals of material behaviour, these could rarely, if ever, be fulfilled. This last point connects further with an issue to which we will return, namely the prevalence of mobility of manpower via mercenary service or 'friendly assistance'. However embedded in local values a particular cause and the manner of its pursuit (in terms of command and tactics), those who were commanded, who did the fighting and had to look to their weapons, seem in very many cases to have included outsiders.¹⁰

On the basis of similar patterns of evidence from graves and state sanctuaries, I have argued that during the eighth to sixth centuries weapons disposal should primarily be considered in the context of attitudes to metal as a commodity. This is not to imply that this is the only factor determining its disposition, merely that it is of great, and in some regions probably paramount, importance. In Achaia, for example, eighth century weapons burials coincide with a peak of weapons dedications at one of the few pre-Classical shrines so far excavated, the sanctuary of Artemis at Ano Mazaraki in the territory of Aigion (Gadolou 1998). Equally, the Archaic Epirote cemetery evidence outlined earlier finds echoes in dedications at nearby Dodona.11 As a general rule, wherever lavish metal disposal is regarded as desirable, it tends to occur in all forms of context in which offerings are normally made, and involves a variety of artefact types, often including arms and to a lesser extent, armour. Under these circumstances, it is the point at which shrines break the pattern, however late this may be, that is of particular interest. It is relatively rare for this to be a matter of cult; a probable exception is the sixth century Pyre of Heracles at Oiti in Thessaly, where weapons were found in some quantity together with sacrificial ash, bone and the usual forms of pottery and votive (Delt 1919, par. 25-33; Béquignon 1937, 204-30; Delt 43, 1988, B1, 224; Delt 44, 1989, B1, 166; Delt 45, 1990, B, 174). More generally, however, since shrines and graves are not straightforward alternatives and the symbolic aspect of warfare stands partially beyond the practical, a particularly interesting phenomenon evident from the latter part of the Archaic period onwards in a variety of state systems, is the place of military force in ethnogenesis or the crystallization of regional-political consciousness. Since recognition of putative shared descent is central to ethnic consciousness (Hall 1997, 25-28), exclusion is as important a means of defining group membership as inclusion, and this can be represented (whether or not actually achieved; Purcell 1990) in a variety of ways, including subordination of population, territorial conquest, migration, and colonisation—all processes potentially involving violence and mobility (Demand 1990, chs.1-4; Dougherty 1993—literary evidence is extensive, see e.g. Thucydides 6.2-5 on the myth-historical ethnography of Sicily, Archilochus fr. 52 on Thasos, or Strabo 14.1.4 on Smyrna and Colophon). This surely explains the frequency with which shrines, as records of local identity though collective history, contained mementos of victories (the fetters at Tegea being a striking example; Herodotus 1.66). The sanctuary of Artemis at Kalapodi offers a particularly vivid illustration of commemoration of such a key military event not merely by specific dedications but by a broader change in dedicatory practice. Here the replacement of metal votives such as dress ornaments by weapons, body armour, and solid bronze rings during the second quarter of the sixth century has plausibly been seen as symbolising the liberation of Phokis from Thessalian occupation (dated, albeit controversially, around the time of the battle of Keressos in c. 575-570 BC) and the consequent foundation of the Phokian League (Felsch, Keinast and Schuler 1980, 81-84; Morgan 1997, 175-84). The events surrounding this victory (variously recounted by Herodotus 8.27-28, Plutarch Moralia 244b-e and Pausanias 10.1) formed a central element in the charter myth of the Phokian ethnos, and so the decision to symbolise it via a change in votive practice at the longest-established regional sanctuary may seem unsurprising (Ellinger 1993, esp. 13-22; Pritchett 1996, ch. II). Indeed, there are interesting parallels to be drawn between the rôle of military history in Phokian national identity and the long-discussed place of Marathon in fifth century Athenian thought (Castriota 1992 passim; Miller 1997, 31-32; Whitley 1994). There is, however, a striking discrepancy between the collective

military history which lay at the heart of the identity of many *ethne* and Thucydides' claim (1.5-6) that 'armed robbery' or the personal pursuit of violence was a primitive way of life which still continued in 'much of Hellas' (notably Aetolia, Akarnania and Ozalian Lokris) unchecked by state authority.

Clearly, attempts to characterise both Archaic attitudes to warfare and the treatment of military equipment according to simplistic conceptions of state type raise critical issues in the interpretation of ancient political terminology (Hansen 1997b; 1998) and its application to the archaeological record. Proper examination of such complex historiographical issues is beyond the scope of this conference, but it should be noted that there is ample archaeological and literary evidence to show that a wide range of phenomena regarded as characteristic of emergent poleis from the eighth century onwards (including, for example, 'urban' development and the development of city shrines, see e.g. Snodgrass 1980 chs. 1, 2) occured much more widely (Morgan 1997; 2000). One way forward is to see ethne and poleis not as parallel forms of state but as different tiers of identity, operative at the same time but salient in different contexts (Archibald 2000). Sooner or later every polis invoked some form of ethnic affiliation, and sooner or later, as the work of the Copenhagen Polis Centre in particular has shown, communities explicitly called poleis are found within areas categorized in modern scholarship as ethne (see e.g. Morgan and Hall 1996 on Achaia; Heine Nielsen 1996 a, b, Heine Nielsen 1999, Morgan 1999b on Arkadia; Archibald 2000 on Thessaly). However, the precise details of the balance between identity perceived in terms of dominant group ethnicity and of political order varied greatly according to time and place (Morgan forthcoming).

The result is a complex spectrum of political orderings, and this in turn has important implications not only for our understanding of warfare as a mechanism which could reflect and sustain internal social ordering, but for the breadth of approach necessary to obtain a rounded picture of how warfare served to articulate inter- and intra regional relations. In the latter sense, it could, as suggested earlier, be seen as an aspect of trade and *xenia* (Herman 1987, 97-105), and in the case of mercenary service, as a development of seasonal labour

and the raids for booty so well documented in Homer (Jackson 1993). Indeed, a close conceptual link with the formalised structure of inter-regional personal obligations is evident in the terminology for foreign military service used in the Archaic period, and usually translated by the modern word mercenary (for which there is no adequate alternative even though it carries clear implications of personal hire for payment which may not always be relevant). The terms most usually used by Archaic authors have clear social connotations. In addition to its usual meaning of guest-friend or stranger, the term xenos is used by Homer (Odyssey 14.102) in the sense of hireling, and acquires more complex military connotations from the fifth century onwards (xenikos applied to mercenary ships or troops, for example, as Herodotus 1.77). A more common term in early literature is epikouros, one who comes to the aid of another—as e.g., Homer Il. 5.614 2.815, 3,456; Herodotus 1.64 in connection with the forces of Peisistratos; or Archilochus Ep 6, where the epikouros is contrasted bitterly with the true friend or philos. Whether or not the service thus described was directly paid is hard to establish. In discussing the activities of Peisistratus and his sons, for example, Herodotus (1.61) draws a distinction between the purchase of Argive mercenaries (misthotoi) and the aid given by Lygdamis of Naxos of his own accord (ethelontes), and while he wrote around a century after the event, the extent to which his vocabulary genuinely reflects sixth century attitudes is a matter of some debate. Nonetheless, the fact that the vocabulary directly attested in Archaic sources draws on established usage for social relations must surely reflect the mechanisms by which much military mobility was articulated. By contrast, overtly financial or military terms, such as misthophoros (e.g. Thucydides 1.35) or summachos (e.g. Aeschylus Pers. 793; Thucydides 1.35, 7.50), appear in fifth century and later sources (although a military sense is at least implicit in Sappho's prayer to Aphrodite (1.28) to be her summachos in winning a desired lover). Yet even during the fifth century, the extent to which it is possible to draw any clear distinction between paid mercenaries and other forms of foreign 'ally' remains a matter of debate (see e.g., Hornblower 1991, 190, 403 with reference to Thucydides 1.115.4 and 3.18.1).

It is, however, worth noting in that the financial implications of hiring mercenaries were considerable. Indeed, mercenary pay has plausibly been cited as a factor behind the development of coinage not least in its homeland, Lydia, to provide rewards when xenia or booty were insufficient (Cook 1958, 261; Kraay 1964, 88-91; see also Wallace 1987 for a more recent general review). Few cities could afford to sustain paid mercenary forces—hence perhaps the continuing rhetorical emphasis on duty (Robertson 1997) combined with the reciprocal obligations of *xenia*—and this may in turn underlie

later rhetorical distrust of paid outsiders. For example, when at the allied congress in Sparta in 432 the Corinthians described the Athenian fleet as 'bought' (Thucydides 1.121.3), they can hardly have been referring to the entire fleet (since, as Hornblower 1991, 198-99 rightly emphasizes, Athenian rowers were also paid at this time), but were rather making the rhetorical and moral point that it contained purchasable foreigners.

Warfare and Society in Archaic Thessaly

At this point it is worth pausing to consider one case study, that of Thessaly, which illustrates well many of the issues raised so far. Thessaly is a region with a complex military history over and above the activities of its cavalry for which it is famed (along with the fertility of its extensive plains, and the wealth of its aristocracy, expressed in cattle ownership and horse breeding).¹² It consists of two major plains surrounded by mountains (Philippson 1897, chs. I-IV; Philippson 1950; Sivignon 1975), and politically, it was divided into four tetrads or moirai, at least by the fifth century, regarded as the oldest aspects of Thessalian organisation (Hellanikos of Mytilene, FrGHist 4.51). Each contained major settlements (Trikka and Aiginion in Hestiaiotis, Metropolis and Arne-Kieron in Thessaliotis, Pharsalos in Phthiotis and Larisa and Pherai in Pelasgiotis) surrounded by a perioikic area (Sordi 1958; Sordi 1992; Helly 1995). There is a growing body of evidence for long-term Early Iron Age occupation in many centres of later importance, chiefly (but not exclusively) derived from rescue excavation in or near modern centres in tetrads and perioikic areas alike, including Iolkos (Intzesiloglou 1994 with bibliography; Sipsie-Esbach 1986), Larisa (Tziaphalias 1994a, 155-56) and Pherai (Apostolopoulou Kakavoyianni 1992; Dougleri Intzesiloglou 1994). Equally, there is no major chronological discrepancy in the appearance of major public works in comparison with many southern centres; hence, for example, sixth century fortification walls at settlements such as Pharsalos (Katakouta and Touphexis 1994) and temple building from the second half of the seventh century in the case of Gonnoi (Helly 1973, 72-74). Evidence that big sites served as physical centres of political power thus appears as compelling in Thessaly as in many parts of what has been regarded as the polis world, and is echoed in later traditions associating leading Thessalian families with particular cities (the Aleuads at Larisa for example). From a Classical perspective, Zosia Archibald has stressed the political and geographical cohesion of the region, citing sources such as Herodotus (6.27, 9.1) and Thucydides (1.102.4, 2.22.3 etc.) as reporting the collective voice of what she describes as a 'caste' of leaders with bases in different cities (Archibald 2000). I suggest that while the case for such cohesion is not quite as strong during the Archaic period, the process by which it may have come into being bears interesting comparison with changes evident elsewhere, notably in Athens. Warfare provides a good starting point for documenting this process, since the circumstances of conflict—who had the power to decide which issues should be fought over, by whom and under whose command—raise fundamental questions concerning the forces defining different tiers of group membership.

In later times, the sixth century was seen as a key period of Thessalian military greatness. To a significant extent this reflects the reforms attributed to the probably legendary King Aleuas (Sordi 1958, 65-68, 71-72; Helly 1995, 118-24). As many other early reforming rulers, including oikists and tyrants or would-be tyrants, as well as certain possible Thessalian contemporaries, Aleuas is credited with a number of major reforms, including law and land division (Axenidis 1947, 43-48; scholiast to Pindar *Pyth*. X.5, Harpokration *FrGHist* 1.52). Indeed, the comparison is highlighted by Plutarch's account (*Mor*-

alia 492a-b) that Aleuas was selected for office by the Delphic lot oracle following the last minute addition of his name to the list of candidates by his uncle (he was previously omitted as of unsuitable character), a story which closely resembles the topos of the oikist malgré lui of colonial foundation legend (Malkin 1987, 26-91). That the Aleuad territorial divisions served military purposes at least by the fourth century is made explicit by Aristotle (Constitution of the Thessalians quoted by Harpokration and a scholiast to Euripides Rhesus 311, Rose fr. 497, 498), who states that each kleros possessing the necessary amount of power produced fifty hippeis and eighty hoplites. But whether as reported by Aristotle they should be seen as real institutions of the sixth century, let alone primarily military in initial intent (as argued by Helly 1995, 193-219, ch.V), are much more controversial questions (see e.g. the table ronde on Helly 1995 in Topoi 7(1) 1997, 165-262; Axenidis 1947, 43-47). Perhaps more pertinently, while issues of land division and tributary labour can have military implications, the extent to which any Archaic changes were felt at a primarily national rather than a local level is debatable, and there seems much to commend the view that Archaic Thessalian land division was a feudal readjustment at best (Link 1991, 151-57). Here it is interesting to note that the only other action of likely regional significance attested for the Archaic period is the elder Skopas' fixing of the level of tribute payable by penestai, probably at some point during the first half of the sixth century (Xenophon Hellenika 6.1.9). Very little concrete is known about penestai (Ducat 1994 offers the most complete review), but it seems that they were probably bound to a landlord rather than the state, and could fight alongside landlords (Demosthenes 23.199, citing Menon of Pharsalos), forming a substantial force of followers if Theocritos' reference (Idylls 16.34-35) to the large number of penestai in the halls of Antiochus during the second half of the sixth century offers any guide.

Accounts of eighth century and Archaic Thessalian wars usually consist of fragmentary details offered by later sources often in problematic contexts. Nonetheless, insofar as they command any credence, they too hint at highly localised power structures. During the Lelantine war, according to Plutarch (*Moralia* 760e-761b), the Chalkidians requested the assistance of Kleomachos of

Pharsalos with his cavalry, and when he fell in battle they buried him in the Agora at Chalkis. In the First Sacred War, Eurylochus was the (probably Aleuad) leader of the Thessalian contingent, and responsible for the destruction of Krisa (scholiast to Pindar Pyth. X.5, Boekh 298; Strabo 9.42.1; Hippokrates *Ep.* 36.17 (Herscher 1873, 941)).14 Finally, Herodotus (5.63.3) reports that basileus Kinneus, probably of Gonnoi, commanded the Thessalian cavalry who assisted the Peisistratids against the Spartans in 512. In all three cases, it seems that a named leader answered a personal request or took the initiative to act. Equally, both Thucydides (1.31) and Aristotle (Pol. 1306a) stress that factional strife among aristocrats was the chief source of Thessalian weakness. Hence perhaps Larisa's voluntary submission to Persia in the 480's (Herodotus 7.6.2), a relationship similar to (and perhaps more inviting than) other more local possibilities, and one which Martin (1985, 34-35) has sought to connect with the city's first issue of coinage for the payment of tribute. There are plenty of parallels for such international relations elsewhere. The Peisistratids, for example, notoriously relied on help of various kinds from international connections; Herodotus (1.60-64) describes how, prior to Peisistratus' attempt at a third period of power, he and his sons took pains to secure gifts from all cities who were in any way in their debt and used the profits to pay mercenaries. Equally, the offer of the city of Magnesian Iolkos to the deposed Hippias must surely imply friendly ties in southern Thessaly (Herodotus 5.94.1; Camp 1994).

The institutional basis of command in the three Thessalian conflicts cited is unclear (only Kinneus is explicitly called *basileus*), but as Axenidis (1947, 42-43) has argued, it seems hard to believe in permanent institutional pan-Thessalian leadership at such an early date, or even recruitment on a wider basis than local ties. Much has been made of Herodotus' statement (5.63.3) that Kinneus' expedition went 'koine gnome' (by common decree or consent). The exact import of the phrase is hard to establish, although it seems somewhat unusual in an otherwise straightforward account of aid between xenoi. If it is other than a euphemism for an action popular in this part of Thessaly, one might conjecture that it implies some dispute or need for additional support. Yet it is hardly a sufficient basis on which to reconstruct a

regular national debate, let alone a federal military structure. At first sight, this impression of local mobilisation sits ill with the interpretation of Aleuad land division in regional-military terms. One might well question the historicity of the division, let alone its initial purpose. But it is worth emphasizing that hints of local substructures linger as late as the fourth century (a point recognised by Wade-Gery 1924, although he erroneously attributed changes under Jason to the effects of Thessalian urbanisation). Indeed, Xenophon's mention (Hellenika 6.1.8-9, 12, 19) of Jason's ability as tagos to dispose of traditional tribute and army strength, including horsemen, hoplites, and peltasts from the surrounding allies, hints at varied contributions raised according to long-standing local groupings and also the strength of local resources at the time—a more complex and nuanced picture than that presented by Aristotle's mathematics.

In certain key respects, this picture seems to differ little from that evident in many Archaic poleis. Pertinent comparison may be made with Frank Frost's (1984) analysis of evidence from pre-Kleisthenic Athens, in which he highlights the lack of evidence for any regionally-based mobilisation, and argues for earlier conflicts being a matter of aristocratic families selecting issues of conflict (land being especially important), answering calls for help or seizing opportunities offered by unforeseen circumstances to mobilise their followers (willing or bound: van Wees 1999), call on their friends, and extract as much kudos as possible 'in the service of the polis'. Thus, for example, the decision to pursue and evict Kylon and his followers (Herodotus 5.71; Thucydides 1.126.3-6) was essentially an Alkmaeonid operation (Frost 1984, 286-287), and the temporary capture of Sigeum by Peisistratus for his son Hegesistratus (Herodotus 5.94-95) owed more to his desire for family kudos than to any real threat (Viviers 1987; Frost 1984, 288 describes it as a failed attempt at colonisation). Certain aspects of Frost's argument seem somewhat overstated (such as his diminution of the role and importance of the naukrariai, see e.g. van Wees 1999, 32; or the preexistence of the concept of public warfare, van Wees 1992, 174-75), and it would obviously be wrong to dismiss the rôle of state institutions in Archaic Athenian political life, if only as means of enhancing the power and status of leading individuals and their families (a point which

Frost himself emphasizes elsewhere: Frost 1994). Nonetheless, his approach does circumvent certain basic difficulties arising from the assumption of state-institutionalised warfare. It takes fuller account of the aristocratic values emphasized above, as well as common, cross-regional concerns for territorial and property defense (whether conceived in terms of cultivation or stock rearing), aid to friends, and the maintenance of boundaries with subject groups. As a result, it deals better with the embeddedness of tyrannical actions in aristocratic traditions, an embeddedness which may be detected in warfare as in many other areas of action. Thus, for example, Peisistratus' imposition on Athenian citizens of payment similiar to the pre-Solonian hektemoroi has plausibly been interpreted by Harris (1997, 110-11) as a form of protection, akin to the Persian 'tribute' formalised by Darius but nonetheless probably something of a bargain after the impositions of local lords. 15 Here too, however, the idea of soldierly autonomy must be called into question. Snodgrass, for example, in assessing social change attendent on the hoplite 'reform' suggests that those who qualified for military service could have established the strong condition that it was the state they served, not some aristocratic grouping and not for purposes of civil strife (Snodgrass 1980, 100-2, although see now Snodgrass 1993, 60-61). But this begs the fundamental question of the extent to which the average Archaic state, of whatever form, was more than 'some aristocratic grouping' with all that that entailed in terms of the use of followers in the pursuit of personal interest.

To return briefly to Thessaly, it is worth pausing to consider one unusual Archaic cemetery which raises interesting questions of comparison. At Ag. Giorgios near Larisa, c. 6km from Krannon, lies a tumulus cemetery c. 4km in extent and with some 40 tumuli noted to date (Tziaphalias 1990; 1994b). It probably belonged to the polis whose remains have been found at nearby Palaiochora and which may be ancient Ephyra, a dependent of Krannon. Two tumuli (Xirorema and Karaeria) have been partially excavated; Xirorema contained 31 graves of which 25 date around the end of the seventh century, and the remainder belong to a separate fifth century level cut into the tumulus top. At Karaeria, 18 groups of burials within periboloi date to the first half of the sixth century. The two tumuli share many features in com-

mon; both contained secondary cremations (generally inurned) with a rich variety of mainly metal goods (weapons, jewellery, vessels, wreaths etc), many of which were burnt. Weapons (mainly offensive) are plentiful and largely of Thessalian manufacture. The main distinction between the tumuli is that Xirorema contained male and female burials but Karaeria only male. This point in particular has led to the suggestion that Karaeria had some ceremonial dimension, perhaps also implied by the presence of three wagons (including two in one grave) which show signs of burning, perhaps having transported the deceased to the pyre.

The Karaeria tumulus has been tentatively interpreted by the excavator as a polyandrion connected to some conflict as yet unknown (Tziaphalias 1994b, 188). This is possible, although it should be noted that there are at present no archaeological parallels for a polyandrion at this early date (at least in the old Greek world), and it is unfortunate that the rite of cremation here precludes analysis of patterns of trauma. There is no evidence to support any geographically or chronologically consistent attitude to the location of the burial of war dead during Early Iron Age and Archaic times. The term polyandrion is not attested in Archaic sources, and during the fifth century, the more usual term, polyandros, occurs rather in the general sense of populous or numerous in people. (e.g. Aeschylus Pers. 73, 899, 533; Ag. 693). There is, however, every reason to assume that the practice predates the term, and by the very end of the Archaic period, there are literary hints of the existence of formal mass military tombs. An epigram attributed to Simonides (Page 1975, Simonides no. 2) refers to such a memorial set up at public expense near the Euripos and under the folds of Dirphys in Euboia, and this has been equated with a polyandrion created after a battle with the Athenians in 507 BC (Page 1981, 89-191, preferring it to be a Euboian rather than an Athenian tomb). But references to significantly earlier monuments tend to occur in much later sources, and none have been located and investigated. Thus Pausanias (2.24.7) reports polyandria at Kenchreai of the Argive dead from the battle of Hysiai in c. 669/8 (the earliest reported case of such a monument), as well as the polyandrion of the Oresthasians (c. 659) in the agora at Phigaleia (8.41.1), and that of the Argives and Lakedaimonians in the Thyreatis c. 550

(2.38.5). Excavated tombs reasonably securely identified as polyandria are fifth century or later (Pritchett 1985, 125-39); an early example, the Marathon tumulus (noted, almost certainly mistakenly, as exceptional for its battlefield location by Thucydides 2.34.5) is an unusual monument with archaising traits and heroizing connotations stressed in recent scholarship (Whiteley 1994; Pritchett 1985, 126-29 for a review of evidence from the soros and the Plataean tomb). Only one possible Archaic polyandrion has been tentatively identified at Akragas in Sicily. Here a pit within the earliest colonial cemetery on the hill of Montelusa which contained twelve bodies and over one hundred and fifty Greek vases, stands out as unusual in the context of the cemetery, and despite the lack of weapons, was therefore interpreted by the excavators as a polyandrion commemorating an unknown battle (Griffo 1946; Fasti Archeologici 1, 1946, 91). The case for the Akragas identification has not been published in detail, but parallels with Ag. Giorgos-Karaeria are clear. Both identifications are tentative, and both rest on the apparently anomalous form or content of the burial(s) in question, rather than on physical anthropological evidence or any clear expectation of what a polyandrion of this period might look like.

In view of these uncertainties, it is important to emphasize that even in our limited state of knowledge there are alternative interpretations of the Ag. Giorgios-Karaeria tumulus, and further research at an extensive cemetery may well add to the range of possibilities. The extent of similarity between Karaeria and Xirorema in rites, offerings and chronological focus, combined with the absence of any demonstrable marker, raises the possibility that the Karaeria tumulus contained an interest group, an interpretation akin to Sanne Houby-Nielsen's characterisation of the dead in some of the most spectacular Kerameikos mounds as symposium groups (Houby-Nielsen 1995). In both cases, the tumuli in question share mortuary customs with the rest of the cemetery, but appear more lavish and show strong gender bias. In view of the compelling evidence for the widespread embeddedness of warfare among a complex of aristocratic values, it is tempting to suggest that evidence from Karaeria represents the same overall package symbolised via other indicia (perhaps as Morris 1998, 38 suggests, more traditional ones). The question of the regional context of these finds is more problematic, however. Morris (1998, 38) points to a parallel for lavish weapons burial in a tholos tomb at Iolkos (*Praktika* 1915, 157-59) and notes also the Krannon tumuli in suggesting that the Karaeria tumulus is not a polyandrion but rather forms part of a wider Thessalian pattern of elite burial. Yet in view of the extent of recent excavation of Thessalian tumuli and the amount of material at present

under study (as well as the uncertain chronology of Iolkos and Krannon), it would be unwise to rush to conclusions about the extent of local variation in the role of the material celebration of warfare across Thessaly. Equally, no interpretation of the Ag. Giorgos tumuli can be excluded until further excavation has been completed at the site.

Human mobility

To return to broader issues, the final aspect of early warfare to be considered in this chapter is human mobility. As emphasized earlier, even a brief review of literary sources closest to our period shows clearly that using outsiders at least to supplement local forces was hardly unusual. Not only was there no evident social stigma in fighting for others, but there are instances where this seems to have been commemorated or at least depicted without comment. Thus, for example, Alkaios (Fr. 350, cf. Strabo 13.2.3) celebrated his brother Antimenidas' service in Nebuchadezzar II's Palestinian campaign which culminated in the siege of Ascalon in 604. Sanctuary dedications have already been mentioned and will be considered again presently. Iconographically, there are a number of seventh century depictions in different media of the use of foreign equipment. In Corinth, for example, an MPCI/II aryballos (C2096, near the Huntsmen Painter) from grave B20 in the Lechaion cemetery (Eliot & Eliot 1968, 348-50 with bibliography) shows a conflict between two groups of varied individuals, including archers and naked and clothed warriors (some with hoplite equipment). While a variety of mythological interpretations have been offered for this scene, noting in particular the presence of the Boiotian shield, one must allow the possibility that the variety of figures and equipment depicted also reflects an ethnic mix which, even if shown in a mythological context, would be at least credible to the viewer. And as noted, while one might regard mobilisation via 'friendly assistance' and directly paid service as separate ends of a spectrum of 'mercenary' activity, both carry important social and economic implications, not least when assessing the role of warfare in representing internal state order. Even in

cases where there seems to be strong emphasis on citizen obligations, there is often some indication that it might occasionally be necessary to call upon outsiders. In Ozalian Lokris, for example, where an inscription of *c.* 525-500 (*ML* no. 13) concerning land settlement implies that those who accepted an allotment also accepted shared responsibility for regional defence, there was an additional provision whereby, under pressure of war, a majority of 101 men chosen from the best citizens could decide to bring in at least 200 fighting men as additional settlers.

For those who undertook military service abroad, rewards in booty, if not in direct pay, could be considerable. Almost casual reports of raids for booty and brigandage of various forms are numerous (for example, Pritchett 1991, 324-26 lists the better documented cases of piratical raids), and the luxury enjoyed by eastern commanders on campaign must have been a particularly attractive target. Indeed, Assyrian epigraphical evidence attests to the capture of such riches; in 709, for example, Sargon captured the royal tent and trappings of the Chaldaean king of Babylon, Marduk-apla-iddima (Luckenbill 1926, no. 39), wealth which he described in the socalled Display Inscription of 707 BC (Luckenbill 1926, no. 67). How far down the ranks captured wealth penetrated (and in what quantity) are much debated and largely unanswerable questions. Even in case of Persian war booty, where evidence is much more plentiful, there remains much scope for interpretation (Miller 1997, 43-46), although in cases such as the Neo-Assyrian expansion, the sheer extent of campaigning makes it hard to accept that the average soldier would not profit (Kuhrt 1995, 518-19). On occasion, however, rewards are re-

corded. The dedicatory inscription (SEG 37, 994) on an Egyptian basalt statue erected by Pedon in his native Priene in the late seventh or early sixth century states that he received from Psamettichus a gold arm ring and a city for his service (Bettalli 1995, 69-70). There is no reason to doubt that conspicuous wealth could have been a powerful lure, the basic existence of which would have been largely unaffected by the changing fortunes of the kingdoms and empires of the east during the Early Iron Age and Archaic period. The Near East as a source of Greek mobility of varying kinds has long been stressed (see e.g. Purcell 1990, 38-44), and the assumption that the movement of humans as commodities attested by the Prophets (e.g. Exekiel 27:13 in the case of Tyre) refers simply to slavery (whatever form that may have taken in the various societies of the Archaic world) may be an oversimplification. Thus, for example, Rosalinde Kearsley (1999) has raised the possibility that military motivation lay behind Greek settlement at Al Mina from the mid-eighth century onwards, with movement of human labour perhaps the counterpart of the long history of material interchange between the old Greek world (especially Euboia) and the east (Popham 1994).

The main geographical areas from which Archaic and early Classical Greek mercenaries came (Caria, Lycia and the north and central Peloponnese) have often been emphasized in highlighting the importance of opportunism and poverty as motivating forces. It would, however, be a mistake to regard this as a complete picture. Whether or not one interprets Archilochos's famous celebration of his spear (Ep. 2) as a trading of normal pleasures for a soldier's life (Burnett 1983, 38-39, nn. 15-16) or an ironic analogy with Odysseus' activities at Ismaros (Od. 9.451), it does not sound like a counsel of despair on the part of an impoverished citizen of a poor island. Lycians, Carians and Ionians lived particularly close to areas of patronage and conflict (see Bettalli 1995, part I for a recent review of Archaic evidence). This in turn could spill into their home territory—hence, for example, Kallinos' exhortation to his fellow Ephesians to resist Kimmerian invasion: West fr. 1; Pritchett 1985, 35-36). There is ample literary and epigraphical evidence from the seventh century onwards to suggest that they exploited such opportunities. This ranges from problematic mentions of 'Yawan' on cuneiform military texts from Nineveh (Brown 1983) and on Babylonian ration tablets (Kuhrt 1995, 608—noting with Brinkmann 1989 that the term may refer to Anatolians rather than Ionians), to various sources recording Psamettichus I and his Saïte successors' use of foreign troops (Kuhrt 1995, 636-41) and Herodotus' statement (3.1) that Ionian and Aeolian Greeks were part of the doomed force sent by Cambyses into Egypt. The reputation of Carians as mercenaries (and armourers: Snodgrass 1964b) was particularly well attested. It is, for example, reported by Aelian de nat. an. 12.30, and born out by grafitti in Egypt (including that at Abu Simbel, Ray 1982). A scholiast to Plato Laches 187b cites Archilochos' comment (Ep. 24) 'and I shall be called epikouros like a Carian', in explaining the expression 'putting the risk on the Carian'. There may be a qualitative and a quantitative increase in evidence for Greek military service when one comes to the Persian empire of the early fifth century, but as Miller (1997, 100-3) emphasizes, there is no reason to doubt that this reflects a long tradition of such activity (Purcell 1990, 38-44, a point also recognised by Parke 1933, 3-6). Given the complex nature of interconnections across the Archaic Mediterranean, in everything from trade and manufacture to intermarriage or migration, it need be no more surprising to find Ionians working in Egypt than in Athens, and indeed, similarities in the role of rulers' followers may on occasion have made for an easy translation. And as Fields suggests (1994a, 108-9), references to eastern ruler dedications at Greek sanctuaries, such as the Pharoah Necho II's dedication at Didyma of the linen corselet which he wore at the victorious outcome of his Palestinian campaign in 601 (Herodotus 2.159), may at least in part have been motivated by a desire to maintain connections with, and display status to, those communities of importance as sources of mercenaries. Furthermore, the importance of eastern influences upon the development of certain items of military equipment has long been argued (see, e.g., Snodgrass 1967, 90-91, on the sixth century composite corselet), and consideration of the kind of context where ideas and improvements might be exchanged (to the benefit of Greek or non-Greek parties) again highlights the importance of longterm military interconnections. Indeed, the dissemination of equipment and techniques to neighbouring areas

(initially discussed in the case of Etruria by Stary 1979, 183-98) is a complex issue of great importance, albeit beyond the immediate scope of this chapter.

To turn to the Peloponnese, the military reputation of Arkadia may have early origins, to judge from Homer's references to aneres anchimachitai (Il. 2.604) and epistamenoi polemizein (Il. 2.611). Likewise, Ephorus (FrGHist 70F54) places the origin of instruction in hoplomachia in mid-sixth century Mantineia. Herodotus (8.26.2) is the first source explicitly to mention Arkadian mercenaries in the aftermath of Thermopylae. Nonetheless, accounts of earlier conflicts certainly mention Arkadians fighting abroad, even though they do not specify whether they were paid hands or allies. Thus Pausanias (8.39.4, 8.41.1) notes that Oresthasion sent one hundred hand-picked men at the behest of Delphi to aid the Phigaleians during the Second Messenian war (and even allowing for the considerable historiographical difficulties surrounding this late account, it is wholly plausible that the Oresthasians were allies of the rebels if not mercenaries). By the fifth century, however, evidence is more plentiful. An inscription from Olympia of the first quarter of the century (SEG 11, 1222) records the offering of a bronze group by Praxiteles, a Mantineian emigré who described himself as 'of Syracuse and Kamarina' (perhaps a mercenary who had served among the ten thousand employed by Gelon or a colonist involved in the refoundation of Kamarina), and Pausanias (5.27.2) also saw inscribed dedications made by Phormis, another of Gelon's mercenaries who described himself as 'Arkas Mainalios'. It has been argued, notably by Callmer (1943, 99), that fifth century population increase forced Arkadians into mercenary activity. Yet the traditions noted above and the archaeological record combine to suggest that military service had a much longer history. As noted earlier, archaeological attention has focused on the dedication of miniature arms and armour at a number of sanctuaries, including, most strikingly, Bassai from the second half of the seventh century onwards (coincident as ever with a major expansion in the level of metal dedication). Snodgrass (1974) interprets the Bassai votives as the dedications of Cretan mercenaries, whereas Cooper (1996, 73, 75-79) suggests they were offered by Arkadian mercenaries to symbolise the tools of their trade. The Bassai miniatures may be particularly

realistic, but the fact that comparable shields, swords, and arrowheads are found widely distributed, especially (if hardly exclusively) at Apollo shrines (Fields 1994a, 104-6), would seem to require a balance of general explanation with appreciation of local circumstances. In addition to finds from other Arkadian sites (Lousoi, Tegea, Alipheira, Gortys, and Glanitsa, for example; Voyatzis 1990, 198-201; Iozzo and Pagano 1995, *passim*; Cooper 1996, 72 table 3-2), they appear in the Kynouria (Faklaris 1990, e.g. pl.92), Samos (Brize 1997, 133-35 with earlier bibliography, connecting these finds with initiation rites) and especially on Crete (Hoffmann & Raubitschek 1972, 2, 7; Jarva 1995, 112 with bibliography), to give a far from exhaustive list.

If geography was an important in factor in the east, it is rather poverty that has tended to feature in discussion of Peloponnesian mercenaries. As I will suggest, this distinction may be more apparent than real, although it does in large measure reflect the emphasis of our earliest literary sources. According to Herodotus (5.49), when Aristagoras of Miletus tried to persuade Kleomenes of Sparta to intervene on behalf of the Ionian cities, he used the argument that 'you must needs then fight for straitened strips of land of no great worth—fight for that with Messenians, who are as strong as you, and Arkadians and Argives, men who have nothing in the way of gold or silver, things for which many are spurred by zeal to fight and die'. Arkadians, and to a lesser extent Achaians, did indeed live in mountainous regions (significant parts of which had poor soils), and often maintained pastoral economies. And as Fields (1994b, ch. 4) has emphasized, the situation of Arkadia compares well with the early modern mercenary traditions of Switzerland, Scotland, and Corsica. It is thus tempting to cite the relative poverty of most parts of Arkadia in the kind of resources central to polis economies elsewhere to argue that mercenary service somehow filled a gap in subsistence provision, or was even a counsel of depair. Yet it would be unwise to press this case. While most parts of Arkadia (with the exception of the eastern plains) are poorly suited to the cultivation of cereals, olive and vine, they support such a wide range of other plant and animal resources that it is misleading to regard the region as a whole as poor by any absolute standards (Roy 1999). Furthermore, where we are given information about the

precise origin of early Arkadian mercenaries (generally in later sources, notably Xenophon's Anabasis; Roy 1967, 302-9; Roy 1972), they come from the east of the region (Tegea and Mantineia in particular) where some of the finest agricultural land is concentrated. This would certainly suggest that rather than simply filling a gap, military service was a form of activity that could be integrated into complex economic strategies to permit the exploitation of a diverse range of available resources. But if it was in essence just one economic choice among many, its social consequences and implications for gender rôles as well as other subsistence activities should not be underestimated. Clearly, women could undertake most subsistence tasks, but unless there were other household members (notably children) to help, household duties must have limited their mobility. Upland transhumance, for example, would have coincided with the summer fighting season, and so unless extra hands were available, it may have been necessary to keep livestock on close land throughout the year (see e.g. Xenophon Hellenika 7.5.15 on the pasturing of cattle close to Mantineia, tended by children and the elderly). It is therefore worth stressing the economic constraints and social consequences for communities locked into the mercenary cycle.

Clearly, the case of Arkadia begs the question of the extent to which it is possible to make any meaningful distinction between the motives for undertaking military service in different parts of the Greek world. But perhaps more pertinently, given the growing body of evidence for the importance of community of place in eastern Arkadia in particular by the eighth or early seventh century (Morgan 1999b), it raises important issues concerning the comparative role of warfare in the definition and maintenance of internal community order. Of particular relevance here is the problem of definition of community territory. Arkadia may have been one of the few parts of Greece where there was a major disjunction between territories defined in terms of subsistence and those relating to such diverse needs as defence, tax, or exile. Under such circumstances, it seems hard to relate hoplite tactics to the maintenance of any territorially defined social interests (following the hoplite reform model) or to regard hoplite warfare as a necessarily useful means of solving local disputes. Furthermore, the

broader implications of manpower mobility are worth reiterating, especially as there is no convincing tradition of early Arkadian colonisation.¹⁶ There are certainly interesting comparisons to be made with colonisation as it is increasingly coming to be understood, less it terms of the tidy budding off of polis from polis (a rationalisation current from Thucydides onwards), and more as a messy mix of adventurism and exile, often involving participants from different areas, and revealing complex pragmatic and ideological approaches to such issues as the definition and control of territory and relations with local populations (Purcell 1990; 1997; Morgan 1999c). In neither case need the permanent or temporary removal of part of the adult male population imply absolute stress on land. Survey data from many regions of Greece present a remarkably consistent picture of highly centred settlement in Geometric and Archaic times, with intensive exploitation especially of marginal land a phenomenon of the Classical period at the earliest (Foxhall 1997, 122-29). Rights of access to land and perceived overcrowding may therefore have been primarily social constructs, but practical responses to these problems show significant areas of overlap (see e.g. Morgan & Hall 1996, esp. 198-203, 214-15, on Achaia; van Wees 1999, on broader questions of aristocratic control of land and resources). Both colonisation and war involve the removal of dependents from households. Mercenary service had the advantage of combining material reward with a (hopefully temporary) reduction in the number of mouths to be fed, but in the case of colonisation, where the promise of reward was probably less direct, a balance may be found in the much-debated question of right of return (noting for example, the compulsory enlistment and severe restriction on return imposed in the case of settlement at Kyrene by the Spartan colony of Thera; Herodotus 4.146-58; Malkin 1987, 60-69).

Clearly, military mobility forms part of a complex pattern of commercial and political interaction and cannot be understood in isolation. I suggest that the Early Iron Age and Archaic period saw a wide spectrum of activity, ranging from the hiring of individuals or groups for material reward to 'borrowings' of men such as the Spartan contingent who aided Samian exiles in the 520s BC (Herodotus 3.54-56) and cross-regional military alliances, such as those which may be publicly symbolised

in the names and attributes of the giants on the frieze of the Siphnian treasury at Delphi (Watrous 1982; Brinkmann 1985). From the viewpoint of internal community ordering, it is therefore dangerous to assume that the role of hoplite warfare as a social structuring force would have extended beyond the level of leaders and issues to govern also the patriotic attitudes of fighting men. Indeed, the assumption of an overlap between army and people (in the sense of demos) should not be relied upon; Snodgrass (1980, 90), for example, has commented on the Cretan use of the term stratos for the body politic, but since the oldest attestations of the term carry the neutral sense of mass, to which military meaning may then be added (as e.g. Il. 1.53, 13.308), there is no necessity to suppose a specifically military interpretation during our period. Patriotism and defence of the polis are indeed lauded from Homer onwards, but as noted, largely in the terminology of heroic obligation to show courage and loyalty (Robertson 1997). It is surely in the context of the obligations arising from xenia that one should understand the laconic or downright cynical tone of Theognidea (887-88) 'do not pay too much attention to the loud-shouting herald: it is not for our native land that we are fighting', rather than as a simple reflection of some patriotic duty to fight harder for one's homeland than for allies and fellow aristocrats abroad. Indeed, it is most striking that no pre-Persian war funerary epigram explictly states that the deceased died fighting for his country (Robertson 1997, 150-51). The ideal of fighting as promachos was regularly stressed, but even when the battle ended in defeat and death, 'dying for one's country' was not praised. The more individualistic ethos of mourning in military elegy is perhaps understandable given the sympotic context of its performance and the class bonds it thus reinforces (Bowie 1990). More significant is the fact that inscriptions, as public statements, do not stress patriotism in any modern sense as one of the qualities to which a good aristocrat would aspire.

Conclusion

In this chapter, I have sought to stress the complexity of connections between a diverse range of issues in an attempt to illustrate the extent to which early Greek warfare formed part of a complex of cross-cutting trade and social networks (as discussed, e.g., by Foxhall 1998), both embodying and reinforcing widely shared social and material values. I have also stressed the need to consider the wider context when attempting to use the practice of war and the treatment of equipment as evidence for emerging citizen attitudes in individual communities. Archaeological evidence of equipment can serve as an indicator of such values only to the extent that it was manufactured in a surviving and valued resource (metal), and in the context of wider attitudes to that resource. Shifts in the disposal of weapons and armour do not in themselves offer evidence for a growing role of the state in the exercise of force. Equally, separation of the practical means of pursuing war from the politics of causes and leadership should extend beyond the material to include the acquisition of manpower. Much remains to be done to present a truly rounded picture, and several key issues have received only scant attention in the

limited space here available. Emphasis on international connections and the relationship between war and trade, for example, demands much greater attention to the control and organisation of sea transport and naval warfare (de Souza 1998; Gabrielsen, this volume). The provision of military equipment (in the sense of the origins of styles and technologies as well as the location of major manufacturing centres, see, e.g., Bakhuizen 1976 on Chalcis) has significant economic implications (not least for the development of metalworking). Geographically, Crete, the home of significant and varied early military dedications, demands closer attention, not least because of its proximity to Cyprus and the Levant and the existence of a large and much-debated body of evidence for interchange in men and materials between these areas (Hoffmann 1997).

Much of the evidence discussed in this chapter dates comparatively early in the Archaic period. As is clear from the chronological balance of evidence cited by Lise Hannestad in her contribution to this volume, new currents in the representation of warfare emerge during the period *c.* 520-480 BC which to a significant extent de-

velop from the values discussed here (and certainly reflect the great importance of international connections). Changes in other areas are to some extent parallel—for example, a development in the role of festivals as contexts for the performance of battle narrative represents an innovation, but also a logical extension of the structure and role of earlier Archaic events (Bowie 1986; Boedeker 1995; 1998). The transition between late Archaic and Classical attitudes to warfare is a major issue in its own right, and it is of course essential to recognise the constant shift in attitudes to material goods of all kinds. Thus, for example, Snodgrass (1989-90) has convincingly interpreted

the general decline in votive offerings at sanctuaries from the fifth century as a reflection of a new tendency to convert wealth of various forms (booty included) into other forms of art (especially sculpture). Yet I concur with van Wees (1998) in suggesting that a major shift in the social role of military force is really a phenomenon of the fifth century at the earliest, and that there is a much higher degree of continuity in attitudes to the conduct and significance of war between the Early Iron Age and the Archaic period than has often been supposed.

Department of Classics, King's College, London

Bibliography

- Ahlberg, G. 1971. Fighting on Land and Sea in Greek Geometric Art. Stockholm: Svenska Institutet i Athen.
- Alexandri, O. 1973. Kranos [Boiotiourges] ex Athinon, *AE*, 93-105. Amandry, P. 1987. Trépieds de Delphes et du Péloponnèse. *BCH* 111, 79-131.
- Amyx, D.A. 1988. *Corinthian Vase-Painting of the Archaic Period*. Berkeley: University of California Press.
- Amyx, D.A & P. Lawrence. 1975. *Corinth* VII, ii. *Archaic Corinthian Pottery and the Anaploga Well*. Princeton, N.J.: ASCSA.
- Anderson, J.K. 1991. Hoplite weapons and offensive arms, in Hanson 1991c, 15-37.
- Andrewes, A. 1969. *The Greek Tyrants*. London: Hutchinson University Library.
- Antonaccio, C. 1995. *An Archaeology of Ancestors*. Lanham: Rowman and Littlefield.
- Apostolopoulou Kakavoyianni, O. 1992. Evrimata tis protogeometrikis kai geometrikis periodou apo tis Feres, in *Praktika*. *Diethnes Synedrio gia tin Archaia Thessalia sti Mnimin tou Dimitri R. Theochari*. Athens: TAP, 312-320.
- Archibald, Z. 1998. *The Odrysian Kingdom of Thrace*. Oxford: Oxford University Press.
- Archibald, Z. 2000. Space, hierarchy and community in Archaic and Classical Macedonia, Thessaly and Thrace, in Hodkinson & Brock, 213-33.
- Axenidis, T.D. 1947. *Larisa kai i archaia Thessalia* I, Athens: Sideri. Bakhuizen, S.C. 1976. *Chalcis-in-Euboea, Iron and Chalcidians Abroad*. Leiden: Brill.
- Béquignon, Y. 1937. *La vallée du Sperchios des origines au IVe siècle*. Paris: Les Belles Lettres.
- Bérard, C. 1970. Eretria III. L'Hérôon à la porte de l'ouest. Bern: Francke.
- Bettalli, M. 1995. I mercenari nel mondo greco I. Dalle origini alla fine del V. sec. a.C. Pisa: ETS.

- Blegen, C., H. Palmer & R.S. Young. 1964. Corinth XIII. The North Cemetery. Princeton, N.J.: ASCSA.
- Boedeker, D. 1995. Simonides on Plataea: narrative elegy, mythodic history. *ZPE* 107, 217-29.
- Boedeker, D. 1998. The new Simonides and heroization at Plataia, in Fisher and van Wees 1998, 231-49.
- Bowden, H. 1993. Hoplites and Homer: warfare, hero cult, and the ideology of the polis, in Rich & Shipley 1993, 45-63.
- Bowie, E. 1986. Early Greek elegy; symposium and public festival. *JHS* 106, 13-35.
- Bowie, E. 1990. *Miles ludens?* The problem of martial exhortation in early Greek elegy, in O. Murray (ed.), *Sympotica*. Oxford: Oxford University Press, 221-29.
- Bradley, R. 1990. *The Passage of Arms*. Cambridge: Cambridge University Press.
- Brinkmann, J. 1989. The Akkadian words for 'Ionia' and 'Ionian', in R.F. Sutton (ed.), *Daidalikon. Studies in Memory of Raymond V. Schoder S.J.*, Wauconda, Ill.: Bolchazy-Carducci, 53-71.
- Brinkmann, V. 1985. Die aufgemalten Namensbeischriften an Nordund Ostfries des Siphnier-schatzhauses. *BCH* 109, 77-130.
- Brize, P. 1997. Offrandes de l'époque géométrique et archaïque à l'Héraion de Samos, in J. de la Genière (ed.), *Héra: images, espaces, cultes.* Naples: CJB, 123-37.
- Brown, R.B. 1983. Greeks in Assyria: some overlooked evidence, *CW* 77, 300-3.
- Buchholz, H.-G., & J. Weisner. 1977. Kriegswesen (Arch. Hom. E1). Göttingen: Vandenhoeck & Ruprecht.
- Burkert, W. 1985. *Greek Religion*. (trans. J. Raffan). Oxford: Oxford University Press.
- Burnett, A. P. 1983. Three Archaic Poets. London: Duckworth.
- Callmer, C. 1943. Studien zur Geschichte Arkadiens bis zur Gründung des arkadischen Bundes. Lund: Gleerup.
- Camp, J. 1986. The Athenian Agora. London: Thames & Hudson.

- Camp, J. 1994. Before democracy: Alkmaionidai and Peisistratidai, in W. Coulson (ed.), *The Archaeology of Athens and Attica under* the Democracy. Oxford: Oxbow Books, 7-12.
- Carapanos, C. 1878. Dodone et ses ruines. Paris: Hachette.
- Carman, J. 1994. *Material Harm: Archaeological Studies of War and Violence*. Glasgow: Cruithne.
- Cartledge, P.A. 1979. Sparta and Lakonia. London: Routledge.
- Castriota, D. 1992. Myth, Ethos and Actuality. Official Art in Fifth-Century B.C. Athens. Madison, Wisc.: University of Wisconsin Press.
- Catling, H.W, & E.A. 1980. Objects in bronze, iron and lead, in M.R. Popham, L.H. Sackett & P.G. Themelis (eds.), *Lefkandi* I. *The Iron Age*. London: Thames & Hudson.
- Christiansen, J. 1992. *Greece in the Geometric Period*. Copenhagen: Ny Carlsberg Glyptotek.
- Constantinidou, S. 1992. The importance of bronze in early Greek religion. *Dodone*, 137-64.
- Cook, R.M. 1958. Speculation on the origins of coinage. *Historia* 7, 257-62.
- Cooper, F. 1996. *The Temple of Apollo Bassitas* I. *The Architecture*. Princeton, N.J.: ASCSA.
- Dakaris, S. 1993. Dodona. Athens: TAP.
- Daviero Rocchi, G. 1993. Città-Stato e Stati federali della Grecia Classica. Lineamenti di Storia delle Istituzioni Politiche. Milan: LED.
- Demand, N.H. 1990. *Urban Relocation in Archaic and Classical Greece. Flight and Consolidation*. Norman and London: University of Oklahoma Press.
- de Souza, P. 1998. Towards thalassocracy? Archaic Greek naval developments, in Fisher & van Wees 1998, 271-93.
- Dickey, K. 1992. Corinthian Burial Customs, ca. 1100 to 550 BC (PhD diss. Bryn Mawr College).
- Dougherty, C. 1993. It's murder to found a colony, in C. Dougherty & L. Kurke (eds.), *Cultural Poetics in Archaic Greece*. Cambridge: Cambridge University Press, 178-98.
- Dougleri Intzesiloglou, A. 1994. Oi neoteres archaiologikes evreunes stin periochi ton archaion Feron, *Thessalia*, 71-92.
- Ducat, J. 1994. *Les Pénestes de Thessalie*. Besançon: Université de Besançon.
- Dunbabin, T.J. 1962. Perachora II. Oxford: Oxford University Press.
 Effenterre, H. van. 1994. Ecrire sur les murs, in H.-J. Gehrke (ed.),
 Rechtskodifizierung und soziale Normen. Tübingen: Günter Narr,
 87-95.
- Ehrenberg, V. 1969. The Greek State (2nd ed.). London: Methuen.
- Eliot, C.W.J., & M. Eliot. 1968. The Lechaion cemetery near Corinth. *Hesperia* 37, 345-67.
- Ellinger, P. 1993. *La légende nationale Phocidienne (BCH* Supp.27). Paris and Athens: Boccard.
- Felsch, R.C.S., et al. 1987. Bericht über die Grabungen im Heiligtum der Artemis Elaphebolos und des Apollon von Hyampolis 1978-1982. AA, 1-99.
- Faklaris, P.V. 1990. Archaia Kynouria. Anthropini Drastiriotita kai Periballon. Athens: TAP.

- Felsch R.C.S., H.J. Kienast & H. Schuler. 1980. Apollon und Artemis oder Artemis und Apollon? Bericht von der Grabungen im neu Entdecken Heiligtum bei Kalapodi, 1973-1977. AA, 38-123.
- Fields, N. 1994a. Apollo: god of war, protector of mercenaries, in K.A. Sheedy (ed.), Archaeology in the Peloponnese. Oxford: Oxbow Books, 95-113
- Fields, N. 1994b. The Anatomy of a Mercenary: from Archilochos to Alexander (unpublished PhD thesis, University of Newcastle upon Tyne).
- Fisher, N. & H. van Wees (eds). 1998. Archaic Greece: New Approaches and New Evidence. Swansea: Bristol Classical Press.
- Forrest, W.G. 1966. *The Emergence of Greek Democracy*. London: Weidenfeld & Nicholson.
- Foxhall, L. 1997. A view from the top. Evaluating the Solonian property classes, in Mitchell & Rhodes 1997, 113-36.
- Foxhall, L. 1998. Cargoes of the heart's desire: the character of trade in the Archaic Mediterranean world, in Fisher & van Wees 1998, 295-309.
- Fried, M.H. 1968. War. The Anthropology of Armed Conflict and Aggression. Natural History Press.
- Friedel, D. 1986. Maya warfare: an example of peer polity interaction, in C. Renfrew & J. Cherry (eds.), *Peer Polity Interaction and Socio-Political Change*. Cambridge: Cambridge University Press, 93-108.
- Frödin, O. & A. Persson. 1938. Asine. Results of the Swedish Excavations 1922-1930. Stockholm: GLAF.
- Frost, F.J. 1984. The Athenian military before Cleisthenes. *Historia* 33, 283-94.
- Frost, F.J. 1994. Aspects of early Athenian citizenship, in A.L. Boegehold & A.C. Scarfuro (eds.), *Athenian Identity and Civic Ideology*. Baltimore and London: Johns Hopkins University Press, 45-56.
- Gadolou, A. 1998. Chalkina kai siderenia opla apo to iero sto Ano Mazaraki (Rakita) Achaia. Mia proti parousiasi, in *Praktika tou* E Diethnou Synedriou Peloponnesiakon Spoudon, 6-10 Septemvriou 1995. Athens: Society for Peloponnesian Studies.
- Gellner, E. 1983. *Nations and Nationalism*. Oxford: Basil Blackwell. Griffo, P. 1946. Ultimi scavi e ultime scoperte in Agrigento. *Quaderni di Archeologia Agrigento* 3, 30-31.
- Guarducci, M. 1988. Epigraphical notes, in G.M.A. Richter, *Archaic Gravestones of Attica*, repr. Bristol and Oak Park, Ill.: Bristol Classical Press/Bolchazy-Carducci, 155-72.
- Hägg, R. (ed.). 1983. *The Greek Renaissance of the Eighth Century BC. Tradition and Innovation*. Stockholm: Åström.
- Hall, J.M. 1997. *Ethnic Identity in Greek Antiquity*. Cambridge: Cambridge University Press.
- Hammond, N.J.L. 1967. Epirus. Oxford: Oxford University Press
 Hansen, M.H. 1997a. A note on the classification of Aigition as a polis, in M.H. Hansen (ed.), The Polis as an Urban Centre and as a Political Community. Copenhagen: Royal Danish Academy of Sciences, 173-75.

- Hansen, M.H. 1997b. *Polis* as the generic term for state, in T. Heine Nielsen (ed.), *Yet More Studies in the Ancient Greek Polis*. Stuttgart: Franz Steiner, 9-15.
- Hansen, M.H. 1998. Polis and City-State. An Ancient Concept and its Modern Equivalent. Copenhagen: Royal Danish Academy of Sciences..
- Hanson, V.D. 1991a. The ideology of hoplite battle, ancient and modern, in Hanson 1991c, 3-11.
- Hanson, V.D. 1991b. Hoplite technology in phalanx battle, in Hanson 1991c, 63-84.
- Hanson, V.D. (ed.). 1991c. *Hoplites. The Classical Greek Battle Experience*. London: Routledge.
- Harris, E. 1997. A new solution to the riddle of the *seisachtheia*, in Mitchell & Rhodes 1997, 108-12.
- Hatzopoulos, M. & L. Loukopoulou (eds). 1980. *Philip of Macedon*. Athens: Ekdotike Athenon.
- Heine Nielsen, T. 1996a. Arkadia. City ethnics and tribalism, in M.H. Hansen (ed.), *Introduction to an Inventory of Poleis*. Copenhagen: Royal Danish Academy of Sciences, 117-63.
- Heine Nielsen, T. 1996b. *Pollon ek polion*. The Polis Structure of Arkadia in the Archaic and Classical Periods (unpublished PhD thesis, University of Copenhagen).
- Heine Nielsen, T. 1999. The concept of Arkadia: the people, their land and their organisation, in Heine Nielsen & Roy 1999, 16-79.
- Heine Nielsen T., & J. Roy. 1998. The Azanians of northern Arkadia. *Classica et Mediaevalia* 49, 5-44.
- Heine Nielsen T. & J. Roy (eds.). 1999. *Defining Ancient Arkadia*. Copenhagen: Royal Danish Academy of Sciences.
- Helly, B. 1973. *Gonnoi* I. *La cité et son histoire*. Amsterdam: Hakkert. Helly, B. 1995. *L'état thessalien: Aleuas le Roux, les tétrades et les tagoi*. Lyon: Maison de l'Orient Méditerranéen.
- Herman, G. 1987. *Ritualised Friendship and the Greek City*. Cambridge: Cambridge University Press.
- Herscher, R. 1873. Epistolographie Graeci. Paris.
- Hobbes, T. 1651. *Leviathan*, London (ed. R. Tuck, Cambridge: Cambridge University Press 1991).
- Hodkinson, S. & R. Brock (eds.). 2000. *Alternatives to the Demo-cratic Polis*. Oxford: Oxford University Press.
- Hoffmann, G. 1997. Imports and Immigrants: Near Eastern Contacts with Iron Age Crete. Ann Arbor: University of Michigan Press.
- Hoffmann, H. & A.E. Raubitschek. 1972. *Early Cretan Armorers*. Mainz: Philipp von Zabern.
- Hölkeskamp, K.-J. 1992. Arbitrators, lawgivers and the 'codification of law' in Archaic Greece. *Metis* 7, 49-81
- Holladay, A.J. 1982. Hoplites & heresies. JHS 102, 94-103
- Hornblower, H. 1991. A Commentary on Thucydides I. Oxford: Oxford University Press.
- Houby-Nielsen, S. 1992. Interaction between chieftains and citizens? 7th cent. B.C. burial customs in Athens. *Acta Hyperborea* 4, 343-74.
- Houby-Nielsen, S. 1995. 'Burial language' in Archaic and Classical Kerameikos. *Proceedings of the Danish Institute at Athens* I, 129-91.

- Intzesiloglou, B.G. 1994. Istoriki topografia tis periochis tou Kolpou tou Voulou, in *Thessalia*, 31-56.
- Iozzo, M. & M. Pagano. 1995. Catalogi degli oggetti, in *Scavi di Pallation*. *ASAtene* 68-69 (51-52, 1990-1991), 119-80.
- Jackson, A.H. 1983. Some deliberate damage to Archaic Greek helmets dedicated at Olympia. *LCM* 8 (2), 22-27.
- Jackson, A.H. 1991. Hoplites and the gods: the dedication of captured arms and armour, in Hanson 1991c, 228-49.
- Jackson, A.H. 1992. Arms and armour in the panhellenic sanctuary of Poseidon at Isthmia, in H. Kyrieleis & W. Coulson (eds.) Symposium on the Olympic Games. Athens: DAI, 141-44.
- Jackson, A.H. 1993. War and raids for booty in the world of Odysseus, in Rich & Shipley 1993, 64-76
- Jackson, A.H. 1999. Three possible early dedications of arms and armour at Isthmia, in Morgan 1999a, ch. I.4, 161-66.
- Jarva, E. 1995. *Archaiologia on Archaic Greek Body Armour*. Rovaniemi: Pohjois-Suomen Historiallinen Yhdistys.
- Johansen, K.F. 1923. Les vases Sikyoniens. Paris: Champion.
- Katakouta, S., & G. Touphexis, 1994. Ta teichi tou Farsalou, in *Thessalia*, 189-200.
- Kearsley, R. 1999. Greeks overseas in the 8th century BC: Euboeans, Al Mina and Assyrian imperialism, in G.R. Tsetskhladze (ed.), *Ancient Greeks West and East*. Leiden: Brill, 109-134.
- Keegan, J. 1993. A History of Warfare. London: Pimlico.
- Kilian, K. 1975. *PBF* XIV, ii. *Fibeln in Thessalien von der mykenischen bis zur archaischen Zeit*. Munich: C.H. Beck.
- Kilian, K. 1977. Zwei Italische Kammhelme aus Griechenland, in *Etudes delphiques (BCH* supp.4). Paris: Boccard, 429-42.
- Kilian, K. 1983. Weihungen aus Eisen und Eisenverarbeitung im Heiligtum zu Philia (Thessalien), in Hägg 1983, 131-46.
- Kourou, N. 1980. Tafiko sounolo apo tin periochi Aigiou, in *Stele: Tomos eis mnimin Nikolaou Kontoleontos.* Athens: Phil. Nik. Kontoleontos, 313-17.
- Kraay, C.M. 1964. Hoards, small coinage and the origin of coinage. *JHS* 84, 76-91.
- Krentz, P. 1985, The nature of Hoplite Battle. Cl Ant 4, 50-61
- Kuhrt, A. 1995. *The Ancient Near East c.3000-330 BC*. London: Routledge.
- Kunze, E. 1956. Schildbeschläge. *Olympia Berichte* V. Berlin: de Gruyter, 35-68
- Kunze, E. 1958. Helme. *Olympia Berichte* VI. Berlin: de Gruyter, 18-151. Kunze, E. 1967a. Waffenweihungen. *Olympia Berichte* VIII. Berlin: de Gruyter, 83-106.
- Kunze, E. 1967b. Helme. *Olympia Berichte* VIII. Berlin: de Gruyter, 111-83.
- Kunze, E. 1991. *Beinschienen. Olympische Forschungen* XXI. Berlin; de Gruyter.
- Kunze, E. 1994. Chalkidische Helme IV-VII. *Olympia Berichte* IX. Berlin: de Gruyter, 27-100.
- Langdon, S. 1987. Gift exchange in the Geometric sanctuaries, in T. Linders & G. Nordquist (eds.), Gifts to the Gods. Uppsala: Academia Upsaliensis, 107-13.

- Langdon, S. (ed.). 1993. From Pasture to Polis. Colombia/London: University of Missouri Press.
- Larsen, J.A.O. 1968. *Greek Federal States. Their Institutions and History*. Oxford: Oxford University Press.
- Latacz, J. 1977 Kampfparänase, Kampfdarstellung und Kampfwirchlichkeit in der Ilias, bei Kallinos und Tyrtaios. (Zetemata 66), Munich: C.H. Beck.
- Link, S. 1991. Landverteilung und sozialer Frieden im archaischen Griechenland. (Historia Einzelschriften, 69). Stuttgart: Steiner.
- Lorimer, H. 1947. The hoplite phalanx with special reference to the poems of Archilocus and Tyrtaeus. *BSA* 42, 76-138.
- Luckenbill, D.D. 1926. Ancient Records of Assyria and Babylonia II. Chicago: University of Chicago Press.
- Maaß, M. 1984. Aegina, Aphaia-Tempel. Neue Funde von Waffenweihungen. AA, 263-80.
- Malkin, I. 1987. Religion and Colonization in Ancient Greece. Leiden: Brill.
- Martin, T. 1985. Sovereignty and Coinage in Classical Greece. Princeton, N.J.: Princeton University Press.
- Miller. M.C. 1997. Athens and Persia in the Fifth Century BC. A Study in Cultural Receptivity. Cambridge: Cambridge University Press.
- Miller, S. 1993. *The Tomb of Lyson and Kallikles: a Painted Macedonian Tomb*. Mainz: Philipp von Zabern.
- Mitchell, L.G. & P.J. Rhodes (eds.). 1997. *The Development of the Polis in Archaic Greece*. London: Routledge.
- Morgan, C.A. 1990. Athletes and Oracles. The Transformation of Olympia and Delphi in the Eighth Century BC. Cambridge: Cambridge University Press.
- Morgan, C.A. 1993. The Origins of pan-Hellenism, in R. Hägg & N. Marinatos (eds.), *Greek Sanctuaries. New Approaches*. London: Routledge, 18-44.
- Morgan, C.A. 1994. The evolution of a sacral 'landscape': Isthmia, Perachora, and the early Corinthian state, in S. Alcock & R. Osborne (eds.), *Placing the Gods*. Oxford: Oxford University Press, 105-42.
- Morgan, C.A. 1997. The archaeology of sanctuaries in Early Iron Age and Archaic ethne: a preliminary view, in Mitchell & Rhodes 1997, 168-98.
- Morgan, C.A. 1999a. *Isthmia* VIII. *The Late Bronze Age Settlement and Early Iron Age Sanctuary*. Princeton: ASCSA.
- Morgan, C.A. 1999b. Cultural subzones in Early Iron Age and Archaic Arkadia?, in Heine Nielsen & Roy 1999, 382-456.
- Morgan, C.A. 1999c. The archaeology of ethnicity in the colonial world of the eighth to sixth centuries BC: approaches and prospects, in M. Bats & A. Stazio (eds.), Frontieri e Confini. Atti della 37º Convegno di Studi Sulla Magna Grecia, Taranto Ott. 1997. Taranto: Istituto per la Storia e l'Archaellogia della Magna Graecia, 88-145.
- Morgan, C.A. 2000. Politics without the polis: cities and the formation of the Achaian ethnos, ca. 800-500 BC, in Brock & Hodkinson 2000, 189-211.

- Morgan, C.A. Forthcoming. Ethne, ethnicity and early Greek states, ca.1200-480: an archaeological perspective, in I. Malkin (ed.), *Ancient Perceptions of Greek Ethnicity*. Washington: Center for Hellenic Studies/Harvard University Press.
- Morgan, C. A., & Hall, J. M. 1996. Achaian poleis and Achaian colonisation, in M.H. Hansen (ed.), *Introduction to an Inventory of Poleis. Acts of the Copenhagen Polis Centre* vol.3. Copenhagen: Royal Danish Academy of Sciences, 164-232.
- Morris, I. 1998. Archaeology and Archaic Greek history, in Fisher & van Wees 1998, 1-91.
- Nilsson, M. 1929. Die Hoplitentaktik und das Staatswesen. *Klio* 22, 240-49.
- Osborne, R. 1997. Law and laws: how do we join up the dots? in Mitchell & Rhodes 1997, 74-82.
- Page, D. 1955. Sappho and Alcaeus. Oxford: Oxford University Press. Page, D. 1975. Epigrammata Graeca. Oxford: Oxford University Press
- Page, D. 1981. Further Greek Epigrams. Cambridge: Cambridge University Press.
- Parke, H. 1933. *Greek Mercenary Soldiers. From the Earliest Times to the Battle of Ipsus*. Oxford: Oxford University Press.
- Payne, H. 1931. *Necrocorinthia. A Study of Corinthian Art in the Archaic Period.* Oxford: Oxford University Press.
- Payne, H. 1933. Protokorinthische Vasenmalerei. Berlin: Keller
- Perdrizet, P. 1908. Fouilles de Delphes V, i. Monuments figurés, petits bronzes, terres cuites, antiquités diverses. Paris: Thorin et fils.
- Pikoulas, I.A. 1981/2. H Arkadiki Azania. *Praktika tou B Diethnous Synedriou Peloponnisiakon Spoudon, Patrai 25-31 Maiou 1980*, II. Athens: Society for Peloponnesian Studies, 269-81.
- Popham, M.R. 1994. Precolonisation: early Greek contact with the east, in G. Tsetskhladze & F. de Angelis (eds.), *The Archaeology of Greek Colonisation*. Oxford: OUCA, 11-34.
- Poulsen, E. 1994. Asine II. 6:2. The Post-Geometric Settlement Material and Tombs of the Hellenistic Period. Stockholm: Åström.
- Pritchett, W.K. 1979. *The Greek State at War* III. Berkeley: University of California Press.
- Pritchett, W.K. 1985. *The Greek State at War* IV. Berkeley: University of California Press.
- Pritchett, W.K. 1985. *The Greek State at War* V. Berkeley: University of California Press.
- Pritchett, W.K. 1996. *Greek Archives, Cults and Topography*. Amsterdam: Gieben.
- Purcell, N. 1990. Mobility and the polis, in O. Murray & S. Price (eds.), *The Greek City from Homer to Alexander*. Oxford: Oxford University Press, 29-58.
- Purcell, N. 1997. Review of G. Tsetskhladze & F. de Angelis (eds.), The Archaeology of Greek Colonisation, Oxford 1994. Antiquity 71, 500-1.
- Raaflaub, K. 1997. Soldiers, citizens and the evolution of the early Greek *polis*, in Mitchell & Rhodes 1997, 49-59.
- Rafn, B. 1979. Asine II:6:1. The Graves of the Early Fifth Century BC. Gothenburg: Paul Åström.

- Raubitschek, A. 1949. *Dedications from the Athenian Akropolis*. Cambridge, Mass.: AIA.
- Ray, J. 1982. The Carian inscriptions from Egypt. *JEgyptianArch* 68, 181-98.
- Rich, J. & G. Shipley (eds.). 1993. War and Society in the Greek World. London: Routledge.
- Rihll, T. 1993. War, slavery and settlement in early Greece, in Rich & Shipley 1993, 77-107.
- Risberg, C. 1997. Evidence of metalworking in early Greek sanctuaries, in C. Gillis, C. Risberg & B. Sjöberg (eds.), *Trade and Production in Premonetary Greece: Production and the Crafts-man*. Gothenburg: Paul Åström, 185-96.
- Robertson, G. 1997. Evaluating the citizen in Archaic Greek lyric, elegy and inscribed epigram, in Mitchell & Rhodes 1997, 148-57.
- Robertson, N. 1978. The myth of the First Sacred War. CQ 72, 38-73.
- Roy, J. 1967. The mercenaries of Cyrus. Historia 16, 287-323.
- Roy, J. 1972. Arcadian nationality as seen in Xenophon's *Anabasis*. *Mnemosyne* 25, 129-136.
- Roy, J. 1999. The economies of Arkadia, in Heine Nielsen & Roy 1999, 320-81.
- Salmon, J. 1977. Political Hoplites? JHS 97, 84-101.
- Shapiro, H.A. 1993. *Personifications in Greek Art*. Bern: Akanthus. Shipley, G. 1993. Introduction: the limits of war, in Rich & Shipley 1993, 1-24.
- Sinn, U. 1994. Apollon und die Kentauromachie im Westgiebel des Zeustempels in Olympia. AA, 585-602.
- Sipsie-Esbach, M. 1986. *Protogeometrische Keramik aus Iolkos*. Mainz: Volker Spiess.
- Sismanidis, K. 1987. To archaiko nekrotafeio tis Agias Paraskevis, in *Amitos. Timitikos Tomos gia ton Kathigiti Manoli Androniko*, vol. 2 Thessaloniki: Aristotelian University of Thessaloniki, 787-803.
- Snodgrass, A.M. 1964a. *Early Greek Armour and Weapons*. Edinburgh: Edinburgh University Press.
- Snodgrass, A.M. 1964b. Carian armourers: the growth of a tradition. *JHS* 84, 107-18.
- Snodgrass, A.M. 1965. The Hoplite Reform & History. *JHS* 85, 110-22.
- Snodgrass, A.M. 1967. *Arms and Armour of the Greeks*. London: Thames & Hudson.
- Snodgrass, A.M. 1974. Cretans in Arcadia?. *Antichità Cretesi: Studi in onore di Doro Levi* II. Catania: Università di Catania , 196-201.
- Snodgrass, A.M. 1980. Archaic Greece. The Age of Experiment. London: Dent.
- Snodgrass, A.M. 1989-1990. The economics of dedication at Greek sanctuaries. *Scienze dell'Antichità* 3-4, 287-94.
- Snodgrass, A.M. 1993. The 'hoplite reform' revisited. *DHA* 19.1, 47-
- Snodgrass, A.M. 1996. Iron, in J.N. Coldstream & H.W. Catling (eds.), *Knossos North Cemetery. Early Greek Tombs*. London: Thames & Hudson, 575-97.

- Snodgrass, A.M. 1999. *Arms and Armor of the Greeks*. Revised edition, Baltimore: Johns Hopkins University Press.
- Spiegel, J. 1990. War and Peace in Classical Greek Literature, Jerusalem.
- Stafford, E. 1998. Greek Cults of Deified Abstractions (unpublished PhD thesis, University of London).
- Stary, P. 1979. Foreign elements in Etruscan arms and armour: 8th to 3rd centuries BC. *PPS* 45, 179-206.
- Thessalia. Thessalia. Dekapenta chronia archaiologikis evreunas 1975-1990. Apotelesmata kai prooptikes. Athens: Kapon. 1994.
- Thomas, R. 1996. Written in stone? Liberty, equality, orality and the codification of law, in L. Foxhall & A.D.E. Lewis (eds.), *Greek Law in its Political Setting*. Oxford: Oxford University Press, 9-31.
- Tuck, R. (ed.). 1991. *Thomas Hobbes, Leviathan*. Cambridge: Cambridge University Press.
- Tziaphalias, A. 1990. Agios Georgios Larisas. *Archaiologia* 34, 44-49. Tziaphalias, A. 1994a. Dekapente chronia anaskafon stin archaia Larisa, in *Thessalia*, 153-78.
- Tziaphalias, A. 1994b. Agios Georgios Larisas, in *Thessalia*, 179-88.
- Viviers, D. 1987. La conquête de Sigée par Pisistrate. AntCl 56, 5-25.
- Viviers, D. 1994. La cité de Dattalla et l'expansion territoriale de Lyktos en Crète centrale. *BCH* 118, 229-59.
- Vokotopoulou, I. 1986. Vitsa. Ta Nekrotafeia mias Molossikis Komis. Athens: TAP.
- Voyatzis, M.E. 1985. Arcadia and Cyprus: aspects of their interrelationship between the twelfth and eighth centuries B.C. RDAC, 155-63.
- Voyatzis, M.E. 1990. The Early Sanctuary of Athena Alea at Tegea and Other Archaic Sanctuaries in Arcadia. Gothenburg: Paul Åström.
- Wade-Gery. H.T. 1924. Jason of Pherae and Aleuas the Red. *JHS* 44, 55-64.
- Wallace, R.B. 1987. The origins of electrum coinage. *AJA* 91, 385-97. Watrous, L.V. 1982. The sculptural program of the Siphnian Treasury at Delphi. *AJA* 86, 159-72.
- Weber, M. 1978. *Economy and Society* (G. Roth & C. Wittich eds.), Berkeley: University of California Press.
- Wees, H. van 1992. Status Warriors. Amsterdam: Gieben.
- Wees, H. van 1994. The Homeric way of war: the Iliad and the hoplite phalanx. *Greece and Rome* 41, 1-18, 131-55.
- Wees, H. van 1995 Princes at dinner. Social event and social structure in Homer, in J.P. Crielaard (ed.), *Homeric Questions*. Amsterdam: Gieben, 147-82.
- Wees, H. van 1998. Greeks bearing arms. The state, the leisure class and the display of weapons in Archaic Greece, in Fisher & van Wees 1998, 333-78.
- Wees, H. van 1999. The mafia of early Greece: violent exploitation in the seventh and sixth centuries BC, in K. Hopwood (ed.), *Organised Crime in Antiquity*. London: Duckworth, 1-56.
- Wells, B. 1990. The Asine sima. Hesperia 59, 157-61.
- Whitley, J. 1994. The monuments that stood before Marathon: tomb cult and hero cult in Archaic Attica. *AJA* 98, 213-30.

Notes

I am most grateful to Lise Hannestad and Tønnes Bekker-Nielsen for their invitation to speak at this conference and for their generous hospitality in Copenhagen. This paper has benefitted greatly from discussion during and after the conference, and especially from the detailed criticisms of Hans van Wees, Anthony Snodgrass and Rosalinde Kearsley. I gratefully acknowledge financial support under the Research Leave Scheme of the British Academy.

- While variation between regional schools of Archaic vase painting has been stressed (notably by van Wees op.cit.), it is also important to consider the potential impact of regional variation in syntax and subject matter in ostensibly more homogeneous Geometric painting. The pioneering study of battle depictions, Ahlberg 1971, is essentially a study of Attic material, and while finds from other regions are noted, potential differences are not considered. This remains a topic for future study.
- 2 For Archaic and Classical evidence, see Poulsen 1994, 29-30; Rafn 1979; Wells 1990.
- This is not, however, a universally held view: see, for example, Rihll 1993, 86-88, who stresses the insecurity of most poleis.
- 4 At Demetrias, for example, metal finds consist largely of personal ornaments: *Delt* 40 1985, 186-91; *Delt* 42 1987, 246-51. At Argissa Magoula, a Boiotian fibula was found by chance along with an Archaic shieldband and a human figure hydria handle: Kilian 1975, 2, 3. The exceptional case of Ag. Giorgios Larisa is considered below.
- 5 Delt 21 1966, 287; Delt 31 1976, 206-9; Delt 32 1977, 149-52; Delt 33 1978, 181-83; Delt 34 1979, 240; Delt 35 1980, 301-3; Delt 36 1981, 271; Delt 38 1983, 229.
- 6 The recent consensus of opinion does not view the depiction on the Chigi Vase as an orthodox phalanx, although for widely differing reasons. Thus, for example, van Wees 1994, 143 sees the formation as more open and fluid than that of the Classical phalanx, with differential degrees of motion between ranks, whereas Krentz 1985, 52 sees it as unduly tight. See also Anderson 1991, 18-
- 7 Huntsmen Painter Group: Perachora aryballos (Dunbabin 1962, 15-17); Corinth CP 2096 from Lechaion (Eliot and Eliot 1968, 348-50). Chigi Group: Syracuse museum, Gela aryballos (Johansen 1923, 99 pl.34:2); Corinth CP 2649 (Amyx and Lawrence 1975, pl.1 no.1); Villa Guilia 22679, olpe from Veii (Payne 1931, 71, fig.17; EAA VII (1966), plate opposite p.138 for detail of hoplites; Amyx 1988, 32, no.3); London BM 1889.4-18.1, aryballos from Thebes (Amyx 1988, pl.11:1a-b = 'Macmillan Aryballos'); Berlin 3773, aryballos from Kamiros (Johansen 1923 pl.32:1a-e); Louvre CA 1831, aryballos (Payne 1931, pl.1:5). Misc: Snodgrass 1964a, pl. 28, alabastron in Berlin.

- 8 A similar argument could be made for certain instances of weapons in burials, as e.g. Camp 1986, 30-31 on the EG warrior cremation from the Athenian Agora (although in this case at least, one might argue that wrapping a sword around the urn was simply a practical way of fitting it into the grave). The extent of mutilation in western European votive deposits of all kinds is noted by Bradley 1990, 113, 176.
- On the treatment of heroic burials and their relationship to ancestor cult: Antonaccio 1995, 221-43. Van Wees 1998, 363-65, makes an analogous point in emphasizing that the omission of weapons from symposium scenes in Attic vase painting does not necessarily imply their absence in real life, but rather derives from artists' emphasis upon other aspects of the event. On sculptural representations, see Hannestad, this volume.
- 10 Parke 1933, 3-13 rightly acknowledges the role of mercenary service, especially in connection with tyrants, but focuses on paid mercenaries rather than non-local contingents acquired via other social channels; see discussion below.
- These remain largely unpublished: for brief notes see Hammond 1967, 429-438; Carapanos 1878, pl.57:6, pl.58:1, 3, 5, 9; Snodgrass 1964a, 41, 47, 232; see also the hoplite figurine of *c*.530-510, Dakaris 1993, figs. 25-26.
- Warrior imagery among small-scale Thessalian bronzes is particularly striking. See, e.g., Buchholz and Weisner 1977, 18, 23, pl.XIII (Karditsa warrior); Christiansen 1992, no. 24; Langdon 1993, 194-97 (LG helmetted warrior of smiting god type, Menil Collection, Houston, with parallels from Philia and Volos).
- Other comparable Thessalian reformers are cited in later sources, notably Skopas the elder, grandfather of Simonides' patron Skopas the Drinker (Xenophon, *Hellenika* 5.1.19, 6.1.12), and Thessalos (Charonax, reported by Stephanos of Byzantion s.v. Dorion, *FrGHist* III.338.8). That the aristocracy maintained rights of government, and thence presumably other reforming powers, is clear in Pindar's praise of the family of his Aleuad patron Thorax (*Pyth.* 10.69-72).
- 14 Robertson 1978, 64-65 suggests that he was mentioned, or his importance inflated, to flatter one of Philip II's senior generals of the same name.
- This view is not undisputed. For the suggestion that the Peisistratid imposition represents a mild continuity of an accepted tax practice, see van Wees 1999, 21-22, 32; this volume.
- 16 Cypriote foundation legends: Voyatzis 1985. For the supposed foundation of Gortyn from Tegea: Pausanias 8.53.4 (compare e.g. Conon 26 FGrHist 36, who has it founded from Lakonian Amyklai).

The Myth of the Middle-Class Army: Military and Social Status in Ancient Athens¹

Hans van Wees

'The wiry, sunburnt working man' cannot help thinking rebellious thoughts when he sees beside him in the line of battle 'a rich man, who lives his life in the shade and carries lots of superfluous flesh, all out of breath and without a clue'. In private, he will mutter to his peers: 'These men are ours; they are nothing'. Or so Plato imagined (Republic 556ce). This vignette of class antagonism within a citizen army reminds us that historians simplify in speaking of the hoplites, the Greek heavy infantry, as if these constituted a single social group, a 'hoplite class'. The infantry included both the wealthy, leisured classes (plousioi) and those who had to work for a living, the 'poor' (penêtes). At the start of the Peloponnesian War, the life of the conspicuously rich Alcibiades was saved in battle by the ostentatiously poor Socrates (Plato, Symposion 219e-220e), and at the outbreak of the Corinthian War, 'capable and enthusiastic' soldiers who could only afford to serve if provided with 'travel money' by their richer neighbours (Lysias 16.14) served alongside the likes of Mantitheus—the very model of an upper-class Athenian, with his long hair, his cavalry service, and his royal connections abroad (ibid. 4, 13, 18).

Modern scholars have generally played down such class distinctions. It is widely believed that the vast majority of hoplites were of roughly the same social and economic status and formed a 'middle class', consisting mostly of independent farmers. Indeed, many have argued that it was above all the shared experience of warfare which turned these farmers into a self-aware and more or less cohesive social group. As heavy infantry be-

came the dominant military force in archaic Greece, those who could afford the hoplite panoply of bronze armour and took their place in the phalanx not only came to look down on the lower classes too poor to afford this kind of equipment, but also became less deferential towards the upper classes, and developed a sense of solidarity and equality amongst themselves. Borrowing from Aristotle, it has been claimed that military developments of the seventh century BC led local aristocracies to cede power to the new 'middle class' (to meson) and introduce a form of democracy (Politics 1297b16-28).² War is thus seen as a driving force in shaping social and political structures.

Some aspects of this model have been challenged,³ but the idea that hoplites formed a largely unified, cohesive group has not been questioned. I shall argue, however, that in Athens, and perhaps elsewhere, hoplites were economically and politically divided right down the middle. The split was not just between a few rich men on the one hand and a broad middle class on the other, but between the wealthier half of the hoplites who had certain political privileges and duties, and the poorer half of the hoplites who had neither. Recognizing this internal division has serious implications for our understanding of archaic and classical Athenian history: it means that the structure of society and politics was shaped by the distribution of wealth, regardless of the differentiation of military functions, and that most 'democratic' rights were, officially at any rate, much less widely shared than we normally imagine.

Property classes in politics and war

In the early sixth century BC, Solon's reforms established the principle that access to political office in Athens depended on property qualifications. 'Solon', says Aristotle,

established the democracy of our forefathers by finely blending the constitution ... because [he] appears to have ceded to the people the most necessary power—to vote for and audit the government offices (for if it did not have that right the people would be a slave and an enemy)—while he reserved all these offices for those who were notable (*gnôrimoî*) and wealthy (*euporoî*): the *pentakosiomedimnoi* and the *zeugitai* and [between these two] a third class known as 'hippad'. The fourth class was the 'thetic' and its members had no access to any office.4

These property classes retained their political significance at least until the end of the fifth century. The office of archon was officially opened to the *zeugitai* as late as 457 BC, and in 403, at the end of the civil war, officials were required by decree to render account only to the top three classes. Solon's classes still existed in the late fourth century, but by then their political role had become nominal: property qualifications for office, although legally still in force, were no longer upheld. 6

That the property class system had a military dimension is attested in Thucydides' account of the Peloponnesian War. We are told that among the hoplites mobilized for the Sicilian expedition 'there were of the Athenians themselves 1,500 from the list (*ek katalogou*), and 700 *thêtes* as marines for the ships' (6.43.1). In other words, those of zeugite status and above had their names placed on a list—whether a permanent register or a list drawn up for the occasion?—while the members of the lowest class did not. By implication, the top three classes, unlike the bottom class, were under an obligation to serve as infantry. This was a legal, not just a moral obligation: a lawcourt speech *For The Soldier*, dating to the Corinthian War, for instance, speaks of generals fining and threatening to imprison a man who pro-

tests at being 'listed' too often (Lysias 9.4-6). We will return to the precise military status of the class of *thêtes*. The role of property classes in the allocation of military duties is confirmed by the Athenians' response to a crisis in 428, when they were forced to man a fleet exclusively with citizens and metics, but exempted the top two classes, *hippeis* and *pentakosiomedimnoi* (Thucydides 3.16.1).

Although we have no explicit evidence that the property classes already had a military dimension in early Greece, it is safe to infer that they did. The name *zeugitai*, 'yoked men', almost certainly refers to fighting in a rank, sometimes called 'a yoke' in Greek, which strongly suggests that from the moment it was created, whether as part of Solon's reforms or even earlier, this class was defined primarily by its duties in war.⁸ In the course of the fourth century, however, the property classes seem to have lost their role in military organization along with their political role, as mobilization 'from the list' was replaced with different systems and the obligation to serve was eventually extended to almost the entire adult male citizen population.⁹

So, from the beginning of the sixth century (if not earlier) to the end of the fifth century (if not later) only the top three property classes had access to political office and the obligation to fight in the heavy infantry, while the lowest class had only 'the most necessary power' and was under no obligation to serve. The question is: where did the dividing line between the two groups lie?

Scholars have usually—and on the face of it quite reasonably—assumed that the obligation to serve, and the attendant political rights, extended to all who could afford to serve as hoplites, perhaps up to half of all adult male citizens. The evidence, however, suggests that the zeugitai were a much more exclusive group. In discussing Solon's restriction of officeholding to those of zeugite or higher status, Aristotle, as cited above, speaks of these men as 'notable and wealthy'. Later in the Politics, he again says: 'in Athens, when they were unsuccessful with the infantry, the notables became fewer, because during the Spartan [i.e., the Peloponnesian] war they levied armies from the list' (1303a8-10). Clearly, the zeugitai, who

constituted the bulk of those 'on the list', are, to his mind, among the 'notables'. To Despite thinking of hoplites as a 'middle class', Aristotle thus saw the *zeugitai* as part of a distinguished elite. Plutarch concurred that Solon's intention in using property classes was 'to re-

serve *all* existing offices for the *wealthy* (*euporoi*)' (*Solon* 18.1). An investigation of the zeugite property census shows that the 'yoked men' were indeed very well-to-do, and that their number must have been much smaller than the total number of citizen hoplites.

The relative wealth of the zeugitai

Three different sources tell us that Solon's property classes were defined in terms of annual agricultural produce expressed in 'dry and liquid measures'. The highest class, the pentakosiomedimnoi or 'five-hundred-bushel men', produced, as their name indicates, at least 500 medimnoi. This amounts to more than 20 metric tonnes of wheat or 16 tonnes of barley; or, assuming that the equivalent liquid measure was the metrêtês, it might have amounted to almost 20 hectolitres (c. 440 gallons) of wine or olive oil. The second class, the hippeis or 'horsemen', produced at least 300 medimnoi. The third class, the zeugitai, produced at least 200 medimnoi, amounting to about 8 metric tonnes of wheat, or almost 6.5 tonnes of barley, or just under 8 hectolitres (c. 175 gallons) of wine or oil. Anyone producing less was rated among the thêtes or 'hired labourers'."

The gap between the *hippeis* and the *zeugitai* is remarkably narrow. ¹² An annual harvest of 300 *medimnoi*

apparently enabled landowners to keep horses, as the label 'horsemen' indicates,13 and art and literature leave no doubt that from the Dark Ages onwards horses were the ultimate symbol of wealth in Greece. The zeugite census thus amounted to no less than two-thirds of what it took to be regarded as very 'rich'. The gap becomes even narrower when one considers just how high is the maintenance cost of horses. Apart from grass and hay, a horse would eat at least 30 medimnoi of barley per year, 14 and since it was customary to keep at least two horsesyoked to a chariot or ridden as a pair by the owner and a mounted attendant—no less than 60 medimnoi, or 20% of the minimum annual income of a hippeus, would go towards feeding the animals.¹⁵ Without even counting the cost of acquiring horses, hippeis at the bottom of the scale would therefore be left with a 'disposable income' of only 240 medimnoi per annum, less than that of zeugitai halfway up their census class.

The absolute wealth of the zeugitai

The impression that the 'yoked men' were quite wealthy is confirmed by a calculation of just how much food and drink 200 measures of agricultural produce represent—a point overlooked until recently, when Lin Foxhall suggested that the annual grain harvest of a zeugite farm would have been enough to feed up to 40 people (1997, 130). We shall see that this is an overestimate, but the vital point remains: a zeugite's income far exceeded his family's subsistence needs.

Part of any grain harvest must serve as seed for the next and is ploughed back into the soil rather than consumed. How large a part varies greatly with the fertility of the soil and the techniques of cultivation. With intensive cultivation, Greek farmers might have achieved a

seed:yield ratio of 1:10, but this theoretical maximum was rarely reached. Scattered figures for modern Greece prior to the introduction of chemical fertilizers suggest ratios as low as 1:3 and no more than 1:5, while surveys of early modern European agriculture (not including Greece) show that in most places ratios ranged from 1:4 to 1:7. The Roman agronomist Columella claimed that 1:4 was usual for Italy. For the sake of argument, we will adopt a worst-case scenario and assume the least favourable figures, 1:3, which would mean that a zeugite expended one-third of his harvest, 67 *medimnoi*, on seed grain.

A further proportion of the produce must be set aside as fodder for the plough oxen. Although oxen eat great quantities of food, Columella's detailed discussion of their rations shows that the bulk of their nutrition came from grass, hay, leaves, and waste products such as chaff and grapeskins, none of which would have counted as part of the farm's yield of 200 measures. Of fodder crops, which presumably did count, the animals were fed relatively little: either 20 litres of bitter-vetch, or 39 litres of chickpeas, or 69 litres of lupines, per ox per year. The Even this last quantity amounts to less than 3 medimnoi per year for a span of oxen.

After subtracting the maximum for seed and animal fodder, then, the zeugite is left with 130 measures. In principle, this is still enough to feed 20-25 people, for it is generally agreed that 5 or 6 medimnoi (200-250kg) of wheat produce enough calories to sustain one adult for a year. 18 At the other extreme, however, Spartans are each said to have contributed to their messes 18 Attic medimnoi of barley meal and 12 Attic metrêtai of wine per year. At this rate, the zeugite farm could have fed only about four people, but this diet must have been highly untypical, since it provides almost twice as many calories as required even by 'soldiers on active duty'. 19 Other figures for daily rations, less excessive than the Spartan diet, suggest a norm of one choinix of grain (or just over a litre) and one or two kotylai of wine (at most half a litre),

which has been called a 'generous sufficiency'. ²⁰ This adds up to 7.5 *medimnoi* plus 2.5 to 5 *metrêtai* per year, and we may add 1 or 2 *metrêtai* of olive oil to complete the annual requirement of an adult male. ²¹ Given a total requirement of between 11 and 14.5 measures, the zeugite farm could feed between nine and twelve adult men. Bearing in mind that women, children, and slaves will have received smaller quantities of food (Garnsey 1999, 100-12), and especially of wine, such a farm could sustain *ten to fifteen* persons.

Assuming a family of five, the *zeugitês* could thus easily afford to keep, say, three slaves, and still have a surplus of some 26-60 measures, 13-30% of the harvest, to store, barter, or sell. A farmer in this position was clearly far above subsistence level. More to the point, since hoplite arms and armour cost the equivalent of about thirty *medimnoi* of grain, 22 he might have been able to afford a new set of equipment *every year*. Most to the point, many members of the lowest property class, even if they had only half the annual income of the zeugite, might have been in a position to feed their households and still, over the course of a few years, save up enough to buy themselves sufficient arms and armour to join the hoplite phalanx. 23

The size of the zeugite farm

A third approach to assessing the wealth of the *zeugitai* is to calculate how large their farms had to be in order to produce a harvest of 200 dry and liquid measures. In the absence of sufficient ancient evidence for average yields per hectare or acre, we can only proceed by comparing yields in modern Greece. Many earlier attempts to do so were forced to rely on evidence for the harvest of only one or two years—which not surprisingly produced widely different results²⁴—but recently more extensive and reliable data have been made available by Eberhard Ruschenbusch and Thomas Gallant (see *table 1*). The main question is now how to derive ancient yields from modern statistics.

Since Gallant's figures are based on the broadest range of harvests, it seems best to adopt his average modern barley and wheat yields of 732 and 674 kg/ha

across Greece, and, most relevant for our purposes, of 794 and 629 kg/ha for Attica, as the basis for estimating yields in antiquity. He himself claims 'that ancient yields may well have been higher': modern yields may have fallen due to a shortage of labour power. Most scholars, however, believe that, in the absence of chemical fertilizers, ancient yields must have been lower. The introduction of fertilizers in the early 1930s certainly caused yields to climb steeply, as Ruschenbusch's figures demonstrate: barley yields rose by 46% and wheat by 61%. An additional argument for assuming lower ancient yields is that selective seeding practices must have bred superior, more productive strains of cereal over the last two-and-a-half millennia (Sallares 1991, 313-72).

Most ancient evidence is far too anecdotal to be of use, since it highlights fantastically good and cata-

Table 1: Modern Greek grain yields (kg/ha)

	R	Gallant 1991, 77			
	1921-32	1933-38	1921-38	1911-50	
a. Barley					
Range:					
– of regional yields	440-880	640-1,200	540-970	<u>-</u>	
– of annual averages	560-860	740-1,050	560-1,050	529-1,097	
Average	640	880	720	732	
Attica/Boeotia	630	920	730	794	
b. Wheat					
Range:					
– of regional yields	410-750	560-1,000	460-770	-	
– of annual averages	360-620	620-1,080	360-1,080	470-903	
Average	510	820	620	674	
Attica/Boeotia	490	790	590	629	

strophically poor harvests, but it does offer some support for the view that ancient averages were low. A relatively sober assessment is that of Columella, who recommends sowing rates of 4 or 5 *modii* of wheat per *iugerum* (4 or 5 x 8.62 litres per 0.25ha), which equals 138-172 litres or 107-133kg per hectare, and 5 or 6 *modii* of barley per *iugerum*, equalling 172-208 litres or 106-129kg per hectare (*De Re Rustica* 2.9.1; 2.9.15-16) Given his seed:yield ratio of 1:4, this would amount to a harvest of 425-530kg/ha.²⁷ Columella's estimated sowing rates, of course, relate to Italy, but they are quite similar to what is known of modern Greek practice.²⁸

An inscription listing the offerings of first fruits of wheat and barley from the territory of Athens and its dependencies to Demeter at Eleusis in 329/8 BC (*IG* II² 1672) has also been used to try and calculate the yields for that year. On the assumption that only 10% of Attica was under grain cultivation, the offerings imply an average yield of 518kg/ha, which fits with nineteenth-century figures, but 10% is a low estimate, and higher percentages produce dismally small harvests.²⁹

We should, therefore, take Gallant's averages for 1911-50 not as a minimum, nor as 'standard' (Garnsey 1992, 148), but as the *highest* probable level of ancient yields. In order to produce 200 *medimnoi* of barley (6,448kg) at

a maximum rate of 794kg/ha, or the same amount of wheat (8,056kg) at a rate of 629kg/ha, a *zeugitês* would thus have needed to cultivate *at least* 8.1ha (*c.* 20 acres) of barley or 12.8ha (*c.* 32 acres) of wheat.³⁰

The total acreage needs to be raised to allow for part of the arable land to lie fallow. Some scholars uphold the traditional view that all farmers at any one time had only half their land under cultivation, leaving the other half uncultivated so as to allow the soil to recover; others argue that a range of more intensive systems of cultivation existed, involving crop-rotation and the integration of agriculture with animal husbandry. Many farmers probably would indeed have been forced or tempted to adopt a regime without fallow, but the sources clearly show that biennial fallow was common and regarded as desirable.³¹ We must conclude that many, but not necessarily all, *zeugitai* would have needed a farm of 16.2 to 25.6ha (40-64 acres).

Producing 200 measures of wine would have taken far less land; producing the same quantity of olive oil far more. Columella claims that an absolute minimum yield of wine in Italy was *c.* 20hl/ha (20 *amphorae* per *iugerum*), and that yields of 30 and 40hl/ha were quite ordinary (3.3.4). Among the very few modern figures cited are averages of 17-19hl/ha for eighteenth- and nine-

teenth-century France.³² For ancient yields, French surmised a range of 11-17hl/ha on the grounds that the ancient yield could 'hardly ... have been much above half that of modern times', while the highest estimate is *c*. 30hl/ha, offered by De Sanctis and Jardé. Most commonly cited is the middle of this range. A recent survey notes that '25 hectolitre is an average very often used for Greece', and this would seem to be a not ungenerous figure to adopt.³³ At this rate, it would take a farm of only 3.1 hectares (*c*. 7.5 acres) to produce 200 liquid measures.

The yield of olive trees varies widely but scholars are now largely agreed on a 'pan-Mediterranean average' of about 2kg (or 2.3 litres) of oil per tree. Due to less efficient pressing, ancient yields must have been rather lower. The maximum number of trees per hectare is thought to be 180. Assuming a yield of 2 litres per tree, the total yield would be 3.6hl/ha, and the production of 200 *metretai* would have required 21.6ha (*c.* 54 acres). ³⁴

Finally, if we are to establish the minimum size of a zeugite holding, we need to know what proportion of the average zeugite farm was devoted to each of these major crops.35 Gustave Glotz guessed that wine and barley would each account for half the measures produced,36 but he assumed too large a proportion of wine. Expressed in terms of 'measures', both the abundant Spartan mess contributions and the common ration of 1 choinix of wheat (1/48th of a medimnos) and 2 kotylai of wine (1/72nd of a metrêtês), cited above, contained grain and wine in a proportion of 60:40. In less large rations, we find a proportion of 75:25, and still smaller proportions of wine are attested.³⁷ Measures of grain eaten must have outnumbered measures of wine drunk by at least 3:2. The pattern of 'home' consumption—whether directly by the producing household or more generally by the population of Attica—should be closely reflected in the pattern of production: a higher share of land would have been devoted to viticulture only if Attic wine were widely produced for export, but there is no sign of that. Indeed, a law of Solon prohibited the export of any agricultural produce except olive oil (Plutarch, Solon 24.1-2). On the other hand, more grain would have to be produced than would be consumed, since some of it had to be used for seed, and we must accordingly raise the proportion of grain cultivated to at least 65:35.38

Since the Athenians not only used, but famously exported olive oil, a considerable part of the land must have been given over to the cultivation of olives, and some part of the average *zeugites*' 200 measures must have been in olive oil. A survey of one small and marginal deme, Atene, shows that 28% of its cultivable land consisted of terraces on which olive trees were most probably grown (Lohmann 1993, 34), but we cannot tell whether this was at all representative, and we have no other evidence on which to base calculations.

Lastly, in the First Fruits inscription from Eleusis the proportion of barley to wheat offered is about 11:1. It has been plausibly argued that this represents a bad year, which would have affected wheat more seriously than barley, and that the normal proportion of measures produced would have been about 9:1 or 8:1 in favour of barley (Garnsey 1988, 102-3).

Taking all this into consideration, and setting an arbitrary, but low, amount of 10 metretai as the average production of olive oil per farm, we arrive at the following figures. It would take at least 1.1 ha to produce ten measures of oil (390 litres). If the remaining 190 measures are divided 65:35 between grain and wine, the vineyard contributes 66.5 measures (25.9hl), which would require about 1ha. The arable land contributes 123.5 measures, divided 9:1 between wheat and barley, which means 12.35 medimnoi of wheat (497 kg) and 111.15 medimnoi of barley (3,583 kg), requiring 0.8 and 4.5ha, respectively. The total requirement is thus 7.4ha without fallow, and 12.7ha with biennial fallow for both wheat and barley. Assuming that, despite its apparent commonness, only about a quarter of farmers actually practiced biennial fallowing, a farm producing 200 measures would on average require 8.7 hectares of land.39

This is an 'average' figure only in the sense that it represents the mean of a range of no doubt very different 200-measure farms, as small as 3ha where the farmer chose to produce nothing but wine, or as large as 26ha where the farmer practiced extensive fallowing and grew nothing but wheat. The figure of 8.7ha is, on the other hand, a *minimum* insofar as it represents the average amount of land required if one assumes the highest plausible yield figures, the highest plausible proportion of crops which require proportionally least space (wine and barley), and a minute proportion of fallow land. Zeugite

farms may perfectly well have been much larger; it seems inconceivable that they were any smaller.⁴⁰

At the minimum average ratio of 8.7ha per 200 measures, then, the property class of *zeugitai* covers farms with an average size of 8.7-13ha, *hippeis* 13-21.75ha, and *pentakosiomedimnoi* 21.75ha or more. A farm falling in the middle of the *thêtes* property bracket would on average be 4.3ha in size, and this happens to be almost exactly the size of what, by common consent, was the typical 'family' or 'hoplite' farm. Both textual and archaeological evidence show that land was often allotted in parcels of 40 to 60 *plethra*, 3.6 to 5.5ha (or 9 to 14 acres), and it has been convincingly argued that this was enough not only to feed a family but to enable military service. ⁴¹ Moreover, a farmer would need to own about 5

ha before he could afford to keep a team of plough oxen, 'one of the most distinctive elements of social differentiation within the peasantry'. ⁴² A 'natural' dividing line apparently ran through the farming population around the 4 or 5 hectare mark—but the line between *zeugitai* and *thêtes* was drawn at a level *twice as high*. ⁴³

In classical Athens a *plethron* of land often sold for at least 50 drachmas, and the monetary value of the 'typical family farm' would thus have been some 2,000 or 3,000 drachmas. The average zeugite farm, at 10.85ha or 120 *plethra*, on the other hand, would have been worth 6,000 drachmas, or 1 talent—just reaching the magical property threshold which, as defined by John Davies, separated the *leisure class* from the working classes.⁴⁴

The number of zeugitai and the number of hoplites

If zeugites were as affluent as we have argued, they cannot have been very numerous, simply because space for their large farms was severely limited.⁴⁵ How much of Athens' territory was under cultivation in antiquity is another matter of debate, but on the most generous estimate 40% of Attica's 2,400km² 'was probably exploited for agriculture of some sort', and for our purposes it is enough to adopt this figure.⁴⁶ How many farms of each property class could this area of 96,000ha accommodate? We have some figures for classical Athens which allow us to calculate at least some parameters of the possible, and to establish that *zeugitai* probably provided only *half*, or less, of the number of citizen hoplites available to Athens at the beginning of the Peloponnesian War.

Thucydides tells us that in 431 BC the Athenians could levy 1,200 cavalry and 13,000 citizen hoplites, not including 'the oldest and the youngest' who were assigned to guarding the city walls and other fortifications (2.13.6-7). Even if these guard troops included only those aged 18-19 and 50-59, the total number of hoplites of all ages must have reached about 18,000. Given the scale of Athens' fortifications, emphasized by Thucydides, the home guard may well have demanded a larger proportion of hoplites, and some have suggested totals of up to 25,000.⁴⁷ For the sake of argument, we will adopt the

lower figure, and calculate what percentage of it could have consisted of men of zeugite census and above.

A simple multiplication shows the scale of the problem: at an average 10 hectares each,48 18,000 hoplites need almost twice as much cultivable land as was available in Attica. This sum, it must be said, is too simple, because 18,000 hoplites cannot be simply equated with 18,000 farming households. For one thing, it is likely that, by the late fifth century if not earlier, income derived from sources other than land would also-somehow—count towards one's property assessment, so that we must allow for a larger number of households than could be sustained by the land alone. If we liberally assume that as much as a quarter of the hoplites' collective incomes derived from sources other than land, the requirement falls from 180,000 to 135,000 ha. Secondly, some households must have provided more than one hoplite. The average number of able-bodied adult males between 18 and 59 in each household may have been as high as 1.25,49 which means 108,000 ha would have sufficed for them—if there had been that much farmland.

Evidently, not all hoplites could have been *zeugitai*. The problem becomes even more acute when we consider how much land must have been owned by the other property classes. Some land must have been in the hands of those who were too poor to serve as hoplites.

The total number of adult male citizens at this time has been variously estimated, but never at less than 40,000, and the most careful discussion suggests that it may have been as high as 60,000.50 Apart from the 18,000 hoplites, there were thus another 22,000-42,000 citizens, and they cannot all have been landless. At the end of the war, at most a quarter of citizens of any class did not own land.51 Deducting the same proportion from our figures for 431 BC, we are still left with between 12,000 and 27,000 'sub-hoplite' citizens, or 9,600-21,600 households, owning a least a little land. Even if these households derived two-thirds of their bare subsistence from sources other than their tiny plot, they needed at least an average 1 ha each, adding up to 10-22.5% of the cultivable land.

The top two property classes also made great inroads. We know that Athens had three boards of ten Treasurers, a position which in the fifth century was open only to *pentakosiomedimnoi*, and could apparently be held only once. In order to fill these boards, a cohort of at least thirty 30-year old *pentakosiomedimnoi* would be required, and according to demographic models this would indicate a total of 1,111 adults in that property

class. Since some boards were not fully manned, we may lower this number to, say, 1,000.52 Applying the same assumptions as above concerning the number of adult males per household, this corresponds to 800 households. If we set the size of the average estate at 24 ha, only a little above the minimum property qualification of 21.75ha, and we deduct a quarter for non-landed sources of revenue,53 we may reckon with 800 estates of some 18ha, or 14,400ha, occupied by pentakosiomedimnoi. The next property class can hardly have been any smaller, so if we posit a modest 800 households averaging 12 ha—three-quarters of a low average of 16 ha—the hippeis would occupy a further 9,600 ha. This puts at least 24,000 ha (25%) of the land in the hands of 1,600 households of the top two classes, providing at most 2,000 horsemen and hoplites.

The remaining 16,000 hoplites, or 12,800 households, then, had at most between 52.5% and 65% of the cultivable land, 50,400-62,400ha, to share between them. If all these households were of zeugite status, and if only three-quarters of their income came from land, so that they needed only 7.5 ha each, they would have still required 96,000ha; in other words, 100% of the cultiva-

Table 2: The property classes in 431 BC: numbers and landownership

		Citizens	Households	Land required		Proportion of		
						land	population	hoplites
a. 60,000	adult male citizens							
Thêtes	landless	15,000	12,000	-	-	-	25%	-
Thêtes	'subhoplites'	27,000	21,600	@ 1ha:	21,600	22%	45%	-
Thêtes	hoplites	12,667	10,133	@ 3ha:	30,400	32%	21%	70%
Zeugitai		3,333	2,667	@ 7.5 ha:	20,000	21%	5.6%	19%
Hippeis		1,000	800	@ 12 ha:	9,600	10%	1.7%	5.5%
Pentakosion	nedimnoi	1,000	800	@ 18 ha:	14,400	15%	1.7%	5.5%
b. 40,000	adult male citizens							
Thêtes	landless	10,000	8,000	-	-	-	25%	-
Thêtes	'subhoplites'	12,000	9,600	@ 1ha:	9,600	10%	30%	_
Thêtes	hoplites	9,333	7,467	@ 3ha:	22,400	23%	23%	52%
Zeugitai		6,667	5,333	@ 7.5 ha:	40,000	42%	17%	37%
Hippeis		1,000	800	@ 12 ha:	9,600	10%	2.5%	5.5%
Pentakosion	nedimnoi	1,000	800	@ 18 ha:	14,400	15%	2.5%	5.5%

ble land. There could thus have been space in Attica for so many hoplites only if many of them were *thêtes*.

As we have seen, the minimum amount of land needed to support a hoplite ranged from 40-60 *plethra* (3.6-5.5ha), so if we very cautiously set the average thetic hoplite farm at 4 ha, and posit once more that farming provided only three-quarters of the collective income of this group, we arrive at a lowest average land requirement of 3 ha. We can then calculate the proportion of *zeugitai* and *thêtes* among the hoplites by working out for what value of X (the number of *zeugitai*) and what value of Y (the number of *thêtes*) 7.5X + 3Y = 50,400 (or 62,400: the available land) and X + Y = 12,800 (the number of hoplite households). The results are shown in *table 2*.

We find that the *zeugitai* and two higher classes combined can have contributed no more than 30-48% of the hoplites and horsemen (while constituting at most 9-22% of the citizen population and owning 46-67% of the cultivable land). Half or more of the soldiers are *thêtes*.

As we shall see in the next section, it is conceivable

that the original zeugite census had at some point been lowered to 150 measures (but no less), which would have reduced the average size of a zeugite farm to about 8 ha.⁵⁴ Substituting three-quarters of this reduced figure, i.e. 6 ha, for 7.5 in our earlier formula, the proportions of *zeugitai* and hoplite *thêtes* change as shown in *table 3*.

The zeugitai and the two higher classes now contribute between 39 and 66% of the hoplites and horsemen (while constituting at most 12-30% of the citizen population and owning 50-75% of the cultivable land). In sum: if we posit the smallest likely citizen population and the largest feasible number of adult male citizens per household, the lowest possible zeugite census and the largest plausible proportion of non-landed sources of income, the smallest conceivable farms and the largest probable number of landless citizens, we must still conclude that at least a third of the soldiers were thêtes. A slightly less generous figure for any of these variables means that the proportion of thêtes quickly rises to 50% or higher, and it is entirely possible that as little as 30-40% of the infantry (and cavalry) was recruited from the top three property classes in Athens.

Table 3: The property classes in 431 BC, assuming a reduced zeugite census

		Citizens	Households		Land required		Proportion of		
						land	population	hoplites	
a. 60,000 a	dult male citizens								
Thêtes	landless	15,000	12,000	-	-	-	25%	-	
Thêtes	'subhoplites'	27,000	21,600	@ 1ha:	21,600	22%	45%	-	
Thêtes	hoplites	11,000	8,800	@ 3ha:	26,400	28%	18.3%	61%	
Zeugitai		5,000	4,000	@ 6 ha:	24,000	25%	8.3%	28%	
Hippeis		1,000	800	@ 12 ha:	9,600	10%	1.7%	5.5%	
Pentakosion	nedimnoi	1,000	800	@ 18 ha:	14,400	15%	1.7%	5.5%	
b. 40,000 a	adult male citizens								
Thêtes	landless	10,000	8,000	-	-	-	25%	-	
Thêtes	'subhoplites'	12,000	9,600	@ 1ha:	9,600	10%	30%	-	
Thêtes	hoplites	6,000	4,800	@ 3ha:	14,400	15%	15%	33%	
Zeugitai		10,000	8,000	@ 6 ha:	48,000	50%	25%	55%	
Hippeis		1,000	800	@ 12 ha:	9,600	10%	2.5%	5.5%	
Pentakosion	nedimnoi	1,000	800	@ 18 ha:	14,400	15%	2.5%	5.5%	

Everything points in the same direction. Zeugitai were not much less wealthy than those who could afford to keep horses, the ultimate Greek symbol of wealth; they were twice as wealthy as they needed to be to afford hoplite service; their properties and income ranked them among the leisure class. Accordingly, they formed only a part—perhaps a minority—of the armed forces, and a small part—perhaps as little as 9%, certainly no more than 30%—of the citizen population. All this vindicates Aristotle's description of them as 'notable' and 'rich'.

Such a disjunction between military role on the one

hand, social, economic, and political status on the other, is seriously at odds with common ideas about the outlines of Athenian political history in general, and about Solon's reforms in particular. Kurt Raaflaub, one of the very few scholars who has faced the issue—most have been unaware of it, or swept it under the carpet—has concluded that there must be some mistake in our sources, since this disjunction is 'plainly impossible', incompatible with political and military ideals central to Greek society. We will first turn to the accuracy of the sources and then to Greek ideology.

The reliability of the evidence

Although they regularly mention the property classes, only three of our sources tell us what the census levels were. The two main texts, the Aristotelian *Athenian Constitution* (7.4) and Plutarch's *Solon* (18.1), give these details in connection with Solon's reform, and do not specify whether the same levels still applied in the classical period. In principle, it is therefore possible that the census levels changed, or indeed that fourth-century scholars simply invented ('reconstructed') what seemed to them suitable census levels and attributed these to Solon—along with much else. But a good deal of evidence suggests that the property qualifications as we have them are indeed genuine and changed only marginally, if at all.

The first such evidence comes from the third source to stipulate the census levels, a passage from Julius Pollux' *Onomasticon* which has been almost universally ignored or misunderstood:

There were four census classes: the pentakosiomedimnoi, hippeis, zeugitai, thêtes. The first were named for their production of 500 dry and wet measures; they contributed (anêliskon) one talent to public funds. Those who belonged to the hippad class seem to have been named for their ability to keep horses; they produced 300 measures, and contributed half a talent. Those who belonged to the zeugision were reckoned from 200 measures upwards, and they contributed 10 minae. Those of the thêtikon held

no government office and contributed nothing. (8.130)

This is a puzzling text: if the 'contributions to public funds' are supposed to be taxes paid by individuals, the sums are far too high, and if they are supposed to be taxes paid by each property class collectively, the sums are too puny to be credible. The usual explanation is that every time Pollux says 'contributed' we should read 'owned': the lexicographer misunderstood and conflated two versions of the property qualifications: the Solonian form, in measures of agricultural produce, and a classical form, expressed in monetary values of property. ⁵⁶ A solution which takes such liberties with the text is clearly far from satisfactory.

A much better, and entirely convincing, interpretation was suggested by Rudi Thomsen (1964, 104-18) but it has received little attention, presumably because it was part of a long, complex, and sometimes tenuous argument about Athenian fiscal practices. Yet one need not accept the whole of Thomsen's case to see the force of his explanation of Pollux' comments. He noted that tax levies (eisphorai) were paid neither by individuals nor by property classes, but by groups of taxpayers, the so-called symmories, of which—at some point in the fourth, and probably already in the fifth century—there were one hundred. He further noted that the standard amount raised by levies was 200 talents, and that the metics were expected to pay 'a sixth'. The citizens thus needed to contribute the remaining 166 talents and 4,000 drach-

mas. It can hardly be a coincidence that the contributions listed by Pollux, when multiplied by 100, add up to exactly 166 talents, 4,000 drachmas. Pollux' figures must represent the amounts paid collectively by the members of each property class within each of the symmories.

What we have in Pollux' discussion, then, is not some material copied from the Athenian Constitution and conflated with garbled material from some other source, but an independent and accurate account of the roles of the property classes in contributing eisphorai—a form of taxation first attested, and probably first set up, in 428 BC (Thucydides 3.19.1). Pollux' comment that 'those who belong to the hippad class seem to have been named for their ability to keep horses' confirms that his information about the census levels did not come from the Athenian Constitution, since this view is explicitly rejected by pseudo-Aristotle (Ath. Pol. 7.4). Whoever Pollux' source was, he listed the same property qualifications as the Athenian Constitution did, despite disagreeing on the origin of the name 'horsemen'. 57 What is more, he cited these qualifications, not in the context of Solon's reforms, but in describing the workings of a fiscal system of the late fifth and early fourth century. Evidently these census levels (still) applied in the classical period.

An interesting feature of this fiscal system was the drastic lightening of the tax burden for the zeugitai. If there were, as suggested above, some 1,000 pentakosiomedimnoi in late fifth-century Athens, each of these would have had to contribute 600 drachmas to meet the overall target. Since hippeis' properties were valued at three-fifths of a pentakosiomedimnos' estate, a proportionate contribution would have been 360 drachmas, but they paid only 300, or less if they were more numerous than the richest class. The real gap, however, opened up between the hippeis and the zeugitai. A proportionate contribution for the latter would have been 240 drachmas, but even if we assume the lowest of the numbers of 'yoked men' calculated above, 3,333, each individual's contribution amounted to a mere 30 drachmas. In this light, we can understand why the emergency levy of citizen troops in 428 BC, mentioned earlier, mobilized all thêtes and zeugitai, but exempted the top two classes (Thucydides 3.16.1): the pentakosiomedimnoi and hippeis

did their bit by making large financial contributions, but the *zeugitai* did not pay so much that they could be excused military service. The *thêtes*, of course, did not pay anything at all.⁵⁸

A second piece of evidence for the level of property qualifications in the classical period is a law on heiresses, cited in a law-court speech of the mid-fourth century, *Against Makartatos*:

Concerning heiresses who belong to the thetic class, if the next of kin does not want to take [the heiress] in marriage, he must give her away with a dowry of 500 drachmas if a *pentakosiomedimnos*, 300 if a *hippeus*, and 150 if a *zeugitês*, in addition to her own property. (Pseudo-Demosthenes 43.54)

This law was evidently in force at the time, and the size of the dowries shows that it can hardly have been introduced before the late fifth century. In the late sixth century, paying a dowry of 500 drachmas would have meant parting with the equivalent of a *pentakosiomedimnos*' entire annual yield, which is surely an inconceivably large amount to have to pay on behalf of a poor niece or more distant relative. Even a century or so later, raising 500 drachmas might mean selling the equivalent of up to 250 measures of barley, or mortgaging a hectare of land.⁵⁹

The terms of this law have two important implications. First, they confirm that in the fourth century the pentakosiomedimnoi were still very wealthy men, whose incomes can hardly have been less than the equivalent of the 'five hundred bushels' from which their class derived its name. This conclusion tallies with pseudo-Aristotle's claim that only pentakosiomedimnoi were formally eligible to serve as Treasurers of Athena, 'according to the law of Solon—for that law is still in force', although in practice whoever was selected by lot would serve, 'even if he were a very poor man' (Ath.Pol. 47.1). If the Athenians chose to ignore the law rather than adapt it to new circumstances, it is likely that not only the name but also the property qualification of the richest class was preserved unchanged.⁶⁰

The second implication of the law on heiresses is that the census levels of *hippeis* and *zeugitai* in the fourth century cannot have been lower than the equivalent of 300 and 150 measures, respectively. It is unthinkable that the dowry payments imposed on them would have been proportionately larger than those imposed upon the richest class. The property qualification of the hippeis is thus clearly confirmed. As for the zeugitai, the law may have set a dowry sum either in the same proportion to the property census as for the other classes, or in a lower proportion. If it was in the same proportion, then obviously the zeugite census of the fourth century must have been 150 measures. And if so, it may have been the same or higher under Solon, but could not possibly have been less: a greater degree of democratization, or significant population growth leading to a reduction of the average size of properties, or both, might have led to a lowering of the threshold, but a raising of the property qualification after Solon would imply reduced participation in politics and a greater average size or concentration of property, which flies in the face of all other evidence. 61 Conceivably, then, an original census of 200 measures might have been reduced to 150—but no less. On the other hand, it is very probable that the dowry payment imposed on zeugitai was proportionately less than that required of the other two classes, just as the amount of tax which they were required to pay was proportionately smaller than the eisphorai demanded of the truly rich. Their census thus may well have been 200 measures even in the fourth century.

Finally, the very fact that Solonian property classes were defined by measures of agricultural produce harvested annually is a strong indication that they are genuine. By the fourth century, Athenian society had become so used to monetary values that the author of a blatantly bogus 'Constitution of Draco' (*Ath.Pol.* 4) could only imagine that this earliest Athenian lawgiver had imposed

census levels by rating property (not annual income) in terms of its value in currency (not in kind). Even the unmistakable meaning of 'five-hundred-bushel men' was not enough to make this author realize that different criteria would have been used in the past. 62 If what we are told about Solon's property qualifications were merely speculation, our sources would, like the inventor of the Constitution of Draco, have spoken of ratable values of estates expressed in drachmas, minae, and talents. Since they do not, classical authors must have had information which revealed the origins of Solon's census system in a pre-monetary society. In all likelihood, they knew what the system had been like because it survived—formally unchanged, though in practice no doubt adapted, and later ignored—to their own day.

At a minimum, we may conclude, with Peter Rhodes, that 'we have no information which would justify us in rejecting [the sources'] figures as correct for Solon's definition of the classes' (1993, 145). I would go further and add that we have some information which positively supports these figures, not only for Solon but also for classical Athens. In any case, even on the most sceptical reading of the evidence, the property qualification for zeugitai cannot have fallen below 150 medimnoi, and such a hypothetical lowering of the census by a quarter does not fundamentally affect the arguments set out above: the zeugitai are still richer than they need have been to afford hoplite service, and still take up too much land for all hoplites to have been 'yoked men'. Since we cannot explain away the evidence which reveals the politically enfranchised zeugitai as an elite among the hoplites, we must ask ourselves whether this situation is indeed incompatible with the ideal of the citizen-soldier so prominent in Greek culture.

Money and military service in Athenian political thought

Our accounts of the oligarchic *coup d'état* in Athens in 411 BC report that, when the oligarchs were eventually deposed, the powers of government were turned over to 'the Five Thousand from the hoplites' (*Ath.Pol.* 33.1,2) and, more explicitly, 'the Five Thousand; they are to be *all* those citizens who also provide arms and armour' (Thucydides 8.97.1). During the coup of 404 BC, too,

some are said to have argued that 'the best thing is to govern the state together with those most able to serve with horses and shields' (Xenophon, *Hellenika* 2.3.48). Such a regime had allegedly already existed two centuries earlier, under Draco (*Ath.Pol.* 4.2). For Aristotle it was a universal rule that 'the body politic must consist *only* of those who possess arms and armour' (*Politics* 1297b1).

This notion, that all those and only those who served their city as hoplites deserved a share in political power, at first glance seems to leave no room for *thêtes* to fight in the heavy infantry and yet be barred from office. A second glance shows that Greek thinking on war and politics was not quite so straightforward. ⁶³

The episode of the Five Thousand is particularly instructive. When the oligarchs first began advocating the creation of this body, they suggested 'that not more than 5,000 men were to take part in political affairs, and that these were to be such men as brought the greatest benefit [to the city] by means of their possessions (khrêmasi) and persons (sômasin)' (Thucydides 8.65.3). By the time a formal proposal was put to the Assembly in a meeting at Kolonos, its wording had been subtly but significantly modified: 'to turn over the entire government to those of the Athenians best able to provide services by means of both their persons and possessions, no fewer than 5,000, for the duration of the war' (Ath. Pol. 29.5). Reflected in these formulations is a certain tension between two criteria for political power: 'possessions', given pride of place in the first proposal, which aimed to keep the number of participants below 5,000, and service in 'person', as a hoplite, given priority in the second proposal, which aimed to have more than 5,000 men taking part in politics. It was not until the oligarchs had been deposed that the criterion of wealth was abandoned altogether and the Five Thousand were equated simply with all hoplites.

What happened next shows the significance of this last re-formulation. As a speech attributed to Lysias later reminded the Athenians:

when you voted to turn over affairs to five thousand, [Polystratos], in his capacity as Enrolment Officer, registered *nine thousand*, so that no one among the people should have a complaint against him, and so that whoever wished might be placed on the list. And if it was not possible for him, he did it as a favour' (20.13).

Thucydides' account of casualties between 431 BC, when the number of hoplites was at least 18,000, and the year of the *coup* shows that the number of citizen hoplites in Athens at the time was indeed about 9,000, rather than

5,000. The major loss of manpower occurred during the years of plague, which killed about a third of the population and thus reduced the number of hoplites to 12,000.64 As for casualties of war and emigration by colonists, Mogens Hansen's calculations (1988, 20-28) have shown that population growth would easily have compensated for all these losses, except the disaster of the Sicilian expedition, a couple of years before the coup. The first force sent to Sicily included 1,500 Athenian hoplites and 700 thêtes serving as hoplite marines. They were reinforced in the next year by 280 cavalry, and the year after that by another 1,200 hoplites and 60 ships, which presumably carried another 600 marines.⁶⁵ The vast majority of these 4,280 hoplites and horsemen were destroyed: 'few out of many returned' (7.87.6). Assuming that 4,000 died, Athens at its lowest ebb still had at least 8,000 soldiers, and a figure of 9,000 in 411 is perfectly plausible.

Evidently, the original proposal concerning the Five Thousand had envisaged admitting only the richer half of the citizen hoplites to government, separating them from the rest of the hoplites on the grounds that they contributed to the common good not only military services but 'possessions' as well, which is surely a reference to the payment of taxes and performance of liturgies. It seems very likely that the aim was, in effect, to draw a line between zeugite hoplites, who paid taxes, and thetic hoplites, who did not. In any case, the proposal reveals an ideology according to which wealth, not military service, was the primary criterion for a share in political rights. ⁶⁶

How widely acceptable was this notion emerges not only from the praise lavished on the regime of the Five Thousand by Thucydides (8.97.2) and the *Athenian Constitution* (33.2), but equally from the remarkable adherence to the concept that five thousand was the legitimate number of citizens even by those who in practice supported a much wider franchise and eventually opened the door to the enrolment of larger numbers by pretending that the number 5,000 corresponded to 'all those citizens who also provide arms and armour'. What is more, the very same notion turns out, on closer examination, to have been supported by Aristotle.

Immediately after announcing that 'the body politic must consist only of those who possess arms and armour', Aristotle continues:

yet it is not possible to define the amount of the property qualification in absolute terms and say that it should be so much, but one must consider the kind [of amount] that imposes the highest [qualification] which allows those who take part in government to be more numerous than those who do not, and prescribe this. For the poor will stay quiet even if they have no share in government, so long as no one treats them with *hybris* or takes away any of their property... And they usually refuse to serve in time of war if they do not receive rations and have no means, but if someone gives them rations they are prepared to go to war. (*Politics* 1297b2-6)

The argument is that, although power should be confined to hoplites, hoplite service in itself is not a sufficient criterion. There must be a property qualification, and it must be set as high as possible, provided that those who fall within it still outnumber those outside it.⁶⁷ Since Aristotle began by categorically excluding all non-hoplites from power, he is clearly not arguing that, where hoplites form a minority, one should reduce the property census below the hoplite level in order to extend power to a narrow majority of the citizen population. Rather, he is talking about raising the census above the basic hoplite level in order to exclude as many hoplites as possible without turning the disenfranchised into a majority. These 'poor' hoplites will not rebel, he reassures the reader, and they will still be available for military service, except that they cannot be expected to pay for themselves and must therefore be maintained at the expense of others.

Perhaps Aristotle has in mind a city where the hoplites form a clear majority of the citizen population, and he is advocating that their number should be trimmed by means of a property qualification so that they are reduced to a bare majority. This is conceivable, even if it was probably rare for the hoplites in any Greek city to form more than half of the population. More probably, Aristotle, having excluded all non-hoplites, is arguing that only a narrow majority among the hoplites—not among the citizens at large—should be admitted to power, and that the property qualification should be designed to *exclude nearly half of the hoplites*. This second interpretation may seem startlingly elitist, but, as we have seen, it matches exactly the goal of the Athenian oligarchs in 411. It also helps explain an otherwise curious discrepancy between the sources' highly favourable opinion of the regime of Five Thousand and their damning criticism of the regime of Three Thousand proposed in 404 BC. Both Xenophon's *Hellenika* and the *Athenian Constitution* report at length and with evident approval the objections of the oligarch Theramenes to having a mere 3,000 enfranchised citizens:

First, that, when they wanted to give a share in power to the decent folk, they extended it to only three thousand, as if excellence was confined to that number. Second, that they were doing two contradictory things: setting up a regime based on force, yet making it weaker than its subjects (*Ath.Pol.* 36.2; cf. *Hellenika* 2.3.19).

If the issue here were the proportion between the enfranchised elite and the rest of the entire adult male population, it would be difficult to see why a ruling group of 5,000 was deemed excellent while a group of 3,000 met with derision as ludicrously small: both numbers are but a small fraction of the tens of thousands who made up the rest of the citizen body. If the issue were the proportion between the enfranchised and the rest of the *hoplite* population, however, the distinction would have been crucial: the Three Thousand would have been outnumbered two-to-one by the rest of the 9,000 hoplites, but the Five Thousand would have formed a narrow majority of just the kind that Aristotle, three generations later, recommended.⁶⁸

Whether Aristotle meant to advocate the political exclusion of almost half of the hoplites, or merely wished to suggest that some hoplites might have to be excluded if there were too many of them, it is clear that he approved of dividing the heavy infantry into a group of richer hoplites with political privileges and poorer hoplites without such privileges. The affair of the Five Thousand shows that in fifth-century Athens, too, a property-based franchise which excluded thousands of hoplites was far from unthinkable: such a franchise was acceptable enough not only to be imposed by oligarchs, but to be commended by 'moderates' such as Thucy-

dides and Xenophon, and to be retained for some time by democrats at least in name, even when it was abandoned in reality.

No doubt many subscribed to more inclusive ideals and would grant equal political rights to all hoplites and indeed all citizens, but some of the best-known and most articulate expressions of the citizen-soldier ideal turn out to hide a more complex and less democratic

conception, which holds that hoplite service is an important requirement for membership in the political community, but that among hoplites only the wealthiest, who contribute taxes and liturgies, should be entitled to full political participation. The line which we have found drawn between *zeugitai* and *thêtes* within the Athenian army is, after all, quite compatible with this particular form of Greek political ideology.

Property classes in the Athenian fleet and army

One final problem remains. As we saw at the outset, Thucydides contrasted the regular hoplites 'from the list' with *thêtes* serving as hoplite marines (6.43.1), and the recruitment of marines among the *thêtes* appears to have been standard fifth-century practice. ⁶⁹ On the one hand, this confirms that there were hundreds of *thêtes*, at least, who owned hoplite arms and armour and were capable of fighting. ⁷⁰ On the other hand, it has suggested to many that *thêtes* served *only* in the fleet. ⁷¹ There is indeed a passage in Harpokration's *Lexicon* which supports this view:

When among the Athenians the citizen body was divided into four, the poorest were called *thêtes* and belonged to the *thêtikon*. These people had no share in government, as Aristotle explains in the *Athenian Constitution*. Aristophanes, in *The Banqueters*, says that *they did not serve in the army*.⁷²

Remarkably, there is no other explicit evidence for the common view that *thêtes* were excluded from the army than this claim by a lexicographer of the second century AD based on an Attic comedy now lost.

If Harpokration was right, and if modern scholars have drawn the correct inference from Thucydides, we would have to accept that all of Athens' 18,000 hoplites belonged to the three highest property classes, after all. Yet brief comments in Aristotle's discussion of military service by 'the poor' show that both Harpokration and modern scholars have jumped to conclusions.

When Aristotle urges the exclusion of the poorer hoplites from his ideal political community, he argues, as we have seen, that the disenfranchised will continue to fight for the city—in return for maintenance. Only the highest property classes are thus liable for service, as in Athens, but the less well-off are not excluded from the army. They retain the right to own arms and armour, and indeed are fully expected to 'want to go to war', at a price. Later, Aristotle lists a similar arrangement as among the typical features of an oligarchic state: here, 'the poor are allowed not to possess arms,73 but the rich are liable to a fine if they do not have them' (Politics 1297a29-39). In these states, it is again only the rich who are liable to military service, but the poor are not excluded: they are under no obligation to own hoplite equipment—or serve in the army—but evidently they can do so if they wish. If the lower property classes were not categorically excluded from the heavy infantry even in oligarchic constitutions and if they were expected to play an active part as hoplites in Aristotle's 'moderate' ideal state, they can hardly have been wholly excluded from the army of democratic Athens.

The *thêtes*, I would suggest, did serve in the Athenian army, but on a voluntary basis, rather than under compulsion. Being exempt from obligations was certainly characteristic of thetic status in other respects: unlike the other classes, they paid no tax and were not required by law to provide dowries for heiresses; under the fictional Constitution of Draco, they were the only class not liable to a fine for absence from the Council.⁷⁴

The major occasions for voluntary hoplite service by *thêtes* will have been mass levies, as opposed to levies 'from the list'. When large armies were needed to defend the country against invasion, as at Marathon in 490 or Plataea in 479 BC, or to mount invasions of neighbour-

ing states, as repeatedly of Megara at the start of the Peloponnesian War, or of Boeotia in 424 BC, mobilization took place 'by the whole army' (panstratiai) or 'by the whole people' (pandêmei). At Marathon and Plataea, 9,000 and 8,000 citizens were assembled; before the plague, 10,000 citizens invaded Megara, and after the plague 7,000 could still be found to invade Boeotia.⁷⁵ In each case, a large proportion of these hoplite field armies and of the thousands forming the hoplite home guard must have consisted of thêtes, who joined not because they were formally obliged to, but out of patriotism and the hope of reward, in pay or booty.

By contrast, for longer and more distant expeditions, usually overseas, the levy was often, perhaps always, 'from the list', that is to say, from among the top three property classes. In such expeditions, thêtes need have played no part, but the presence of the notoriously poor Socrates in a select force at Potidaea suggests that they could and did volunteer. How common this was we cannot tell.⁷⁶ Volunteers aside, this type of levy drew primarily on a relatively small and wealthy section of the hoplite population, so it is not surprising that the numbers mobilized were quite limited: the largest-ever Athenian armies sent overseas each consisted of 4,000 hoplites, while forces of one or two thousand men were far more common.⁷⁷ The narrow basis of recruitment in these cases also explains Aristotle's otherwise puzzling claim that 'the notables' became fewer as a result of mobilization 'from the list'. Even more crucially, it explains why the Athenian state funded the besieging army at Potidaea on the assumption that all or most of its 3,000 hoplites brought along a personal servant: the bulk of these troops were not average hoplite farmers, but members of the leisure class who could afford at least a couple of slaves.78

As for naval service, it was apparently performed on a voluntary basis, except in rare instances when an emergency levy was imposed. The captains assigned to the ships could and would recruit anyone prepared to work for pay as an oarsman, ship's officer, or marine, but could not force anyone to serve. For three reasons, this resulted in a predominance among naval personnel of *thêtes*: first, they simply constituted the great majority of citizens; secondly, they were the poorest citizens and thus most in need of the money offered for their serv-

ices; and thirdly, they were the only citizens not already under a military obligation. Conversely, there were few *zeugitai* in the fleet because they did not need the money and therefore had little incentive, and because the chance that they might be called up for the cavalry or infantry discouraged them from volunteering for other duties. But, just as some *thêtes* might join a largely zeugite force levied 'from the list', some members of the elite might, if they so chose, join the largely thetic crew of a warship.

That there was no more a formal barrier to naval service by zeugitai than to infantry service by thêtes is illustrated by Lysias, who in his speech Against Andocides accuses his opponent of never having served his country: 'not as a horseman, not as a hoplite, not as a trierarch, not as a marine' (6.46). Apparently, serving as a marine—though not as sailor or rower—fell within the range of what a member of the elite might conceivably do. Cimon was said once to have made the dramatic gesture of dedicating his cavalry gear on the Acropolis before joining the fleet to fight as a marine at Salamis (Plutarch, Cimon 5). Considerations of prestige need not have deterred the elite from serving, since marines were held in the same high regard as regular infantry. Aristotle, as concerned as anyone to exclude 'the naval mob' from the political community, made one exception: 'the marines ... are free men and belong to the infantry, and it is they who are in charge and command the fleet' (Politics 1327b9-11). Most striking is Thucydides' epitaph for 120 hoplites killed by the Aetolians: 'the best men from the city of Athens to die in this war' (3.98.4). That they were marines (3.91.1, 95.2) did not detract anything from their glory.80

In sum, *zeugitai* predominated in many of the smaller infantry forces, but in every mass mobilization of hoplites half or more of the troops consisted of *thêtes*. In the navy, the principle of voluntary service resulted in a *de facto* predominance of *thêtes*, but not to the exclusion of the other classes. Thucydides' and Aristotle's comments on the division of military labour between *thêtes* and soldiers 'from the list' are consistent with this state of affairs. Harpokration, on the other hand, must have been wrong to imagine that the lowest property class had been banned from the Athenian army: presumably, he simply read too much into a comic allusion to the

fact that the *thêtes*, unlike their richer fellow-citizens, were not *obliged* to fight.

Although there clearly were great differences between the armed forces of classical Athens and their predecessors of Solon's day, the basic organizational principle was in all likelihood the same: infantry duty for the *zeugitai*, *hippeis*, and *pentakosiomedimnoi*; exemption, but not exclusion, for the *thêtes*. Again, if the oligarchic states known to Aristotle exempted their 'poor' without excluding them, why would Solon have opted for a more exclusive and thus smaller and weaker army?⁸¹ Indeed, the very names *zeugitês* and *thês* may hint that the compulsory-voluntary distinction was integral to the public roles of these classes from the beginning.

'Yoked men' is, as we have seen, an appropriate des-

ignation for hoplites, but the *zeugitai* have turned out not to be the only men who took their place in the 'yoke' of the phalanx; nor, on the alternative interpretation of their name, were they the only 'yoke-owners'. Similarly, 'hired men' would have been a singularly insulting label for the many independent hoplite farmers who fell within the lowest property bracket. ⁸² The names fit better if they are understood as agriculturally-inspired metaphors coined to describe, not only specific military and agricultural roles, but also general roles in Athenian society: the *zeugitai* were 'yoked' in the sense that they were obliged to make military and financial contributions to the community, while the *thêtes* were 'hired' insofar as they would render service to the community only for a reward.

Conclusion: war, class, and democracy

Neither the supposed unreliability of the evidence, nor the supposed dictates of ideology, nor even Harpokration's *Lexicon*-entry can be brought to bear against the conclusion that the *zeugitai* were wealthy men, probably multiple slave-owners and certainly rich enough to count as members of the leisure class. Aristotle may sometimes think of *zeugitai* as a 'middle class', and probably they did indeed think of themselves as 'middling' citizens, by comparison with the truly rich, the horse owners and liturgists. Elsewhere, however, from a less elevated point of view, Aristotle sees them as 'notable and wealthy' citizens. Their small numbers (between 9% and 30% of the population), high status, and large properties surely demand that *we* call the *zeugitai* part of the Athenian *elite*.

The 'yoked men' and their fellows in the other elite property classes cannot have constituted the whole of the Athenian hoplite army of the Peloponnesian War, which must have included a large proportion of *thêtes*. The same is likely to be true of the Athenian army of Solon's day. To speak of the hoplites as a 'class', let alone a 'middle class', is therefore misleading—and no ancient source does so. ⁸³ It is true that all hoplites share in the prestige accorded to the heavy-armed infantry man and as such are set apart from the rest of society, but at the same time deep divisions cut across the hop-

lite army, along the lines drawn by the property census. The *zeugitai* are in effect a middle class *among the hop-lites*, as opposed to the population at large. Their much more limited financial obligations to the community separated them from the top two classes, ⁸⁴ but their leisure class status separated them even more sharply from the *penêtes*, the working men, who constituted the bottom half of the hoplite army.

Until the mid-fifth century at least, Athens was thus less democratic than we tend to imagine. Aristotle and Plutarch were right to say that Solon extended the right to hold office only to 'the notable and wealthy'. Full participation in politics was limited to the leisure class not only because other citizens could rarely afford it, but also as a matter of principle: the less wealthy were formally banned from standing for office. The crucial significance of Solon's reforms in abandoning birth as a criterion for power is not to be denied, but we must not forget how narrow a group benefited from the application of the new criterion of wealth. The zeugitai are so close to the rich that they must have been part of the elite which, according to the sources, owned almost all the land and subjected the poor to severe economic exploitation.85 Perhaps Solon's restructuring of political privileges was designed to reconcile non-aristocratic landowners to Solon's programme of economic reform,

the *seisakhtheia*, which did much to loosen their control over the poorest sections of the population.

Office-holding remained the preserve of the elite for a remarkably long time. It took until 457 BC before zeugitai were admitted to the archonship (Ath.Pol. 26.2), and formally none of the major offices were ever opened to the thêtes. In this respect, the turning point in the history of Athenian democracy must have been the introduction of pay for office from the 450s onwards, which implicitly recognized the right of the 'working' classes to play a role in politics beyond attending assemblies and law courts. 86 If the twin aims of the coup of 411 BC were the abolition of pay for office and the limitation of full citizenship to a group roughly the equivalent of the zeugitai, it was because both would lead to the restoration of a form of government which until recently had been open, not to all hoplites or all citizens, but only to the leisured classes.

War and military organization thus played a secondary role in shaping Athenian society and politics. A man's social and political status were clearly determined above all by his wealth, and property-class boundaries did not coincide with the ability to provide hoplite arms and armour. Since Solon's reforms appear to have ex-

cluded from power as many hoplites as they included, his actions can hardly have been motivated by a sense that those who fought for the city deserved a share in political power. No case can therefore be made that the rise of the hoplite phalanx brought with it the creation of 'hoplite democracy' in Athens. Again, it is hard to argue that the role of the *thêtes* in the fleet led to the development of 'radical democracy': if some *thêtes* had long fought in the phalanx without ever receiving political recognition, why would their service in the navy—for pay, and in the company of foreigners and slaves—have brought them any more credit? ⁸⁷

On the contrary, it was the political order which shaped military organization: the distinction between compulsory and voluntary hoplite service was created to legitimate a property-based political system. War, then, was not an autonomous force for change. Yet the willingness of the Athenian elite to accept military duties (as well as financial burdens) from which the common people were formally exempt is remarkable testimony to the centrality of warfare in Greek political ideology from Homer to the Hellenistic age.

Department of History, University College London

Bibliography

Amouretti, M.-C., and Brun, J.-P. (eds.) 1993. *La production du vin et de l'huile en Méditerranée* (BCH Supplément, 26). Paris: de Boccard.

Anderson, J.K. 1961. *Ancient Greek Horsemanship*. Berkeley and Los Angeles: University of California Press.

Andrewes, A. 1956. The Greek Tyrants. London: Hutchinson.

Andrewes, A. 1981. The hoplite katalogos, in: G.S. Shrimpton and D.J. MacCargar (eds.), *Classical Contributions. Studies in honour of M.F. McGregor*. New York: J.J. Augustin, 1-3.

Andreyev, V.N. 1974. Some aspects of agrarian conditions in Attica in the fifth to third centuries BC, *Eirene* 12, 5-46.

Barbagallo, C. 1904. La produzione media relativa dei cereali e delle vite nella Grecia, nella Sicilia e nell'Italia antica, *Rivista di Storia Antica* 8, 477-504.

Beloch, K.J. 1885. Das Volksvermögen von Attika, *Hermes* 20, 237-61. Beloch, K.J. 1924. *Griechische Geschichte* I.1 (2nd ed.) Berlin: de Gruyter.

Brock, R. 1989. Athenian oligarchs: the numbers game, *JHS* 109, 160-64.

Burckhardt, L.A. 1996. Bürger und Soldaten. Aspekte der politischen

und militärischen Rolle athenischer Bürger im Kriegswesen des 4. Jahrhunderts v.Chr. Stuttgart: Franz Steiner.

Burford Cooper, A. 1978. The family farm in Greece, *CJ* 73, 162-75 Burford, A. 1993. *Land and Labor in the Greek World*. Baltimore and London: Johns Hopkins University Press.

Ceccarelli, P. 1993. Sans thalassocratie, pas de démocratie? Le rapport entre thalassocratie et démocratie à Athènes dans la discussion du Ve et IVe siècle av. J.C., *Historia* 42, 444-70.

Davies, J.K. 1971. *Athenian Propertied Families 600-300 BC*. Oxford: Oxford University Press.

Davies, J.K. 1984. Wealth and the Power of Wealth in Classical Athens. Salem, N.H.: Ayer.

De Sanctis, G. 1912. *Atthis. Storia della repubblica ateniese dalle origini alla età di Pericle*, 2nd ed. Torino: Fratelli Bocca.

Demont, P. 1993. Le loisir (skholê) dans la Politique d'Aristote, in P. Aubenque (ed.): *Aristote Politique. Etudes sur la Politique d'Aristote*, Paris: Presses Universitaires de France, 209-30.

Figueira, T.J., 1991. Athens and Aigina in the Age of Imperial Colonization. Baltimore and London: Johns Hopkins University Press. Figueira, T.J. 1993. The strange death of Draco on Aegina, in R.M.

- Rosen and J. Farrell (eds.): *Nomodeiktes. Greek studies in honor of Martin Ostwald.* Ann Arbor, Mich.: University of Michigan Press, 287-304
- Fisher, N.R.E. 1976. Social Values in Classical Athens. London and Toronto: Dent and Hakkert.
- Fisher, N.R.E. 1993. Slavery in Classical Greece. London: Bristol Classical Press.
- Forbes, H. 1992. The ethnoarchaeological approach to ancient Greek agriculture. Olive cultivation as a case study', in B. Wells (ed.), *Agriculture in Ancient Greece*. Proceedings of the Seventh International Symposium at the Swedish Institute at Athens. Stockholm: Swedish Institute at Athens, 87-101
- Foxhall, L. 1992. The control of the Attic landscape, in B. Wells (ed.), *Agriculture in Ancient Greece*. Proceedings of the Seventh International Symposium at the Swedish Institute at Athens. Stockholm: Swedish Institute at Athens, 155-59
- Foxhall, L. 1997. A view from the top. Evaluating the Solonian property classes, in L.G. Mitchell and P.J. Rhodes (eds.), *The Development of the Polis in Archaic Greece*. London: Routledge, 113-36.
- Foxhall, L., and Forbes, H.A. 1982. Sitometreia: the role of grain as a staple food in classical antiquity, *Chiron* 12, 41-90.
- French, A. 1964. *The Growth of the Athenian Economy*. London: Routledge and Kegan Paul.
- Frost, F.J. 1984. The Athenian military before Cleisthenes, *Historia* 33, 283-94.
- Fuks, A. 1953. The Ancestral Constitution. Four studies in Athenian party politics at the end of the fifth century BC. London: Routledge and Kegan Paul.
- Gabrielsen, V. 1994. Financing the Athenian Fleet. Public taxation and social relations. Baltimore and London: Johns Hopkins University Press.
- Gallant, T.W. 1982. Agricultural systems, land tenure, and the reforms of Solon, *BSA* 77, 111-24.
- Gallant, T.W. 1991. Risk and Survival in Ancient Greece. Reconstructing the rural domestic economy. Stanford, Ca.: Stanford University press.
- Garnsey, P. 1988. Famine and Food Supply in the Graeco-Roman World. Responses to risk and crisis. Cambridge: Cambridge University Press.
- Garnsey, P. 1992. Yield of the land, in B. Wells (ed.), *Agriculture in Ancient Greece*. Proceedings of the Seventh International Symposium at the Swedish Institute at Athens. Stockholm: Swedish Institute at Athens, 147-53.
- Garnsey, P. 1999. *Food and Society in Classical Antiquity*. Cambridge: Cambridge University Press.
- Glotz, G. 1926. Ancient Greece at Work. London: Kegan Paul.
- Gomme, A.W. 1933. *The Population of Athens in the Fifth and Fourth Centuries BC*. Oxford: Oxford University Press.
- Gomme, A.W. 1956. *A Historical Commentary on Thucydides*, Vol. II: Books II-III. Oxford: Oxford University Press.
- Gomme, A.W., Andrewes, A., and Dover, K.J. 1981. A Historical

- Commentary on Thucydides, Vol. V: Book VIII. Oxford: Oxford University Press.
- Greenhalgh, P.A. 1973. Early Greek Warfare. Horsemen and chariots in the Homeric and archaic ages. Cambridge: Cambridge University Press.
- Hammond, N.G.L. 1973. Studies in Greek History. Oxford: Oxford University Press.
- Hansen, M.H. 1981. The number of Athenian hoplites in 431 BC, SO 56, 19-32.
- Hansen, M.H. 1985. Demography and Democracy. The number of Athenian citizens in the fourth century BC. Herning: Systime.
- Hansen, M.H. 1988. Three Studies in Athenian Demography. Copenhagen: Munksgaard.
- Hansen, M.H. 1991. The Athenian Democracy in the Age of Demosthenes. Structure, principles and ideology. Oxford: Blackwell.
- Hanson, V.D. 1995. The Other Greeks. The family farm and the agrarian roots of western civilization. New York: Free Press.
- Hanson, V.D. 1996. Hoplites into democrats: the changing ideology of Athenian infantry, in J. Ober and C. Hedrick (eds.), *Demokra*tia. A conversation on democracies, ancient and modern. Princeton: Princeton University Press, 289-312.
- Hodkinson, S. 1988. Animal husbandry in the Greek polis, in C.R. Whitttaker (eds.), *Pastoral Economies in Classical Antiquity*. Cambridge: Cambridge University Press, 35-74.
- Hopkins, K. 1983. Models, ships and staples, in P. Garnsey and C.R. Whittaker (eds.), *Trade and Famine in Classical Antiquity*. Cambridge: Cambridge University Press, 84-109.
- Hornblower, S. 1991. *A Commentary on Thucydides*, Vol. I: Books I-III. Oxford: Oxford University Press.
- Isager, S., and Skydsgaard, J.E. 1992. *Ancient Greek Agriculture. An introduction*. London and New York: Routledge.
- Jameson, M.H. 1978. Agriculture and slavery in classical Athens, *CJ* 73, 122-45.
- Jameson, M.H. 1992. Agricultural labor in ancient Greece, in B. Wells (ed.), Agriculture in Ancient Greece. Proceedings of the Seventh International Symposium at the Swedish Institute at Athens. Stockholm: Swedish Instute at Athens, 135-46
- Jardé, A. 1925. Les céréales dans l'antiquité grecque. La production.Paris: de Boccard.
- Jarva, E. 1995. *Archaiologia on Archaic Greek Body Armour*. Rovaniemi: Societas Historica Finlandiae Septentrionalis.
- Jones, A.H.M. 1957. Athenian Democracy. Oxford: Oxford University Press.
- Jongman, W. 1988. Adding it up, in C.R. Whittaker (ed.), Pastoral Economies in Classical Antiquity, Cambridge: Cambridge University Press, 210-12.
- Krentz, P. 1982. *The Thirty at Athens*. Ithaca and London: Cornell University Press.
- Lambert, S.D. 1997. *Rationes Centesimarum. Sales of public land in Lykourgan Athens.* Amsterdam: Gieben.
- Latacz, J. 1977. Kampfparänese, Kampfdarstellung und Kampfwirklichkeit in der Ilias, bei Kallinos und Tyrtaios. Munich: Beck.

- Lewis, D.M. 1973. The Athenian Rationes Centesimarum, in M.I. Finley (ed.), *Problèmes de la terre en Grèce ancienne*. Paris and the Hague: Mouton de Gruyter, 187-212.
- Lintott, A.W. 1982. Violence, Civil Strife and Revolution in the Classical City 750-330 BC. London and Canberra: Croom Helm.
- Lintott, A.W. 1992. Aristotle and democracy, *CQ* 42 (1992), 114-28.
- Lohmann, H. 1993. Atene. Forschungen zu Siedlungs- und Wirtschaftsstruktur des klassischen Attika. Cologne: Böhlau.
- Lonis, R. 1994. La cité dans le monde grec. Structures, fonctionnement, contradictions.
- Markle, M.M., 1985. Jury pay and assembly pay at Athens, in P.A. Cartledge and F.D. Harvey (eds.), *Crux. Essays presented to G.E.M. de Ste. Croix on his 75th birthday*. Exeter: Imprint Academic, 265-97.
- Morris, I., and Raaflaub, K. (eds.) 1998. *Democracy 2500? Questions and Challenges*. Dubuque.
- Nilsson, M.P. 1929. Die Hoplitentaktik und das Staatswesen, *Klio* 22, 240-49.
- Nippel, W. 1980. Mischverfassungstheorie und Verfassungsrealität in Antike und früher Neuzeit. Stuttgart: Klett-Cotta.
- Ober, J. 1989. Mass and Elite in Democratic Athens. Rhetoric, ideology and the power of the people. Princeton, N.J.: Princeton University Press.
- Osborne, R. 1985. *Demos: The Discovery of Classical Attika*. Cambridge: Cambridge University Press.
- Osborne, R. 1987. Classical Landscape with Figures. The ancient Greek city and its countryside. London: George Philip.
- Patterson, C. 1981. Pericles' Citizenship Law of 451-50 BC. New York.
- Pleket, H.W. 1993. Agriculture in the Roman empire in comparative perspective, in H. Sancisi-Weerdenburg et al. (eds.), *De Agricultura. In memoriam Pieter Willem de Neeve*. Amsterdam: Gieben, 317-42.
- Pritchett, W.K. 1956. The Attic Stelae, Part II, Hesperia 25, 178-317.
- Pritchett, W.K. 1985. *The Greek State at War*, Vol. IV. Berkeley: University of California Press.
- Raaflaub, K. 1992. Politisches Denken und Krise der Polis. Athen im Verfassungskonflikt des späten 5. Jahrhunderts v.Chr. Munich: Stiftung Historisches Kolleg.
- Raaflaub, K. 1997. Soldiers, citizens, and the evolution of the early Greek polis, in L.G. Mitchell and P.J. Rhodes (eds.), *The Development of the Polis in Archaic Greece*. London and New York: Routledge, 49-59.
- Raaflaub, K. 1999. Archaic and Classical Greece, in K. Raaflaub and N. Rosenstein (eds.), War in the Ancient and Medieval Worlds:

 Asia, the Mediterranean, Europe, and Mesoamerica. Cambridge,
 Mass.: Center for Hellenic Studies, 129-61.
- Rhodes, P.J. 1982. Problems in Athenian eisphora and liturgies, *AJAH* 7, 1-19.
- Rhodes, P.J. 1993. *A Commentary on the Aristotelian Athenaion Politeia* (2nd ed.). Oxford: Oxford University Press.
- Ridley, R.T. 1979. The hoplite as citizen, AC 48, 508-48.
- Ruschenbusch, E. 1979. Athenische Innenpolitik im 5. Jahrhundert v. Chr. Ideologie oder Pragmatismus? Bamberg: Aku Fotodruck.

- Ruschenbusch, E. 1984. Zum letzten mal: die Bürgerzahl Athens im 4. Jh. v. Chr., *ZPE* 54, 253-67.
- Ruschenbusch, E. 1988. Getreideerträge in Griechenland in der Zeit von 1921 bis 1938 n.Chr. als Maßstab für die Antike, ZPE 72, 141-53.
- Ste. Croix, G.E.M. de 1953. Demosthenes' TIMHMA and the Athenian eisphora in the fourth century BC, COM 14, 30-70.
- Sallares, R. 1991. *The Ecology of the Ancient Greek World*. Ithaca: Cornell University Press.
- Sanders, G.D.R. 1984. Reassessing ancient populations, *BSA* 79, 251-62. Schwahn, W. 1936. Theten, *RE* VI.A.1, col. 186-204.
- Sealey, R. 1966. The revolution of 411 BC, in *Essays in Greek Politics*. New York, 111-32.
- Sinclair, R.K. 1988. *Democracy and Participation in Athens*. Cambridge: Cambridge University Press.
- Skydsgaard, J.E. 1988a. Transhumance in ancient Greece, in C.R. Whittaker (ed.), *Pastoral Economies in Classical Antiquity*. Cambridge: Cambridge University Press, 75-86.
- Skydsgaard, J.E. 1988b. Solon's tele and the agrarian history. A note, in E. Christiansen, A. Damsgaard-Madsen and E. Hallager (eds.), Studies in Ancient History and Numismatics, presented to Rudi Thomsen. Aarhus: Aarhus University Press, 50-54.
- Spence, I.G. 1993. The Cavalry of Classical Greece. A social and military history with particular reference to Athens. Oxford: Oxford University Press.
- Spurr, M.S. 1986. *Arable Cultivation in Roman Italy, c. 200 BC- c. AD 100.* London: Society for the Promotion of Roman Studies.
- Starr, C.G. 1977. *The Economic and Social Growth of Early Greece,* 800-500 BC. Oxford and New York: Oxford University Press.
- Starr, C.G. 1986. *Individual and Community. The rise of the polis 800-500 BC*. Oxford and New York: Oxford University Press.
- Strauss, B.S. 1986. Athens after the Peloponnesian War. Class, faction and policy 403-386 BC. Ithaca, N.Y.: Cornell University Press.
- Strauss, B.S. 1996. The Athenian trireme, school of democracy, in J. Ober and C. Hedrick (ed.), *Demokratia. A conversation on democracies, ancient and modern*. Princeton, N.J.: Princeton University Press, 313-25.
- Thomsen, R. 1964. *Eisphora. A study of direct taxation in ancient Athens*. (Humanitas, 3). Copenhagen: Gyldendal.
- Wallace, R.W. 1993. Aristotelian Politeiai and Athenaion Politeia 4, in R.M. Rosen and J. Farrell (eds.), Nomodeiktes. Greek studies in honor of Martin Ostwald. Ann Arbor, Mich.: University of Michigan Press, 269-86.
- Wees, H. van. 1988. Kings in combat. Battles and heroes in the Iliad, *CQ* 38, 1-24.
- Wees, H. van. 1995. Politics and the battlefield. Ideology in Greek warfare, in A. Powell (ed.), *The Greek World*. London and New York: Routledge, 153-78.
- Wees, H. van. 1999. The mafia of early Greece. Violent exploitation in the seventh and sixth centuries BC, in K. Hopwood (ed.), *Organized Crime in Antiquity*. London: Duckworth, 1-51.
- Welwei, K.-W. 1992. Athen. Vom neolitischen Siedlungsplatz zur archaischen Großpolis. Darmstadt: Wissenschaftliche Buchgesellschaft.

West, M.L. 1978. Hesiod. Works and Days. Oxford: Oxford University Press.

Whitby, M. 1998. The grain trade of Athens in the fourth century BC, in H. Parkins and C. Smith (eds.), *Trade, Traders, and the Ancient City*. London and New York: Routledge, 102-28.

Whitehead, D. 1981. The archaic Athenian zeugitai, CQ 31, 282-86.

Williams, J.M. 1983. Solon's class system, the manning of Athens' fleet, and the number of Athenian thetes in the late fourth century, *ZPE* 52, 241-45.

Wood, E.M. 1988. *Peasant-citizen and Slave. The foundation of Athenian democracy.* London and New York: Verso.

Notes

- This paper was written at the Center for Hellenic Studies. Walter Donlan, Simon Hornblower, Peter Hunt, Peter Krentz, Franzeska Lang, Ted Lendon, Kurt Raaflaub, Barry Strauss, and audiences in London, Copenhagen, and Washington, D.C., have done much to improve it with their comments and suggestions. For its remaining failings the authors bears sole responsibility.
- 2 Classic statements of this view are Nilsson 1929; Andrewes 1956; Hanson 1995; 1996. (Hanson, however, argues that this hoplite middle class dissolved from the mid-fifth century onwards: esp. 1995, 347-50, 366-67). Note also Ridley 1979, 519: 'The Athenian hoplite army was very much a social group, the upper and middle class, with political repercussions of the first order, but that is well understood'.
- 3 Contra a radical break in styles of warfare in the seventh century: Latacz 1977; Pritchett 1985; Van Wees 1988; Raaflaub 1997. Contra the assumption that decisive military roles brought about class awareness and political ambition (let alone political power): Ceccarelli 1993; Van Wees 1995.
- 4 *Politics* 1273b36-9, 1274a16-22; also *Ath.Pol.* 7.3; Plutarch, *Solon* 18.1-2; Pollux 8.130. On Aristotle's approving attitude towards the Solonian constitution, see Lintott 1992.
- 5 Archonship: *Ath.Pol.* 26.2 (with Rhodes 1993, 330-31). Decree of 403: *Ath.Pol.* 39.6 (with Rhodes 1993, 470-71). A decree concerning the foundation of a colony at Brea (c. 445?) shows that property-class distinctions mattered sufficiently to be the subject of an amendment (*ML* 49.39-42; see also n. 84, below).
- 6 Ath.Pol. 7.4; 47.1 (with Rhodes 1993, 145-46, 551). Other evidence for the existence of the property classes in the fourth century: Isaeus 7.39; Demosthenes 24.144 (citing the bouleutic oath); [Demosthenes] 43.54 (discussed below, pp. 55-56); and a decree concerning settlers on Lemnos, *IG* II².30.12.
- 7 Permanent register: Andrewes 1981; ad hoc lists: Hansen 1981, 24-29; 1985, 83-89.
- 8 For the evidence and interpretation, see Whitehead 1981; Rhodes 1993, 138; cf. n. 42 below. Contra: Frost 1984, 283-84; Hansen 1991, 43-46. The notion of men 'yoked' together on the battle-field need not be taken as evidence of a very close and rigid formation, but refers more generally to the solidarity and hard work of the soldiers, and perhaps also, as I will suggest below, p. 61, to an element of compulsion in military service.
- 9 For mobilization 'by divisions' and 'by eponym', see Andrewes

- 1981, 2-3; Hansen 1981, 28-29; 1991, 88-89; for the high proportion of adult male citizens subject to military service after the ephebic reforms of 336/5, see, e.g., Hansen 1991, 108-9; Burckhardt 1996, 33-43.
- O There is no doubt that by *euporoi* Aristotle really means 'wealthy' (and not merely 'well-off'): he describes the richest Athenians, the liturgical class, as such (*Politics* 1291a33-4; cf. Davies 1971, xx-xxi; 1984, 10-14). Note also *Ath.Pol.* 26.1 (with Rhodes 1993, 326-29): 'It happened that at this time [after the death of Ephialtes] the more decent people did not have a [powerful] leader ... Moreover, the majority of them had fallen in war, since in those days armies were levied from the list ... so that the decent folk among both the people and the wealthy were destroyed'
- Sources: Ath. Pol. 7.4; Plutarch, Solon 18.1; Pollux 8.130 (the latter independently from Ath. Pol., see below, pp. 54-55). The exact figures are as follows: a medimnos is 52.176 litres, or 40.28kg wheat, 32.24kg coarse barley, or 33.55kg barley meal (alphita); a metrêtês is 38.88 litres (Foxhall and Forbes 1982, 43-44). Thus 500 med. is 20,140kg wheat/ 16,120 (coarse) barley/ 19,440 litres oil or wine; 300 med. is 12,084kg wheat/ 9,672kg barley/ 11,664 litres oil or wine; 200 med. is 8,056kg wheat/ 6,448kg barley/ 7,776 litres oil or wine. The sources' claim that liquid produce was included in the annual yield figures is denied by some (Foxhall 1997, 130-31), but supported by the tradition that Spartan allotments produced '70 medimnoi of barley for a man [or: the husband] and 12 medimnoi for a woman [or: his wife], and a quantity of liquid produce in proportion' (Plutarch, Lycurgus 8.7). If the Athenian census figures had excluded the yield in wine and oil, the annual income of zeugitai would thus have been about twice as high as that of full Spartan citizens (bearing in mind that Peloponnesian medimnoi were rather larger than the Attic equivalent), which is unlikely. It seems perfectly plausible that, for the purposes of estimating annual yield, dry and liquid measures were regarded as rough equivalents, as the sources imply: on the one hand, the metrêtês was a smaller measure than the medimnos, but on the other hand, oil and wine were needed in smaller quantities for home consumption and would have been more valuable than grain in barter or sale. (Some other schemes of equivalence-all entirely hypothetical—are cited in Rhodes 1993, 141-42.)
- As has occasionally been noted: Raaflaub 1999, 138; Hanson 1995, 440; de Ste Croix, unpublished paper (cited in Rhodes 1993, 145).

- 13 For ancient debate about the name and modern debate about the reliability of the figures, see below, pp. 54-56.
- 14 Careful calculations in Spence 1993, 280-6 (taking account of the small size of ancient Greek horses). Higher estimates in Anderson 1961, 137 (40 med.) and 138 (50 med.).
- 15 Pairs of horses: Greenhalgh 1973, 84-145; Spence 1993, 284-85; contra Burford 1993, 74, 151.
- 16 Theoretical maximum: Osborne 1987, 44-45, drawing on Sanders 1984, who shows that a seed:yield ratio of 1:10 was possible on Melos in 1848 (256) and 1670 (258); Sanders, however, also concludes that Melos was exceptionally fertile (262) and that the ratio on other Cycladic islands at the time was a much more ordinary 1:5 or 6. Other modern Greek ratios: Jameson 1978, 129 n. 39 (in Methana, 'in pre-fertilizer days 1:3 or 1:4 was not considered bad'); Sallares 1991, 374-75; 497 n. 239. Early modern Europe: Spurr 1986, 82-84; Pleket 1993, 326-28. Columella: *De Re Rustica* 3.3.4 (but it has been pointed out that he is advocating the superiority of viticulture and may well have played down the seed:yield ratio for grain: Pleket, ibid.).
- 17 De Re Rustica 6.3.3-8 (cf. 11.2.99-100). During summer the oxen eat only leaves, but from November to mid-June their diet may include 38 (6 x 4 + 2 x 7) sextarii of bitter-vetch (@ 0.539l per sextarius), or 72 (6 x 8 + 2 x 12) sextarii of chickpeas, or 8 modii of lupines (@ 8.62l per modius). How widespread the cultivation of fodder crops was in Greece is debated: Hodkinson 1988, 41-45, contra Skydsgaard 1988a, 76-78; Burford 1993, 149.
- 18 Foxhall and Forbes 1982, 68-72; also, e.g., Starr 1977, 153; Hopkins 1983, 106 n. 3; Garnsey 1988, 91, 102; Whitby 1998, 114-17.
- 19 Dicaearchus *FHG* ii.242, cited in Athenaeus 4.141c. Foxhall and Forbes 1982, 48-49, cite a requirement of 3,337 calories per day for 'very active' adult males, including 'soldiers on active duty'; they calculate the daily calorific value of the mess contibutions cited in Plutarch, *Lycurgus* 12.3, at 3,982 (3,416 + 568; ibid., 58). Since Dicaearchus' figures are 1.5 times as large, we arrive at *c.* 6,000 calories.
- 20 Foxhall and Forbes 1982, 57; ibid., 51-65, 86-9, for a tabulation and discussion of the ancient evidence.
- 21 There are 48 *choinikes* to a *medimnos*, and 144 *kotylai* to the *metrêtes*. Foxhall and Forbes 1982, 68, give a quantity of rather more than 50 litres (i.e. *c.* 1.25 *metrêtês*) of olive oil per person per year as the household rule of thumb in modern Methana. They argue that oil was a much less significant part of the ancient diet (ibid., 69-70), but I am assuming here that that would have been (more than) compensated for by its ancient non-food uses.
- 22 A late sixth-century decree stipulates that Athenian settlers on Salamis are to provide their own equipment to the value of at least 30 drachmae (*IG* I³.1 = *ML* 14), and a law which is likely to date to the same time (since it was then that coinage was first introduced in Athens) decrees that one drachma is to count as the equivalent of one *medimnos* of grain (Plutarch, *Solon* 23.3). We are also told that an ox counted as the equivalent of 5 drachmae (Plutarch, ibid., citing Demetrius of Phaleron), and since the

- bronze armour of the hero Diomedes in the *Iliad* was 'worth nine oxen' (6.236), even this would have cost only 45 drachmae/*medimnoi*. In the classical period, a panoply is estimated to have cost 75-100 drachmae (Hanson 1995, 294-301; Jarva 1995, 148-54), at a time when the lowest recorded price for grain was 2 dr. per *medimnos* of barley (Plutarch, *Moralia* 470f: late fifth century), and 5 or 6 dr. per *medimnos* of wheat was apparently a normal price (in the late fifth and fourth century: see Pritchett 1956, 196-98; Markle 1985, 293-97). Wine and oil might sell for much more.
- 23 This possibility is cautiously admitted by Foxhall 1997, 131: 'Clearly the *thêtes* must have included ... the odd hoplite'. Hanson (1995) rightly argues that a hoplite panoply 'was not enormously costly' (294) and 'not necessarily beyond [the] economic reach' of *thêtes* (299), and that 'even as early as 440-430 BC' hoplite service was 'no longer' confined to the *zeugitai* (348-9), yet he assumes that in *early* Greece *thêtes* were 'perhaps ... incapable of buying armour' (112) and in any case 'not allowed to buy or otherwise obtain heavy arms' (299; emphasis added). I believe to have disproved the first assumption above; for the second assumption, see below, pp. 59-61.
- 24 The harvests of 1922-23, chosen by Arnold Gomme (1933, 31), and of 1928, chosen by Alfred French (1964, 20; adopted by Rhodes 1993, 141), turn out to represent very bad years. The most often-cited figures, those of Auguste Jardé, are totally unreliable. Although he cited precise figures for the—rather good—harvest of 1921 (1925, 203-4; it should be noted that Ruschenbusch's figures for the same year are notably lower), he decided that 'these statistics are of little use' (1925, xiv n.2) and simply assumed that higher yields were the normal modern average. Barley, he claimed, produced 19 or 20 to 24hl (1,175-1,500kg) and wheat 12.5 or 13hl (c. 1,000kg) per hectare (1925, 57, 60). These quantities exceed his own figures for 1921 by 33-70% and 28%, respectively. As Gallant's averages for 1911-50 show, Jardé overestimated average yields of wheat by about half (48%), while his highest estimate for barley more than doubles the actual result (60-105%).
- 25 Gallant 1991, 78-80; also Osborne 1987, 44-45, on the possibility of higher yields with intensive cultivation (cf. n. 16, above). How widespread more intensive techniques were is debated, but it seems clear that extensive, plough agriculture was very common (see below, with n. 31).
- 26 On the introduction of fertilizer: Ruschenbusch 1988, 151-52 n. 19. Note the more anecdotal evidence from Methana, where the introduction of fertilizer is said to have raised seed:yield ratios from 1:3 or 1:4 to 1:9 (Jameson 1978, 129 n. 39).
- 27 Columella's recommended sowing rate (like his yield ratio, see n. 16, above) may be on the low side, since he himself sarcastically refers to people who would double his amounts (2.9.1), but higher rates of sowing would produce sharply diminishing yield ratios (Gallant 1991, 46-49).
- 28 A sowing rate of 115kg/ha of wheat and 154kg/ha of barley for Attica in 1864 is cited by Jardé 1925, 34 n. 2 (reversing the figures as given), who also adduces sowing rates for Crete of 115kg/ha of

- wheat and 140kg/ha of barley, and for Greece of 154-256kg/ha of barley. Jameson 1978, 131; Garnsey 1988, 95, treat 130-135kg/ha as the 'standard' sowing rate, but Gallant argues that there is no such thing (1991, 46).
- 29 For discussion, see esp. Garnsey (1988, 98-101; 1992, 147-49), who argues that 329/8 BC was a bad year.
- 30 A selection of other estimates of ancient yields (some clearly influenced by Jardé's overestimates—see n. 24, above—others by the poor results of Columella and the Eleusis offerings) is tabulated below. Some of these figures are given explicitly in the works cited, others I have calculated on the basis of the information given. In converting litres into kilogrammes, I have adopted the weights given in Foxhall and Forbes 1982, 43-44: wheat 0.772 kg/litre, barley 0.618 kg/litre.

Estimated Ancient Greek Yields (kg/ha)

	barley	wheat	'grain'
Barbagallo 1904, 490	310	230	-
De Sanctis 1912, 235	-	-	925
Beloch 1924, 303 n. 2	750-875	-	-
Jardé 1925, 60	1,000-1,250	620-925	-
Glotz 1926, 246-47	650-1,100	-	-
French 1964, 20	450	-	
Starr 1977, 154-55	1,000 (max.)	620-925	-
Jameson 1978, 131	-	-	400
Osborne 1987, 45		1,000-1,500	-
Garnsey 1988, 102	500-1250	300-925	-
Garnsey 1992, 148	770	625	-
Sallares 1991, 374, 389	-	-	(average) 500
	-	-	(maximum) 650
Foxhall 1997, 130	-	-	600-1,000

On the lowest estimate (Barbagallo's 230kg/ha of barley), the zeugite farm would have to be 34.8ha; on the most generous estimate (Osborne's 1,500kg/ha of wheat), it would need to be only 5.4ha (excluding fallow).

Common, because it is taken for granted in Homer (*Iliad* 10.351-3; 13.703-7; 18.541-9; *Odyssey* 5.127; 13.31-33) and Xenophon (*Oeconomicus* 16.10-15); desirable, because it is recommended by Hesiod (*W&D* 464: 'fallow, defence against ruin, soother of Hades': see West 1978 ad loc.) and stipulated in a number of fourth-century Attic leases of land (Osborne 1987, 42-43). For the debate, see Whitby 1998, 104-5; Isager and Skydsgaard 1992, 108-14; Skydsgaard 1988a, 75-86; Sallares 1991, 303, 385-86 (universal biennial fallow); and Garnsey 1988, 93-94; 1992, 149-52; Hodkinson 1988, 35-74; Gallant 1982, 113-17; Jameson 1978, 125-30 (alternative regimes).

- 32 Jardé 1925, 186 n. 1; Amouretti and Brun 1993, 560.
- 33 French 1964, 21, 176 (adopted by Starr 1977, 153, and Rhodes 1993, 141); De Sanctis 1912, 236; Jardé 1925, 186 n. 3. Survey: Amouretti and Brun 1993, 557-61; cf. Barbagallo 1904, 503; Glotz 1926, 246-47 (20-25ha).
- 34 Figures derived from Amouretti and Brun 1993, 554; Lohmann 1993, 215-17; Forbes 1992, 98 ('pan-Mediterranean' average). See also French 1964, 20-21, 176 (again arguing that ancient yields would have been no more than half of modern yields, 'a crude guess' of just over 1.1hl/ha, adopted by Starr 1977, 153, and Rhodes 1993, 141), Osborne 1987, 45 (average 2.75hl/ha); De Sanctis 1912, 236 (3hl/ha); Jardé 1925, 186-87 n.4 (5-6hl/ha).
- Gallant 1991, 68, argues (rather perfunctorily) that 'fruits, pulses, and vegetables' would have constituted a major part of the ancient diet and therefore of the crops. To what extent these products would have counted towards the overall yield in 'measures' is not clear, and it is difficult to quantify their contribution, but in any case Gallant's yield statistics for beans and lentils (1991, 77) suggest that these crops would yield no more per hectare than barley, while his estimates of acreage needed to produce the assumed minimum amount of pulses and vegetables (1991, 73, 79) show that this would take up proportionally far more land than grain.
- 36 Glotz 1926, 246-47: allowing for biennial fallow, he concluded that 'the man who produced his own wine and bread had not more than 25 acres [10 ha]' (a result implicitly adopted by Hammond 1973, 135 n. 2). More accurately, on his assumptions the farm would be between 7.4 and 12 ha (18.5-30 acres).
- 37 75:25 in the rations sent to the Spartans on Sphakteria (still quite generous, since they include meat; Thucydides 4.16.1) and in the smaller common ration, noted above, of 1 *choinix* of wheat and only 1 *kotyle* of wine. 80:20 for choruses in Phigaleia (Athenaeus 4.148f) and 6:1 for a Spartan king dining at home (Herodotus 6.57.3).
- 38 The maximum yield figures adopted in this section imply a seed:yield ratio of about 1:5. If from a proportion of 65:35 we deduct 20% for seed from the 65, the proportion becomes 52:35 = *c*. 60:40. At the worst seed:yield ratio of 1:3 (as used in the previous section), the proportion of grain to wine cultivated would have to be about 70:30.
- 39 Thus about 13% of the farmland would have been planted with olive trees (half of what has been calculated for the deme Atene, cited above), 11% vines, 9% wheat, and 52% barley; 15% would have been left fallow. Modern land use has changed dramatically, so that comparison may be pointless, but, for the record, the proportions for 1961 were 58% for all cereals, pulses, fruit and vegetables, and fodder crops; 26.4% for vines; no olives; and 15.6% apparently left fallow (long after the introduction of chemical fertilizers; statistics based on Sallares 1991, 296).
- 40 Note that the assumptions made in this section to arrive at the smallest conceivable farm size tend in the opposite direction from the assumptions made in the previous section to calculate

- the minimum number of people that could live off 200 measures of produce. The high seed grain requirement assumed earlier implies lower yield figures and thus a larger farm; the lower seed grain requirement implied in the higher yield figures adopted here implies a larger grain surplus and thus a capacity for feeding more people. Farmland which produced 123.5 medimnoi of grain and which had a seed:yield ratio of about 1:5 (see n. 38) could sustain 12 or 13 adult males (and two oxen).
- Surveys of the evidence in e.g. Burford 1993, 67-72, 113-16 (cf. Burford Cooper 1978, 168-72), who equates this not only with a 'hoplite', but also a 'zeugite' farm. Jameson 1978, 125 n.13, adds that the division of Melos among 500 Athenian klêrouchoi would also have resulted in average plots of 5ha. Hanson (1995, 188-89) adopts these figures as 'normative' for 'a hoplite farm of between 10 and 20 acres' (4-8ha); so do e.g. Skydsgaard 1988a, 81, and Isager and Skydsgaard 1992, 78-79. The latter (accordingly) explicitly reject calculations of farm size on the basis of Solonic property qualifications (so too Skydsgaard 1988b, 53); the other scholars appear to overlook the issue. Gallant 1991, 82-7, offers comparative evidence that across the Mediterranean 3-6ha was regarded as 'sufficient for supporting a subsistence farm' (84); cf. Foxhall's average of 3.5ha for subsistence holding on Methana (1997, 130). The largest plot sizes cited are between 200 and 300 plethra, i.e. 18-27ha, which seems to me encouragingly close to my figures for pentakosiomedimnoi.
- 42 Jongman 1988, 211; also Hodkinson 1988, 39-40. As Beloch already noted, this is another reason for believing that *zeugitai* means 'yoked men', not 'yoke owners': 'obviously very many farmers who harvested less than 200... bushels must have owned a span of oxen' (1924, 303 n. 1).
- 43 The discrepancy has been noted by Foxhall 1997, 131, and Raaflaub 1999, 151 n. 49. Jameson 1992, 145, and Lonis 1994, 210, place 'hoplites' above the 40-60 *plethra* level.
- 44 That 50 drachmas was a standard price for a plethron was first argued by Andreyev 1974, 14-18 (at the suggestion of A.A. Vayman), based largely on the so-called Rationes Centesimarum (see Lambert 1997, esp. 229-33, 257-65; Lewis 1973, 194-7); that it was at least a common price has been widely accepted. In c. 390, a farm of 'more than 300 plethra' is said to have been bought for 'more than 25,000 drachmas', i.e. at 83 dr. per plethron (Lysias 19.29, 42), but the context suggests that the sum is exaggerated. Another way of calculating property value which may have been used in Greece is to regard annual revenue as 8% of total value; 200 measures of barley, the cheapest form of produce, sold at 2 dr. per measure (in the late fifth century, see n. 22 above), was worth 400 dr. with an implied property value of 5,000 dr.: a few measures of wheat, wine, or oil, would easily bring the total up to a talent (see already, e.g., Beloch 1885, 246, who, however, took unjustifiable liberties with the numbers to make them fit a passage from Pollux, discussed below, pp. 54-55). Those who argue that the figure of 2,000 drachmas cannot be the rough equivalent of the 'hoplite census', on the grounds that the number of hop-

- lite citizens at the time of the Lamian War was higher than the number of citizens above the 2,000-drachma property requirement imposed by Antipater shortly afterwards (e.g. Williams 1983, 243-44), forget that from 336/5 onwards the state had been providing hoplite equipment to all ephebes, thereby extending hoplite service well below the previous hoplite census. For brief discussions of the leisure class threshold: Davies 1984, 28-29; Ober 1989, 128-29.
- 45 The problem is hinted at by Skydsgaard 1988b, 51 ('The arable land in Attica will not suffice'), and Jameson 1992, 145 with n. 70, but only fully addressed by Raaflaub 1999, 151 n. 49, who concludes that 'if the census figure is correct, the zeugites are not identical with the hoplite class whose property qualification then was probably much lower, if one existed at all'; his provisional solution is to question the accuracy of our sources, but he notes that 'this problem needs to be investigated more thoroughly'.
- Total surface area: Garnsey 1988, 90. Percentage under cultivation: Osborne 1987, 46, implicitly retracting his earlier estimate of 'up to 50%' (1985, 225 n. 82); similarly Garnsey 1988, 92, 102; Whitby 1998, 104 (35-40%). Foxhall 1992, 156, suggests 50% 'for broadly agrarian purposes', but this evidently includes pasture and woodland ('anything ... that was not built over, dug out, or nothing but bare rock'). Lower estimates: Sallares 1991, 303, 385-86 (30%, i.e. 72,000ha); Jardé 1925, 49-50, calculated the cultivable area at 68,736ha or c. 27% of 2,553km², only to reject it as 'not very likely' (50; it was nevertheless adopted by Starr 1977, 155); he went on to cite 20% as 'only a minimum' (52). French 1964, 176, assumed a mere 34,000ha in the major plains, plus 'smaller patches in the foothills'. Lohmann 1993, 34, 225, finds that the marginal deme of Atene only has 22% cultivable land, but estimates a much greater extent of cultivation elsewhere (e.g., 50% in Anaphlystos).
- 47 18,000: Hansen 1981, 23; 1988, 23-25. 18,500: Figueira 1991, 216 (who believes that this number includes cleruchs). 20,000: Jones 1957, 8-9, 161. 22,000: Strauss 1989, 78. 24,000: Ruschenbusch 1979, 140. 25,000: Gomme 1933, 4-6; 1956, 34-39. Thucydides gives 29,000 as the total number of hoplite field troops and home guard, but this includes a proportion of non-citizens (and, it has been argued, some non-hoplites as well: Hansen 1981, 19-24; 1988, 24; cf. Hornblower 1991, 256, ad 2.13.6-7). Slightly different figures in Diodorus 12.40.4.
- 48 This figure is adopted not only for ease of calculation, but also because it seems likely that the actual average will have fallen rather below the middle of the zeugite range of 8.7-13ha (10.85ha).
- 49 After setting up his own household at age 30, a man would be its sole hoplite for almost 20 years until his (eldest) son became eligible; if he survived long enough (and demographic models suggest that only about 1 in 5 men would have done: e.g. Hansen 1988, 21 (table)), he might then serve for up to ten years alongside his son; after that his son would be the household's sole hoplite again. If he had two sons, there would be a period of about 10

years in which the second son served first alongside his father and brother, later alongside his brother, until he in turn married and set up a new household. Assuming that the average household had 1.25 sons (i.e., 2.5 children) reaching the age of 30 (implying a growth rate of about 0.8% p.a., which is the rate implied by the rise of the number of 'field' hoplites from 9,000 in 490 to 14,200 in 431; see below), a rough calculation shows that it would provide 34.5 'hoplite years' over 30 years, i.e. 1.15 hoplites: 20 years of one-man service, plus up to 10 years in which 2.25 men serve in 20% of households (= 4.5 man years) and in which 1.25 men serve in the other 80% of households (= 10 man years). Factors ignored here are mortality rates after the age of 50 and rates of physical disability, both of which would tend to lower the figure of 1.15 somewhat.

- 50 40,000: Patterson 1981, 66-8; 43,000 (not including over-60s): Gomme 1933, 26; 50,000: Ruschenbusch 1979, 146; 60,000: Hansen 1988, 14-28.
- 51 The citizen population at the time had shrunk drastically, but was still at least 20,000 (Hansen 1988, 25-28), and the number of landless was 5,000 according to Dionysius of Halicarnassus, *Lysias* 32. Lysias himself indicates that the landless include 'many hoplites and cavalry and archers' (34.4).
- Davies 1971, xxvi; 1984, 36-7, drew attention to the possible significance of the Boards of Treasurers, but rightly warned that in the fourth century these were *de facto* open to non-*pentak-osiomedimnoi* as well. It seems clear, however, that the property class system was in operation at least until the end of the Peloponnesian War (above, p. 46, 54-56), so that it is legitimate to draw conclusions about the number of *pentakosiomedimnoi* in 431. On the demographic model used here (taken from Hansen 1988, 21 n. 9), the cohort of 30-year olds constitutes 2.7% of the adult male population (and should therefore constitute the same proportion within each property class).
- That 25% may be deducted here and in subsequent calculations is merely a guess, but it seems to me to err on the side of generosity, since there were relatively few non-landed sources of revenue (chiefly paid labour, craft production, mining, and money lending). The figure is meant to include both a (presumably small) proportion of households with revenues purely from such non-landed sources, and a (presumably larger) proportion of households living mostly off the land, but with some additional income from elsewhere.
- 54 See below, p. 56. The bottom of the zeugite range would have become 6.5ha, but the top end stayed at 13ha, so that it would be an underestimate to take three-quarters of 10ha as the new mean.
- 55 Raaflaub 1999, 138, 150-51 n. 49. Foxhall 1997, 129-32, is the only scholar to date to have been prepared to conclude that the *zeugitai* were part of 'a very small elite'—but only under Solon, when they were 'something different' from 'whatever hoplites became by the middle of the fifth century' (131).
- 56 E.g., Davies 1984, 4; already Beloch 1885, 245-46, with uncharac-

- teristically fanciful arithmetic (see n. 44 above), followed by De Sanctis 1912, 237-38.
- 57 Since both sources agreed on the level of the property qualifications, one cannot infer from their disagreement over the *hippeis* that they had no information about the actual census levels and were merely guessing (as argued by, e.g., de Ste Croix, unpublished paper, cited by Rhodes 1993, 143, 145). The issue was evidently not the accuracy of these figures, but whether they were the *original* criterion: 'some' argued that the name *hippeis* showed that they originally qualified by owning horses; pseudo-Aristotle's counter-argument was that the name of the *pentak-osiomedimnoi* showed that this class was defined by their annual produce from the start and that the same was thus likely to have been true of the *hippeis*.
- See below, pp. 57-59, for how this pattern matches classical Athenian political ideology. It has plausibly been argued that a sliding scale of taxes for the property classes did not feature under Solon (as Beloch 1885, 245, already pointed out, a flat rate tax of 5% or 10% is attested for Peisistratos and his sons by Thucydides 6.54 and Ath.Pol.16.4), and that property classes no longer featured in taxation after the reforms of Nausinikos in 378/7 BC (e.g., de Ste. Croix 1953, 42-5), but this is no reason to reject the validity of Pollux' statement for the late fifth and early fourth century (when, as de Ste. Croix, ibid., noted, there is otherwise 'no information whatever about the general system of assessment of eisphora'). The implication of accepting Pollux' evidence that eisphora-payments were imposed on zeugitai, too, is that the circle of tax-payers would have been close to the 6,000 suggested by, e.g., de Ste. Croix 1953, 33; Jones 1957, 28-29; Fisher 1976, 24; cf. Rhodes 1982, 5-11, but also that this group had a property census, not of c. 2,500 drachmas as suggested by these scholars, but of c. 6,000 dr, the census attributed to them by another group of scholars (e.g. Davies 1971, xx-xxx; 1984, 34-35; Sinclair 1988, 62-63, 122-23; Ober 1989, 128-29) who argue for a much smaller group of tax-payers of only 1,200-2,000 citizens. In other words, the present argument implies a significantly different distribution of wealth from that envisaged by both these schools of thought.
- 59 See also Welwei 1992, 181. One of the other laws on inheritance cited in the same speech features a clause stipulating that it is to be valid 'from the archonship of Eukleides' (i.e. 403 BC), and the law on dowries is likely to have been part of the same legislation. It was apparently still in force in the late fourth or early third century when the comic poet Poseidippos referred to the obligation 'to take the *thêssa* in marriage or give her five minae [500 dr.]' (Harpokration, sv. *thêtes and thêtikon*; Poseidippos F38 Kassel-Austin/F35 Kock).
- 60 That the Athenians ignored rather than adapted the law which excluded *thêtes* from serving as archons (*Ath.Pol.* 7.4) points to the same conclusion. An alternative explanation of pseudo-Aristotle's comment on the Treasurers, suggested as a possibility by Rhodes, namely that 'the assignment of citizens to Solonian

classes was now wholly unrealistic and a poor man might be a pentakosiomedimnos' (1993, 551), does not in fact seem feasible. It implies either (a) that even a poor man could now have an annual income of 500 medimnoi (so Schwahn 1936, col. 200), or (b) that the Athenians kept the name but lowered the census. (a) is impossible: 500 drachmas might lose their value as a result of inflation, but 500 'bushels' were always worth a small fortune; (b) would imply precisely the opposite of what [Aristotle] claims—that the law of Solon was no longer in use, and that a new law was now applied (rather than ignored).

- 61 Contra Thomsen 1964, 147-55. Beloch 1924, 303, suggests that the census was indeed 150 under Solon, but that it was subsequently lowered, for which there is no evidence. Note Aristotle's comments on the advisability of adapting the property census to changing circumstances (Politics 1308a35-b10).
- 62 The Constitution of Draco provides a few hints about the relative and absolute wealth of the property classes in the classical period. It decrees that for non-attendance in the Council fines are to be imposed: 3 dr. per day for pentakosiomedimnoi, 2 dr. for hippeis, and I dr. for zeugitai (4.3). The proportions would roughly fit either 500-300-200 or 500-300-150 (if the latter, the zeugitai would pay fractionally over the odds compared with pentakosiomedimnoi; if the former, they would pay just over an obol less than the proportionate sum). The daily fines are substantial, showing again that the absolute property levels are unlikely to have been significantly below the census attributed to Solon. The qualifications for office holding, it should be noted, are remarkably low: 10,000 drachmas for generals and cavalry commanders (only half of the unofficial liturgical census of 3-4 talents) and 1,000 drachmas for archons and treasurers (only half the presumed minimum necessary for hoplite service), while 'the lesser magistracies' are open to 'those who provide arms and armour' (4.2), which implies that many hoplites owned even less than 1,000 drachmas. I would suggest that this situation can only have obtained in the late fourth century, after the ephebic reform of 336/5, when the state began to provide equipment and training, thereby extending hoplite service to the bulk of the population (see e.g. Burckhardt 1996, 33-43). That fines for absence from the Council are imposed only on the top three property classes does not necessarily mean that the thêtes are meant to be excluded, but merely that fines were not imposed on them (in line with a general pattern in which thêtes are neither excluded not compelled to take part, see further below, pp. 59-61). On the general likelihood that, despite many similarities to the 'draft' constitution of 411, 'Draco's' constitution dates to the latter part of the fourth century: Fuks 1953, 84-101; for other views, see Wallace 1993; Figueira 1993.
- 63 For critical examination of Greek ideas on this subject, see Ceccarelli 1993; Van Wees 1995.
- 64 The plague killed 4,400 hoplites and 300 horsemen 'from the formations' (i.e. the field army of 14,200), or just under a third (Thucydides 3.87.3; that 'the field army' did not include the

- home guard stationed on the walls is clear from 8.69.1); so too Hansen 1988, 14; Ruschenbusch 1979, 140-1 (contra Figueira 1991, 206-7, 215-16). That in the space of only 40 days just over a quarter of Hagnon's troops died of the plague (2.58.3) seems consistent with a longer-term mortality of one third.
- 65 Thucydides 6.43.1; 6.94.4; 7.16.2; 7.20.2 (with 7.31.5); see Hansen 1988, 14-16; for casualties, see also Strauss 1986, 179-82.
- 66 Although some scholars have noted that the 5,000 were meant to be a more select group than the (9,000) hoplites (e.g. Raaflaub 1992, 32, 39; Brock 1989, 162-3; Strauss 1986, 79), others have simply glossed over the discrepancy in numbers: Fuks 1953, 86-88; Sealey 1966, 123 (who supposes that the earlier formulations referring to wealth are merely a 'colourful' way of describing the hoplites, and otherwise notes only that 'the so-called Five Thousand ... proved to number far more than five thousand'); Ruschenbusch 1979, 135 ('but in fact 9,000'); Nippel 1980, 79 (5,000 not to be taken literally), 93 ('the 5,000, or even 9,000 hoplites'); Lintott 1982, 137, 139; Hansen 1991, 41 ('nominally 5,000 men, actually a good many more than that, perhaps more like 9,000'); Hanson 1996, 303 ('a group called 'The Five Thousand,' but more likely numbering nine thousand or more'. All these glosses seem to imply that the number 5,000 was a rough guess at the number of hoplites, which turned out to be a very bad guess: it is quite incredible that the Athenians should have so little idea of what their actual hoplite numbers were. Even less plausible is Jones' assumption (1957, 178-79) that 9,000 qualified, but only 5,000 of these actually owned hoplite arms and armour.
- 67 Hanson 1995, 207, interprets this passage in the opposite sense: 'Aristotle confesses that he does not know the precise standard that might ideally result in the *largest* body of hoplite landowners running the government' (emphasis added). It is difficult to see how one might read this sense into the Greek or how it would suit the context, and all the commentators and translators I have consulted offer something similar to the translation offered above.
- 68 The choice of 5,000 as the number of enfranchised has not otherwise been adequately explained (see e.g. Nippel 1980, 89); for Aristotle, the richer half of the hoplites would presumably represent the leisure class (on the importance of leisure in his political thought, see Demont 1993). It is surely no coincidence that Plato's preferred number of citizens is 5,040 (*Laws* 745c, 746d). For the significance of the number 3,000, see Brock 1989, 163; Krentz 1982, 64-65; Lintott 1982, 164-65.
- 69 Thucydides' comment that an emergency levy of troops for an expedition to Chios in 411 'had hoplites from the list as marines under coercion' (8.24.2) suggests that those 'listed' would not normally serve as marines. Moreover, the navy sent out to Sicily was lavishly equipped and employed only the best crews, so that the recruitment of the socially and politically inferior thêtes would be most surprising unless it were common practice.
- 70 That they provided their own arms and armour seems self-evident: neither the assumption that the state provided equipment

- and training for a body of specialist thetic marines, nor the idea that the state handed out equipment to untrained *thêtes* who volunteered to serve as marines, is at all likely or has any support in the sources (contra Hansen 1991, 45, following Gomme, Andrewes, and Dover 1981, ad 8.24.2).
- 71 So, e.g., Hansen 1991, 44-45, 85; 1981, 26; Ridley 1979, 519.
- 72 Harpokration, s.v. thêtes kai thêtikon,, citing Ath.Pol. 7.3, and Aristophanes F248 Kassel-Austin/F232 Kock (the Etymologicum Magnum, s.v. thêtikon, evidently does no more than abbreviate Harpokration, and cannot be regarded as an independent source). The same entry also notes: 'Antiphon, in the speech against Philinos [frg. B6], says 'to make all the thêtes hoplites'. Whatever the nature and context of this proposal, it only tells us that not all thêtes were hoplites, which is obviously true; it does not mean that many thêtes were not hoplites already.
- 73 Note that Aristotle does *not* say, as H. Rackham mistranslates in the Loeb edition (1959, 341), that 'the poor are *not allowed* to possess arms'.
- 74 Fines under Draco: see above, n. 62. Their exemption from contributing dowries (see above, p. 55) is most remarkable, since the next-of-kin to a thetic heiress was surely in the vast majority of cases himself a *thês*.
- 75 Marathon: Nepos, Miltiades 5.1; Plutarch, Moralia 305b; Pausanias 10.20.2; Suda s.v. Hippias. Plataea: Herodotus 9.28.2. Megara: Thucydides 2.31.3. Boiotia: Thucydides 4.93.3 and 94.1.
- 76 Socrates at Potidaea: Plato, Symposium, 219e-220e; Plutarch, Alcibiades 7.2-3 (his property is said to have amounted to no more than 500 drachmas: Xenophon, Oikonomikos 2.3; perhaps one of his rich friends provided him with arms and armour). That volunteers might be used in principle is clear from the story of Tolmides' raising of 3,000 volunteers for an expedition in addition to the 1,000 men 'from the list' which he was supposed to raise; here, however, the volunteers are apparently also men who might equally have been raised 'from the list' (Diodorus Siculus 11.84.4; Plutarch, Pericles 18.2).
- 77 Expeditions of 4,000: Tolmides (see previous note); Pericles (and Hagnon) in 430: Thucydides 2.56.2, 58.3; 6.31.2 (emphasizing its exceptionally large size). If all 4,000 hoplites in these forces were 'from the list' (Thucydides does not tell us), together with the permanent force of 1,200 horsemen and mounted archers, they would have added up to very nearly the total number of 'elite' soldiers calculated above in Table 2a (5,333). In other words, unless there were many thetic volunteers, one of our other calculations must be nearer the mark (implying a smaller population or a lowered property census).

- 78 Aristotle, above, p. 46. Servants at Potidaea: Thuc. 3.17.4. One cannot, therefore, conclude from this and other references to hoplites' slave attendants that slave-ownership extended to the average farmer as well (as suggested by e.g. Jameson 1978; 1992, 142-5; Hanson 1995, 47-89; contra e.g. Wood 1988, 42-80; see Fisher 1993, 37-47, for a concise survey of the debate on the extent of slave-owning).
- 79 That voluntary naval service was the rule is well-established (e.g. Gabrielsen 1994, 106-9; Ruschenbusch 1984, 265-6); despite occasional claims to the contrary (e.g. Schwahn 1936, col. 203).
- 80 See Hanson 1995, 371-2; Hornblower 1991, ad 3.98.4.
- 81 Contra Hanson's suggestion that *thêtes* may have been forbidden to own arms and armour, or at least discouraged from owning military equipment (1995, 296, 299; see above n. 23). Frost's argument that there was in effect no state army or fleet in Athens before Cleisthenes seems to me to go too far (1984, esp. 292-93). See on this issue also Cathy Morgan's contribution to this volume.
- 82 See also above, pp. 46, 51 and nn. 8, 42.
- 83 As pointed out by e.g. Starr 1986, 54 (contra Hanson 1995, 435-44, who argues that *mesoi*, *hoplitai*, and *zeugitai* all denote the same group; also e.g. Ruschenbusch 1984, 264).
- 84 That *pentakosiomedimnoi* and *hippeis* are bracketed together in opposition to the other classes in the crisis mobilization of 428 (see above, p. 46), while *zeugitai* and *thêtes* are similarly opposed to the richer classes in the Brea decree (see above, n. 5), suggests a significant social divide at this point (as noted by Hornblower 1991, 400, ad 3.16.1; Hansen 1991, 115-16).
- 85 I have argued that the sources' claims about the monopolization of landownership, although exaggerated, are essentially correct, and that the poorest *thêtes* were indeed severely exploited; it will be obvious that I do not accept the common theory that Solon's political and economic reforms were both directed at the same social group, the class of 'middling' farmers: see Van Wees 1999.
- 86 This reinforces Raaflaub's arguments in favour of treating the reforms of Ephialtes and Pericles as the decisive stage in the development of Athenian democracy, contra the claims made for Kleisthenes by Ober and for Solon by Wallace, all in Morris and Raaflaub 1998. See Markle 1985 on the significance of pay in extending political participation beyond the leisure class.
- 87 Again, see Ceccarelli 1993, and Van Wees 1995; contra, e.g., Ober 1989, 83-84; Strauss 1996; Raaflaub in Morris and Raaflaub 1998, esp. 44-48, 95-97.

Naval Warfare: Its Economic and Social Impact on Ancient Greek Cities

Vincent Gabrielsen

Introduction

We possess a good number of studies that elucidate a variety of technical aspects of ancient Greek naval warfare: considerably more is known today about the innovations made in shipbuilding technology, the origin and development of naval powers, and the way fleets were manned and deployed, to mention only some of the main areas in which noticeable advances have been made. Such fundamental topics, however, as the political, economic and social implications of naval warfare remain largely unexplored.2 That neglect is all the more surprising in view of the improved possibilities which the newly-gained insights into the technical matters have provided for exposing and assessing the longterm consequences of a major transformation in the nature of naval warfare that had occurred by the early fifth century BC.

Navies in the proper sense, recent scholarship argues, began to emerge in the Greek world after the middle of the sixth century BC and were chiefly the result of two almost concurrent lines of development. First, the multipurpose vessels with one or two banks of oars (particularly, the *triakontors* and *pentekontors*) gradually ceded their dominant place in fleets to a new, larger type of craft with three banks of oars and exclusively designed for warfare at sea, the trireme. Even though subsequent innovations led to structural modifications of this ship type and to the introduction of various new types (the quadriremes [tetrereis], quinqueremes [pentereis], and

others, generally called 'polyremes'),3 the basic concept of the specialized warship remained that established by the trireme. Second, states took, in a competitive fashion, the decisive step to build fleets consisting (entirely or mostly) of publicly-owned ships. Thus possession of purpose-built, public vessels in large numbers is seen as the defining characteristic of the developed navy.4 If the cardinal points of that exposition are accepted (and our evidence strongly suggests that they should be), then in the period c. 550-470 BC a great part of the Greek world faced an entirely novel situation: challenges, needs and pressures of a new kind and an unprecedented scale began to leave their heavy imprint on the economic and social life of naval states. Henceforward poleis aspiring to possess and maintain naval establishments had to find ways to respond to economic demands, which even at the best of times exceeded the capacity of their own reserves, financial or otherwise.

In this paper I propose to treat what I believe are two important questions: (1) What were the fiscal systems used by Greek city-states in order to finance naval activity? (2) What was the impact of these systems on the social structure of the city-states involved? I shall focuse on two particular *poleis* at two different periods of time: Classical Athens and Hellenistic Rhodes. Before dealing with each of these two naval powers separately, it may be useful to mention briefly some general but significant characteristics of ancient naval warfare.

Naval warfare and resources

Historical accounts of the Classical and Hellenistic periods amply confirm the validity of Thucydides' statement (1.143.5) 'sea power (thalassokratia) is indeed a great thing'. It is imperative, however, to avoid the tendency of earlier and more recent scholarship to impute to the word thalassokratia the modern, Mahanian-inspired concept 'control of the seas'.5 Whether it refers to the principal means by which a hegemonic power tried to keep rivals out of its declared sphere of influence, or to the endeavours of states which—styling themselves policemen of the seas—assumed the task of combating piracy, 'control of the seas' was hardly ever possible for a number of reasons, most of which are related to the peculiar features of ancient warships and the way they were used in naval warfare.6

First, fleets were comprised of oared vessels which for tactical purposes were primarily used as weapons, that is, as floating missiles supplied with a powerful bronze ram at their prow with which to puncture an enemy craft, often after performing the manoeuvres of *periplous* and *diekplous*. Indeed, the ram itself (and so the offensive capability of vessels) was already in existence on the pentekontors and other early, multi-purpose ships. But its full use in a universally followed (though not equally expertly practised) tactical concept became possible only after the invention of the man-driven torpedo, the trireme. Speed and agility were therefore essential qualities, and to achieve these qualities naval architects strove to construct fairly slender, light ships with, as far as practically possible, maximum oar-power.

Second, and in consequence, these men-of-war were filled to the brim with large rowing complements requiring a large daily intake of food and water, yet they had precious little space available for carrying the amount of provisions actually needed:9 the standard crew of the trireme of the Classical period numbered 200, of whom 170 were oarsmen; a slightly different type of warcraft, a quadrireme in the fleet of Hellenistic Rhodes, was manned by forty-six officers and ratings, to which perhaps three times as many oarsmen should be added. To Third, lightness for the purpose of speed required that the ships were frequently dried on land so as to avoid their becoming waterlogged. Fourth, in addition to

making possession of great skill a vital prerequisite, handling these vessels posed exhorbitant demands in terms of human energy. Simply, the ability of even a well-trained rowing crew to maintain the high speed needed in combat lasted for only a short period of time: as Nikias, the Athenian commander-in-chief of the expeditionary force to Sicily (415-413 BC), explained in a letter to his home government, 'the peak efficiency of a [rowing] crew is brief and few are the oarsmen who can both set the ship out and maintain their oarstroke' (Thuc. 7.14.1).

These four features alone limited severely the warship's radius of action ('action' here does not refer to the leisurely cruising under sail and reduced oar-power) and imposed the need of having not only a naval headquarters adequately supplied with infrastructural facilities and personnel, but also an extensive network of bases dispersed over strategically vital areas.11 Once naval bases are defined as regional aggregations of three contiguous and interacting zones—(a) harbours with their naval installations, (b) adjacent settlements and (c) the cultivated or forested hinterland surrounding them—it becomes easy to appreciate a pronounced economic function which was intimately tied to their strategic significance: their ability to satisfy an ever-present demand for manpower, provisions and naval materials—not least shipbuilding timber-turned them into arterial systems of recruitment, logistical support and fleet maintenance. Thalassokratia, therefore, primarily referred to the successful endeavours of a naval state to possess and control the greatest number possible of conveniently situated bases from which operations could be mounted.

In the sphere of inter-state relations, all this came inevitably to add new impetus to traditional mechanisms of domination. Places which, because of their geographical location and resources, did offer the advantages just described, might try to use them to enhance their own diplomatic and military value. Most of them, however, constantly faced the grim prospect of either being forcefully reduced to subjection by a stronger naval state or—what in many instances amounted to the same—willingly becoming its allied dependencies. It was first and foremost a question of power. Political pressure or

armed violence were taken into use for appropriating another community's naval infrastructure and resources, human as well as material. The acquisition schemes fashioned in order to achieve these ends were admirably sophisticated and fiercely oppressive.

Understood this way, the concept of *thalassokratia* implies intense naval activity, primarily in order to defend existing bases and to acquire new ones, and intense naval activity, in its turn, requires command over enormous material and financial resources. It is to the theme of resources that I now turn.

Besides bringing a specific mode of warfare squarely within the venue of economic activity at large, that theme highlights the frequent correlation between the aims of naval warfare and the means that made its practice possible. 'If some city is rich in ship-timber', wrote a fifth-century Athenian, 'where will it distribute it without the consent of the power having the lead at sea? And if some city is rich in iron, copper, or flax, where will it distribute it without the consent of the leading sea power? In all these, however, I see the very materials of which also my ships are built.'12 'His ships', were, of course, those of the Athenian empire. Thucydides' account of how imperial Athens used raw muscle to appropriate the naval establishments of disaffected allies (e.g. Thasos in the 460s,13 Samos in 440-43814), or of how bitterly she fought over control of places renowned for their richness in silver-mines, timber and manpower (Eion and Amphipolis in Thrace¹⁵) offer concrete testimony to that effect. Yet much more valuable—because of the general validity of its conclusions—is Thucydides' incisive analysis of the intimate connection between two pairs of terms: 'naval power' (nautike dynamis) and 'preparedness' (paraskeue), on the one hand, and 'expenditure' (dapane) and 'revenue' (prosodos chrematon), on the other. 16

A dominant thread running throughout the part of his work which scholarship calls the *Archaeology* (but which properly is the section where he constructs the main interpretative framework of his historical account) is the function of financial resources in fuelling the development of naval power, as well as the use of naval power for the acquisition of further financial resources. These points are presented by way of treating a succession of Thalassocracies, from king Minos onwards.¹⁷ More importantly, they preface the ancient historian's

description of how Athens, by 431, had become so great a naval power, in control of such vast amounts of resources, that it brought fear to the Lacedaimonians—in Thucydides' view, the truest cause of the Peloponnesian War (1.23.6). Thus, in an important sense, the Thucydidean analysis is in accord not only with Plato's pronouncement that 'all wars are fought for the possession of wealth' (*Phd.* 66C), but also with Aristotle's conclusion that 'even the art of war is by nature an art of acquisition' (*Pol.* 1256b23).

A fourth-century Attic orator quite fittingly characterized the triremes with the adjective 'gluttonous' (adephagoi triereis), 18 thereby indicating the great costs involved in keeping fleets of such ships afloat. Even when an inherent bias towards exaggeration is taken into account, there is much in the surviving source material to document clearly the shear incidence and general magnitude of economic pressures. Quantifying these pressures with a tolerable degree of precision is, however, a different matter. What we really want to know are the total costs which naval states had to meet in three areas: (a) shipbuilding, (b) maintenance and (c) of having fleets in commission. Yet the sad truth is that we shall probably never be able to reconstruct anything near credible 'naval budgets', for even the evidence from classical Athens, the most richly documented city-state, fails to provide full or reliable information on these matters. Indeed, Thucydides and inscriptions give some figures that are useful pointers to the high level of expenses in only certain areas and in isolated years during the fifth century BC,19 but there are still substantial gaps. For instance, the total cost of the grand expedition to Egypt in the 450s, which ended in disaster, or the cost of the equally great (and likewise disastrous) expedition to Sicily in 415-413 BC.20 Furthermore, not even qualified guesses can be ventured about the costs of such conspicuously large-scale shipbuilding programmes as that launched by Athens in 483/2, or that by Dionysius I of Syracuse in 399, or the one by Antigonus I in 315, or, again, those which led to the aggrandizement of the Ptolemaic and Seleucid fleets in the third and second centuries BC, not to mention a series of comparable, though not quite as large, enterprises carried out at numerous other places from the later part of the sixth century onwards.21

Some comfort comes from the series of fragmentarily preserved Athenian inscriptions known as the naval records. These documents, which generally cover the period 378-322 BC, are the published accounts of the Dockyard Superintendents, a board of officials responsible for the headquarters of the Athenian fleet (i.e. the harbours of Kantharos, Zea and Mounichia). Their meticulously arranged entries record the day-to-day administrative and financial business transacted by these officials, as well as the naval matériel in stock in discrete years.²² Still, while these valuable inscriptions document Athens' naval strength in terms of hulls and equipment, and together with the speeches of the orators (e.g., Lys. 21.1-10) give a good impression of the cash spent by private individuals, the trierarchs (cf. below), they have obvious limitations: above all, they are very little concerned with operational expenses and not at all with what can safely be regarded as one of the most onerous budgetary items: paying and maintaining crews. In this regard, moreover, fourth-century Athens is highly exceptional. No comparable material survives from Rhodes, the other city-state with which I am concerned here, nor, for that matter, from any other Classical or Hellenistic naval power.

Our difficulties in quantifying the financial pressures are compounded by two further factors. One is the circumstance—and this is important to remember in the following-that everywhere naval activity was financed partly by public, partly by private funds. The figures provided by our sources relate either to the first or to the second, but seldom, if ever, to both. For instance, a good indication of the expenses of a warship seem to come from an inscription recording the fact that in c. 200 BC the Rhodians set the cost of keeping a trireme in commission for one month at 10,000 drachmas (i.e. 330 dr. per day). That amount, however, appears in a clause of a treaty of alliance stipulating the financial obligations of an allied state (the Cretan city of Hierapytna).²³ We do not know if the ally concerned had to bear all or some of the relevant expenses, nor if that sum was normal or exceptional. It certainly exceeds the daily rate of 200 dr. which fifth-century Athens usually gave to a trireme crew (1 dr. per man: Thuc. 3.17.3). But any inferences that might be drawn from such a comparison are rendered hazardous by our inability to say whether the Rhodian amount expresses—as the Athenian one certainly does—only what was to be defrayed from public funds, excluding any additional outlays frequently taken care of personally by ship captains. ²⁴

The other factor is the almost complete unpredictability of both the duration and the financial requirements of campaigns. In the Classical and Hellenistic periods fleets or squadrons were often dispatched to carry out a multiplicity of objectives on the basis of funding schemes only roughly calculated by their governments-and sometimes even without such schemes at all.25 But as soon they left their home ports, the element of unpredictability increased for every mile they put behind their sterns. An illustration of the exigencies facing fleet commanders in such situations is provided by Demosthenes' censuring of the Athenians in 341 BC: 'For where else do you suppose that he [sc. a fleet commander] looks for the maintenance of his crews, if he gets nothing from you and has no private fortune to furnish their pay? To the sky? No, indeed; it is from what he can collect or beg or borrow that he keeps things going.' (Dem. 8.26).

So the decision of a state to build up a naval establishment was one thing—even if that state (1) quite unexpectedly came into possession of the cash needed to build ships (as Athens did from her silver-mining revenue in 483/2 BC), 26 or (2) proved capable of rerouting to that area any surplus accumulated in other spheres of economic activity (as Archaic Corinth is said to have done with her revenue from seaborne commerce),²⁷ or (3) succeeded in enlisting the financial support of another power (as Sparta managed to do via her rapprochement with Persia from 412 BC onwards, 28 or, finally, (4) activated the mechanisms of Herrschaft for appropriating the reserves of subjected territories (as Achaemenid Persia, imperial Athens, Alexander the Great, the Antigonids, the Ptolemies and other rulers are seen to have done). Quite another thing, however, was to ensure a constant and, if possible, steadily growing flow of resources with which to maintain naval supremacy. Funds, naval materials and manpower came to be three of the most highly prized commodities, and as such they caused those who had them and those who needed them to become interlocked into a variety of complex political and economic relationships.

Few, if any, city-states commanded public treasuries capable of funding such costly projects entirely on their own. Therefore, two additional, and sometimes complementary, things were needed: (I) a reliable fiscal infrastructure by means of which domestic, private cash could be made available; and, to the extent one could muster the necessary amount of diplomatic skills or military power, (2) the deployment of acquisition schemes

designed for the purpose of gaining control over external resources. How exactly the first of these should be shaped was above all a political issue whose solution mainly hinged on the way a community, according to the prevailing ideology, had defined and arranged its internal power structure.

The Fiscal system of Classical Athens

The principal institution of this system is known as the trierarchy (Greek: trierarkhia), a substantive designating the duty or service performed by a trierarch (*trierarkhos*). The word trierarkhos is a compound of trieres (the Greek word for trireme) and arkhon (here, commander), but from early Classical times onwards it was universally used for a warship captain tout court, whether the ship in question was a trireme or a different kind of warcraft. Yet, even though virtually all Greek naval states had their ships captained by trierarchs, that position—and in particular the rules determining its appointment and responsibilities—was not everywhere part of the same institutional structure as that of Athens.29 An understanding of the view taken by the Athenian democracy on three issues is crucial for our appraisal of the system introduced at Athens in order to make private cash available for financing naval activity: (a) whether—and if so, the mode in which—private wealth, possessed on a grand scale, should be subjected to the regulatory forces of redistributive mechanisms; (b) the kind of obligations to be carried by individuals qua members of a political community as well as the ways of rewarding the fulfilment of these obligations; and (c) who was legally entitled to exercise armed violence.

Attitudes towards the first two had already been formed by, and were being transmitted through, the old custom of *leitourgia*: properly, a useful service to the community as a whole, voluntarily performed by affluent individuals, that is to say, in response to a predominantly moral obligation to expend part of their wealth and time on the public good.³⁰ Democratic Athens adeptly reinforced and redefined aspects of that custom in accordance with the prevailing ideology in order to shape her peculiar liturgy system, one which remained in force throughout Classical times. In principle, that sys-

tem too held on to the view that private wealth and personal abilities should, regularly and out of a strongly-felt moral commitment, be put to public utility. In practice, however, it replaced 'moral obligation' with 'statutory compulsion', while at the same time it sought to maintain an element of volition by attaching to liturgical spending a set of rewards, mostly honorific ones. These are the main characteristics of the broader institutional framework into which naval commandership, alongside a number of other civic services,31 was transferred: the trierarchy became a liturgical obligation. Indeed, liturgies, including that of captaining a warship, were to be found in other states as well (cf. note 29 above). What gave the Athenian system its idiosyncratic style, however, was its being, ideologically and juridically, the product of a particular political regime.

To bring out the view taken by the Athenian democracy on the third issue mentioned above—the right to exercise armed violence—it is necessary to specify, at least cursorily, the meaning of a central concept: naval activity. This largely consisted of either one of two things. Anyone who wishes to become familiar with a formal sea battle can read through the chapters of Herodotus (and the verses of Aeschylus' Persae) on the battles at Artemision and Salamis (480 BC), or those of Thucydides on the battles off the Sybota islands (433 BC), in the Crissaean Gulf (i.e. Phormio's operations in 428 BC) or those of Xenophon on the battle at Argynousai (406 BC), or those of Diodorus on the engagement between the fleets of Demetrius Poliorcetes and Ptolemy at Salamis in Cyprus (306 BC), or any other account of similar engagements by these and other authors. But if one wants to be acquainted with informal naval warfare, then good descriptions, which are fairly representative of innumerable other such instances in our sources, are available in Xenophon's account of how, from their base in Aegina, the ships of the Spartan admiral Teleutias carried out a night attack on the harbour of the Piraeus, and in Diodorus' account of how small squadrons of Rhodian craft operated during Demetrius' siege of Rhodes in 305-304 BC. ³²

A formal battle is usually a large-scale engagement of a limited duration between two opposing fleets; its beginning is clearly signalled, its end quite easily perceived by the combating parties. Informal naval activity, on the other hand, essentially consists of surprise attacks carried out by a small number of ships or fleets against other warships, merchantmen or some territory; they may or may not be connected with a formally declared war; to the same kind of activity, of course, belong attempts to offer protection from such assaults, as was for instance the case with squadrons of warships escorting merchantmen. Whereas the formal battle at heart is a forewarned measurement of relative strength between two contestants within a spatially limited scene of action—hence, in an important sense, resembling the hoplite phalanx fighting in land warfare—informal naval activity, in its psychology and techniques, is firmly rooted in a different concept, that of the raid. Already in the world depicted by the Homeric epics the raid mentality constituted the dominant structural element in what Aristotle was later to call an 'art of acquisition', and as such it turned peaceful trade and the forceful seizure of goods into interlapping activities, regardless of whether the practitioners were individual heroes or whole communities.33 Historically, the formal sea battle, like the purpose-built warship, is a later phenomenon-which is why ancient historians were preoccupied with recording its first occurrence.34 Yet the seaborne raid went on being a most widely-used mode of naval warfare, despite the fact that the right to practice it became a major political issue. Much of the history of ancient piracy can be written in terms of the stand taken by states on precisely that issue.

An Athenian warship captain who distinguished himself in the battle against the Persian fleet at Artemision in 480 BC was Kleinias son of Alkibiades. Kleinias, Herodotus reports (Hdt. 8.17; cf. Plut. *Alc.* I), fought on his private ship and with a crew of 200 men, whom he provided from his own means. Several things

are remarkable about Kleinias. First of all, as the size of his complement strongly indicates, he was the owner of a relatively novel, extremely powerful, and highly expensive, purpose-built warship, a trireme. Secondly, by participating in the fighting with his own ship and crew he responded not so much to a statutory duty as to a moral obligation that emitted from his social and political status: as a member of the old Athenian aristocracy he was expected to display generosity and military valour and to defend his polis with his own weapons;35 in so doing, he responded to the norms of the old leitourgia custom. Thirdly, on that particular occasion (in 480 BC) he definitely acted both within the formal naval establishment of his state and in the pursuit of its strategic aims, but the frequency of campaigns of that kind was hardly high enough by itself to justify the private possession of a regular warcraft. What, then, did Kleinias do with his trireme (and crew) when he was not busy defending his polis?

He very probably used it to honour another kind of obligation, one at least as strong as that to defend his own community: to fight on the side of an influential foreign connection with a view to fulfiling such vows of reciprocal allegiance as those ensuing from established guest-friendships (*xenia* relationships).³⁶ Again, if driven by political ambition to carve out for himself and his house an offshore, semi-private dominion, the sort of small-scale 'tyranny' which the elder Miltiades appears to have set up for himself in the Thracian Chersonese, personal command over naval resources was indispensable.³⁷ Finally, he almost certainly used it entirely on his own behalf as an independent raider.

The principal word expressing that vocation is *leisteia*, which can retain its traditional rendering 'piracy' (*piraterie*, *pirateria*, *Seeraub*, etc.) as long as we remember three important things. That it referred to a behaviour deeply entrenched in the economic, political and social structure of ancient communities. That the shades of meaning—often pejorative ones—imputed to it by Classical and Hellenistic sources, were strongly coloured by current perceptions about who was and who was not entitled to practice the violent seizure of territory, property and persons by using the sea as a primary means. And, finally, that the distinction often made in our sources and consistently drawn by modern scholar-

ship³⁸—viz. between (a) illegitimate, privately-conducted, gain-motivated maritime aggression and (b) legitimate, 'political' maritime aggression committed either during a declared war by the main participants and/or their allies and privateers, or in connection with duly declared retaliatory reprisals—is really an artificial one, and so broadly irrelevant, precisely because legitimacy and illegitimacy were political constructs which could be manipulated by those possessing the necessary amount of power.

The instance concerning the seizure by an Athenian trireme of a merchantman from Naukratis in 355 BC will suffice to illustrate the latter point. The plunder, on high seas, of goods worth 57,000 drachmas from the citizens of a community currently not at war with Athens was a gain-motivated predatory act conducted in private by the two captains who commanded a public warship and the three ambassadors who sailed with them. By contrast, the formal decision of the Athenian political authorities, when they later learnt of the incident, to regard the seizure of Naukratian property as not illegal on the grounds that the cargo of the merchantman 'at the time was not friendly (viz. to the Athenians)' was simply the public justification of the act, one intimately connected to the view taken by the Athenians that by law the loot was state property. That the Athenian state quite arbitrarily defined the legal nature of the seizure (and, in a formal sense, ultimately became the plunderer) does not alter the fact that the capture of the merchantman was an act of gain-motivated maritime aggression, pure and simple. 39

An allegedly Solonian law-clause provides explicit evidence to the effect that Archaic (as opposed to Classical) Athens legally recognized the corporate existence of 'those going away for plunder (or booty: *leia*)'. ⁴⁰ But even without that specific testimony we would still find the same point amply documented in the major implication underlying the inter-communal arrangements concerning the right of seizure (*sylan*), ⁴¹ namely that *leisteia* was not always looked upon disapprovingly by states. Closer to the point is Thucydides' remark (1.5.1-3 ff.) that 'in earlier times both the Greeks and the Barbarians who dwelled on the mainland [*sc.* of Asia Minor] near the sea, as well as those on the islands, (...) turned to *leisteia*, under the lead of their most powerful men,

whose motive was their private gain and the support of their weaker followers (...) for this occupation did not as yet involve disgrace, but conferred something even of glory.'42 True, especially from Classical times through to the grand-scale Roman anti-pirate campaign that was launched in 102 BC and beyond,⁴³ *leisteia* was constantly condemned and often fought, but that did not keep people from practising it.

By far the most noteworthy thing about Kleinias, however, is the virtual disappearance of his kind from the Athenian record after about 480 BC. The process of harnessing the independent raider all the more to communal decisions and actions had, as the movements of the Younger Miltiades suggest, already began previously. Operating on his own accord and very probably with his own ships in 493 BC, Miltiades raided Lemnos, captured the island, and then 'handed it over to the Athenians'private gains were turned to public property.⁴⁴ His expedition to Paros in 489 BC had indeed all the characteristics of a raid which, according to Herodotus (6.132-133), was undertaken out of purely personal motives. Yet this time Miltiades could employ the force of seventy ships as well as the appropriate amount of funds and manpower only after the Athenian assembly had issued an authorization to that effect, and only after he himself had assured his home authorities that his personal venture against some place (whose identity he did not disclose) would be beneficial to (i.e. it would 'enrich', Hdt. 6.132) all the Athenians. In 480 BC, Kleinias fought side by side with other ship captains, or trierarchs. But the majority of these trierarchs commanded public triremes and had been appointed by the state to perform an obligation prescribed by the law of democratic Athens.

By that time, Athens had come into possession of an unprecedentedly large fleet, about 200 triremes, most of which had been built through the so-called Themistoclean programme of 483/2. To meet the high costs accruing from the maintenance and operation of that fleet a particular fiscal mechanism was designed by incorporating naval commandership into the orbit of liturgical obligations. Henceforward, what was needed on board every ship was a rich man who could aid the public treasury by making cash payments on the spot: wealthy Athenians were required, for one year at a time, to captain and finance a trireme. Hence, the independent

raider gave way to a state appointee whose primary qualification was the thickness of his purse. The raid mentality, however, persisted. What really changed in Athens is that its practice in naval warfare was deprivatized to become the prerogative of the state.

Not long after the introduction of the new fiscal system came the second measure needed for achieving thalassokratia. In 478, the Athenians were recognized as the leading member of the newly-founded Delian League, whose members came under an obligation to provide either ships for the common fleet or cash for the League fund kept at Delos. What initially united these under Athenian leadership was 'a pretext': to exact revenge from the Persians by ravaging the Persian king's territory, certainly also through pillaging and piracy.⁴⁵ There was no doubt in Thucydides' mind that that step signalled the beginning of the Athenian rule (arche) over a steadily growing number of allies (1.96-98). The process leading to a further increase in Athens' naval power in the course of the fifth century can, among a host of other measures, be followed (a) in the massive conversion of ship contributions to monetary payments of tribute (phoros), (b) in the use of these funds on primarily Athenian war operations (while from 454 onwards the goddess Athena was allowed to skim 1/60 of the incoming amounts of phoros), and (c) in the series of confiscations of the fleets belonging to disaffected allies. The general outcome, which is what matters here, is summarized by Thucydides (1.99.3): 'For because of this reluctance [of the allies] to face military service, and in order to avoid being away from home, most of them assessed themselves to pay a corresponding sum of money instead of supplying ships. Consequently, the Athenian fleet grew strong with the money which the allies themselves contributed, while whenever the allies revolted they were ill-prepared and inexperienced for the war.' To finance naval activity fifth-century Athens had managed to direct towards herself an immensely rich flow of external resources by imposing on her subjects collectively the function of an extra-polis treasury.

So the years around 480 represent a significant turning-point. In the military sphere, Athens became a naval power in possession of a large public fleet. In the political sphere, the bodies of government (Assembly and Council) took total control of that fleet, which practi-

cally meant that the state ensured for itself total monopoly over the exertion of armed violence at sea. In the economic sphere, two parallel developments occurred: the creation of a fiscal system, the trierarchic institution, as well as Athens' subsequent control over an extra-polis treasury, garanteed the uninterrupted availability of revenue (prosodos chrematon) with which to meet naval expenditure (dapane); at the same time, a hitherto vital field of private economic activity was dispelled from the polity structure as the pursuit of gain by using the sea was snatched from the independent raider to become the prerogative of the state. Finally, in the social sphere, the old-fashioned naval raider died out. The Athenian democracy gradually tamed the aristocratic warrior by turning him into an honourable tax-payer. The story of the latter process, which runs on to the fourth century, is too long to be told in full here, but its main themes are: (1) the enormous drain on Athens' financial reserves caused by the expenses of the Peloponnesian War; (2) the loss of imperial tribute even before the defeat to Sparta in 404 BC—which was not followed by the loss of the will to embark on new power-political projects relatively shortly afterwards; and, as a consequence of these, (3) the need to squeeze harder the domestic tax-potential (i.e. the rich Athenians) by privatizing an ever-growing part of naval expenditure. It is to the fourth century that we must turn in order to see the effects of all these, especially that produced by the growing privatization.

One cannot but empathize with Apollodoros, the son of an ex-slave (Pasion) who had become one of the wealthiest citizens of Athens. In 362 BC, when Athens was about to send a naval squadron to the northern Aegean, he was required to discharge three obligations: (1) to pay his share of the extraordinary war-tax (eisphora) levied in order to finance the expedition; (2) together with 299 others—who like him were the richest men of Athens—to pay in advance the whole amount of that tax-levy (a proeisphora) and then try to recoup his money from a number of eisphora-payers; and (3) to captain a ship of the expeditionary force.⁴⁶ Even though he tried to perform these duties as conscientiously and lavishly as possible, he was hit by almost every disaster imaginable; that he ultimately proved unable to recoup his advance money (i.e. the proeisphora) was among the lesser ones (50.9).

When the warship which he commanded as trierarch had carried out the crossing from the island of Thasos to the Thracian coast, Apollodoros found the shore too hostile to attempt a landing, all the while he had to endure a violent storm. 'So', he says, 'we were forced to ride at anchor all night long in the open sea, without food and without sleep' (50.22). His rowing crew, in total dismay, unfed and exhausted after the crossing, was unable to engage in battle should they be attacked (a reminder of the importance of bases). On a reasonable estimate, the daily amount of food needed by Apollodoros' crew to satisfy their basic energy requirements totalled about 300 to 400 kilograms, most of which would consist of grain; as for water, another indispensable item, they needed one hundred gallons (c. 545 litres) or more.47 Initially, his complement consisted of conscripted Athenian sailors, but these he dismissed already before the fleet departed from the Piraeus, because they were too few and too inexperienced. Instead, he hired a full complement of skilful but expensive specialists from the open market (50.7-8); from this point on his troubles started for good. For in spite of the fat wages Apollodoros paid them, his crew deserted ship four times, and each time he had to hire fresh manpower by offering higher pay. On top of this, the trierarch appointed to succeed him the following year failed to arrive from Athens, with the result that Apollodoros had to serve an extra term—and spend more money; all the while, as he complained later, not only was his own life at risk, but at home his farm was being neglected, his wife fell ill, his children were still minors and his mother breathed her last shortly after he reached harbour (50.59-62). In the end, he was compelled to raise loans from five different creditors in order to meet the running expenses of his obligation. And indeed these expenses did not include any compensatory payments—usually in the order of 5,000 drachmas or more—which his government would demand of him, in the event his ship was damaged or lost.48

Apollodoros would have confirmed the point which, according to Thucydides (1.121.3), a Corinthian representative made before a Peloponnesian assembly held at Sparta already in 431 BC: 'For by contracting a loan we (the members of the Peloponnesian League) can use the inducement of higher pay to entice away from the Athe-

nians their foreign crews: for the strength of the Athenians consists of hired hands rather than their own citizens.' In his own speech to the Athenians in the same year, one also reported by Thucydides (1.143.1-2), Pericles confidently emphasized the naval skills of Athenian citizens and the loyalty of the foreign sailors serving in the Athenian fleet. Either of these remarks highlights the virtual inability of even such a large city-state as Athens to respond to the demands for manpower without resort to recruitment of foreign labour, free or slave.⁴⁹

Surely, Apollodoros would also have subscribed to the fourth-century orator's characterization of triremes as 'gluttonous' (cf. p. 74 above). How gluttonous triremes could be is shown by another example from the latter half of the fourth century: Konon son of Timotheos, and grandson of the victor at the battle of Knidos, had in a ten-year period spent about 70,000 drachmas on several trierarchies; a large part of that sum (which seems astronomical when compared to the one and a half to two drachmas per day earned by a skilled labourer) consisted of compensatory payments for damaged or lost ships.50 Granted, not all trierarchs incurred so great expenses. But even when—as in most cases the level of outlays was lower, the very frequency of their recurrence was high enough to produce a cumulative financial burden which, in combination with the liabilities incurred from other civic obligations, forced this class of people to adjust their economic action according to their financial circumstances and responsibilities, mainly in two ways. Negatively, by minimizing expenditure on personal extravagance and conspicuous consumption, or through the hypothecation of their property in order to obtain loans. And positively, by expanding or intensifying their economic operations—be it as rentiers, contractors of silver-mines, investors in trade, or producers of marketable agricultural goods—in order to generate the surplus capital needed.51

Finally, Apollodoros would have tacitly agreed with the complaints made by other Athenians about the burdensome liturgies, the trierarchies, the tax-paying groups (*symmories*) and the personal dangers to which they were exposed when sailing aboard a trireme. ⁵² In the 330s and 320s, privatization of naval costs had reached hitherto unheard of levels. All those liable to these fiscal demands had of course two options which they sometimes used.

One was to try to evade their obligation entirely by claiming lack of financial resources on the scale required (a claim usually accompanied by attempts to conceal their property), 53 though this they could do only at the risk of being challenged to the dreaded *antidosis*, the exchange of properties. 54 The other was to find a substitute

who, for a sum of money, agreed to take over part of their duty and captain the ship on their behalf. Yet resorting to either of these means removed the fourth-century Athenian trierarch even farther away from his precursor, the independent raider.

Hellenistic Rhodes

In 227 BC, Rhodes was hit by a severe earthquake that caused the great Colossus and the larger part of the city walls and naval dockyards to collapse.55 Historically, however, that catastrophe is more significant for the improvement it brought than for the damages it caused. Polybius explains how the Rhodians, through a tremendous amount of skilful diplomatic footwork, 'made such an impression on the cities, and especially on the kings, that not only did they receive presents beyond measure (i.e. material aid amounting to far more than the extent of the actual damage) but they even made the donors feel under obligation to them.' (5.88.4). Of the gifts listed by Polybius to have been given on that occasion those featuring most prominently are the very commodities by which Rhodes could maintain its primacy as a trading centre and as a naval power: notably, cash, grain and naval materials. Ptolemy III Euergetes gave pine timbers (probably from Cyprus) for the construction of ten quinqueremes and ten triremes, 3,000 pieces of sailcloth and tow weighing 3,000 talents, in addition to a consignment of corn to feed the crews of ten triremes. Antigonus III Doson offered high quality Macedonian timber (probably roof-timbers cut to size for the repair of the dockyards), and substantial amounts of pitch, tar, iron and lead. The gift of the Syrian king Seleucus II Kallinikos included ten ready-built quinqueremes provided with complete sets of gear, shipbuilding timber and 1,000 talents each of raisin and hair. If we add the gifts—of the same or similar kind—which were given by many other donors, but which Polybius saw no need to record in detail, then we can appreciate the degree to which the Rhodians proved able to boost their naval establishment by capitalizing on the catastrophe.

Two comments seem necessary. First, what this whole affair really documents is not the *creation* of a net-

work of external suppliers, but rather the inducement of traditional suppliers to make synchronized, ad hoc and exceptionally large contributions of valuable commodities—thus relieving the recipient city of the economic pressures which it would otherwise have had to lift itself in connection with a refurbishment of its naval establishment; and, as it may already have been noticed, virtually all of the commodities concerned in this instance are identical to those which a fifth-century Athenian had said could be acquired by his state by virtue of ruling over an empire (cf. 74 and note 12). Second, all these givers hurried to respond to the Rhodian appeal out of an obvious self-interest in the maintenance of a first-rate naval power which, besides operating a vast trading-network of its own, was willing to service their separate economic needs. In the Hellenistic period Rhodes had assumed the leading position which was previously held by Athens among crack fleets of the eastern Mediterranean. Rhodian naval supremacy and, above all, its overly benevolent function towards a large number of trading communities is emphasized by Polybius' account of the conflict between Rhodes and Byzantion in 220 BC—especially by his statement 'the Rhodians had the lead at sea' 56—and by other authors, too. In the context of 305/4 BC, Diodorus (20.81) writes:

The city of Rhodes had a powerful navy and enjoyed the finest government in Greece, and so was an object of competition between the dynasts and kings, as each sought to win it over to his friendship. (...) It had reached such a peak of power that it took up on its own, on behalf of the Greeks, the war against the pirates and cleared the sea of that scourge. (trans. Austin 1981, no. 39).

Again, referring to Hellenistic times, Strabo (14.2.5 [652-53]) says:

It (i.e. the city of Rhodes) is also remarkable for its good order (*eunomia*) and for the care it devotes to the rest of its administration and especially to naval matters; as a result it controlled the seas for a long time and destroyed piracy, and became a friend to the Romans and to those of the kings who were well disposed both to the Romans and to Greeks. (trans. Austin 1981, no. 92).

Archaeological evidence and inscriptions add to that picture by way of firmly documenting the existence of a huge naval infrastructure which, in addition to an extensive system of dockyard facilities at home, comprised a far-reaching web of naval bases abroad. 57 There is absolutely no doubt that the Rhodians too drew on their domestic capital in order to finance such a prodigiously expensive structure and particularly their fleet. Yet it appears that they did so primarily by resorting to schemes that bear little resemblance to those used in Classical Athens. The specific character of these schemes depended on whether or not the political regime was susceptible to an ideology prescribing three things: (a) the enforcement of redistributive mechanisms mainly based on compulsion; (b) the complete nationalization of the practice of armed violence at sea; and, consequently, (c) the denial to individuals of the right to use naval activity as a venue to private enrichment, and hence also as a form of production.

Indeed, at Rhodes, too, public warships were captained by appointed trierarchs who also had financial obligations. Furthermore, though there is no explicit evidence to document such a thing, the trierarchy might have been one of the liturgies which wealthy citizens were expected to undertake. But even so, it would be completely unwarranted to assume that the liturgies there were subject to the same rules and institutional setting as those of Classical Athens. In fact, there are distinct indications to the effect that the Rhodian naval organization differed from that of Classical Athens in certain important respects. One of these is that at Rhodes there existed a *formal* substitute for those trierarchs who

either were not able or did not wish to command their vessel in person—the officer bearing the title *epiplous*. ⁵⁸ At Athens, on the contrary, not only was the obligation of wealthy men appointed to serve as trierarchs formally inalienable, but such substitutes were, from an official point of view, nonexistent—to which should be added that, at least on one occasion, the trierarchs who had transferred the active part of their duty to a substitute risked being collectively charged with treason and desertion because their evasive action was believed to have been the cause of a naval defeat. ⁵⁹

More generally, though no less importantly, what fails to surface in a voluminous body of inscriptional evidence from Rhodes is anything to indicate the use of such compulsory mechanisms as those known from Classical Athens (including the organization of tax-payers and trierarchs into symmories and the antidosis procedure). In the Rhodian material, references to extraordinary taxes in the form of eisphorai and proeisphorai are staggeringly few, date from the very end of the Hellenistic period, and appear in contexts that are not even remotely associated with the navy or military activity at large.60 Absent too are such, and similar, schemes from the exceptionally detailed literary record that chronicles an entire year's severe military crisis, i.e. Rhodes' siege by Demetrius in 305-304 BC (Diod. 20.83-100.5). What does surface, instead, with a frequency that makes the total lack of evidence for compulsory mechanisms even more conspicuous is a different mode of utilizing private cash for communal purposes: the publicly solicited voluntary contributions (epidoseis). 61 Even though the projects attested so far to have been funded that way do not include military operations (but see Diod. 20.88.3), the preponderance of such schemes in our source material is still of significance, inasmuch as it suggests that the Rhodians generally prefered voluntarism to compulsion.

The most significant difference between Classical Athens and Hellenistic Rhodes, however, lies elsewhere. Notably, in the fact that a considerable part of the latter state's fleet consisted of private ships whose owners put them at the service of the state; in other words, a system akin to that known to the Athenian Kleinias. Aristotle reports that (at some fourth-century date) the Rhodian trierarchs successfully carried out an oligarchic revolution, primarily because under the democratic govern-

ment they had been unable to recover money owed to them by the state. 62 The transactions alluded to here cannot have represented simply the reimbursment of captains for expenses they had incurred while serving on public ships, since in that case trierarchic service would not have entailed any monetary outlays at all-a construct which is out of the question because it misleadingly reduces the financial obligations of trierarchs to the provision of short-term loans. In addition, the situation described here is completely the reverse of that prevailing in Classical Athens, where much too often it is the trierarch who was deeply in debt to the state. ⁶³ Rather, Aristotle refers to a system, according to which the trierarchs took upon themselves an obligation that elsewhere fell entirely on the state: to provide ships and gear (and probably crews, too) in return for a fixed sum of money. A good part of the Rhodian fleet consisted of privatelyowned ships chartered by the state.

Intimately connected to that system of partly public, partly private ships—and so reflective of it—are the types of vessels used in the Rhodian naval establishment. They fall into two general categories. One was comprised of an unknown number of relatively large types of craft which were primarily designed for deployment in formal sea battles. Their structural characteristics placed them—alongside some other, even larger denominations (the 'polyremes') which crop up in other fleets in early Hellenistic times—in the class of ships called kataphracts ('fenced-in' or 'armoured' vessels, provided with a superimposed fighting-deck and protecting screens along the sides forming an oarbox). Ships of that category in the Rhodian navy consisted of triremes, quadriremes and quinqueremes, that is, three different versions of the specialized (or purpose-built) warhip. The other category was made up of a variety of smaller craft, whose structural features set them apart from the kataphracts and gave them a generic appellation of their own: aphracts (light, 'unfenced' ships without an oarbox or screens).⁶⁴ The presence of this latter kind of craft in the fleet of Rhodes (and in those of other states) is a reminder of the fact that the almost complete transition—one best documented in Classical Athens—from multi-purpose galleys to the purpose-built warship was far from a universal phenomenon. A number of navies retained, or frequently enlisted the services of, a contingent of vessels that performed a wider range of functions, of which employment in formal sea battles was generally not the principal one.

Most, if not all, of these functions subsumed under the concept of the raid. Still towards the end of fifth century BC, the Rhodian federal fleet counted a number of multi-purpose pentekontors.⁶⁵ The 'double-banked' galleys (dikrotoi) mentioned by Hellenistic sources are either that or a closely similar kind of ship. 66 Another type which is attested to in the same period as a unit in an expeditionary squadron is the 'oared vessel of two banks' (epikopon ploion dikroton), probably a merchant galley that was used as a naval auxilliary after it had been beefed up with a second bank of oars and had its prow armed with a ram.⁶⁷ Furthermore, it seems likely that Rhodes possessed also some triremes of the aphract version.⁶⁸ But by far the greatest in importance and numbers among the Rhodian contingent of aphract vessels were the triemioliai, after which came a lesser number of an akin ship-type, the hemioliai. 69 Our sources often describe the *hemiolia* as a type of craft preferred by pirates, the triemiolia as the type favoured by those chasing pirates,70 but perhaps we should steer clear of such stereotyping and accept that the pirates themselves also used triemioliai (and other types of ships) whenever convenient. Much more relevant is to note that, since the tactics of the pirate and his chaser were basically identical (and therefore both of them opted for craft that was swift and structurally suitable for sudden raids and surprise attacks), the main—but not the sole—functional characteristic of the hemioliai and the triemioliai was predatory action, regardless of whether the target was the pirate's prey, the pirate himself, or enemy craft at large.

How great an emphasis the Rhodians laid on that characteristic is indicated by two peculiar features of their naval organization. One concerns the varying composition of their fleets according to the nature of military operations in which they were engaged: while their aphract ships—and especially the triemioliai—were seldom deployed in large-scale, formal battles and then only in insignificant numbers, such craft constituted the standard units in raiding expeditions.⁷¹ The other is that nine times out of ten the Rhodians fought no formal battles but chased pirates.⁷² The close link between the design of ships and the purposes for which these were

used was not a new one. Thucydides (1.10.4) distinguishes between two kinds of vessels: (1) the *kataphract* ships of the developed navy (*kataphract* at that time referring to purpose-built warships supplied with a raised deck above and a protective leather screen at the sides); and (2) the older types 'that were fitted out pirate-style (*leistikoteron*)', that is, fast, *aphract* vessels.⁷³ It thus appears that the functional nexus between *aphract* vessels and raiding activity (see e.g. Diod. 20.97.5), and the frequent dissociation of both from the purpose-built warship, had already been firmly established in the fifth century BC.

In many places, the raid mentality never really lost its close affinity to private ship-ownership, be that the possession of a merchant galley, a multi-purpose aphract vessel, or even a specialized warship. In 412 BC, the Rhodian Dorieus, a celebrated Olympic victor and member of the prominent Ialysian family of the Diagoridai, made his political come-back from his place of exile (Thurii) by joining the Spartan fleet with ten triremes he owned in private.⁷⁴ His possession of fighting vessels placed him within a long-lasting tradition adhered to by men of comparable status, both at home and abroad. In the Homeric catalogue of ships, Rhodes is represented by nine vessels, made up of three groups, with one group belonging to Ialysos, one to Camiros, and one to Lindos-the three separate political communities that in the fifth century BC merged (through a political synoikism) to form the federal state of Rhodes.⁷⁵ These ships were owned by aristocratic families. In addition to the Athenian Kleinias, famous predecessors of the Rhodian Dorieus are to be found in such independent raiders as Philippos son of Boutakides from Kroton, who in 510 BC participated in the campaign of the Spartan Dorieus on his own trireme and crew, or Phaylos, another prominent citizen of Kroton, who in 480 BC took his own ship to the battle of Salamis, or the Phocaean Dionysios, who after the battle of Lade took off with his own ships to Sicily where he enriched himself by operating as a full-time raider.76

Classical Athens' clear break with that tradition—seen already in the law ordaining that goods violently seized by the use of public warships were state property, Dem. 24.12—is neatly illustrated by the political incident caused by one Makartatos. In the early fourth cen-

tury he sold his plot of land in order to raise money with which to purchase a trireme. Then, having hired a complement, he sailed off to fight as a privateer on the side of a Cretan city which at that time seems to have been on unfriendly terms with Sparta. This is the sole known instance of private ownership of a warcraft at Athens after 480 BC. And even though Makartatos was acting outside the naval organization of his polis, the mere fact that an Athenian citizen used a regular warship for a purpose likely to endanger Athens' relations to Sparta sufficed to upset the Athenians so greatly as to put the matter on the agenda of the assembly: Athens did not tolerate independent naval action of that kind.⁷⁷ Other city-states, however (perhaps including Classical Sparta and some of its Peloponnesian allies),⁷⁸ armed themselves by resort to a mixed system of public and private ships, with some of the private ones belonging to their own citizens, some to foreign privateers: Makartatos offered precisely that sort of service, and so also did (to mention but one other example) the c. 1,000 part-time merchants, part-time-privateers who, in addition to peiratai, joined Demetrius' forces during his siege of Rhodes in 305-304 BC.79 The motive which our sources give for the former group's participation in the siege—i.e. the private gain likely to accrue from plundering wealthy Rhodes (Diod. 20.82.4)—shows that the line separating the merchant, the privateer and what we call a pirate was often thin enough as to be nonexistent.

In contrast to the Athenian Makartatos stands Hannibal, the daring Carthaginian who (for some reason unknown to us) was nick-named 'the Rhodian'. Acting within the naval organization of his country during the First Punic War (264-241 BC), he created havoc among the Roman contingents with his private warship, an exceptionally fast quinquereme—which after his capture was used by the Romans as the model for a brand-new fleet.80 Almost certainly, his outstanding skills in seamanship, especially as a blockade runner, were acquired in the same way as those of the Athenian Kleinias: by operating, for most of the time and with his state's condonation, as an independent raider. At some early second-century date, the Rhodian admiral Epikrates, who currently held command over a fleet of ships from Rhodes, the Nesiotic League and Athens, issued an ordinance to the effect that those among his forces who carried out piratical raids against the enemy may not launch their attacks from Delos but must use their own harbours as bases. Epikrates neither condemned nor prohibited the practice itself; he only sought to spare Delos from becoming the target of reprisals.81 Granted, that occurred during a time of armed conflict, but there is nothing peculiar (or overly significant) in the fact that warfare provided a justification for acts of violence that frequently were committed in peacetime as well. Whenever piratical activity comes under fire in our sources, it frequently takes the form of exasperated outbursts of condemnation pointedly targeted at the Cretans, the Ozolian Locrians, the Aetolians, the Acarnanians, the Tyrrhenians, the Cilicians and the Illyrians.82 Yet, on that matter, many more states actually continued to hold an opinion very similar to that which the Illyrian Queen Teuta tersely expressed in her response to an official Roman complaint (230 BC) about the assaults of her subjects' vessels on Italian shipping: 'so far as concerned private activities, it was not customary for Illyrian rulers to preclude their subjects from augmenting their fortunes at sea.'83

In about 260 BC, the commanders and crews of three Rhodian triemioliai put up a dedication to Athena at Lindos. They had just returned from one or more operations against Tyrrhenian pirates, and to thank the goddess for the successful completion of their mission they offered her part of the booty (laphyra) which they had captured from the pirates as 'the first fruits' (aparcha).84 It is pointless to try to decide whether that mission was a private or public one: it simply was both. The dedication was a private one, as also in all likelihood were the ships involved. No official authorization of that (or any other known) mission is recorded, and none may have been needed, since the task accomplished by these units was fully in accord with Rhodes' policy to pose as the protector of trade and as a dedicated combatant of piracy. Moreover, 'booty', as the clause of a treaty from c. 200 BC makes clear, 85 often comprised not only the pirates' capture (persons and valuables), but also the pirates themselves and their ships. If, as seems certain, the commanders of these three triemioliai themselves kept the remaining and greatest part of the booty, then their action must, indeed, be viewed as a substantive mode of 'augmenting their fortunes at sea'. And, inevitably, this view could also be applied to their ability, as proprietors of multi-purpose craft or even regular warships, to engage in various fields of economic activity—be it the non-violent pursuit of their own trading interests, or the offer of protection to Rhodian and foreign shipping against raiders, or, whenever opportune, the violent appropriation of wealth belonging to others.

So, in Hellenistic Rhodes, the political regime (whether democratic or oligarchic) appears to have been resilient to the ideological prescriptions mentioned above (p. 82): neither the enforcement of redistributive mechanisms based on compulsion, nor the total nationalization of armed violence, nor, again, the denial to individuals of the right to enrich themselves through naval activity seemed workable propositions there. Rather, the regime in Hellenistic Rhodes chose to respond positively to a different ideological construct, one that recommended that the increasing financial burdens imposed by naval warfare be met by allowing certain key aspects of the traditional power-structure, including the aristocratic habit of private ship-ownership, to run their course. Consequently, the long-term impact of that choice on the socio-political sphere was of a fundamentally conservative nature: for one, the fiscal system remained anchored to the old, pre-Classical (and non-Athenian) notion of the leitourgia custom; for another, not only was the independent raider allowed to live on, but his dealings continued to be an acceptable mode of economic activity that was largely in harmony with the interests of his state. Throughout Hellenistic times, a large part of the Rhodian fleet remained in the hands of a limited but overly dominant group of families which, in addition to having monopolized almost all higher functions of the state, formed a nearly close-ended and powerful naval aristocracy. Hence, while the fourth-century Athenian warship captain appears all the more often in the pitiful guise of the begrudging tax-payer, his Rhodian counterpart is frequently seen in inscriptions as publicizing his naval exploits with a self-assertiveness and pride that prove him to be a far more worthy successor of the Athenian Kleinias.

Department of History, University of Copenhagen

Bibliography

- Austin, M.M. 1981. The Hellenistic World from Alexander to the Roman Conquest: A Selection of Ancient Sources in Translation. Cambridge: Cambridge University Press.
- Berve, H. 1937. Miltiades: Studien zur Geschichte des Mannes und seiner Zeit. Berlin: forlag?
- Blackman, D.J., Knoblauch, P. and Giannikouri, A. 1996. Die Schiffshäuser am Mandrakihafen in Rhodos, AA, 371-426.
- Blinkenberg, C. 1938. Triemiolia. Étude sur une type de navire rhodien. Det Kgl. Danske Videnskabernes Selskab, Archæologiskkunsthistoriske Meddelelser II.4 (Lindiaka, VIII). Copenhagen.
- Bravo, B. 1980. Sylân. Représailles et justice privée contre des étrangers dans les cités grecques, ASNP 3rd ser., vol. 10.3, 675-97.
- Brulé, P. 1978. La piraterie crétoise hellénistique. Annales littéraires de l'Université de Besancon 223. Paris.
- Casson, L. 1986. Ships and Seamanship in the Ancient World, 2nd ed. Princeton, N.J.: Princeton University Press.
- Casson, L. 1991. The Ancient Mariners, 2nd ed. Princeton, N.J.: Princeton University Press.
- Casson, L. 1995. Merchant Galleys, in Gardiner and Morrison 1995,
- Coates, J.F., Platis, S.K. and Shaw, T.J. 1990. The Trireme Trials, 1988. Report on the Anglo-Hellenic Sea Trials of 'Olympias'. Ox-
- Davies, J.K. 1969. Demosthenes on Liturgies: A Note, JHS 87, 309-33. Dell, H.J. 1967. The Origin and Nature of Illyrian Piracy, Historia 16, 344-58.
- de Souza, P. 1998. Towards a Thalassocracy? Archaic Greek Naval Developments in Fisher N. and van Wees, H. (eds.), Archaic Greece: New Approaches and New Evidence, 271-93. London and Swansea: Duckworth.
- de Souza, P. 1995. Greek Piracy, in Powell, A. (ed.), The Greek World, 179-98. London and New York.
- Figueira, T.J. 1991. Athens and Aegina in the Age of Imperial Colonization. Baltimore and London: Johns Hopkins Univ. Press.
- Gabrielsen, V. 1986. Phanera and Aphanes Ousia in Classical Athens, C&M 37, 99-114.
- Gabrielsen, V. 1987. The Antidosis Procedure in Classical Athens, C&M 38, 7-38.
- Gabrielsen, V. 1994. Financing the Athenian Fleet: Public Taxation and Social Relations. Baltimore and London: Johns Hopkins University Press.
- Gabrielsen, V. 1997. The Naval Aristocracy of Hellenistic Rhodes. (Studies in Hellenistic Civilization, 6). Aarhus: Aarhus University Press.
- Gardiner, R. and Morrison, J.S. (eds.) 1995. The Age of the Galley: Mediterranean Oared Vessels since Pre-classical Times. (Conway's History of the Ship). London: Conway Maritime Press.
- Garlan, Y. 1978. Signification historique de la piraterie grecque, DHA 4, 1-16.
- Garlan, Y. 1989. Guerre et économie en Grèce ancienne. Paris.

- Gauthier, P. 1972. Symbola. Les étrangers et la justice dans les cités grecques. Nancy.
- Gomme, A.W. 1933. A Forgotten Factor in Greek Naval Strategy, JHS 53, 16-24.
- Haas, C.J. 1985. Athenian Naval Power before Themistocles, Historia 34, 29-46.
- Hansen, M.H. 1974. The Sovereignty of the People's Court in Athens in the Fourth Century B.C. and the Public Action against Unconstitutional Proposals. (Odense University Classical Studies, 4). Odense: Odense University Press.
- Hassal, M., Crawford, M. and Reynolds, J. 1974. Rome and the Eastern Provinces at the End of the Second Century BC, JRS 64, 195-220.
- Herman, G. 1987. Ritualised Friendship and the Greek City. Cambridge: Cambridge University Press.
- Holladay, A.J. 1988. Further Thoughts on Trireme Tactics, G&R 35.3, 149-51.
- Hunt, P. 1998. Slaves, Warfare and Ideology in the Greek Historians. Cambridge: Cambridge University Press.
- Jackson, A.H. 1973. Privateers in the Ancient Greek World, in Foot, M.R.D. (ed.), Warfare and Society. Historical Studies in Honour and Memory of J.R. Western, 241-53. London.
- Kallet-Marx, L. 1993. Money, Expense, and Naval Power in Thucydides' History 1-5.24. Berkeley: University of California Press.
- Lazenby, J.F. 1987a. The Diekplous, G&R 34.2, 169-77.
- Lazenby, J.F. 1987b. Naval Warfare in the Ancient World: Myths and Realities, IHR 9, 438-55.
- Lewis, N. 1960. Leitourgia and Related Terms, GRBS 3, 175-84 Lewis, N. 1965. Leitourgia and Related Terms (II), GRBS 6, 227-30.
- MacDonald, B. 1984. Leisteia and Leizomai in Thucydides and in
- I.G. I (3rd edn.) 41, 67 and 75 AJPh 105, 77-84.
- McKechnie, P. 1989. Outsiders in the Greek Cities in the Fourth Century BC. London and New York: Routledge.
- Meiggs, R. 1982. Trees and Timber in the Ancient Mediterranean World. Oxford: Oxford University Press.
- Meijer, F. 1986. A History of Seafaring in the Classical World. New York: St. Martin's Press.
- Migeotte, L. Les souscriptions publiques dans les cités grecques. (Hautes Études du monde Gréco-Romaine, 17). Geneva and Quebec.
- Momigliano, A. 1944. Sea Power in Greek Thought, CR 58, 1-7.
- Morisson, J.S. 1974. Greek Naval Tactics in the Fifth Century B.C., IJNA 3.1, 21-26.
- Morrison, J.S., 1991. The Greek Ships at Salamis and the Diekplous, JHS 111, 196-200.
- Morrison, J.S. and Coates, J.F. 1986. The Athenian Trireme: The History and Reconstruction of an Ancient Greek Worship. Cambridge: Cambridge University Press.
- Morrison, J.S. and Coates, J.F. (eds.) 1989. An Athenian Trireme Reconstructed: The British Sea Trials of 'Olympias', 1987. (BAR International Series, 486). Oxford: British Archaeological Reports.

- Morrison, J.S. and Coates, J.F. 1994. *Greek and Roman Oared War-ships, 399-31 BC*. Oxford: Oxbow.
- Morrison J.S. and Williams, R.T. 1968, *Greek Oared Ships, 900-323 BC.* Cambridge: Cambridge University Press.
- Murray, W.M. 1989. Octavian's Campsite Memorial for the Actian War. (Transactions of the American Philosophical Society, 79:4). Philadelphia.
- Nowag, W. 1983. Raub und Beute in der archaischen Zeit der Griechen. Frankfurt.
- Ormerod, H.A. 1924. *Piracy in the Ancient World: An Essay in Mediterranean History*. Liverpool: University Press of Liverpool.
- Osborne, R. 1991. Pride and Prejudice, Sense and Subsistence: Exchange and Society in the Greek City, in Rich, J. and Wallace-Hadrill, A. (eds.), *City and Country in the Ancient World*, 119-45. London and New York: Rouledge.
- Perlman, P. 1999. Krêtes aei lêistai? The Marginalization of Crete in Greek Thought and the Role of Piracy in the Outbreak of the First Cretan War, in Gabrielsen, V. et al. (eds.), Hellenistic Rhodes: Politics, Culture, and Society. (Studies in Hellenistic Civilization, 9), 132-61. Aarhus: Aarhus University Press..
- Pugliese Carratelli, G. 1939-40. Per la storia delle associazioni in Rodi antica, *ASAA* n.s. 1-2, 147-200.
- Rauh, N.K. 1998. Who were the Cilician Pirates?, in Swiny et al. (eds.), Res Maritimae. Cyprus and the Eastern Mediterranean from Prehistory to Late Antiquity. Proceedings of the Second International Symposium 'Cities on the Sea', Nicosia, Cyprus, October 18-22, 1994, 263-83. Atlanta.
- Rodgers, W.L. 1937. Greek and Roman Naval Warfare: A Study of Strategy, Tactics, and Ship Design from Salamis (480 B.C.) to Actium (31 B.C.). Annapolis, Md.: Naval Institute Press.

- Rougé, J. 1981. *Ships and Fleets of the Ancient Mediterranean*. Middletown, Conn.: Wesleyan University Press.
- Segre, M. 1936. Dedica votiva dell'equipaggio di una nave rodia, *Clara Rhodos* 8, 227-44.
- Semple, E.C. 1916. Pirate Coasts of the Mediterranean, *Geographical Review* 2, 134-51.
- Shaw, T.J. (ed.) 1993. *The Trireme Project: Operational Experience* 1987-1990. Lessons Learnt. (Oxbow Monographs, 31). Oxford: Oxbow Books.
- Starr, C.G. 1989. *The Influence of Sea Power on Ancient History*. New York and Oxford: Oxford University Press.
- Strauss, B.S. 1996. The Athenian Trireme, School of Democracy, in J. Ober and C. Hedrick (eds.), Dêmokratia: A Conversation on Democracies, Ancient and Modern, 313-26. Princeton, N.J.: Princeton University Press.
- Strauss, B.S. 2000. Democracy, Kimon, and the Evolution of Athenian Naval Tactics in the Fifth Century B.C., in P. Flensted-Jensen et al. (eds.), *Polis and Politics. Studies in Ancient Greek History presented to Mogens Herman Hansen on his Sixtieth Birthday, August 20, 2000*, 315-26. Copenhagen: Museum Tusculanum Press.
- Wallinga, H.T. 1993. Ships and Sea-Power before the Great Persian War: The Ancestry of the Ancient Trireme. Leiden: Brill.
- Wees, H. van 1992. Status Warriors: War, Violence and Society in Homer and History. Amsterdam: J.C. Gieben.
- Welwei, K.W. 1974. Unfreie im antiken Kriegsdienst, I: Athen und Sparta. Wiesbaden.
- Whitehead, I. 1987. The Periplous, G&R 34:2, 178-85.
- Ziebarth, E. 1929. Beiträge zur Geschichte des Seeraubs und Seehandels im alten Griechenland. (Hamburger Beiträge aus dem Gebiet der Auslandskunde, 30). Hamburg.

Notes

- Morrison and Williams 1968; Rougé 1981; Morrison and Coates 1986, 1989 and 1994; Meijer 1986; Casson 1986; Wallinga 1993; Coates, Platis and Shaw 1990; Shaw 1993; Gardiner and Morrison 1995.
- 2 See, however, Momigliano 1944; Lazenby 1987b; Starr 1989; Gabrielsen 1994; Strauss 1996 and 2000.
- 3 Murray 1989; Morrison and Coates 1994.
- 4 See now the lucid paper of de Souza (1998), whose dating of the emergence of the public, purpose-built warship and definition of the latter are followed here; Wallinga 1993, 13-32; a useful summary is given by Starr 1989, 21-28.
- 5 The modern concept of 'control of the seas', developed by Alfred Thayler Mahan, *The Influence of Sea Power upon History 1660-1783* (Boston, 1890) was followed by Rodgers (1937, xiv, 117-20, 127-29) and continues to be employed.
- 6 Further reasons are given by Starr 1989, 4-6.

- 7 Morrison 1974, 1991; Whitehead 1987; Lazenby 1987a; Holladay, 1988; Wallinga 1993, 73-74.
- 8 The pictorial evidence is discussed by Casson 1986, 49-74. First mention of the use of the ram in our literary sources: Hdt. 1.166.2 (battle off Alalia [in Corsica], dated to ca. 546 BC).
- 9 Thucydides (1.48.1) notes that the Corinthian fleet off Corcyra in 432 BC had taken three days' supplies. This seems to be something exceptional.
- 10 Classical trireme: Morrison and Coates 1986, 107-18. Rhodian quadrireme: Segre, 1936, 228.
- 11 Gomme 1933.
- 12 Ps.-Xen. Ath. Pol. 2.11-12.
- 13 Thuc. 1.101.3.
- 14 Thuc. 1.117.3; cf. 1.99 and 1.19: 'The Athenians, on the other hand, after a time deprived the subject cities of their ships and made all of them pay a fixed tribute, except Chios and Lesbos.' Cf. Hornblower, Comm I, 57, ad loc.

- 15 Thuc. 1.98.1, 1.100.2-3, 4.108.1; cf. Hdt. 5.23.2, 5.126.
- 16 Kallet-Marx 1993, 1-20.
- 17 Thuc. 1.1-23. Cf. Kallet-Marx 1993, 21-36.
- 18 Lys. fr. 39 (Thalheim), quoted by Harpokration s.v. 'adephagous triereis'.
- 19 E.g. Thuc. 2.70.2, 3.17.3: 2,000 talents spent on the siege of Potidaia, 431-429 BC; IG I³ 363 (ML 55): c. 1,400 talents were spent on the campaign against Samos (440 BC); IG I³ 364 (ML 61): 26 talents to the squadrons sent to aid Korkyra in 433/2 BC. See further Kallet-Marx 1993.
- 20 Thuc. 1.110.4 (Egypt), 7.87.5-6 (Sicily).
- 21 Athens: Hdt. 7.144.1-2; Thuc. 1.14.1-2; [Arist.] Ath.Pol. 22.7. Dionysios I: Diod. 14.41-43.4. Antigonos I: Diod. 19.58.1-6. On the Ptolemaic fleet, see e.g. Diod. 20.49.1, with Meiggs 1982, 133-34; H. Hauben, RDAC (1987) 213-26.
- 22 IG I² 1604-32, to which should be added a few other fragments published elsewhere.
- 23 SIG³ 581, lines 70-73.
- 24 Thuc. 6.31.3; Lys. 21.19; [Dem.] 51.6.
- 25 Pritchett (GSW 5.495-97) discusses the exceptional case documented by IG II² 207, where on its dispatch an Athenian fleet is provided by the home authorities with grain purchased from a Persian Satrap; cf. also ibid. 485-99.
- 26 Hdt. 7.144.1-2; [Arist.] Ath. Pol. 22.7.
- 27 Thuc. 1.13.4-5.
- 28 Thuc. 8.18, 8.43.3, 8.80.2-3; Xen. *Hell.* 1.1.24-25, 2.1.10-12, cf. Thuc. 2.65.12.
- 29 Trierarchs at Samos (Hdt. 6.14.2, 8.85), Aegina (Hdt. 7.181, 8.93), Naxos (Hdt. 8.46), Sparta (Thuc. 4.11.4), Rhodes (Arist. *Pol.* 1304b29), Teos and Lebedos (*SIG*³ 344.66), Priene (ibid. 1003.29) and Egypt (R. Bagnall, 'The Ptolemaic Trierarchs', *CE* 46 (1971) 256-62). A.W. Gomme's surmise, from Thuc. 4.11.4, that the trierarchy at Sparta was similar to that at Athens is unwarranted (*HCT* 3. 448, ad loc). In Herodotus *trierarkhos* perhaps means simply the captain of a warship (e.g. 6.14.2). Cf. *OCD*³ s.v. 'trierarchy'.
- 30 Lewis 1960, 1965.
- 31 Davies 1969.
- 32 Teleutias: Xen. *Hell*. 1.5.21-24. Rhodian squadrons: Diod. 20.84.5-6, 88.4-6, 93.2-5.
- 33 E.g. Hom. *Od.* 3.73ff. (= 9.252 ff., *Hymn to Apollo*, 452 ff.), 14.224-359. Good discussions of the central passages from Homer's *Iliad* and *Odyssey* are offered by Ormerod 1924, 72-74, 87-94, Nowag 1983; Pritchett, *GSW* 5.320-21; van Wees 1992; de Souza 1995 and van Wees 1992.
- 34 Thuc. 1.13.4 (battle between the Corinthians and the Corcyraeans), with 1.13.6 (battle between the Phocaeans and the Carthaginians), cf. *FGrH* Timaios F 71, which is to be distinguished from the battle off Alalia (ca. 546 BC) between the Phocaeans and the joint forces of the Tyrrhenians and Carthaginians reported by Hdt. 1.166-67.
- 35 For the possession of ships by Archaic aristocrats, see Haas 1985.

- 36 *APF* no. 600 (V), pp. 15-16; more generally, Herman 1987, 97-105, 128-30.
- 37 The elder Miltiades: Hdt. 6.34-36. The five ships employed in 493 BC by the elder Miltiades' nephew and successor (as a tyrant in the Thracian Chersonese), Miltiades (the Younger) son of Kimon (Hdt. 6.41), were almost certainly his private possession. In view of Hdt. 6.39 (the same Miltiades was in 516 sent on a trireme—the first Athenian trireme mentioned by our sources—to the Chersonese by Hippias and Hipparchos), these ships were probably triremes: D.M. Lewis in *CAH* IV², 298, but cf. de Souza 1998, 285-86. On the character of these colonizing projects, see Berve 1937, 26-36; Figueira 1991, 133-37, with appendix D, pp. 260-62.
- 38 Ormerod 1924; Ziebarth 1929; Jackson 1973; Brulé 1978, 128-31; MacDonald 1984; Garlan 1978, 1989; McKechnie 1989, 101-41; de Souza 1995. Even Pritchett, who in his detailed presentation and discussion of the relevant material (*GSW* 5.312-63, cf. 245-97, 363-98) writes (319) 'It is well to heed the warning of Jacoby (*FGrH* 3B Suppl.2 p. 322) that the difference between naval warfare and piracy is in the eyes of the beholder' (with his comment, p. 319, on Y. Garlan's [1978] typology of brigandage), distinguishes throughout between 'privateers' (i.e. 'politically motivated enemies') and 'freebooters' (312 n. 441). See, however, Davies in *CAH* VII², part I, 286.
- 39 Dem. 24.11-14, 120; quotation from section 12. The particulars of this case are as follows: (i) after they had been plundered the merchants made a petition to the Athenian authorities, claiming that the seizure of their property was unlawful; (ii) the Assembly rejected their claim on the grounds that at that time the cargo of the merchantman 'was not friendly' (hos apecheirotonesasth' hymeis me philia einai tote, 24.12)—the further explanation, that the Athenians, even though not at war with Egypt, were on friendly terms with Persia, from which Egypt was at the time in revolt (Ormerod 1924, 62; Pritchett, GSW 5.384), is not what the text says; (iii) at the same time, and in accordance with Athenian law, the seized property was considered to be the property of the Athenian state; (iv) even so, the loot continued to be in the possession of the three ambassadors who together with the trierarchs had carried out the seizure; (v) but later, when a decree appointed a commission of inquiry and directed all citizens to give information about the holders of sacred or public money in private hands, Euktemon laid information that the trierarchs held public property worth 9 1/2 talents; (vi) subsequent proceedings involved treatment of the matter by the Council and then by the Assembly, where the ambassadors lodged a protest against Euktemon's information, declaring that the money was in their possession; (v) following this (and in the same meeting), Euktemon made a proposal to the effect that the state collects the money from the trierarchs, who can then take legal steps to make the ambassadors accountable for it. Cf. Pritchett, GSW 5.119 n. 113, 383-84, and Hansen 1974, no. 13, pp. 32-33, and 50-51. A similar case concerns the seizure of five talents from a merchantman from Kyzikos by Meidias in his capacity as captain of the Athe-

nian 'sacred' ship *Paralos*: Dem. 21.173 with Pritchett, *GSW* 5. 335, who rightly remarks: 'What is not clear is why a merchant ship of Kyzikos was regarded in Athenian courts as an enemy one.' In his critique of Ormerod's (1924, 62) use of Dem. 24.11-12, McKechnie (1989, 115) misses the important point that the Athenian trireme, even though a public vessel, was used for a private purpose.

- 40 Cited by the Roman jurist Gaius in the Digest 47.22.4.
- 41 Gauthier 1972; Bravo 1980; Pritchett *GSW* 2, ch. 8, and 5.68-152; J.K. Davies in *CAH* VII², part I, 287-90.
- 42 Cf. Hornblower, Commentary, I, 23, ad loc.
- 43 Ormerod 1924, 208-47, for a discussion of the Roman campaigns against piracy, initiated by Marcus Antonius the Orator in 102 BC. For the Roman 'Piracy Law' of 100 BC, see Hassall, Crawford and Reynolds 1974. Piracy as a chronic phenomenon in the Mediterranean: Semple 1916.
- 44 Hdt. 6.137-38, with 6.41.1-2. Cf. Figueira 1991, 138.
- 45 Thuc. 1.96.1, with S. Hornblower in *The Athenian Empire*. Laktor 1, 3rd edn. (London, 1984), 28, and Hornblower, *Comm*, I, 144, ad loc.
- 46 [Dem] 50.4, 8-9. All subsequent references in the text are to that speech.
- 47 For the calculations underlying these estimates, see Gabrielsen 1994, 120 with n. 36.
- 48 Gabrielsen 1994, 139-45.
- 49 Welwei 1974, 65-104; Hunt 1998, 40-41, 83-101.
- 50 For details, see Gabrielsen 1994, 222 with n. 4.
- 51 Osborne 1991, argues for the impact of liturgical expenditure on agricultural production.
- 52 E.g. Isoc. 8.128.
- 53 Gabrielsen 1986.
- 54 Gabrielsen, 1987.
- 55 For this and what follows, see Polyb. 5.88-90.4, with Meiggs 1982, 144-45.
- 56 Polyb. 4.45.9-47.7, 4.49.1-52.10, quotation from 4.47.1-2.
- 57 For the dockyards in the city of Rhodos, see Blackman, Knoblauch and Yannikouri 1999. For those at Eulimna (mod. Alimnia), see *Delt* 35 (1980) Chron. 561-63. Overseas bases: *SIG*³ 581.10.11 (Hierapytna on Crete, ca. 200 BC); *Clara Rhodos* 2 (1932) 170, no. 1, cf. M. Segre, *RFIC* n.s. 10 (1932) 452-53 (Aigila [mod. Antikythera], first half of the third cent. BC). Cf. Gabrielsen 1997, 37-42.
- 58 Segre 1936, 231-33; Casson 1986, 307 and n. 29.
- 59 [Dem.] 51.8-9. On Athenian practices, see Gabrielsen 1994, 95-
- 60 Eisphora: Clara Rhodos 2 (1932) 202, no. 34. Proeisphora: I.Lindos 384b.14, 384d.13, 449.11, 482.12; TCSuppl. 216, no. 101e.11; NuovoSER 175, no. 29.14; ASAA 2 (1916) 147, no. 20; Pugliese Carratelli 1930-40, no. 14.4. All these inscriptions date from after the end of the first cent. BC.
- 61 The relevant documents are conveniently assembled in Migeotte 1992.

- 62 Arist. Pol. 1304b27-31.
- 63 In addition to the naval records (*IG* II² 1604-32), see e.g. [Dem.] 47.20-25.
- 64 For *kataphracts* and *aphracts*, see Casson 1986, ch. 6, and his General Index, svv.
- 65 Thuc. 6.43.1.
- 66 I.Lindos 707; Ael.Arist. 43.539-40 (Dindorf). App. Mithr. 25 and Plut. Luc. 2.3.
- 67 ASAA 2 (1916) 143, no. 12; Casson 1986, 133 n. 127, and 1995, 119-23.
- 68 Polyb. 16.2.10, 16.7.4, with Gabrielsen 1997, 185 n. 8.
- 69 On these two types, and particularly the *triemiolia*, see Blinkenberg 1938; Casson 1986, 127-31; Gabrielsen 1997, 86-94.
- 70 Theophr. Char. 25.2; I.Lindos 88. Cf. Casson 1986, 127-31.
- 71 For instance, of the Rhodian contingent of about 30 ships in the battle of Chios (201 BC) only seven were *triemioliai*: Polyb. 16.2.10. This should be compared to the numerous instances in which that type of ship is used in raids: Diod. 20.93 and the incriptions in Blinkenberg 1938, and Gabrielsen 1997, 189 n. 42, with pp. 92-94.
- 72 Casson 1991, 139.
- 73 Casson 1986, 88 with n. 58; cf. Hornblower, *Comm* I, 35-36, ad Thuc. 1.10.4.
- 74 Paus. 6.7.4; cf. Thuc. 8.35.I-4, 44.I-4, 84.2; Xen. *Hell.* I.5.19; Diod. 13.38.5, 45.I.
- 75 Hom. Il. 2.653-56.
- 76 Philippos: Hdt. 5.47. Phaylos: Plut. Alex. 34.2, cf. Hdt. 8.47. Dionysios: Hdt. 6.17.
- 77 Isae. 11.48.
- 78 Thuc. 4.11.4: Brasidas urges his Spartan co-trierarchs to not 'spare the timber' (i.e. their ships) and attempt a landing on the rocky shore. Hornblower (*Comm* II, 164, ad loc) remarks: 'in a Spartan context the word [sc. trierarch] does not have the financial implications which it sometimes has in Athens'. If so, a most probable reason for the Spartan trierarchs' reluctance to damage their ships is that these were privately owned. Anyhow, before the acquisition (with Persian money) of her own fleet Sparta could either requisition ships from her allies, or encourage piracy, Thuc. 2.69.1 with Hornblower, *Comm* I, 355.
- 79 Diod. 20.82.4-83.3, 97.5. At 20.82.4 and 83.1, the ships of the merchants/privateers and of the *peiratai* are called *poria*; but at 20.97.5-6, the ships of the former group (or some of them) are specified as *keletes*, and those of the latter group (or some of them) as *aphracts*.
- 80 Polyb. 1.46.4-47.10, and 1.59.8.
- 81 IG XI(4) 751 = SIG3 582.
- 82 On the Ozolian Locrians, Aetolians and Akarnanians, see Thuc. 1.5.3. See furthermore Brulé 1978 and Perlman 1999 (Cretans); Dell 1967 (Aetolians); Ormerod 1924, 190-247 and Rauh 1998 (Cilicians).
- 83 Polyb. 2.8.8; cf. J.K. Davies in CAH VII², part I, 287.
- 84 I.Lindos 88.
- 85 SIG³ 581.55-58.

War and Culture in the Seleucid Empire 1

Michel Austin

Introduction: the post Alexander world

Alexander's legacy to the world was a mess. By failing to ensure the succession after himself he left the door open to the conflicting ambitions of his followers, who were only too glad to follow his example. After Alexander there was no *pax macedonica* that could compare with the later *pax romana*. War was an almost continuous presence and had pervasive effects, not easily described as either positive or negative, nor to be classified neatly as specifically social, cultural, economic, or political.

Ancient writers commenting on the post-Alexander world illustrate this. For example, Polybius and Strabo write about the enlarged geographical horizons and knowledge of the existing world that took place after Alexander (Polybius 3.59, Strabo 1.2.1).2 This was not just an incidental by-product of invasion: geographical exploration fulfilled an imperial purpose and was one of the instruments of conquest (Strabo 1.1.16). War also redistributed wealth. Athenaeus mentions (6.231b-e) the rise in prosperity and the increased circulation of gold that took place in the late fourth century in what he calls the 'Macedonian period' (6.229c and ff). The conquest of the Persian empire had the effect of releasing immense wealth in the world (eurysthenes ploutos; 6.231e), through the forcible seizure of the Persian treasures of precious metals (cf. F. de Callataÿ 1989). War also displaced persons, with numerous cultural consequences. Demetrius of Phalerum, the Aristotelian philosopher, expelled from Athens in 307, eventually took refuge at the court of Ptolemy I and was influential in launching the Library and Museum of Alexandria.³ Under the early Ptolemies Alexandria became in the third century a magnet that attracted talent from far and wide in the Greek

world. In the second century, the process then went into reverse. According to Athenaeus (4.184b-c):

The Alexandrians were the teachers of all Greeks and barbarians at a time when the entire system of general education had broken down because of the continuous disturbances which took place in the period of Alexander's successors.

He then goes on to mention the effects of Ptolemy VIII's massacre in 145: 4

He murdered many of the Alexandrians; not a few he sent into exile, and filled the islands and towns with men who had grown up with his brother (Ptolemy VI)—scholars, philosophers, mathematicians, musicians, painters, athletic trainers, physicians, and many other men of skill in their profession. And so they, reduced by poverty to teaching what they knew, instructed many distinguished men.

Similarly in the early first century the Mithridatic Wars had the result, as was shown by Elizabeth Rawson, of driving numerous skilled Greeks away from the Greek world, to the eventual benefit of Rome (Rawson 1985, 7f., 14-18, 69f.).

The post-Alexander world thus offers a vast field of study for the impact of war on cultural and social life. My subject within that world is the Seleucid monarchy. There are two facts about the Seleucid empire that stand out immediately. The first is that, of all the monarchies

of the age, the Seleucids were perhaps the most overtly military in character. As Guy Griffith put it, 'The Seleucid empire becomes known to us usually when it is at war, and the best that can be said is that it was at war reasonably often' (Griffith 1935, 142). The second is that, as far as cultural achievements are concerned-and perhaps I should make clear that I am dealing here specifically with Greek cultural achievements—the Seleucids seem to rank well behind the other monarchies of the age, above all the Ptolemies. For example, the Seleucid empire has no obvious equivalent for Ptolemaic Alexandria and everything that it stood for, despite the fact that rivalry between the two monarchies can be seen as one of the guiding threads of their history. It is perhaps not surprising that modern treatments of the Seleucids and of the cultural history of the age have relatively little to say about this aspect of Seleucid history. Edwyn Bevan in 1902 had a number of comments of detail to offer, but the most comprehensive treatment of the question is an imaginative chapter in Franz Altheim's *Weltgeschichte Asiens im griechischen Zeitalter* published in 1948, which develops points raised by Eduard Meyer in 1925 and after him in more detail by Tarn in his *Greeks in Bactria and India* first published in 1938.⁵

I will divide this paper into two parts, War and Culture respectively, though the first part is rather brief and aims only at providing the context for the second. The conjunction of the two topics may appear rather abrupt, even artificial. But it seemed worthwhile to juxtapose them, to see what connections there might be. And it may also be useful to attempt an integrated view, and to set aside the artificial dividing line between political and military history on the one hand, and social and cultural history on the other.

War

I would like to limit myself here to two groups of points, first about the character of the Seleucid monarchy, and second about the Seleucid empire.

On the first point. Like every other dynasty of the age, the Seleucids owed their royal status to victory in war (Bikerman 1938, 12-17; Austin 1986; Sherwin-White & Kuhrt 1993, 53-59). A Seleucid king was in the first instance an active military leader, so much so that generalship and statesmanship were in practice one and the same thing (cf. Suda s.v. basileia). The sources regularly present the kings acting in military contexts.6 The nucleus of the monarchy was also military in origin: the king, his 'friends', and his military forces, to use the convenient shorthand that is found in several Greek inscriptions and in Jewish sources (Austin 1986, 462 for the inscriptions; I Maccabees 6.28, 6.57-61, 12.43). This group constituted what may be called the 'royal establishment' and was the direct beneficiary of empire, from which it derived great wealth (Rostovtzeff 1941, I 517f.). The empire owed its existence to conquest: it was 'territory that had been won by the spear', to use the terminology current in the period after Alexander, and this concept was openly appealed to by several Seleucid rulers from Seleucus I down to at least Antiochus IV in the late 170s (Diodorus 21.1.5; Polybius 5.67, 38.1.4; cf. Bikerman 1938, 15; Schmitthenner 1968; Mehl 1980-81).

Kings were normally on the move, fighting one campaign after another, as the reigns of Seleucus I and Antiochus III illustrate in detail. Of Antiochus I, son and successor of Seleucus I, Memnon of Heracleia comments that 'he preserved his father's empire (arche) through many wars though with difficulty and not in its entirety' (FGrHist 434 F1 §9.1). It is not till Seleucus IV (187-175 BC) that one finds a reign which shows a prolonged period of peace without any significant military activity. But this was just an interlude and the result of the defeat of Antiochus III by the Romans and the peace of Apamea in 188. After him military activity was resumed in the reign of Antiochus IV with his campaigns against Egypt, and the king was to die while launching a major eastern expedition. Thereafter there were yet more major expeditions, the last one of any size under Antiochus VII against the Parthians in 131-129, but there was also a proliferation of dynastic wars between rival branches of the dynasty or competing claimants to the throne (cf. Millar in Kuhrt and Sherwin-White 1987, 130). Seleucid history thus displays almost every kind of war known at the time: wars of conquest, wars in defence of the empire, against every possible type of opponent, from kings and dynasts inside and outside the empire, to cities, Greek and other, to rivals for the throne, to barbarians such as the Galatians in Asia Minor.

The precise impact of all this on Seleucid history is a vast subject, and difficult to assess for the empire as a whole. This is because of the fragmentary nature of the evidence and its predominantly local character, which makes it easier to see Seleucid rule from a series of local perspectives than from a wider imperial view.

The kings themselves took completely for granted their military role and their regular involvement in warfare, as the reign of Antiochus III illustrates in detail. Polybius' narrative of his early years (223-217 BC) provides an excellent insight into the functioning of the monarchy and how policy was decided in practice (5.40-71, 79-87). At every moment of decision the question for the king and his advisers is simply, Which is the next war that should claim the attention of the king and how should it be fought? (see notably Polybius 5.41-42, 45, 49, 51, 58). Alternative courses of action do not seem to be considered. The king and his advisers assume that the military forces needed for these wars are available and prepared to fight. Nor is there any sign that decisions for war were affected by calculations of the possible risks and costs, or of the expected benefits. Still less is there any indication that the effects of warfare on the local populations were thought to be a factor to be taken into account. For example, after the failure of the war against Ptolemy IV in 217, Antiochus III was anxious to reestablish control in Asia Minor, where his cousin Achaeus had proclaimed himself an independent king and ruled from Sardis. Antiochus eventually captured Sardis and took Achaeus prisoner (213). Polybius tells how Antiochus burst into tears at the sight of his cousin and the fall in his fortunes, though he went on to have Achaeus executed in the most gruesome fashion (8.22-23). But we are not told that Antiochus shed any tears over the fate of the city of Sardis, which was predictably plundered by the soldiery (Polybius 7.18). A group of inscriptions from Sardis in 213 after its recapture adds detail to the picture, and shows the king taking measures to alleviate the distress which his own actions had brought about, and laying down restrictions on the billeting of his troops in the city.⁷

There is in fact a substantial body of epigraphic evidence to illustrate the same problem later in the king's reign, during his recapture of Asia Minor and his conquest of southern Syria from the Ptolemies. Even Antiochus III, perhaps the most military of all Seleucid kings, was never able fully to control the behaviour of his own troops. A series of pronouncements by the king himself or his officials attempts in one way or another to remedy the results of destructive warfare or to control the effects of the presence of troops on the local population. Apart from Sardis in 213, examples are known from Labraunda in Caria in 203, Amyzon also in Caria in 203 and again ca. 200, Scythopolis in Palestine in 201, 200 and 195, and in the period after 197 from Kildara, Iasos and Heracleia in Caria, and perhaps too from Xanthos in Lycia. 8

From his own experience the king must have been perfectly aware of the consequences of military activity, but this never apparently inhibited any decision for war. The kings did not wish to oppress their subjects and repeatedly professed their concern for their welfare. But they did not have any answer to the recurring difficulty of enforcing their own edicts,9 and were unable to see that they themselves were part of the problem. The ambivalence towards war that is a regular theme in Greek literature from the Iliad onwards seems to be absent from royal warfare. Still less is there any counterpart among all the Macedonian kings to the remarkable sentiments expressed by their contemporary Asoka (269-232 BC),10 the third ruler in the Mauryan empire in India, as we know from a series of rock cut edicts, in one of which the king mentions his revulsion at his own actions:

On conquering Kalinga the Beloved of the Gods (i.e. Asoka himself) felt remorse, for when an independent country is conquered the slaughter, death, and deportation of the people is extremely grievous to the Beloved of the Gods, and weighs heavily on his mind. ^{II}

The Seleucids had regular diplomatic relations with the Mauryan kings from Seleucus I and Chandragupta onwards (cf. Fraser 1972, I 180f.). Asoka knew of the kings in the west and mentions them by name in that same edict where he refers to the extent of his influence:

on all his frontiers to a distance of six hundred *yojanas* [i.e. about 1500 miles], where reigns the Greek king Antiochus (II), and beyond the realm of that Antiochus in the lands of the four kings named Ptolemy (II), Antigonus (Gonatas), Magas (of Cyrene), and Alexander (of Corinth or Epirus). ¹²

It would be interesting to know how the Seleucid kings might have reacted to these sentiments. The short answer is perhaps simply that they were unable to rethink their own position: war was simply part of royal status, the foundation of the monarchy and of the entire 'royal establishment', the king himself, his followers, and his military forces, who all took for granted the benefits of successful warfare. Wars against other kings had the highest status of all (cf. Polybius 5.42, 45; Austin 1986; Sherwin-White & Kuhrt 1993, 58).

On the second point, the Seleucid 'empire'. For a start, the kings themselves assumed that they had a natural right to rule their territories, through victory in war and through inheritance from their predecessors (Bikerman 1938, 12-17). They constantly use the language of ownership: the empire belonged to them as of right, and if anything was lost from their control they were entitled to try to reassert that control, no matter what the cost (cf. *OGIS* 219 [Antiochus I]; Livy 33.38 [Antiochus III]; I Maccabees 15.3-4 [Antiochus VII]).

But what exactly was the 'empire'? The word 'empire' is misleading, if it suggests a cohesive and integrated unit that functioned as a single whole. In practice, the Seleucid empire was made up of a multiplicity of local and regional entities of many kinds, cities, Greek and non-Greek, peoples with different forms of social and political organisation, dynasts and kings, all scattered over a vast area. All these units pre-existed the foundation of the empire, and in many cases survived the passing of Seleucid history. The kings themselves accepted implicitly the diversity of their empire and never imagined that it could be transformed into a completely new and integrated entity. Their relations with their subjects were based on the assumption of diversity and fragmentation. This had obvious elements of strength: by dispensing favours on an individual basis as a reward for loyalty, royal rule could benefit from existing divisions. But it also had its weaknesses: from the perspective of the local communities Seleucid rule was something external and therefore an unnatural imposition. This emerges from many pieces of evidence. It is what one would expect from non-Greek sources, such as the author of the Book of Daniel, who writing in the mid 160s presented the history of his world as a continuing struggle between the 'king of the north' (i.e. the Seleucids) and the 'king of the south' (i.e. the Ptolemies) (Daniel 11:2-30). ¹³ But the same point of view is found even in the case of Greek communities that professed loyalty to the kings. Thus a decree of Ilium relating (probably) to the accession of Antiochus I states:

King Antiochus ... has sought to recover his ancestral rule, and has therefore embarked upon an honourable and just enterprise, with not only the ready assistance of his 'friends' and his military forces in his fight for his interests but also the goodwill and collaboration of the deity, and has restored the cities (*poleis*) to peace and the kingdom (*basileia*) to its former state (*OGIS* 219, lines 7-12).

The 'cities' (i.e. the Greek cities) and the 'kingdom' seem therefore to be perceived as two distinct entities: a city like Ilium might profess its devotion to the king, but it sees the Seleucid kingdom as something separate of which it is not itself an integral part. The consequence is that the empire owed its continued existence to the perception of the kings by their subjects as strong enough to enforce their rule. It is true that the greatest conquering kings, Seleucus I and Antiochus III, used diplomacy and conciliation as much as force to acquire or restore their power. Appian makes this point about Seleucus I in general terms (*Syriake* 55). Antiochus III is seen in action in Asia Minor in the early 190s when he sought to bring the Greek cities back under his control but encountered resistance from Smyrna and Lampsacus:

He was not relying so much on the fear inspired by force, but through envoys he would send them [sc. Smyrna and Lampsacus] conciliatory messages and reproach them for their rashness and obstinacy (Livy 33.38).

But the underpinning for such diplomacy had to be military power: without it there was no motive for submitting to Seleucid rule. And there were plenty of enemies, who would take advantage of any perceived weakness on the part of the rulers. What Seleucid rule meant from the receiving end is illustrated by the reaction of the peoples of Asia Minor in 189 after the defeat of Antiochus III by the Romans and the expedition of Manlius Vulso against the Galatians inland. Polybius comments:

All the peoples of Asia on this side of Mt Taurus rejoiced not so much at the prospect of the defeat of Antiochus and being relieved from tribute, garrisons, or other royal injunctions, as at the removal of all fear of the barbarian Galatians, and

at their escape from their insolence and lawlessness (21.41.2; cf. Walbank's *Commentary* III p.153).

Tribute, garrisons, royal commands: this sums up the content of Seleucid rule, which has been described by Fergus Millar as 'primarily a system for extracting taxes and forming armies' (Millar in Kuhrt & Sherwin-White 1987, 129f.). On the other hand the Seleucid kings were not barbarians, but part of the civilised world of the time, and therefore different in character from the savage and uncontrolled violence of the Galatians of Asia Minor.¹⁵

Mention of the Seleucid kings as part of the civilised world brings me to the second part of this paper, on the Seleucid kings and Greek culture.

Culture

It is nowadays generally agreed that the Seleucid rulers did not have any policy to 'hellenise' their empire (whatever may be meant by that). While an earlier generation of historians (Bevan 1902, Bouché-Leclercq 1913-14, Meyer 1925) credited the Seleucids with a cultural mission and presented them as champions of Hellenism in the east, a reaction against this set in even before World War II. Thus Rostovtzeff dismissed the idea rather unceremoniously (Rostovtzeff 1941, I 499-502 esp. 502). No one has put the point more elegantly than Bickerman:

[Seleucid policy was characterised by] a wise and salutary neglect .. not infected by the Christian zeal which later became the liberal itch, the Seleucids did not try to convert anybody—either to the true religion or good plumbing. They left people as dirty and blissful as they had been before the Macedonian conquest (Bickerman 1966, 97).

My purpose here is not to re-examine this very broad issue, but to ask a much more limited and specific question. What did the Seleucid rulers do to promote Greek culture at the individual level, and what evidence is there for links between known cultural figures of the age and Seleucid kings?

At this point let me make two things clear. First, I am not implying that Greek cultural life in the post-Alexander monarchies was dependent solely on the encouragement of rulers. Cultural life went on in the Greek cities, whether the kings themselves did anything about it or not. The history of the Seleucid empire illustrates this very clearly: it was precisely when the Seleucids themselves were in decline that cultural figures from the new Seleucid foundations in the east began to appear, and the process continued after their disappearance and under Parthian rule.¹⁸ In what follows, I am therefore dealing with only part of a larger picture. Second, I am not assuming that royal patronage of cultural life was an unmixed blessing. One could easily point to all the limitations of Alexandrian cultural life under the Ptolemies in addition to the great achievements: monarchy was not necessarily conducive to freedom of thought.19

So, what did the Seleucids do personally to promote Greek cultural life in their empire?

The scantiness of the available evidence presents obvious problems: the record is clearly very incomplete. For example, the Polybian tradition provides evidence on several dozen figures from the court circles of Antiochus III, but the choice of individuals and the way they are presented clearly reflects Polybius' own interests.

They earn their place in the record because of their role in political and military history, and none of them is specifically presented as a cultural figure. If we turn to a different source with different interests, Athenaeus, the picture of the Seleucid court changes. Thus Athenaeus mentions as present at the court of Antiochus III the historian Mnesiptolemus of Kyme, who wrote a history of the Seleucids (FGrHist 164),20 his son, aptly named Seleucus, who wrote poetry, 21 and in the same context Epinicus a comic poet (Athenaeus 10.432b-c, 15.697d). Hegesianax of Alexandria Troas is known from the Polybian tradition, but only as an ambassador active at the time of Antiochus' encounters with the Romans. It is from Athenaeus that we learn that before being employed in this capacity by Antiochus he was also an actor, a historian, a poet, and was at the Seleucid court before he was elevated by the king to become one of his 'friends' (FGrHist 45; Athenaeus 3.80d, 4.155a-b, 9.393d-e).²² It is quite possible therefore that the Seleucid record in cultural history is seriously underrepresented in the evidence.

For convenience I will divide the subject under four main headings, Literature & Philology, Medicine, Military Technology, and Philosophy. ²³

Literature and Philology

Literary activity by kings themselves starts early in the post-Alexander period, with Ptolemy I and his account of the campaigns of Alexander (FGrHist 138). This was continued by his successors in the dynasty, several of whom are known to have written prose works or poetry, including Cleopatra herself. The literary activities of the rulers no doubt facilitated their patronage of other writers (Fraser 1972, I 311f.). So too Attalus I, who encouraged literary talents, was a writer himself (cited by Strabo 13.1.44). Even Pyrrhus of Epirus is known to have been a writer, on tactics and siege engines, and he may conceivably have written his own Memoirs (FGrHist 229, though Jacoby doubts the existence of the latter). In comparison with this there is no known literary activity by any of the Seleucid kings for most of the history of the dynasty. One has to wait till Antiochus VIII, very late in the day, to find a ruler with an attested literary record: he is known to have had a particular interest in poisonous snakes, and verses of his on the subject are

quoted by Galen (Pliny *HN* 20.264; Galen 14.185 & 201; cf. Marasco 1996, 465f.).

Nor is the evidence for libraries in the Seleucid empire very impressive. A 'public library' is attested at Antioch in the reign of Antiochus III, who is mentioned as having attracted the poet Euphorion of Chalcis in Euboea to be its librarian. Euphorion enjoyed some celebrity as a poet, in his time and after his death, though his poetry was thought to be obscure (which he may have taken as a compliment).²⁴ But his activity as librarian at Antioch is known solely from an entry in the Suda (Suda s.v. *Euphorion*), and there is no further information about this library at Antioch.

The only other mention of a library in the Seleucid empire is again at Antioch, but under the late Seleucids. Malalas (*Chronography* 235.15) has the story of the foundation by an Antiochus Philopator of a sanctuary of the Muses at Antioch and also (by implication) of a library, both of them located in the agora. Antiochus Philopator is either Antiochus IX or Antiochus X, and this places the foundation towards the end of the second century or in the 90s BC. But the foundation was carried out by the king not on his own initiative, but following the terms of the will of a certain Maron of Antioch. Maron had emigrated from Antioch to Athens (possibly as a security move in a period of trouble), and had left money in his will for the foundation of a sanctuary of the Muses and a library.

The evidence on Seleucid libraries is thus very limited, and the argument from silence may have some force here. There is certainly nothing to compare with the fame of the great library of Alexandria nor with that of Pergamum in the second century which Eumenes II developed in open emulation of the Ptolemies. Nor is there any trace on the part of the Seleucids of the almost fanatical hunt for books which was ascribed to both Ptolemies and Attalids.²⁵

To turn to individual literary figures with a known Seleucid connection. I have already mentioned several writers under Antiochus III: Mnesiptolemus of Kyme the historian and his son the poet Seleucus, the comic poet Epinicus, Hegesianax of Alexandria Troas, historian and poet, and the poet Euphorion of Chalcis. Other poets at the Seleucid court are hard to document.²⁶ A certain Simonides of Magnesia wrote a poem, now lost,

commemorating the victory of (probably) Antiochus I over the Galatians.²⁷ The only poet of real repute with a Seleucid association apart from Euphorion is Aratus of Soli, who is said to have been invited by the same Antiochus I from the court of Antigonus Gonatas. The exact date and duration of his stay are uncertain. He was reportedly asked by the king to produce an edition of the *Iliad*.²⁸

Prose writers are more numerous, at least under the first two Seleucid rulers. Megasthenes wrote an account of India (the Indica) that was the main source of Arrian's own work on India, and was also used and cited by Diodorus, Strabo and the Elder Pliny (FGrHist 715). He is usually assumed to have composed his work as a result of a mission to the court of Chandragupta carried out under Seleucus I. That Megasthenes had an association with Seleucus is shown by Clement of Alexandria (Stromateis 1.72.4 in FGrHist 715 F3) but there is in fact no evidence of any mission on his part to Chandragupta on behalf of Seleucus. This has been pointed out recently by Bosworth who argues that the diplomatic activity of Megasthenes took place earlier than Seleucus I, in the period 320-318 and not in 304/3 (Bosworth 1996).29 Be that as it may, his work represents an obvious example of the literary and cultural consequences of the expansion of Greek horizons in the wake of Alexander's conquests. The same is true of three other writers who are definitely associated with the first two Seleucid kings. Demodamas of Miletus is known from two Milesian decrees of 299 when he was a member of the Boule of Miletus and was instrumental in promoting honours for the Seleucid dynasty.30 Demodamas is also known from a reference in the Elder Pliny (HN 6.49), who shows him to have been a general and explorer in the service of Seleucus and his son in the far east, and the author of an account of his explorations, though the exact nature of this work is not clear (FGrHist 428).31 A similar case is Patrocles (FGrHist 712), who was serving Seleucus I already in 312 (Diodorus 19.100.5-6) and seems to have continued in Seleucid service for a long time until at least the early years of Antiochus I (cf. Memnon FGrHist 434 F1 §9.1). As an admiral of the Seleucids he explored the Caspian sea and wrote an account of his findings which was used, according to Strabo (11.7.3), by Eratosthenes and Apollodorus of Artemita (FGrHist 779

F4). He is mentioned by Strabo with particular respect for the reliability of his information (2.1.2 & 9; 11.7.3; 11.11.5 & 6) and also by the Elder Pliny (HN 6.58).32 Finally a certain Deimachos, another writer on India (FGrHist 716), is mentioned by Strabo (2.1.9) as an envoy to Bindusara, the son and successor of Chandragupta, presumably in the reign of Antiochus I.33 Strabo was critical of the reliability of his account, as indeed he was of other writers on India with the exception of Patrocles (cf. e.g. 15.1.5 on Megasthenes). In addition to these three Greek writers mention should also be made of Berossus of Babylon, whose work on Babylonian history, written in Greek, was dedicated to Antiochus I (FGrHist 680; cf. Burstein 1978; Kuhrt in Kuhrt & Sherwin-White 1987, 32-56). The first two rulers in the dynasty thus fostered, directly or indirectly, significant prose writing. But after them, the number of known prose authors who wrote under the patronage of Seleucid kings dwindles abruptly, the only known figure being Mnesiptolemus of Kyme under Antiochus III, already mentioned.34

There is clearly a pattern with the first two Seleucid kings: Demodamas, Patrocles and Deimachos, and perhaps Megasthenes, were acting as generals or envoys in the far eastern empire, and combined their service for the kings with literary activity based on their experiences of travel and exploration. This was a period of expanding horizons and almost limitless possibilities following up what had been started by Alexander's conquests. Exploration was promoted by a king (Seleucus) who had himself been a member of Alexander's expedition, and geography here went hand in hand with an imperial purpose.35 The territorial thinking of Seleucus shows in fact unusual breadth. He is said to have wanted to cut a canal between the Caspian and the Black Sea (Pliny HN 6.31). Very striking is also the neglected report in the Elder Pliny (HN 2.167-8) that Seleucus and Antiochus wanted the Indian Ocean to be called Seleukis and Antiochis after themselves (cf. Bikerman 1938, 22), a rare example of the naming of a sea after rulers. This recalls the name Seleukis which was given, presumably by Seleucus himself, to at least part of North Syria, and possibly to an even more extended region.³⁶ The exact territorial scope of the name Seleukis has been debated and it may have changed in time,³⁷ but a central point is regularly overlooked, namely that here was a king who wanted to name after himself or his son entire regions, and even an ocean, not just individual cities as was the case with the other kings.³⁸ This development, however, was cut short. After the first two rulers the dynasty was on the defensive in the far east, and no more writers like Demodamas and the others are known for the Seleucid period. In general, it looks as though the promise of the early Seleucids as regards literary activity faltered, and the relative dearth of information about significant literary figures after this time may not be accidental.³⁹ There can certainly be no question of comparing the Seleucids with the Ptolemies in this respect. Though emulation between the two dynasties was an almost continuous feature of their history, it did not seemingly extend to patronage of literature.

Medicine

Like every royal court of the age and before, the Seleucids had their contingent of royal doctors. Several names are known (up to seven altogether), from the time of Seleucus I down to Antiochus IX, though most of the known cases date from the third century.40 Doctors at court were by definition influential persons who enjoyed the trust of the king. One good though controversial example is Erasistratus of Ceos, together with Herophilus of Chalcedon the most celebrated doctor of the third century.41 Erasistratus plays in virtually all ancient accounts a prominent role in the celebrated story of the love of Antiochus I for his stepmother Stratonice in the reign of Seleucus I (Brodersen 1985; Mehl 1986, 230-67).42 (The story incidentally was made the subject of an opera by Méhul in 1792 called Stratonice which enjoyed great fame in its day and was praised by the young Berlioz.) Another well-known royal doctor is Apollophanes of Seleucia in Pieria, seen in action early in the reign of Antiochus III in the account of Polybius, and clearly a very influential person at court (Polybius 5.56, 58-61). More is known about Apollophanes than is mentioned in Polybius' account.⁴³ A noted doctor of the age, he is honoured in a dedication from Lydia made by a Seleucid officer (Arkesilaos) to Zeus Porottenos on his behalf, though the exact date and context are unknown (Herrmann 1970; TAM 5.1.689). It also emerges from another inscription, a letter of Antiochus III to Cos, that Apollophanes had in fact been a doctor at court for many years before this, since he was doctor to Seleucus II and then to Seleucus III (R. Herzog, *Parola del Passato* 38 (1983), 64; *SEG* 33.673). And finally we are told that he was a follower (*sectator*) of Erasistratus (Caelius Aurelianus *Acutae Passiones* 2.173, 175; cf. Fraser 1969, 528 and n. 25). Whatever precisely that implies, the information is suggestive and brings us back to Erasistratus, a key figure in any discussion of medicine and the Seleucids, but at the same time a terrible problem.

I wish I knew the truth about Erasistratus, but there is no modern consensus about his exact date, and more importantly about his role and importance at the Seleucid court. On the question of chronology, the central difficulty seems to be the discrepancy between the floruit given for Erasistratus by Eusebius, viz. 258/7 and the story of Erasistratus' role in diagnosing the love of Antiochus I for his stepmother Stratonice, which must have taken place in about 293/2. If the Eusebian date is treated as a firm peg, then Erasistratus has to be dissociated from the story of Antiochus and Stratonice. The suggestion here is that the name of Erasistratus, the more famous figure, displaced that of his father Cleombrotus, who is briefly mentioned in one passage in the Elder Pliny as having 'saved' Antiochus (Pliny HN 7.123).44 This suggestion was put forward long ago by Wellmann and it still seems to be the majority view.⁴⁵ If on the other hand the connection between Erasistratus and Antiochus I is retained, then the Eusebian date must go. This in brief is the argument developed at length by Fraser in 1969 and accepted by others, and I have to confess that I find it attractive.46

Equally unclear is the question of Erasistratus' relations with the Seleucid court. Fraser's study of Erasistratus was concerned to react against the general assumption that his activity was associated with Alexandria and the Ptolemies, not the Seleucid court. The presumed connection of Erasistratus with the Seleucid court depends to a large extent on the story of Antiochus I and Stratonice, but it probably remains true that in any case the Ptolemaic associations of Erasistratus are themselves conjectural. All that can be asserted with confidence is that there were a number of royal doctors at the Seleucid court, which is hardly surprising, and that Erasistratus may have been one of them, but how far one can go in

talking of a Seleucid 'school of doctors' is unclear.⁴⁷ Assuming there was such a school, it is not known how far it may have received explicit royal encouragement, and it remains true that in any case it was less prominent than that at Alexandria.⁴⁸

The point of relevance for the present discussion is the obvious connection between military activity and medicine. Royal doctors tend to be noted in the nonmedical tradition for their advice and personal influence at court, as the case of Apollophanes shows, but no less important to the kings were their professional skills. Seleucid kings, like Philip and Alexander before, fought in person in the front line, and a recurring element in the biographical tradition about such rulers is their reckless exposure to physical risk and the wounds they suffered in battle. Philip was reputedly wounded many times,⁴⁹ and so was Alexander.50 The same is known of several Seleucid kings, and Bikerman reckoned that 10 out of the first 14 rulers were killed in a military context (Bikerman 1938, 13). An inscription from the time of Antiochus I illustrates the point: a decree of the city of Ilium grants proxeny and citizenship to Metrodorus of Amphipolis, the doctor of Antiochus I. This was done at the express request of the king, who mentioned in his letter to Ilium that Metrodorus had successfully treated the king for a wound in the neck he had suffered in a battle (OGIS 220).51 Seleucid kings thus had a very personal interest in medicine, and on this point at least war and culture seem to converge.

Military technology

Mention of war leads to a related point: did the Seleucid kings play any role in promoting military technology, as other kings did? The Ptolemaic record is clear. Ctesibius of Alexandria, the third century inventor of various mechanical instruments, received the patronage of Ptolemy II, and in addition to various inventions he perfected a catapult. This is mentioned by Philo of Byzantium in his work on catapults (ca. 200 BC), who comments on the success of the Alexandrian engineers and the benefit they gained from royal patronage: 'they received considerable support (*choregia*) from kings who were eager for fame (*philodoxoi*) and were well disposed to the arts and crafts (*philotechnoi*)'.52 Another third or second century writer on siege-engines, Biton, dedicated

his work to a king Attalus.⁵³ In comparison the Seleucid record appears to be a blank, and there is nothing in the extant evidence that associates them particularly with military technology. Contrast the reputation in this field not just of other kings but of several Greek cities, Rhodes, Massalia and Cyzicus, according to Strabo (14.2.5; cf. Marsden 1969, 75f.). The Ptolemies and the Rhodians are known to have made their artillery resources available at times to friendly states abroad. This is illustrated by two decrees from Samothrace in the reign of Ptolemy III (Syll.3 502 line 10; Bakalakis and Scranton 1939, at p. 453f. lines 20-23; cf. Marsden 1969, 76f.) and by the Rhodian gift to Sinope in 220 mentioned by Polybius (4.56.3). By contrast the only explicit mention of the use of artillery in the Seleucid army comes from the defence of Thermopylae by Antiochus III against the Romans in 191, though this obviously cannot be the whole story.54

Nor do the Seleucids figure at all in the conspicuous naval 'arms race' that was a striking feature of the rivalry between Ptolemies and Antigonids down to the mid third century (Casson 1995, ch. 6 esp. 137-40). But then the Seleucids failed to develop into a major naval power in the Aegean and eastern Mediterranean despite the probable ambition of Seleucus I and his successors. It seems in fact that the only major contribution made by the Seleucids to the military history and techniques of the age was through their ostentatious use of elephants obtained from India (Bikerman 1938, 61f.; Bar-Kochva 1976, 75-83; cf. in general Scullard 1974). Seleucus I and his successors picked up the fashion that had been started off by Alexander. Strabo mentions that the Seleucid kings kept their elephants at Apamea, together with the larger part of the army (16.2.10). The need for elephants gave extra significance to the maintenance of their connections with the 'upper satrapies' in the east, 55 and also had the effect of driving the Ptolemies their rivals to develop their own supplies of elephants from Africa. But having said this I am not sure how far elephants should be categorised as a 'cultural and social' phenomenon.

Philosophy

From elephants to philosophers is admittedly a rather abrupt transition. But philosophers require a mention in

any discussion of the monarchies of the age.⁵⁶ By the time of Alexander philosophy had achieved a status such that the kings of the time, all of them upstarts, were anxious to attract to their courts intellectual figures of distinction from the Greek world because of the special chic this conveyed. Kings needed philosophers as a sign of acceptance by the best brains of what was for them the civilised world. But then, philosophers hardly needed kings, and were if anything anxious not to be seen to be too closely involved with them. Philosophical schools were already established in Athens by private initiative, and unlike other branches of intellectual activity such as philology, literature, medicine and the sciences, philosophy did not benefit from royal patronage which threatened to compromise its independence. Hence philosophical schools normally flourished in cities that were not at the same time centres of royal power (Athens above all, then in the second century Rhodes and Tarsus), and Alexandria was in no position to compete here.

The record of the Seleucid kings is for the most part patchy compared to the other major monarchies. One may first mention briefly a mysterious story in Athenaeus (12.547a-b) of a king Antiochus, not further identified, who is reported as writing to an official with orders for the immediate expulsion of all philosophers from 'the territories', the stringing up of young men found in their company, and the holding of their fathers under the gravest charges. Unusually for Athenaeus no source is quoted, and the context of the story, if genuine, is uncertain.⁵⁷ For the third century the evidence yields only two names of philosophers with possible Seleucid connections. Early in the century a certain Clearchus dedicated at Aï Khanoum in remote Afghanistan a set of Delphic maxims which he claims to have copied at Delphi. He may be identical with Clearchus of Soli, an Aristotelian philosopher, as was argued by Louis Robert (Robert 1968, 442-54). Assuming the identity, we do not know whether he had any personal connection with Seleucus I, or whether he was a freelance traveller. Apart from this, a king Antiochus, probably Antiochus II, is reported to have sought to attract Lykon of Alexandria Troas, the head of the Peripatetic school at Athens, a man who according to Diogenes Laertius was 'esteemed beyond all philosophers by Eumenes (I) and Attalus (I)', though without success (Diogenes Laertius 5.67-8; cf. Habicht 1989, 9). The direct record then dries up almost completely for the rest of the third century, apart from stray scraps of information,⁵⁸ and one has to wait till well into the second century to see connections between Seleucid rulers and philosophers of the time develop in a rather unexpected way.

The evidence relates to a certain Philonides of Laodiceia by the sea, one of the Seleucid foundations in North Syria. His case illustrates very well how far we are dependent on the chance survival of information. From epigraphic evidence one knew of a certain Philonides from Laodiceia and his two sons Philonides and Dicaearchus, who were obviously influential at Laodiceia in the time of Seleucus IV and Antiochus IV and had made a positive commitment to the Seleucid monarchy, on whose behalf they promoted good relations with the Greek mainland. They are honoured in a decree from Eleusis for services to Athens (IG II² 1236).⁵⁹ The youngest son Dicaarchus is honoured in another decree from Delphi (OGIS 241), dated most probably to 168/7; he is honoured for his devotion to Delphi and for interceding on its behalf with Antiochus IV. The two sons are also mentioned in another inscription from Delphi, a list of theorodokoi, where they are identified as sons of Philonides.60

None of the inscriptions specifies that any members of this family had any philosophical connections. But it so happens that a Philonides was a noted mathematician and Epicurean philosopher in the early second century. For long he was known only as a mathematician through an allusion in Apollonius of Perge (Conica II, I p. 192 Heiberg; cited by Gallo 1980, 33 n. 33), until one of the papyri from Herculaneum shed remarkable new evidence on him in the form of a biography of the philosopher, though the text is unfortunately very mutilated and fragmentary.61 Among other things62 the extant fragments give an account of the influence he exercised on the Seleucid king Demetrius I. This makes it clear that he must be one of the men called Philonides from Laodiceia mentioned in the inscriptions from Athens and Delphi, probably the father rather than the son. 63 The Herculaneum papyrus tells how Antiochus IV was hostile to the Epicureans, but Philonides was able to bring over to his doctrines his nephew Demetrius I (fr. 30) who became devoted to Epicureanism (frs. 12, 19, 20, 27, 30). Demetrius treated Philonides with great consideration, though Philonides was not willing to become a member of the king's council or to go on embassies on his behalf (fr. 27). Philonides may also have exercised his influence on Demetrius at the time of his accession when the king, wishing to placate the Romans, wanted to punish Laodiceia for the assassination in 162 of the Roman envoy Cn. Octavius by a certain Leptines (Polybius 32.3.2-5, 10-13), but Philonides was able to deflect his anger (frs. 9, 32; cf. also fr. 62, 16; the reading of the papyrus is uncertain).⁶⁴

All this fits more or less with the epigraphic evidence. The papyrus biography has an obvious eulogistic streak and may well exaggerate the influence of Philonides on Demetrius (cf. Gallo 1980, 40), but here for the first time is evidence of a philosophical figure with close relations with a Seleucid ruler. 65 Besides, Philonides was a native of Laodiceia, a Seleucid foundation and not an old Greek city. He was therefore home grown, and not an import from the old Greek world, as had been the case so far with the vast majority of intellectual figures active at the courts of the kings.⁶⁶ In this respect he was not alone: several philosophers emerged from Seleucid cities in Asia in the second century, though this was seemingly a development that took place independently of any royal encouragement (cf. Tarn 1938-1951, 40-3; Altheim 1948, II 139-41).

Whether the example of Philonides could have signalled the start of a new process is hard to say, given the turbulent history of the end of the dynasty. The reign of Demetrius I turned sour, a rival, Alexander Balas, put forward by Attalus II of Pergamum supposedly as a son of Antiochus IV, received the recognition of the Roman Senate (153/2) and Demetrius was overthrown and killed (150). Remarkably, Alexander Balas is also credited with philosophical connections, though too much significance should not be read into this. His credentials as a legitimate ruler were suspect, and in his brief reign (150-145) he was no more than a puppet in the hands of others, whether outsiders hostile to the Seleucids or his own favourites (cf. Will 1982, 374-9; Habicht in CAH VIII2 (1989), 362-5). One may therefore take with a pinch of salt the report in Athenaeus that Balas was gentle and fond of literary conversations (philologos). Though devoted to Stoicism, he showed according to Athenaeus remarkable patience with the rude outspokenness of one Diogenes, an Epicurean philosopher, whereas later Antiochus VI ordered Diogenes to have his throat cut (Athenaeus 5.211a-d, with anecdotal material taken from his own work *On the Kings of Syria* [FGrHist 166 F1]).⁶⁷ With that episode the known relations of the Seleucids with philosophers come to an abrupt end.

To sum up. Once more, considerable allowance has to be made for the inadequacies of the evidence. It may well be that the picture I have drawn is largely fantasy, but on present evidence the impression is of a patchy record on the part of the Seleucid monarchy. As far as cultural achievements are concerned they cannot sustain comparison with the Ptolemies or the Attalids. A few cultural figures are found to have an association with the first two rulers. One wonders in fact whether there may not be rather more to Antiochus I in this respect than we know of, as his association with several literary figures suggests (the poets Aratus of Soli and Simonides of Magnesia, Berossus of Babylon, the geographical explorers and writers). But after the first two rulers the momentum seems to flag. More individuals from the court circles are known for the reign of the flamboyant Antiochus III than for any other Seleucid king, and they include several literary figures, but few of them apart from Euphorion could be described as showing any special eminence. Antiochus III is remembered for his military, not his cultural achievements. The geographer Strabo is always interested in highlighting cultural figures (especially philosophers) produced by particular Greek cities or active in them, but he has few names to mention in his account of the major Seleucid cities in Syria and in Mesopotamia. None of these cities is presented by him as a noted intellectual centre. 68 It is therefore not surprising that the Seleucids have a generally low profile in most general accounts of the culture of the post Alexander period.⁶⁹

If this impression is correct, what is the explanation? There was no a priori reason why the Seleucids should not have been able to attract outside talent as did the other monarchies. They had the resources and a reputation for wealth second only to that of the Ptolemies (Bikerman 1938, 35f., 119, 126f.). Nor was there any problem of distance: the North Syrian coast was just round the corner from the Aegean and long familiar to the

Greeks. 'Have brains, will travel' had long been the motto of many an opportunist Greek, long before the time of Alexander. If Clearchus could travel all the way from Delphi to Aï Khanoum in Afghanistan to set up a copy of Delphic maxims, then anybody could go anywhere. Furthermore, there was no incompatibility between the maintenance of a high military profile and the pursuit and promotion of cultural activities: both brought fame to the rulers. Monarchy had many faces other than the purely military. Long before Alexander, Archelaus of Macedon, according to Thucydides, developed the military potential of the country more than all the eight kings who preceded him (2.100). It was the same Archelaus who was the first to raise the cultural profile of Macedon on the Greek scene, by attracting, for example, Euripides from Athens to his court. Plutarch comments on the two sides of Demetrius Poliorcetes, the king at war and the king at peace (Plutarch Demetrius 2). In the third century the Ptolemies presented themselves simultaneously as great conquering kings and friends of the arts.70

Why then did the Seleucid monarchy fail as a whole to develop in the same direction? Several reasons might be suggested.

The first is evidently a simple question of personal inclinations and political will. Cultural centres with lasting cultural institutions did not just happen (cf. Engberg-Pedersen 1993), they had to be created and promoted, and for this the personal commitment of the king was essential. It did make a difference who was king. The ruler needed to establish and maintain contacts with cultural figures on a person to person basis. This is obviously true of Alexandria under the early Ptolemies,71 and also of Pergamum, especially under Eumenes II. The adjectives philologoi, philomousoi, or philotechnoi, are sometimes applied to kings in general or to individual rulers,72 but to my knowledge the only Seleucid king to be described in those terms (as philologos) is, ironically, Alexander Balas, a short-lived and ineffectual ruler who may not even have belonged to the dynasty. There is no Seleucid equivalent for the wide intellectual interests attested for the early Ptolemaic kings or for Antigonus Gonatas.

A related point is the comparative lack of contacts between the Seleucids and the mainland of Greece, and

especially Athens, for much of their early history down to the late third century, as has been shown by Habicht (Habicht 1989). Several pieces of evidence suggest that Seleucus I cultivated a connection with Athens, including the gift of a tiger which was mentioned in contemporary comedy (Athenaeus 13.590a-f; cf. Sherwin-White & Kuhrt 1993, 93). The sculptor Bryaxis of Athens made a statue of Seleucus (Pliny HN 34.73), and Athenians were among the settlers of Antioch transplanted by Seleucus from the earlier foundation of Antigoneia (Habicht 1989, 7-9). Thereafter evidence of Seleucid relations or presence in the Aegean and mainland is scanty at a time when Ptolemies and Antigonids were competing for influence there (cf. Habicht 1992). The Attalids too had a close interest in the Aegean and the mainland from early in their history (McShane 1964, 40f.). Seleucid weakness as a naval power in the Aegean and eastern Mediterranean may have been a contributory reason for their absence.⁷³ One has to wait till the second century to see a change taking place in this respect. The ancient tradition emphasises the role of Antiochus IV, his devotion to Athens as a result of his prolonged stay there, and his conspicuous generosities to her and to other Greek cities (Livy 41.20; Mørkholm 1966, 55-63; Habicht 1989, 18-22). In fact the renewal of Seleucid connections with the Greek mainland had started already in the reign of Antiochus III, even before his own invasion of the mainland in 192 (Habicht 1989, 10-18). After Antiochus IV Seleucid links with the mainland and especially with Athens continue to be attested almost to the end of the dynasty.74 It is striking that relations between the Seleucids and the mainland of Greece should have become much closer at a time when Seleucid power was now circumscribed by the Treaty of Apamea than they had been for most of the third century. But by this time it was perhaps too late for the Seleucids to make a fresh start in the cultural field, as the history of the dynasty from after the death of Antiochus IV is one of almost continuous turmoil and instability. One can only speculate on what might have happened if the position had been different at an earlier date. Compare once more the Ptolemies. Demetrius of Phalerum, the Peripatetic philosopher placed in charge of Athens by Cassander of Macedon in 317, was expelled in 307 by his namesake Demetrius Poliorcetes. He took refuge at first in Boeotia but eventually ended up at the court of Ptolemy I in Alexandria, not at that of Seleucus, and went on to assist Ptolemy in launching the Library and Museum.⁷⁵ In the third century it was in fact more common for political exiles from the mainland to end up at the Ptolemaic court than anywhere else.⁷⁶

Another point of relevance is that for a long time the Seleucid empire did not have anything that could be called a genuine 'capital city'. I use the word 'capital' with some hesitation, because I am not always sure what is meant and whether this concept should be projected back to the ancient world, as it often is, without further examination of the terminology used by ancient writers.⁷⁷ But there is an obvious difference between Alexandria and Pergamum on the one hand, where all the functions of government and social life were concentrated in one single large centre, and the position in the Seleucid empire on the other. The creation of a large centre of this kind was itself dependent on the size and nature of the kingdom. Ptolemy was in charge of Egypt almost from the moment of Alexander's death in 323. The country formed a natural unit and base, and Alexandria had been founded nearly a decade before. Egypt also had long been well known to the Greeks, some of whom had settled there as early as the seventh century. From an early date Ptolemy was thus in a position to make Egypt look an attractive destination to Greeks ready to offer their services and he presented himself as an appreciative employer (Diodorus 18.28.5-6, cf. 33.3). The Attalid kingdom, on its side, though it only started to develop later, enjoyed comparable advantages of closeness and familiarity to the Greek world, and compactness with a well defined centre in Pergamum. It also enjoyed under Eumenes II the benefit of active Roman support.

The Seleucid empire was different. Its starting point was Babylonia, to which Seleucus was appointed satrap in 321, though his real beginning only came in 312. From that time onwards Seleucus devoted the rest of his long career to enlarging the empire till it reached enormous proportions. He added successively the far eastern provinces, then North Syria, then Asia Minor and at the very end of his life a foothold on the European mainland. It is not obvious that this vast and evolving empire had a clear centre or any single city that could be called its

'capital'.⁷⁸ Seleucus left an empire that lacked a final shape, and where different parts were not equally settled and controlled. From the moment of his accession Antiochus I was plunged into a series of wars in an attempt to keep the empire together, and the kings were on the defensive for most of the time until the reign of Antiochus III when the fight back began.

One consequence was that the kings were kept on the move, and mobility was a characteristic of the Seleucids that distinguishes them from most of the other kings of the period (Sherwin-White & Kuhrt 1993, 38, 135f., 198). There has been some discussion of what was the 'centre' of the Seleucid empire and what was its 'capital', or whether it had several centres and capitals.⁷⁹ The debate is perhaps somewhat unreal. For a long time no single city seems to have been thought of by the rulers as being the 'capital' for the whole empire or indeed could have been.80 An indication of this comes as late as the 190s in the reign of Antiochus III, when he was actively reasserting Seleucid claims to parts of the European mainland: he declared his intention to rebuild Lysimacheia across the straits as a residence (oiketerion) for his son Seleucus (Appian, Syriake 3; cf. Will 1982, 189; P. Briant in Topoi 4 [1994], 367). This implied a future shift away from Sardis, hitherto the main Seleucid centre for Asia Minor, but also a possible division of spheres of activity between himself elsewhere in Asia and his son, as had happened already before, under Seleucus I with his son Antiochus I in the far east in the period 292-282. After the Treaty of Apamea Antioch did eventually become in effect what one may now call the 'capital city' of the Seleucids, possession of which was essential to confer legitimacy to the ruler (Grainger 1990, 125, 162). But this is a late development which should perhaps not be projected back to the early history of the dynasty, as is often done. 81 On any interpretation the Seleucids were slow to develop any true counterpart to Ptolemaic Alexandria or Attalid Pergamum. Mobility was the normal state of affairs for the kings down to the time of Antiochus III and indeed beyond, and it was the direct result of military necessities. Although military command often had to be delegated, the visible presence of the king at the head of his troops was constantly required.82

Conclusion

In the end one seems therefore to be drawn back from the cultural to the military aspect and to war. In an extensive survey of Syria in the period after Alexander Fergus Millar came to the conclusion that its apparent lack of visible development under the Seleucids may have been related to war and instability (Millar in Kuhrt & Sherwin-White 1987, 130: 'an area dominated by war and political instability'). The same point was made explicitly by Strabo in relation to Hyrcania, commenting on the lack of attention devoted by successive rulers to the development of the country's considerable resources (11.7.2):

The cause of this lack of attention was the fact that the first rulers of the Hyrcanians, I mean the Medes and the Persians, as also the last, I mean the Parthians [...] were barbarians, and also the fact that the whole of the neighbouring country was full of brigands and nomads and deserted regions. The Macedonians ⁸³ did indeed rule over the country for a short time, but they were so occupied with wars that they could not attend to their remote possessions.

The point may perhaps be extended to much of the history of the Seleucid empire. 84 One of the functions expected of a king by his subjects was the provision of peace and security. This the Ptolemies were able to do for Egypt for much of their history. Theocritus says of Ptolemy Philadelphus: 'his people go about their occupations in security; no enemy by land has crossed the teeming Nile to raise the battle cry in villages that do not belong to him, nor has he leaped in arms on to the shore from a swift ship with hostile intent to seize the herds of Egypt' (17.97-101; cf. Polybius 5.34). It is doubtful whether any Seleucid king could have truthfully made such claims for any large part of his empire, though the aspiration receives occasional expression. 85

But I would like to end not with the kings, but with a cultural figure. The greatest single intellectual to emerge from the Seleucid empire in the whole of its history is without doubt Posidonius, but he dates from the time when the dynasty was by now in terminal decline (c. 135-c. 51; for the testimonia cf. Edelstein-Kidd 1972-1989). Posidonius was a native of Apamea in Syria, one of the major foundations of Seleucus I and ironically the military headquarters of the kings according to Strabo (16.2.9-10). But beyond the fact of his birth in one of the Seleucid cities Posidonius' intellectual development owed virtually nothing to his origins in the Seleucid empire. Like other intellectual figures that arose in the Seleucid empire in the second century (cf. Tarn 1938-1951, 40-42; Altheim 1948, 139-41, 145), he moved away from the Seleucid empire and went west. He left his native Syria early, escaping one imagines from the turmoil of late Seleucid history, studied in Athens then at Rhodes where he received citizenship and opened a famous school. He travelled extensively in the west, but it seems clear that he never returned to Syria (cf. T3 Edelstein-Kidd; Syria is not mentioned in his travels T 14-26). In his history he did not behave towards his native country as other expatriate Greek historians did, from Thucydides via Timaeus to Polybius his predecessor, but turned against the late Seleucid rulers, of whom he gave a very unflattering picture as decadent rulers corrupted by excessive wealth, and against his own fellow countrymen in North Syria whom he ridiculed in the same vein (cf. Malitz 1983, 257-302). The ability of the Seleucid monarchy in its greatest days to attract and retain intellectual figures of weight from the outside seems, from the above survey, to have been at best inferior to that of rival monarchies.86 In the period of its decline all it could do was to drive its own best men away and thus enable others to derive the benefit.

Department of Ancient History, University of St. Andrews

Bibliography

- Altheim, F. 1947, 1948. Weltgeschichte Asiens im griechischen Zeitalter, 2 vols. Halle: Max Niemeyer.
- Austin, M.M. 1986. Hellenistic kings, war and the economy, *CQ* 36, 450-66.
- Bakalakis, G. & R.L.Scranton. 1989. An inscription from Samothrace, *AJPh* 60, 452-58 (cf. J. and L. Robert *Bull*. 1939, 298).
- Bar-Kochva, B. 1976. *The Seleucid Army. Organization and tactics in the great campaigns*. Cambridge: Cambridge University Press.
- Berve, H. 1926. *Das Alexanderreich auf prosopographischer Grundlage* 2 vols. Munich: C.H. Beck.
- Bevan, E.R. 1902. *The House of Seleucus* 2 vols. London: Edward Arnold.
- Bickerman, E.J. 1966. The Seleucids and the Achaemenids, in *Convegno sul tema: la Persia e il mondo greco-romano*, 87-117. Rome: Accademia dei Lincei.
- Bikerman, E. 1938. Institutions des Séleucides. Paris: Paul Geuthner.
- Bilde, P. & others (eds). 1990. *Religion and Religious Practice in the Seleucid Kingdom* (Studies in Hellenistic Civilization 1). Aarhus, Oxford and Oakville, Conn.: Aarhus University Press.
- Bilde, P. & others (eds). 1993. *Centre and Periphery in the Hellenistic World* (Studies in Hellenistic Civilization 4). Aarhus, Oxford and Oakville, Conn.: Aarhus University Press.
- Bilde, P. & others (eds). 1996. Aspects of Hellenistic Kingship (Studies in Hellenistic Civilization 7). Aarhus, Oxford and Oakville, Conn.: Aarhus University Press.
- Bosworth, A.B. 1996. The historical setting of Megasthenes' *Indica*, *CPh* 91, 113-27
- Bouché-Leclercq, A. 1913-14. *Histoire des Séleucides* 2 vols. Paris: Ernest Leroux.
- Brodersen, K. 1985. Der liebeskranke Königssohn und die Seleukidische Herrschaftsauffassung, *Athenaeum* 63, 459-69.
- Brodersen, K. 1989. *Appian's Abriss der Seleukidengeschichte (Syriake* 45.232-70, 369). *Text und Kommentar*. Munich: Editio Maris.
- Burstein, S. 1978. *The Babyloniaca of Berossus*. Malibu, Calif.: Udena Publications.
- Callataÿ, F. de. 1989. Des trésor royaux achéménides aux monnayages d'Alexandre: espèces immobilisées et espèces circulantes, *REA* 91, 259-74.
- Carsana, C. 1996. *Le dirigenze cittadine nello stato seleucidico*. Como: Edizioni New Press (cf. Savalli-Lestrade 1998).
- Casson, L. 1995. *Ships and Seamanship in the Ancient World*. Baltimore and London: Johns Hopkins University Press.
- Edelstein, L. & I.G.Kidd. 1972-1989. *Posidonius* I *The Fragments*. Cambridge: Cambridge University Press (see also Kidd, I.G.).
- Edson, C.F. 1958. Imperium Macedonicum: the Seleucid empire and the literary evidence, *CPh* 53, 153-70.
- Engberg-Pedersen, T. 1993. The relationship between intellectual and political centres in the Hellenistic world, in Bilde et al. (eds) 1993, 285-315.

- Erskine, A. 1995. Culture and power in Ptolemaic Egypt. The Museum and the Library of Alexandria, in *Greece & Rome* 42, 38-47.
- Fraser, P.M. 1969. The career of Erasistratus of Ceos, in *Rendiconti dell'Istituto Lombardo* 103, 518-37.
- Fraser, P.M. 1972. *Ptolemaic Alexandria*. 2 vols. Oxford: Oxford University Press.
- Fraser, P.M. 1996. *Cities of Alexander the Great*. Oxford: Oxford University Press.
- Gabbert, J.J. 1997. Antigonus II Gonatas: A Political Biography. London: Routledge.
- Gallo, I. 1980. Frammenti Biografici da Papiri vol. 2 La biografia dei filosofi, 21-166. Rome: Edizioni dell' Ateneo e Bizzari.
- Gera, D. 1999. Philonides the Epicurean at court: early connections, *ZPE* 125, 77-83.
- Gisinger, F. 1949. Patrokles (5), in RE 18.2, 2263-73.
- Grainger, J.D. 1990. *The Cities of Seleukid Syria*. Oxford: Oxford University Press.
- Grainger, J.D. 1997. A Seleukid Prosopography and Gazetteer. Leiden: E.J.Brill.
- Green, P. 1990. *Alexander to Actium. The Hellenistic Age*. London: Thames and Hudson.
- Griffith, G. 1935. *The Mercenaries of the Hellenistic World*. Cambridge: Cambridge University Press.
- Habicht, C. 1988. Zur vita des Epikureers Philonides (*P Herc* 1044), in *ZPE* 74, 211-14.
- Habicht, C. 1989. Athen und die Seleukiden, in Chiron 19, 7-26.
- Habicht, C. 1992. Athens and the Ptolemies, in *Classical Antiquity* 11, 68-90.
- Hannestad, L. 1994. The chronology of the Hellenistic fortress (F5) on Failaka. *Topoi* 4, 587-95.
- Herrmann, P. 1970. Weihungen an Zeus Porottenos. I. Der Hegemon Arkesilaos für Apollophanes, den Leibartzt Antiochos'III, in *Anzeiger der philosophisch-historischen Klasse der Öster*reichischen Akademie der Wissenschaften 107, 94-98 no.1.
- Holleaux, M. 1942. *Etudes d'épigraphie et d'histoire grecques* vol. III. Paris: de Boccard.
- Invernizzi, A. 1993. Seleucia on the Tigris: centre and periphery in Seleucid Asia, in Bilde & others (eds) 1993, 230-50.
- Jones, A.M.H. 1940. *The Greek City from Alexander to Justinian*. Oxford: Oxford University Press.
- Kartunen, K. 1989. *India in Early Greek Literature*. Helsinki: Studia Orientalia, vol. 65.
- Kidd, I.G. 1988. *Posidonius* II *The Commentary* II (i) and II (ii). Cambridge: Cambridge University Press (see also Edelstein, L.).
- Kuhrt, A. & S.Sherwin-White (eds.). 1987. *Hellenism in the East*. London: Duckworth.
- Landau, Y. 1966. A Greek inscription found near Hefzibah, in *Israel Exploration Journal* 16, 54-70.
- Lloyd, G.E.R. 1975. A note on Erasistratus of Ceos, in JHS 95, 172-5.

- Longrigg, J. 1993. *Greek Rational Medicine. Philosophy and medicine from Alcmaeon to the Alexandrians*. London: Routledge.
- Ma, John.1999. Antiochos III and the Cities of Western Asia Minor. Oxford: Oxford University Press.
- McShane, R.B. 1964. *The Foreign Policy of the Attalids of Pergamum*. Urbana, Ill.: University of Illinois Press.
- Malitz, J. 1983. Die Historien des Poseidonios. Munich: C.H. Beck.
- Marasco, G. 1996. Les médecins de cour à l'époque hellénistique, in *REG* 109, 435-66
- Marinoni, E. 1972. La capitale del regno di Seleuco I, in *Rendiconti dell'Istituto Lombardo* 106, 579-631.
- Marsden, E.W. 1969. *Greek and Roman Artillery. Historical Development*. Oxford: Oxford University Press.
- Marsden, E.W. 1971. *Greek and Roman Artillery. Technical Treatises*. Oxford: Oxford University Press.
- Mehl, A. 1980-81. *Doriktetos chora*: kritische Bemerkungen zum 'Speererwerb' im Politik und Völkerrecht der hellenistischen Epoche, in *Ancient Society* 11-12, 173-212.
- Mehl, A. 1986. Seleukos Nikator und sein Reich. I. Teil. Seleukos' Leben und die Entwicklung seiner Machtposition. (Studia Hellenistica, 28). Louvain: Universitas Catholica Lovaniensis.
- Meyer, Ed. 1925. *Blüte und Niedergang des Hellenismus in Asien*. Berlin: Karl Curtius.
- Millar, F. 1987. The problem of Hellenistic Syria, in Kuhrt & Sherwin-White (eds) 1987, 110-33.
- Mitchell, S. 1993. Anatolia. Land, Men, and Gods in Asia Minor. Volume I: The Celts and the Impact of Roman Rule. Oxford: Oxford University Press.
- Mørkholm, O. 1966. *Antiochus IV of Syria*. Copenhagen: Gyldendal. Musti, D. 1966. Lo stato dei Seleucidi. Dinastia, popoli, città da Seleuco I ad Antioco III, in *Studi classici e orientali* 15, 60-197.
- Olshausen, E. 1974. *Prosopographie der hellenistischen Königsge-sandten. I Von Triparadeisos bis Pydna*. (Studia Hellenistica, 19). Louvain: Universitas Catholica Lovaniensis.
- Pearson, L. 1960. *The Lost Histories of Alexander the Great*. New York: American Philological Association.
- Pfeiffer, R. 1968. History of Classical Scholarship. From the Beginnings to the End of the Hellenistic Age. Oxford: Oxford University Press.
- Philippson, R. 1941. Philonides (5), in RE 20, 63-73.
- Plassart, A. 1921. Liste delphique des théarodoques, in *BCH* 45, 1-85. Préaux, C. 1978. *Le monde hellénistique*. 2 vols. Paris: Presses Universitaires de France.
- Rawson, E. 1985. *Intellectual Life in the Late Roman Republic*. London: Duckworth.
- Riginos, A.S. 1994. The wounding of Philip II of Macedon: fact and fabrication, in *JHS* 114, 103-19.
- Robert, J. and L. 1983. Fouilles d'Amyzon en Carie I. Paris: de Boccard.
- Robert, L. 1968. De Delphes à l'Oxus: inscriptions grecques nouvelles de la Bactriane, in *CRAI*, 416-57.

- Robert, L. 1984. Pline VI, 49, Démodamas de Milet et la Reine Apame, in *BCH* 108, 467-72.
- Rostovtzeff, M. 1941. *Social and Economic History of the Hellenistic World.* 3 vols. Oxford: Oxford University Press.
- Roy, C. le 1986. Un réglement religieux au Létôon de Xanthos, *RA*, fasc. 2, 279-300.
- Salles, J.F. 1987. The Arab-Persian Gulf under the Seleucids, in Kuhrt & Sherwin-White (eds) 1987, 75-109.
- Savalli-Lestrade, I. 1998a. Comment on écrit l'histoire hellénistique. À propos d'un livre récent sur la place des élites civiques dans le royaume séleucide, in *REG* 111, 308-22 [review of Carsana 1996].
- Savalli-Lestrade, I. 1998b. *Les Philoi royaux dans l'Asie hellénistique.* Geneva: Droz.
- Schmitthenner, W. 1968. Über eine Formveränderung der Monarchie seit Alexander dem Grossen, in *Saeculum* 19, 31-46.
- Schneider, C. 1967, 1969. Kulturgeschichte des Hellenismus 2 vols. Munich: Beck.
- Schwarz, F.F. 1969. Deimachos von Plataiai: zum geistesgeschichtlichen Hintergrund seiner Schriften, in Stiehl, R. & H.E.Stier (eds) Beiträge zur alten Geschichte und deren Nachleben: Festschrift für Franz Altheim zum 6.10.1968, I, 293-304. Berlin: Walter de Gruyter.
- Scullard, H.H. 1974. *The Elephant in the Greek and Roman World*. London: Thames and Hudson.
- Sherwin-White, S. & A.Kuhrt. 1993. From Samarkhand to Sardis. A new approach to the Seleucid empire. London: Duckworth.
- Staden, H. von. 1989. Herophilus: the Art of Medicine in Early Alexandria. Cambridge: Cambridge University Press.
- Tarn, W.W. 1913. Antigonus Gonatas. Oxford: Oxford University Press.
- Tarn, W.W. 1938, 1951. *The Greeks in Bactria and India* (1st and 2nd ed.). Cambridge: Cambridge University Press.
- Thapar, R. 1997. *Asoka and the Decline of the Mauryas* (revised ed.). Oxford: Oxford University Press.
- Tracy, S.V. 1988. IG II²937: Athens and the Seleucids, in *GRBS* 29, 383-88.
- Vatai, F.L. 1984. *Intellectuals in Politics in the Greek World. From* early times to the hellenistic age. London: Routledge.
- Weber, G. 1997. Interaktion, Repräsentation und Herrschaft. Der Königshof im Hellenismus, in A.Winterling (ed.) Zwischen 'Haus' und 'Staat'. Antike Höfe im Vergleich (Historische Zeitschrift, Beiheft 23), 27-71.
- Wellmann, M. 1909. Erasistratos (2), in RE 6, 333-50.
- Wellmann, M. 1930. Beiträge zur Geschichte der Medizin im Altertum, in *Hermes* 65, 322-331.
- Will, E. 1979, 1982. *Histoire politique du monde hellénistique*. 2 vols (2nd ed.). Nancy: Annales de l'Est.
- Will, Ed. 1990. La capitale des Séleucides, in *Akten des XIII Kongresses für Klassische Archäologie, Berlin 1988*, 259-65. Mainz: Philipp von Zabern.

Notes

- I I am very grateful to all the participants at the conference for their comments, and in particular to Lise Hannestad for inviting me in the first instance.
- 2 Cf. Fraser 1972, I 527 on Eratosthenes.
- 3 See n. 75.
- 4 Cf. Fraser 1972, I 86-88 with notes, index III p. 67 s.v. 'expulsion of intelligentsia'.
- 5 See notably Bevan 1902, I 199f, 222-32, 256f., 281-83, 297-99; II 276-78; Meyer 1925; Tarn 1938 & 1951 ch. 2 'Literature and Social Contacts' esp. 39-44; Altheim 1948, II 136-68 'Die hellenistische Literatur im Seleukidenreich'; Bikerman 1938, 39f. is brief; the question is briefly noted in Green 1990, 164; the subject receives no treatment in its own right in Kuhrt & Sherwin-White 1987 or Sherwin-White & Kuhrt 1993. Schneider 1967, I 605-30 is derivative, unsystematic, and of doubtful reliability. See also below nn. 69, 81 on Fraser 1972.
- 6 Cf. e.g. the meeting of Seleucus I and Demetrius Poliorcetes (Plutarch *Demetrius* 32) or the embassy of the Samian Boulagoras to find Antiochus (II?) in *SEG* I 366 lines 10-20.
- 7 P. Gauthier *Nouvelles inscriptions de Sardes, II* (Geneva 1989), nos.1 p. 13-15 and 3 p. 81-83.
- 8 Labraunda: J. Crampa, Labraunda vol.3, part 2: the Greek inscriptions (Lund 1972), no.46 pp.61-63 and Robert 1983, 139f.
 - *Amyzon*: Robert 1983, nos. 10 p. 138-41, 11 p. 141-42, 12 p. 142-43, 18 p. 195-96.
 - Scythopolis: Landau 1966, with corrections in Bull. 1970, 627 and further discussion of the text by T. Fischer ZPE 33 (1979), 131-38 and J.M. Bertrand ZPE 46 (1982), 167-74; cf. also SEG XLI.1574. Kildara: Robert 1983, 181-87.
 - *Iasos*: G. Pugliese-Carratelli *Annuario* 45-46 (1967-68), 445-53 and *Bull*. 1971, 621, now in *I.Iasos* 4.
 - Heracleia: M.Wörrle Chiron 18 (1988), 421-70 and SEG XXXVII.859.
 - *Xanthos*: le Roy 1986; cf. generally Sherwin-White & Kuhrt 1993, 49f., 58f. 176 & 178, 201f.
- 9 Cf. also the inscription from Failaka-Ikaros in the Persian Gulf (C. Rouéché & S.M. Sherwin-White, *Chiron* 15 (1985), no. 3 p.13-39; Sherwin-White & Kuhrt 1993, 172-78). On the question of its date cf. Hannestad 1994 (probably Seleucus II rather than Antiochus III).
- 10 Dates according to Thapar 1997, ch. 2.
- 11 13th Major Rock Edict, Thapar 1997, 255-57 at p. 255; cf. p. 35f. on the context.
- Thapar 1997, at p. 256, cf. p. 40f. for the identification of the kings; cf. generally Sherwin-White & Kuhrt 1993, 100-3.
- 13 See also I Maccabees I.1 for a view of Alexander, his successors, and Antiochus IV, all presented as hostile military kings; cf. Millar in Kuhrt & Sherwin-White 1987, 110f.; Sherwin-White & Kuhrt 1993, 53.
- 14 Ma 1999, 217 f. Cf. also the remarks of Carsana 1996, 173-94 esp.

- 192-94 on the detached attitude of Hellenistic historiography towards the monarchies, though note the critical comments of Savalli-Lestrade 1998a, esp. 316f.
- 15 Cf. generally Ma 1999, ch. 3. For Seleucid kings posing as champions against the barbarian world cf. n. 27 and also Pausanias 10.20.5 for the support given by Antiochus I for the defence of Delphi against the Celtic tribes (cf. L. Hannestad in Bilde & others 1993, 20f.); the appeal of Euthydemus of Bactria to Antiochus III in Polybius 11.34.5 with Walbank *Commentary* II p.313.
- 16 Cf. Bilde and others 1990, 11f.; Briant *ib.* 40, 60f.; Hannestad & Potts *ib.* 122f.
- 17 Schneider 1967-68 is a step back in this respect.
- 18 Cf. esp. Tarn 1938-51 and Altheim 1948, both cited in n. 5 above; Bickerman 1966.
- 19 Cf. Altheim 1948, II esp. 137-53 for a negative assessment of the Ptolemies in contrast to the Seleucids, developing hints in Meyer 1925, 37f., 46: the authoritarian approach of the Ptolemies stifled creative freedom. The question does not seem to be explicitly raised in Fraser 1972, I 305-12 on royal patronage in general and under the Ptolemies, cf. too 551 on Alexandrian history and geography, contrast 484f. on philosophy where the negative influence of the Ptolemaic court is explicitly noted.
- 20 Listed in Carsana 1996, 165 as E20, Savalli-Lestrade 1998b, 33.
- 21 Seleucus son of Mnesiptolemus was also one of 39 contributors to a loan to Miletus in 205/4: A.Rehm *Milet I.3 Das Delphinion* no.147 line 102-3; L.Migeotte *L'Emprunt public dans les cités grecques* (Paris 1984), no. 97.
- 22 Olshausen 1974 no. 136; listed in Carsana 1996, 119f. as B6. Savalli-Lestrade 1998b, 29.
- 23 I leave aside the construction work patronised by Seleucid kings. See for example the extensive gifts of Antiochus IV in the Greek world; cf. Mørkholm 1966, 55-63.
- 24 Cf. Cicero, *De natura deorum* 2.133; on Euphorion cf. O. Skutsch, *RE* 6 (1909) s.v. Euphorion (4), 1174-1190; Altheim 1948, 141, 152; Pfeiffer 1968, 150; P.E. Easterling and B.M.W. Knox (eds.) *Cambridge History of Classical Literature* (Cambridge 1985), I 607-9; listed in Carsana 1996, 164f. as E19. Savalli-Lestrade 1998b, 27.
- 25 Fraser 1972, I 325; Erskine 1995; cf. Strabo 13.1.54 for the Attalids' interest in the library of Aristotle.
- 26 Lucian, *Pro imaginibus* 5 has the story that Stratonice, wife of Seleucus I, set a contest to poets to praise her hair, despite being bald. Cf. generally Altheim 1948, II 152.
- 27 FGrHist 163 (the Suda dates him to the reign of Antiochus III, but the poem is usually referred to Antiochus I); cf. Mitchell 1993, I 18f.; listed in Carsana 1996, 165 as E21.
- 28 Pfeiffer 1968, 120-22; listed in Carsana 1996, 160 as E4. Savalli-Lestrade 1998b, 10f.
- 29 For the standard view see, e.g., Olshausen 1974 no. 127 p. 172-74; Mehl 1986, 187-91; Kartunen 1989, 96-99; Sherwin-White &

- Kuhrt 1993, 12f., 91-101; J.F.Salles in *Topoi* 4 (1994), 599f.; Carsana 1996, 117f. (B2). Savalli-Lestrade 1998b, 8f.
- 30 In the first decree Antiochus I is honoured for his services to Miletus (*OGIS* 213; Holleaux 1942, 111-17). The second decree honours Apame, wife of Seleucus I for her care for the Milesians serving in the army of Seleucus (Holleaux 1942, 99-110).
- 31 He is not mentioned by Strabo; cf. Robert 1984; Mehl 1986, 218; Sherwin-White & Kuhrt 1993, 19, 25-27, 82f.; listed in Carsana 1996, 142 as D4 (on which cf. Savalli-Lestrade 1998a, 320; Savalli-Lestrade 1998b, 4f.).
- 32 Cf. Meyer 1925, 32f.; Gisinger 1949 (attempts to reconstruct Patrocles' work); Pearson 1960, 163f., 227f., 231 citing Tarn 1938-1951, 488-90; Fraser 1972, I 535; Mehl 1986, esp. 113f., 118f., 279, 301; Sherwin-White & Kuhrt 1993, 19; listed in Carsana 1996, 102 as A3. Savalli-Lestrade 1998b, 9, 14.
- 33 It is not clear that he is identical with the author of a work on siegecraft (*FGrHist* 65 F3 & 4) and a work on piety (F8), cf. Jacoby's comments; the discussion of Schwarz 1969 is therefore based on tenuous grounds. Cf. generally Fraser 1972, I 535; Olshausen 1974 no. 126 p. 171f.; Mehl 1986, 187-91; Kartunen 1989, 100; Sherwin-White & Kuhrt 1993, 13; listed in Carsana 1996, 118f. as B4. Savalli-Lestrade 1998b, 4.
- 34 Demetrius of Byzantium (*FGrHist* 162) wrote 8 books on Antiochus I and Ptolemy II; he may have been a contemporary of the king, but it is not known whether he had any connection with him. A certain Archibius is reported to have written to a king Antiochus with advice on how to prevent storm damage to crops (Pliny *HN* 18.294; cf. D.J. Thompson in *CAH* VII².1 364f.). It is not clear whether this implies a literary work dedicated to the king.
- 35 Altheim 1948, II 142-44 draws a contrast between the Seleucid explorers who wrote their own accounts and the Ptolemaic geographers (above all Eratosthenes) whose accounts were based not on their own travels but on the explorations of others. This contrast is not explicitly taken up by Fraser 1972, I 520-53 in his detailed discussion of Alexandrian geography.
- 36 The name was apparently already in current use by the accession of Antiochus I, cf. the decree from Ilium *OGIS* 219 lines 4-5; cf. too *OGIS* 229 lines 2, 13; Strabo 16.2.4.
- 37 Cf. Musti 1966, 60-81 esp. 79-81 who argues for an originally more extensive use of the term (he does not mention the passage in Pliny); Grainger 1990, 41 makes no reference to Musti.
- 38 Strabo II.II.5 notes the habit of the 'Macedonians', i.e. the Seleucids (cf. n. 83), of naming or renaming rivers and places to suit themselves; cf. Fraser 1996, 82, 86, 87f.
- 39 Cf. Tarn 1938-1951, 40 and Altheim 1947, I 152f. on the general lack of literature at the Seleucid court. According to Carsana 1996, 188-90 Antiochus III sought (unsuccessfully) to use Greek historians for dynastic propaganda purposes, unlike the early Seleucid kings who used them to chart the eastern part of their newly acquired empire; the contrast is based on rather tenuous evidence, cf. Savalli-Lestrade 1998a, 316f.

- 40 Bikerman 1938, 36f.; Fraser 1969, 536f.; Marasco 1996, 438-47 for a recent conspectus.
- 41 There is disagreement among recent writers as to the scope and character of his medical researches. Cf. Fraser 1969 with the qualifications of Lloyd 1975, cf. too Lloyd in *CAH* VII.1² 347-50 for an evaluation of his medical achievement; Longrigg 1993, 181-83, 188f., 199-203, 205-8, 210-18.
- 42 Notably Plutarch *Demetrius*; Appian *Syriake* 59-61, but two authors (Valerius Maximus and Pliny) as well as mentioning Erasistratus also give each an alternative name; see below n. 44.
- 43 See Walbank *Commentary* I p. 584 for his medical reputation; he is listed in Carsana 1996, 162f. as E12 (with corrections by Savalli-Lestrade 1998a, 319f.). Savalli-Lestrade 1998b, 19-21, 24f.
- 44 But elsewhere Pliny refers the same episode to Erasistratus (29.5), and his information seems in any case garbled. In neither passage does Pliny make any direct reference to the story of Stratonice, and in both passages he states that 'king Ptolemy' rewarded Cleombrotus-Erasistratus for 'saving' or 'curing' the king. In the second passage 'king Ptolemy' is described as 'son' of Antiochus (the second Pliny passage appears not to be mentioned by Mehl 1986, 239). No other ancient account mentions any Ptolemaic connection with these events. In another version of the story of Antiochus and Stratonice Valerius Maximus (5.7, ext.1) states that Antiochus was cured either by the (otherwise unknown) mathematician Leptines 'or, as some relate, by Erasistratus the doctor'.
- 45 Wellmann 1909, 333-34, followed e.g. by Brodersen 1985, 462 and 1989, 171; Mehl 1986, 250-53 (but Mehl accepts that Erasistratus was present at the court of Seleucus I at the time); Longrigg 1993, 181-3; Marasco 1996, 439-41 & 442-44.
- 46 Fraser 1969, 533-35 followed by Lloyd 1975, 172; von Staden 1989, 47, 142.
- 47 It may be relevant that the poet Euphorion of Chalcis, placed in charge of the public library of Antioch by Antiochus III (above) is recorded to have written, among his many works, a Hippocratic glossography (Wellmann 1930, 328-31; Fraser 1969, 537); cf. O. Skutsch *RE* 6 (1909), 1189.
- 48 This is conceded by Fraser 1969, 536f.; Marasco 1996, 442-44 does not take a clear position.
- 49 Cf. Riginos 1994 for a detailed collection of material and discussion.
- 50 Cf., e.g., Arrian, Anabasis 7.10.1-2; Berve 1926, I 79f. on Alexander's doctors.
- 51 Metrodorus is listed in Carsana 1996, 159 as E3. See also Savalli-Lestrade 1998b, 13f.
- 52 Belopoeika \$50 ed. Marsden 1971, 106-84 at p. 108; the motivation given is interesting: fame was as important as practical usage. On Ctesibius cf. Fraser 1972, I 428-32.
- 53 Athenaeus 14.634a; Marsden 1971, 66-103; cf. generally Préaux 1978, I 216f.
- 54 Appian *Syriake* 18.78 cf. too Livy 35.51.9, 36.10.7; cf. Bar-Kochva 1976, 161. Note the gift of hair by Seleucus II to Rhodes (Poly-

- bius 5.89), which must have been intended for use in catapults; cf. Walbank on Polybius 4.56.3.
- 55 The satrap of Bactria sent 20 elephants in 274/3 for the 'First Syrian War', cf. the Babylonian text cited in Sherwin-White & Kuhrt 1993, 46f.
- 56 For what follows cf. generally Engberg-Pedersen 1993; Préaux I 212-17, 226-30 on the relations between philosophers and kings; a rapid narrative survey in Vatai 1984, 116-29. On philosophers in the Seleucid empire cf. Tarn 1938-1951, 40-43 and Altheim 1948, II 139-41 for a contrast with Alexandrian philosophy, on which cf. Fraser 1972, I 480-94 (esp. 484f. on Alexandria's lack of attractiveness till the first century), cf. too 551.
- 57 Altheim 1948, II 140f. attributes this to Antiochus IV, but there is no obvious way of identifying the relevant king.
- 58 These suggest that there may have been more connections than we know of in detail. (1) An anecdote in Athenaeus (13.593b-d) from Phylarchus (*FGrHist* 81 F24) concerns Danae, daughter of the Epicurean Leontion, who was attendant of Laodice, the former wife of Antiochus II. (2) Athenaeus 14.652f-653a quoting Hegesander reports a correspondence between Amitrochates (Bindusara, the second Mauryan king of India) and a king Antiochus (I) about the sale of various goods including a sophist: Antiochus replies that it is not a Greek custom to sell sophists! (3) Two Athenian inscriptions of *c.* 229-209 and 184/3 BC respectively honour Aristocreon of Seleucia, the son of the sister of Chrysippus of Soli the Stoic philosopher (*Syll.*³ 475 and 474 with Habicht 1989, 13f.).
- 59 Habicht 1989, 18; the decree belongs probably to the reign of Seleucus IV.
- 60 Plassart 1921, IV.78-80 at p. 24, cf. p. 37.
- 61 P.Herc. 1044; Gallo 1980 supersedes previous work, notably the editio princeps of W. Crönert in 1900 and Philippson 1941, cf. Gallo 1980, 29f. on Crönert and 31f. on Philippson. See Gallo 1980, 23-49 for the papyrus and the life of Philonides (esp. 33-41), 51-166 for the papyrus fragments and commentary, and pls. I-III; cf. Habicht 1988 for two corrections of detail. Gallo's edition is not mentioned by Carsana 1996, 166f. (E24 & 25). On Philonides and his sons see also Savalli-Lestrade 1998b, 46f., 51-53, 71-73, Gera 1999.
- 62 Such as information about the teachers of Philonides; cf. Gallo 1980, 36-38.
- 63 Modern scholarship is not unanimous on this point. Father: Habicht 1989, 18; son: Philippson 1941, 64; Fraser 1972, II n. 320 p. 601 (on I p. 416 Antiochus IV is incorrectly described as father of Demetrius I, whose uncle he was); Gallo 1980, 34 (Philonides born not long before 200).
- 64 A grammarian and lecturer of the name of Isocrates, active in Syria in the 160s, is also mentioned by Polybius as being implicated in the murder of Octavius (Polybius 31.33.5 and 32.2, 3.6-9; Diodorus 31.29, from Polybius); it is not known whether he had any connection with the Seleucid court.

- 65 It seems that Philonides is the only philosopher known to have acted (in effect) as tutor to a Seleucid king, whereas there are several known cases for the other dynasties (Préaux 1978, I 214f.; cf. Fraser 1972, I 308f. on the tutors of Ptolemaic kings). There is a striking dearth of information about the education of Seleucid kings (contrast, e.g., Alexander the Great).
- 66 Cf. on this Tarn 1938-1951, 41; Altheim 1948, II 140, 144f.; Fraser 1972, I 307-9 on Ptolemaic Alexandria.
- 67 Athenaeus describes Diogenes as from Seleucia in Babylonia; if true he is otherwise unknown, but there may be a confusion on the part of Athenaeus with the well known Stoic philosopher Diogenes, also from Seleucia on the Tigris, but commonly known as Diogenes the Babylonian, who became head of the Stoa in Athens; the Epicurean Diogenes may be Diogenes of Tarsus (cf. on this point Carsana 1996, 169 [E37] citing Bouché-Leclercq 1913-14, 339). See also Savalli-Lestrade 1998b, 75f.
- 68 Cf. 16.2.10 (Posidonius of Apamea); 16.1.6 (Seleucus of Seleucia); 16.1.16 (Diogenes of Seleucia); contrast e.g. all the names in 14.2.13 (Rhodes), 14.5.13 (Tarsus), or 17.3.22 (Cyrene). For a survey of intellectual figures from the Greek cities in the east in the post Alexander period cf. briefly Jones 1940, 281f. and more fully Tarn and Altheim cited in n. 5 above.
- 69 Pfeiffer 1968 is able to devote six chapters to the Ptolemies and Alexandrian scholarship and one to the Attalids, but the Seleucids are conspicuously in the background. Cf. Pfeiffer 1968, 120-122 (Aratus), 150 (Euphorion); the more positive estimate of the Seleucids given by Fraser 1972 is a partial exception; see above on Erasistratus and below n. 81.
- 70 For instance, Theocritus in his poem in praise of Ptolemy II celebrates the wide empire of Ptolemy and his military might, the wealth that came from all this, and the use that Ptolemy made of it for the benefit of the gods and for the generous support of poets such as Theocritus himself (Theocritus 17.73-117). So too Callixeinus of Rhodes, in the description of the great procession at Alexandria in 271/0, mentions in the same breath the vast naval resources and constructions of Ptolemy Philadelphus and the Library and Museum at Alexandria (FGrHist 627 F 2, from Athenaeus 5.203c-e).
- 71 Cf. Fraser 1972, I 309-12 on the personal interest of the Ptolemaic kings.
- 72 For example on kings in general, Plutarch *Moralia* 140c, 1095c (*philomousoi*, *philogoi*); Philo of Byzantium on the Ptolemies (*philodoxoi*, *philotechnoi*; see n. 52); Theocritus 17.115-17 on Ptolemy Philadelphus, and see the index in Fraser 1972 for individual rulers; Tarn 1913, ch. 8 on Antigonus Gonatas. Plutarch does not name any Seleucid ruler in his comments on the intellectual pursuits of kings (*Demetrius* 20).
- 73 The Seleucids probably maintained a fleet in the Persian Gulf, but that is a different story: cf. J.F. Salles in Kuhrt & Sherwin-White 1987, 75-109 esp. 96-98, 108f.
- 74 Cf. the redating to the reign of Antiochus VII in the late 130s of

- an Athenian decree concerning relations with the Seleucids, Tracy 1988, cf. Habicht 1989, 22-24 and generally 22-26 on the continued links of the Seleucids with Athens.
- 75 Fraser 1972, I 306f., 314-16, 321f.; testimonia on Demetrius of Phalerum in FGrHist 228.
- 76 E.g., the Athenians Chremonides and his brother Glaucon after the Chremonidean war; Cleomenes of Sparta after Sellasia.
- 77 E.g. Marinoni 1972, 579-81; Will 1990 (who does not mention Marinoni).
- 78 Grainger 1990, 122-26; cf. Weber 1997, 35f. on the major monarchies and the difference between Attalids and Ptolemies on the one hand, and Seleucids and Antigonids on the other.
- 79 Cf., e.g., Invernizzi in Bilde et al. 1993, 230-50, whose discussion does not take into account Asia Minor.
- 80 Compare Gabbert 1997, 68f. on Antigonus Gonatas.
- 81 Rostovtzeff 1941, I 462, 480f. (Antioch the capital); Marinoni 1972 (Antioch, not Seleucia in Pieria, meant from the start by Seleucus I to be the capital of his empire, replacing Seleucia on the Tigris); Fraser 1972 I esp. 100, 343, 345, 347, 349 (Antioch in the third century the capital of the Seleucid empire and comparable to Alexandria in its cultural life); Green 1990, 164; Will 1990 (Antioch becomes the capital perhaps from Antiochus I onwards, though its urban development remains modest until the Roman empire); Invernizzi in Bilde et al. 1993, 236, 239, 241 (Antioch replaces Seleucia on the Tigris as royal capital, though Seleucia on the Tigris retained its 'cultural centrality' [237 cf. 240] as well as

- its economic importance [239, 240f.]). For the first century BC, the flattering description of Antioch in Cicero *pro Archia* 4.3 as a city full of learned men and liberal studies is not easy to substantiate.
- 82 Cf. Polybius 5.41, 45, 49 on the early years of Antiochus III; Livy 35.42, cf. 45 on his invasion of the Greek mainland in 192.
- 83 The Seleucids are meant, cf. Edson 1958.
- 84 Cf. also Rostovtzeff I 1941, 475 on 'the prevailing atmosphere of incessant war', 484 on Dura-Europus; briefly, Green 1990, 164.
- 85 Cf. OGIS 219, decree of Ilium for Antiochus I 'he has restored peace to the cities and has advanced his interests and the kingdom to a more powerful and brilliant position'; a decree of Iasos of the period after 197 talks of Antiochus III 'maintaining his ancestral disposition towards all the Greeks, and bringing peace to some, helping individually and in common many others who have met with troubles' (lines 41-44) (G. Pugliese Carratelli cited in n. 8). Not even North Syria could take peaceful conditions for granted. Serious disturbances are known already at the accession of Antiochus I (OGIS 219). The port of Seleucia in Pieria, almost on the doorstep of Antioch at the mouth of the Orontes, was in Ptolemaic hands for more than two decades from Seleucus II to the early years of Antiochus III (Polybius 5.58). Cf. also the evidence for Ptolemaic mercenaries present near Laodicea in the third century, J.P. Rey-Coquais Syria 55 (1978), 313-25.
- 86 Compare Fraser 1972, I 307-9 for Ptolemaic Alexandria.

War and Greek Art

Lise Hannestad

The strongest impact war had on Greek art was undoubtedly that it might provide occasion (i.e. victory) and thus the economic basis,¹ in the form of booty, for a considerable number of large scale building projects which contributed significantly to the development of, for instance, Greek temple architecture. The best known example is, of course, the Periclean building programme on the Acropolis. The temple of Zeus in Olympia, one of the most famous temples in the Greek world, can be mentioned as yet another example of a temple built from the spoils of war.² Thus chapters from a handbook on Greek architecture would perhaps be the obvious response to the question of war as a cultural force in relation to Greek art.

Another choice of topic, demonstrating even more directly the relation between art and war, might be the victory monuments, also paid with booty, and with which many Greek sanctuaries were packed.³

Instead, I have chosen a more speculative approach to the theme, i.e. to focus on how the effect on the individual of warfare and combat experience is reflected in the visual arts. In this, my paper may be said to draw inspiration from Victor Hanson's studies of the Greek hoplite battle. I have chosen to study the theme from two viewpoints and with two aims in mind. One is realism in fighting scenes in Greek art, with particular reference to the archaic period and for a purely art historical purpose: did war contribute to the stylistic and iconog-

raphic development of the visual arts? The other is to examine if a specific group of art can contribute anything to the question of whether Greek culture was a war culture?

It may be useful to begin with a few remarks on my use of the term war and on the source material. I use the terms war and warfare in a very broad sense and the word fighting is perhaps better suited for many of the monuments and scenes I shall present. The source material will include sculpture and painting from both public and private spheres. In sculpture I shall mainly discuss grave reliefs and friezes from public monuments. Large scale paintings are rarely preserved in Greek art; but an idea of some famous paintings has come down to us through literary sources, whereas the richest archaeological sources as to scenes of war and combat are vase paintings which show an unbroken line from the late eighth to the late fourth century BC. I shall concentrate on war on land, which is by far most often represented in art, apart from the geometric period where representations of sea battles are just as common as battles on land.⁴ I do not intend a systematic chronological study but have felt free to move forth and back in time. I have attempted to concentrate on well-known monuments as far as possible, since my purpose is not to present hitherto unknown or little known material but a reinterpretation or rather a study in greater detail of battle scenes and scenes related to war.

Realism in archaic art

It is well known that in Greek visual art, scenes of war and fighting, which are extremely common, are usually taken from mythology, whereas combat scenes from real life are rare. Thus scholars have often stressed that scenes showing fighting in phalanx are very rare; that the heroic duel is preferred to the anonymous fighting between a mass of warriors; and that combat scenes in vase-painting are usually stereotyped. In the following I shall argue that, though Greek art usually expresses the fighting experience through mythological subjects and not through the historical battles which were part of the experience of the majority of the male population of a Greek polis in the archaic and classical periods, many features in these mythological pictures reflect personal experiences of war and fighting. I shall demonstrate in more detail how realism with regard to the wounded and the dead, which we traditionally consider a phenomenon non-existent in Greek art before the hellenistic age, makes its appearance already in the archaic period.

A paper aiming to study the direct influence of contemporary warfare on Greek visual art can hardly leave out two of the scenes that are usually seen as the rare exeptions from the rule that war and fighting are expressed in mythological language. One is on a ceramic jug from the middle of the seventh century BC: the socalled Chigi vase, made in Corinth but found in an Etruscan grave; 7 the other is the famous Alexander mosaic from a house in Pompeii, which undoubtedly copies a famous Greek painting of the late fourth century BC, probably a royal commission. More than three centuries divide these two pictures, and yet they are in one aspect closer to each other than to most Greek art from the periods in between, i.e. that they attempt to depict the phalanx tactics of their own times, the Chigi vase the phalanx in its early stage, the Alexander mosaic in a period where the Macedonian version of the phalanx is still a central element in combat during the wars of Alexander. A difference may be that the Chigi vase does not necessarily depict a specific battle whereas the Alexander mosaic probably depicts a specific event, though it is disputed which of Alexander's two battles with the Persian king, Issos (333 BC) or Gaugamela (331 BC) it is from.8

The Chigi vase (plate 1) shows a unique representation of hoplites in formation, on the point of joining battle. The painter very effectively depicts all warriors in a line making exactly the same movement. Not the individual, but the formation is depicted. In the middle, the front ranks are already about to engage in battle, their spears lowered to a horizontal position. The flute player, famous from the Spartan phalanx, is fol-

lowed by yet another rank consisting of more hoplites, some of them running to catch up with the line. In fact the picture is something of a tour de force, bringing to life very effectively the impression which the phalanx must have produced. One has to study the picture carefully to realise, for instance, that in the case of the front line advancing from the right there are 4 warriors if one counts the shields and heads, but there are actually 10 legs. Whereas the warriors on the left side, whose shields are shown from the inside, carry only one spear, as is customary later in the history of the phalanx, those to the right carry two, those in the front rank one held horizontally, ready to attack, and another one still held upright. The two warriors preparing to fight on the far left (Plate 2) also have two spears—we cannot rule out the possibility that this was indeed used in the early history of the phalanx10 rather than just a device used by the painter to mass the weapons on both sides, adding to the impression of numbers. From an art historical point of view, perhaps the most interesting question raised by this representation is whether the scene is intended to show a single moment in time, with the two warriors to the left showing that the hoplites did not put on their heavy armour until the very moment of battle;11 or whether it shows a progressive method of narration reading from the left (and right) towards the centre of the frieze.

The representation of the phalanx on the Chigi vase is perhaps best explained by the novelty of the phalanx tactic and the fascination it evoked among its contemporaries.¹²

The Alexander mosaic, on the other hand, shows how a purely infantry battle was gradually transformed, from the fifth century BC onwards, into battles with diversified units, with cavalry playing an important role. Instead of the anonymous fighting of robot-like men, the mosaic is built up of single episodes, the most important being, of course, the meeting of the two main adversaries, Alexander and Dareios. In this respect the mosaic, or rather the painting behind it reflects traditional combat scenes in visual arts of the archaic and classical periods, with their focus on the individual. The mastery of the composition lies in the way in which these isolated episodes are interwoven and set against a background of the extra-long Macedonian spears, the so-

called *sarissa*, effectively used to produce an impression of depth and the din of battle.¹³

Pollitt¹⁴ has rightly pointed out that the artist whose painting is reflected in the Alexander mosaic was a master of dramatic narrative with an usurpassed ability for bringing the dramatic tension to a climax through the emotional interplay between the figures.

Written sources tell us that paintings of historical battles were produced earlier than the period of Alexander. Thus, two such paintings were exhibited in the famous Stoa Poikile on the Athenian Agora. The paintings—probably made around 460 BC—were of battles in which the Athenians had been victorious. One showed the battle of Marathon, another the battle between Athenians and Spartans at Oinoë. *C.* 500 years later they were described in detail by Pausanias (I.I5.3), the indefatigable traveller of the second century AD:

At the end of the painting (in this case a series of four different paintings) are those who fought at Marathon; the Boeotians of Plataea and the Attic contingent are coming to blows with the foreigners. In this place neither side has the better, but the centre of the fighting shows foreigners in flight and pushing one another into the morass, while at the end of the painting are the Phoenician ships and the Greeks killing the foreigners who are scrambling into them. Here is also a portrait of the hero Marathon, after whom the plain is named, of Theseus represented as coming up from the under-world, of Athena and of Heracles. — Of the fighters the most conspicuous figures in the painting are Callimachus who had been elected commander-in-chief by the Athenians, Miltiades, one of the generals, and a hero called Echetlus, of whom I shall make mention later.15

Pausanias begins his description of the paintings in the stoa in this way:

This portico contains, first, the Athenians arrayed against the Lacedamonians at Oinoë in the Argive territory. What is depicted is not the *akme*, i.e. the height of the battle, nor when the

action has advanced as far as the display of deeds of valour, but the beginning of the fight when the combatants were about to close.¹⁶

Pausanias' choice of words 'nor when the action has advanced as far as the display of deeds of valour' offers us, I think, a kind of key to understanding the fighting scenes usually seen in Greek art, i.e. the battle broken up into duels or fighting in small groups.

The actual pattern of fighting in hoplite battles has been much debated in recent years, perhaps because it varied from battle to battle.¹⁷ The initial clash between two phalanxes, the thrust (othismos) in ranks, is never depicted in Greek art. The reason is, I would argue, that it was the individual engagements in which personal courage, dexterity and ingenuity were crucial, and the opportunities they offered to 'display deeds of valour' which were considered the height of a battle. Rather than seeing the fighting scenes as idealized, we should recognise that they reflect a psychological reality.¹⁸ What the Greeks saw as the memorable episodes of a battle were these individual engagements, not the anonymous action of the phalanx. Thus the usual fighting scenes in the visual arts are a result of a selectivity as to which part of battles would and should be remembered. This concentration by the artists and their patrons on a psychological reality with focus on the individual and his fate reflects, I think, a lack of interest in tactics etc.; something which has often been compared with Herodotus' descriptions of battles,19 but which is something also to be seen in much later European visual art, where artists' main interest in battle scenes are very similar: the individual and his fate, not tactics or the totality of a battle.20

It has often been pointed out that Greek artists—and similar anachronisms are of course common also in much later art—depicted contemporary dress and equipment in mythological fighting scenes; and not least Victor Hanson²¹ has stressed the intimate knowledge of how armour and weapons were handled that pervades many depictions. As an example may be mentioned how the shifting trend from very heavy armour in the early archaic period with its heavy bronze cuirass, greaves and the Corinthian helmet (all of which must have hampered movement severely) towards much lighter equipment in the classical and later periods is clearly reflected

in the visual arts. The handling of the heavy shield and spear when not fighting is, for instance, to be seen on the famous red figure krater by the Niobid Painter (Plate 3). In a rocky landscape, Heracles and some other heroes are resting, watched by Athena. The scene undoubtedly reproduces a wall painting, but its identification is much debated.²² The heavy shield and the helmet of the seated hero are placed on the ground, the hero himself leaning on his two long spears. Above him, on Heracles' right, a hero who is still wearing his helmet supports his shield against his knee and leans on his spear.

But not only in such details as the equipment and the handling of it do we meet an intimate knowledge of war and battle. One of the most striking traits in archaic Greek art, usually very formulised in its expression, is the realism that suddenly appears in the representation of the dead and wounded in battle.²³ One of the masterpieces of late archaic sculpture is the dying warrior in the left corner of the east pediment of the Aphaia temple on Aigina (Plate 4). Much has been written in recent years about the burden of the hoplite shield. Here it serves as the last support of the dying, his arm still in the arm grip (porpax), whereas in his almost unconscious state he is no longer able to hold on to the handgrip (antilabe). With his right hand, he still holds the sword. Though this can never have been visible from below, the artist has portrayed the pain and the fleeting consciousness in the warrior's face with the slightly opened mouth and the deep furrows from nose to cheeks. His legs are moving to no effect, and in a moment he will collapse completely, his arm probably slipping through the grip of the shield. He has been fatally wounded by an arrow (Heracles') in the right part of the chest. Blood streaming from the wound was probably painted on to heighten the effect, as we often see it in vase painting. The sculpture is actually one of the most poignant portrayals of a dying warrior in the whole history of Greek art.

The wounded warrior supporting himself on the shield and with a last grip on the sword is a motif we can find again and again in vase-painting. Among the most distinctive depictions are those of the Brygos Painter, for instance the mortally wounded opponents of Poseidon, Athena and Hermes in a gigantomachy on a kylix now in Berlin (Plate 5a-b).²⁴ The wounded amazon on a

krater by Euphronios is a couple of decades earlier (Plate 6).²⁵

Characteristic of this motif is that the wounded or dying have all drawn or tried to draw their sword in a last attempt to ward off their opponents who still fight with a spear or a similar weapon (the gods). It should be noted that the motif as such is not an invention of the late archaic artists but is already to be found in a version lacking the realistic details in the early sixth century.²⁶

The use of the double-edged iron spearheads in hoplite combat resulted in large wounds, which must have caused severe haemorrhages. Victor Hanson has stressed that the literary descriptions of some battles, with the ground turned red with blood are to be taken literally.²⁷ Many vase-paintings, too, stress this enormous loss of blood (see for instance Plates 5-6). However, there is a characteristic limit to the realism of rendering of wounds in the visual arts. Even in the hellenistic period this discretion or even aestheticism with regard to death is still characteristic of Greek art. I know of only one example in Greek art of the depiction of bowels emerging from a wound and that is in the representation of the hunt on the Calydonian boar, on the François vase from c. 575 BC, where we see such wounds very clearly on the dead hound and more discreetly on the dead hunter (Plate 7). This restraint as to 'total realism' is perhaps surprising considering the descriptions in the Iliad, known to all Greeks. Characteristically, such realism as to wounds is not to found again until much later, in the archaistic Aegistos relief from the early Roman period (last half of the first century BC or perhaps rather the first century AD) which clearly draws upon literary rather than visual prototypes.²⁸

One of the finest representations of a battle in Greek art is the gigantomachy on the north frieze of the Siphnian treasury in Delphi, dating from *c.* 525 BC.²⁹ The frieze is 8.6 m long and only 64 cm high and in this confined space the sculptor brilliantly structures his composition. The gods attack from the left, a convention that signals that the victory will ultimately be theirs. Though using the traditional scheme with fighting in clearly defined groups, not in ranks, the sculptor nevertheless succeeds in simulating the tactics of a hoplite combat with the giants attacking in groups of two or three, their shields overlapping to form a wall (*e.g.*, Plate

8). The ruthlessness of this, the ultimate battle according to Greek mythology, is rendered in a way that still deeply affects the modern spectator, seeing for instance the giant attacked by the lions of Cybele (Plate 9). Originally, painted blood, portrayed as streaming copiously from the wounds made by the lions' teeth and claws would have further increased the sense of horror. The battle ground is already strewn with dead or fatally wounded, and the artist has taken great pains to depict them individually. One is lying naked on his side, and very unusual in reliefs—his face is shown en face, his mouth open in pain. His head is resting on one arm, the other arm hanging feebly (Plate 10). Another naked giant, still wearing his helmet, is lying on his back, one arm bent back over his head. Both his legs are slightly bent and it seems that in a moment the running warrior will tread on him (plate 11)—a theme to appear again in the hellenistic period in the gigantomachy on the Great Altar of Pergamon.30 Yet another giant, supporting himself on his right elbow, expends his last strength in an attempt to lift his shield for protection against the spear of a goddess (Plate 11). To the right, one giant is still fighting back, though he is already on his knees and trying to protect himself with his shield, which is pierced by the spear of his opponent. His right hand held the sword in a final attempt to defend himself against his successful opponent (Plate 11).

It has often been stressed that the early red figure vase painters of the so-called Pioneer Group of the very end of the sixth century BC must have studied the male anatomy, probably in the palaestra. Similarly, there can be no doubt that the sculptor of the north frieze of the Siphnian Treasury or the artistic tradition from which he grew, had an intimate knowledge of contemporary warfare, which was also applied to the mythological fight between gods and giants in the Siphnian Frieze.

The first efforts of an army after a battle would have been directed toward carrying or dragging off the wounded who still had some chance of survival.³¹ Of primary importance was also a proper burial of the dead in order to fulfill the obligations to both dead and living in a Greek community.³²

Tending to the wounded is a very rare motif in Greek visual arts. One such motif is on a late archaic drinking cup by the Sosias Painter, now in Berlin (Plate 12).³³ Patroclus is shown seated on his shield, biting his teeth in pain, and turning his head aside in the characteristic reflex movement of not wanting to see one's own bleeding wounds, while Achilleus dresses a wound in his left biceps. The cause of the wound is also indicated: an arrow has pierced the rim of Patroclus' shield, which he carried on his left arm, when the arrow hit him.

In contrast, the motif of carrying the dead from the battlefield is quite common in archaic art. Among the earliest representations are those on the handles of the François vase, showing Aias carrying the dead Achilleus (robbed of his armour and weapons, something happening not only in the epics but which was also normal practice in contemporary warfare) (Plate 13). Thus, in its mythological disguise, this motif must have had a deeper significance for contemporary viewers than a story from an epic. Whereas Aias is rendered in a very schematic manner, characteristic of early archaic art, the so-called 'Knielauf; the dead Achilleus shows realistic traits, his long hair hanging in front of his face and his eyes closed.34 The magnitude of the deed must certainly have been recognised by contemporaries of the vase-painter Exekias from his portrayals on an amphora in Munich of a warrior wearing all his own heavy armour while carrying on his back a dead comrade in full armour (Plates 14-15).35 This must have been something of a superhuman effort, with the warrior's own armour weighing about 35 kg and added to that the dead man and his armour, altogether more than 120 kg.³⁶ The shape of the shields shows that on this amphora too, the theme is mythological, again probably Aias carrying Achilleus.

Also from the cycle of the Trojan war is the scene on the calyx krater by Euphronios, with Hypnos and Thanatos lifting the dead Sarpedon from the battlefield (Plate 16). Hypnos and Thanatos, Sleep and Death, wear Corinthian helmets, a fact which reveals the similarity of this mythological scene to what was part of contemporary warfare, where comrades-in-arms would have carried the dead.³⁷ We find a variation of this motif on a cup, formerly in the Hunt collection, also by Euphronios, where Sarpedon is being carried away by the same two personifications in a kind of procession.³⁸

A completely different pictorial tradition is to be seen in the tondo of a Laconic black figure drinking cup from the middle of the sixth century BC (Plate 17)³⁹ where a

procession of warriors are carrying the dead. Nothing here suggests a mythological theme.

These examples—and many more could have been mentioned—clearly disprove the traditional view that in the visual arts, the Greek artists of the archaic period

simply followed a stereotyped pattern of rendering scenes of warfare. On the contrary, Greek artists in this period, when hoplite warfare was at its peak, took great pains to present what Hanson has called the misery of the hoplite battle.⁴⁰

Warrior Ideology

In the past decades many scholars of ancient history have viewed Greek culture as a culture deriving its values from war. Recently Yvon Garlan has formulated the viewpoint in this way: 'On all levels and in all realms of society the significance of the warrior model was asserted: within families the soldier, as portrayed on Attic vases, was the central figure around whom the internal relationships of the oikos was organized.'41 Some scholars, however, have begun to question this view, among them W.R. Connor (1988) who has stressed that also in this aspect Greek culture should not be seen as a unit, but in all its complexity over time and space. In the following I have attempted to examine if (or what) the iconography of the funerary monuments of private burials may contribute to this discussion of the social importance of the warrior.

Within the scope of this paper I shall concentrate on the Attic evidence, but in order to study the phenomenon over a longer period of time I shall include the grave stelai from Delos, which are from the hellenistic period when the Attic production of sculptured funerary monuments had ceased. Delos was under Athenian domination from 166 BC until the destruction by pirates in 69 BC.

In the archaic period two types of sculpture were used as grave markers in Attica: sculpture in the round and a relief-decorated stele. Of sculpture in the round, the type used for men was the kouros, i.e. the naked young man with no attributes marking him as a warrior or in any other role. An example is a *kouros* from Anavysos in Attica from around 525 BC (Plate 18).⁴² Here nothing suggests that the relatives wanted to commemorate the deceased as anything but a splendid young human being. However, the sculpture may belong together with a base carrying the epigram: *Stay and mourn the monument of dead Croesus, whom furious Ares destroyed*

one day as he fought in the front ranks,⁴³ indeed a valid warning against any straightforward interpretation of a piece of art without information on its context.

A couple of decades later, the grave stele of Aristion from Velanideza in Attica represents the deceased as a bearded hoplite (Plate 19).44 The inscription tells us only his name and that of the sculptor. There are other warrior stelai; in fact they seem to be the most frequent type of stele for a man, though for young men commemorations as athletes were also popular. However, the total number of archaic Attic grave stelai is relatively small and it is hardly possible to come to any conclusion beyond the fact that it was, in fact, common for men to be commemorated as hoplites: i.e. men of the elite, since it is important to realise that the archaic sculptured grave markers must have been the prerogative of the aristocrats. Sparse though the material is, it nevertheless appears to confirm the view of the central importance of the warrior expressed by Garlan.

The evidence becomes more complex when the sculptured Attic grave marker surfaces again around 430 BC after having disappeared during the first generations of the democracy. From then on, it continues in use until the late fourth century, offering us a splendid opportunity to study the iconography preferred by Athenian citizens (and others)-not only of the uppercrust, but also those of at least some means. Moving into the apparently simple world of Attic classical gravestones is, however, rather like walking into a minefield. We should not be deceived by the fact that they present to us Athenians of both sexes and all ages, and probably from elite to slave status, or by our spontaneous impression that we understand the message these gravemarkers seek to convey. Any attempt at a closer interpretation of the iconography of many of these stelai will immediately meet with difficulties as any classical archaeologist will

know.⁴⁵ For that reason I have chosen a rather simplistic approach, which nevertheless, I think, can offer us some idea of the development of the warrior ideology in the sphere of private burials in the most powerful polis in Greece after the Persian wars.⁴⁶

In the first decade of the renewed production of sculptured grave stelai, i.e. 430-420 BC, there is still only a very small number made and no warrior representations can be attributed to this decade. In the next two decades, at the height of the Peloponnesian war, the warrior representations reach their peak. 15% of all preserved funerary monuments show one or—less often—more hoplites.⁴⁷

In the period 400-375 BC, the percentage of gravestones with warriors has fallen to 6%, and when the production of sculptured funerary monuments has reached its peak in the period 375-350 BC, warrior representations are to be seen on only about 1.5%. In the last half of the century, or rather until the end of the production, possibly in 317 BC,⁴⁸ they are to be seen on *c.* 2.5% of the gravestones (Plate 20).

The majority of classical funerary reliefs with warrior representations present either the warrior, i.e. the deceased, alone (normally standing peacefully) or as part of a group, usually relatives or comrades-in-arms. Such representations follow the general trend in the iconography of the funerary monuments of the classical period, showing the deceased either alone or together with relatives or friends. In contrast, the theme 'Warrior in action' is a comparatively rare motif, mostly to be seen after 400 BC, with the Dexileos stele⁴⁹ as the most famous example.⁵⁰

The hellenistic grave stelai from Delos, often of a rather modest quality, represent male figures in much the same way as the late fourth century Athenian funerary monuments, i.e. as 'civilians' dressed in chiton and mantle, sometimes with allusions to the gymnasium.⁵¹ Only 2.5% of the stelai depict a warrior (on board a ship).

This, admittedly very simple, examination of sculptured funerary monuments suggests that, in contrast to Athens in the sixth century BC, when the role model as hoplite was clearly an important aspect of aristocratic life, this changes during the period of democracy. Why do we find warrior representations on only 15% of the funerary monuments during the period of the Peloponnesian war? The traditional conclusion that only men who died in action were commemorated as warriors probably accounts for part of it. However, the fact that though the Athenians usually served in the army from they were 18 until they were 60, by far the majority of the males depicted on the funerary monuments are represented not as hoplites but as civil citizens (signified by their wearing a cloak) or the young men very often as athletes, strongly suggests that it was not only acceptable but the norm (in the wealthier part of society) to be commemorated as a civilian. The warrior cannot have been 'the central figure around whom the internal relationships of the oikos was organized.' (Garlan 1995)

This tendency becomes much stronger in the fourth century and the hellenistic period, when the role model for a man as a warrior has ceased to be popular, at least in Athens and on Delos. This fall in the percentage of warrior representations on the funerary monuments seems actually to coincide with the establishing of an official cult for Eirene in Athens in 374 BC.⁵²

Thus, the funerary monuments of private persons of the archaic and classical periods in Athens and on hellenistic Delos, confirm, I think, the importance pointed out by Connor of viewing Greek culture and its attitude to war not as a unit but in all its variations over time and space. The sculptured funerary monuments of private burials in Athens certainly show a distinct change through time in the popularity of the warrior as the role in which the male population was depicted on funerary monuments.

Conclusion

The question raised in the beginning of this paper was how the effect on the individual of contemporary warfare and combat experience was reflected in the visual arts. A closer study of fighting scenes in the visual arts of the archaic period indicates that though they appear to be stylized and often stereotyped, still we meet, particularly in works of art of high quality, examples of a realism that bears evidence of the same feeling that Pindar expresses in a poem for the Thebans:

Sweet is war to the untried, but anyone who has experienced it dreads its approach exceedingly in his heart.⁵³

War was not about just about glory but most of all something to be feared. And the evidence from the Athenian sculptured funerary monuments suggests a development from an aristocratic warrior ideology in the archaic period to, in the fifth and particularly the fourth century BC, a society with different ideals. War had not become a less important part of everyday life, but there seems to have been a change in values, so that the male role model was no longer so strongly concentrated on the warrior, a development which becomes very clear in the hellenistic period, when armies to a large extent were mercenaries and the civilian is the 'Idealbürger' of the Greek *poleis*.

Department of Classical Archaeology, University of Aarhus

Bibliography

- Ahlberg. G. 1971. Fighting on Land and Sea in Greek Geometric Art (Skrifter utgivna av Svenska Institutet i Athen, 4°, 15). Stockholm
- Anderson, J.K. 1991. Hoplite Weapons and the Offensive Arms, in Hanson 1991, 15-37.
- Arias, P. & Hirmer, M. 1960. *Tausend Jahre griechische Vasenkunst*, Munich: Hirmer.
- Bilde, P. & others (eds). 1993. *Centre and Periphery in the Hellenistic World* (Studies in Hellenistic Civilization 4). Aarhus, Oxford and Oakville, Conn.: Aarhus University Press.
- Bilde, P. & others (eds). 1996. Aspects of Hellenistic Kingship (Studies in Hellenistic Civilization 7). Aarhus, Oxford and Oakville, Conn.: Aarhus University Press.
- Boardman, J. 1974. *Athenian Black Figure Vases*, London: Thames and Hudson.
- Boardman, J. 1989. *Athenian Red Figure Vases*, the Classical Period, London: Thames and Hudson.
- Clairmont, C.W. 1993. Classical Attic Tombstones, Kirchberg: Akan-
- Cohen, A. 1997. *The Alexander Mosaic, Stories of Victory and Defeat*, Cambridge: Cambridge University Press.
- Connor, W.R. 1988. Early Greek Land Warfare as Symbolic Expression, *Past and Present* 119, 3-29.
- Froning, H. Marmor-Schmuckreliefs mit griechischen Mythen im 1. Jh. v. Chr. Mainz: Philipp von Zabern.
- Garlan, Y. War and Peace, in Vernant 1995, 53-85.
- Hannestad, L. 1993. Greeks and Celts: The Creation of a Myth, in Bilde et al. 1993, 15-38.
- Hannestad, L. 1997. Death on Delos, in Bilde et al. 1997, 285-302.
- Hanson, V.D. 1989. *The Western Way of War—Infantry Battle in Classical Greece*. London: Hogger and Stoughton.
- Hanson, V.D (ed.) 1991. *Hoplites: the Classical Greek Battle Experience*, London: Routledge.

- Harrison, E.B. 1972. The South Frieze of the Nike Temple and the Marathon Painting in the Painted Stoa, *AJA* 76, 353-78.
- Hölscher, T. 1973. Griechische Historienbilder, Würzburg: Konrad trilsteh.
- Jeppesen, K. 1970. Dilemma der Sieben von Theben, *Acta Archae-ologica* 41, 155-79.
- Johansen, K. Friis. 1951. *The Attic Grave-Reliefs of the Classical Period, An Essay in Interpretation*. Copenhagen: Munksgaard.
- Kurtz, D.C. 1975. Athenian White Lekythoi. Oxford: Oxford University Press.
- Lisserague, F. 1984. Autour du guerrier, *La cité des images*, 35-48, Paris: Editions de la Tour.
- Lullies, R. 1979. Griechische Plastik. Munich: Hirmer.
- Pollitt, J.J. 1986. *Art in the Hellenistic Age*, Cambridge: Cambridge University Press.
- Pritchett, W.K. 1971. Ancient Greek Military Practises, Berkeley: University of California Press.
- Rice, E. 1993. The glorious dead: Commemoration of the fallen and portrayal of victory in the late classical and the hellenistic world in Rich & Shipley, 224-57.
- Rich, J. & Shipley, G. (ed.) 1993. War and Society in the Greek World. London and New York: Routledge.
- Richter, G.M.A. 1960. Kouroi, Ancient Greek Youths. London: Phaidon.
- Richter, G.M.A. 1961. *The Archaic Gravestones of Attica*. London: Phaidon.
- Schmidt, E. 1962. Le grand autel de Pergame, Leipzig.
- Stibbe, C.M. 1972. *Lakonische Vasenmalerei des sechsten Jahrhunderts*. Amsterdam: North-Holland.
- Vaughn, P. 1991. The Identification and Retrieval of the Hoplite Battle-Dead, in Hanson 1991, 38-62
- Vernant, J.P. (ed.). 1995. *The Greeks*. Chicago: University of Chicago Press.

Notes

- I Cf. Connor 1988, 16: 'The taking of booty was perhaps the largest movement of capital in Greek civic life' (with reference to the figures given by Pritchett 1971, 75ff).
- 2 A victory of the Eleans over their neighbours from Pisa (Pisatis), cf. Pausanias 5.10.2.
- See Rice 1993.
- 4 Cf. Ahlberg 1971.
- 5 E.g. Lisserague 1984, 40. See also Cohen 1997. This monograph had not appeared when this paper was written. Cohen's ch. 2 contains a brief analysis of battle images and battle narratives, mainly of the classical period, as a background for the analysis of the Alexander Mosaic.
- 6 Boardman 1974, 208 (for the archaic period). Id. 1989, 220 'Fighting scenes follow traditional schemes and there is still no explicit demonstration of a hoplite rank rather than individual duels.'
- 7 For the Chigi vase, see also Morgan, this volume, note 6.
- 8 For a discussion of whether the mosaic or rather the painting it copied depicted a specific battle or was to be seen as a more general rendering of Alexander's battles with the Persians see Pollitt 1986, 46.
- 9 Cf. Hölscher 1973, 28.
- 10 See Anderson 1991, 19 who suggests that the first spear was meant to be thrown as suggested by the loops on the spears of the preparing warriors on the far left. The loop is intended to give extra purchase when the spear is thrown. Others (see references by Anderson) have interpreted the second spear as a spear held in reserve by a servant.
- 11 Cf. Hanson 1989, 60ff.
- 12 The frieze on the Chigi vase has often been seen as the visual parallel to Tyrtaios' description of the early hoplite battle.
- The literature on the Alexander Mosaic and its prototype is vast. A recent monograph with an analysis of the two contexts, the Greek of the fourth century BC and the Roman, is Cohen 1997. For the composition of the Mosaic in comparison with classical battle images see ibid. 37.
- 14 1986, 45. Cohen 1997 (see also note 5)
- 15 The translation is by H.L. Jones, Loeb Classical Library. For a discussion and reconstruction of the Marathon Painting see Harrison 1972. See also Hölscher 1973, 50ff.
- 16 Thus this painting may actually have shown the very beginning of a hoplite battle just as the Chigi vase does. In the Stoa Poikile these two paintings of contemporary battles flanked two mythological scenes, an amazonomachy and the Greek kings gathered after the fall of Troy.
- 17 Cf. Connor 1988, 14 and note 41 for further references.
- 18 A related discussion of the painting of the battle of Marathon in the Stoa Poikile is to be found in Hölscher 1973, 82 who also stresses a psychological reality in contrast to a physical reality. Cf. id. 29.

- 19 Cf. Hölscher 1973, 82.
- 20 A recent example in a different medium is the film Saving Private Ryan.
- 21 1989 Chap. 6
- The interpretation of the scene has been much debated. See Arias & Hirmer 1960, 86. See also Jeppesen 1970.
- 23 See also Hannestad 1993.
- 24 CVA Berlin 2 Taf. 67 and 68.
- 25 Euphronios p. 128ff no. 13.
- 26 E.g. the C-painter's kothon, Louvre CA 616, see for instance Arias & Hirmer 1960 fig. 48. See Hölscher 1973, 26 for a discussion of the fighting scene on this vase.
- 27 Hanson 1989, 203.
- 28 Ny Carlsberg Glyptotek I.N. 1623, see Ny Carlsberg Glyptotek Catalogue Etruria and Central Italy no. 97. For a discussion of the dating of the relief see Froning 1981, 82ff. I am indebted to my colleague Pia Guldager Bilde for drawing my attention to this relief.
- 29 Billedhenvisninger
- 30 See on the east frieze, Artemis treading on a fallen opponent and Aphrodite placing her left foot on the face of a fallen giant, see for instance Schmidt 1962 figs. 15 and 40-41.
- 31 Cf. Hanson 1989, 208.
- 32 See also Vaughn 1991.
- 33 CVA Berlin 2, 7-9 no. 49.
- 34 A very similar rendering of this motif is seen in a cup by Phrynos in the Vatican no. 317, *ABV* 169, 4; see *Albizzati* pl. 34.
- 35 CVA München 7 Taf. 351-53.
- 36 Cf. Hanson 1989, 56 with further references.
- 37 The other side of the krater shows an armouring scene, one of the most popular motifs in Greek vase painting, but here, as one would expect from this painter, with a number of realistic details showing Euphronios' familiarity with such scenes, see *Euphronios* 93-105 no. 4
- 38 See *Euphronios* 182-186 no. 34. The other side of the cup shows a hoplite dancing, a flute player accompanying him.
- 39 Attributed by Stibbe (1972 no. 218 (Taf. 74) to the Hunt Painter.
- 40 Hanson 1989, 225.
- 41 Garlan 1995. Garlan's assertion that representations of warriors on Attic vases support the view that the soldier was the central figure around whom the internal relationships of the oikos were organized will not bear a closer examination of the material.
- 42 See Richter 1960, pp. 118f no. 136.
- 43 Richter 1960, 115f. The translation is the one given by Richter.
- 44 See Richter 1961, 47 no. 67.
- 45 Illustrated in an as yet unsurpassed analysis by Friis Johansen 1951. One of the central issues in grave reliefs with more than one person is to identify which of the depicted persons represents the deceased.
- 46 Private burials understood as funerary monuments financed by

- private persons and erected in family burial plots. All these monuments also had a very public function in that they were visible for all passers-by on the roads to and from Athens.
- 47 The quantifications and datings are based on Clairmont 1993.
- 48 The end of the production is usually connected with the laws of Demetrios of Phaleron. See Johansen 1951, 13 and Clairmont 1993, Introduction 2.
- 49 See for instance Lullies 1979 Taf. 188.

- 50 A parallel phenomenon be be observed on the white ground lekythoi, the typical grave vases of the fifth century, where the traditional iconography is suddenly in the last years of the fifth century supplemented with battle scenes. See Kurtz 1975, 64 f.
- 51 See Hannestad 1997.
- 52 See Der neue Pauly III and LIMC III.
- 53 Stobaeus, Anthology on War; Pindar, Hyporchemata Fr. 110.

Academic Science and Warfare in the Classical World

Tønnes Bekker-Nielsen

No proposition Euclid wrote, no formulae the text-books know, will turn the bullet from your coat... (Rudyard Kipling, 'Arithmetic on the frontier')

To a soldier in the front line, geometry or mathematics may not seem particularly useful in the face of his immediate problems. Nonetheless, the systematic application of science for military purposes is one of the key factors in the development of European warfare over the last three centuries—as K.G.H. Hillingsø points out in his contribution to this volume, pp. 167-68. While basic education prepared boys to be good soldiers when they were called up, theoretical science was applied to the study of ballistics, to engineering and to the development of new weapons.

What was the relationship between academic science and warfare in the ancient world? The fact that the ancient academies and the ancient educational curriculum were dominated by the arts and humanities, leaving little place for the 'hard sciences', does not mean that their lessons were *a priori* irrelevant to practical warfare. For instance, rhetoric, which formed an important part of the education of an upper-class Greek or Roman, was a prerequisite for success not only in the courtroom or in politics, but also as a military leader, since the commander was expected to give a speech to rouse the soldiers to battle. Philosophy likewise played an important role in the formation of the educated Greek or Roman.

The leisured and peaceful existence of the philosopher was seen as the antithesis of the soldier's life—witness, to take just one instance, the famous anecdote of Diogenes and Alexander. But if we read the *Stratagems* of Frontinus, a sort of empirical digest of the science of warfare down to the first century AD, we find that philosophical qualities are among the virtues of a commander. Indeed, the chapter headings of the fourth book of *Stratagems* could have been taken from a work of philosophy: *de continentia*; *de iustitia*; *de constantia*; *de affectu et moderatione*.²

The object of this paper is to examine another part of the academic curriculum, and one which underwent a dramatic development during the period under consideration, the last four centuries before our era: geometry.

Tradition has it that above the entrance to Plato's Academy were carved the words 'no one who is not versed in the science of geometry may enter here'. In ancient Greece, being geometrically literate was a prerequisite for the study of a wide range of subjects. Of course you had to know some geometry to study physics, or astronomy; or to practice cartography or city-planning; but geometry was an important part of music and philosophy as well. At a later date, Quintilian went so far

as to say that without geometry, one could not learn rhetoric properly: 'nullo modo sine geometria esse possit orator'. It also formed a basis for the study of mechanics, but this subject was not part of the academic curriculum; on the contrary, Plato is said to have rejected mechanics as a corruption of the purity of geometry, and furthermore involving banausourgia, manual work of a character entirely unsuited for the true scholar.³

We have a drama-documentary account of life in the philosophical school of Socrates preserved in Aristophanes' comedy *The Clouds*. In the first act, Strepsiades enters the Thinkery, the philosophical academy, and is shown around by a student who explains the various activities which are being pursued there. They concern, in the order in which they are mentioned in the play:

- measurement
- music
- astronomy
- geometry
- geology
- religion
- astronomy
- geometry
- cartography

Now the modern man in the street would probably consider most of these academic disciplines to be practical and possibly useful, but to the Athenian man in the street—a category which includes not only Strepsiades himself, but the audience for which the comedy was written—they are examples of pure and speculative, in other words largely useless, science. Not entirely useless, though: in one passage, the student explains that geometry can be used for surveying. 'Aha', the disingenuous Strepsiades replies, 'for confiscations'. Wrong again—for surveying the whole world, the student explains.4

In the following, I hope to trace the use of geometry and its related subjects in a military context from the classical Greek period to the early Roman Empire, and the extent of its application to reconnaissance and mapmaking, tactics, and castrametation. Artillery and poliorketics have been omitted, as they fall within the area of mechanics, and thus outside the scope of this paper. Hopefully, this brief survey can shed some light on the larger question of the relationship between pure science, warfare, and society in the ancient world. Along the way, some cases which have been cited as instances of an early use of geometry in a military context will be critically examined.

Tactics

As the first of these cases, let us take the battle of Leuctra near Thebes in 371 BC, where an expeditionary force of Spartans was defeated by the Boiotians and their commander killed. Instead of the traditional battle formation, where the hoplites would form two rectangles facing each other, the Theban force at Leuctra was drawn up as a wedge or triangle, producing a phalanx which was fifty deep at its widest point on the left. By concentrating their forces at one point, the Thebans were able to break the Spartan line and carry the day. Given the prestige of the Spartan hoplites and the dubious military reputation of the Boiotians, the outcome of the battle attracted considerable attention at the time, and even more in the centuries which followed. A tradition evolved, centred on the person of the Theban com-

mander Epaminondas, who was credited with inventing the wedge-shaped phalanx and thus revolutionising Greek land warfare. In the biography of Epaminondas by Cornelius Nepos, we are told a good deal about his intellectual background, and how his studies included music and Pythagorean philosophy: he was, we are told, a pupil of the philosopher Lysis of Tarentum, who, when the Pythagoreans were expelled from Croton, sought refuge in Thebes (Nepos, 15.2). The combination of musical studies and Pythagorean philosophy, both of which involved geometry, with the tactical revolution brought about by the triangular phalanx is certainly suggestive; even more so when we are told that Philip, later king of Macedon and father of Alexander the Great, was also said to have been a student of Lysis. Did the two

great tactical innovators, Philip and Epaminondas, go to school together? It sounds too good to be true; and so it is. Though Philip *did* spend three years in Thebes as a hostage, this was from 368 to 365, too late to have studied under Lysis. As for Epaminondas and his tactical revolution, this merits closer examination.

Around the middle of the fourth century, some twenty years after the event, the historian Ephorus wrote an account of the battle of Leuctra. The original is lost, but its character can be deduced from passages in Diodorus and Pausanias, both of whom seem to have found Ephorus a useful source.⁵ Polybius, on the other hand, describes Ephorus' account of Leuctra as confused and incompetent (12.25f3-4).

In his account Diodorus, presumably basing himself on Ephorus, glorifies Epaminondas as a charismatic leader, a skilled rhetorician and gifted tactician, who achieves victory 'with a few soldiers against the Lacedaemonians and all their allies' thanks to his tactical brilliance. Pausanias, writing two centuries later, and presumably likewise drawing on Ephorus, acknowledges the tactical brilliance of Epaminondas but soberly concedes that the armies were more or less evenly matched, and that Sparta's allies contributed very little to the fighting, leaving the Spartans to fend for themselves.

An alternative to the Ephorus tradition is offered by Xenophon in the *Hellenika*.⁸ At the time of Leuctra, he was between fifty and sixty years old and living in the western Peloponnese. After Leuctra, Xenophon moved to Corinth, not far from Thebes and the site of the famous battle. As a veteran soldier and contemporary of the events which he describes, his story deserves to be taken seriously—but the biographers of Epaminondas

have not always done so. They have good reason to ignore Xenophon, since he does not mention Epaminondas at all! This omission, however, is no reason why we should not look closer at Xenophon's account of the battle itself. Describing the order of battle, he first mentions the cavalry, which was drawn up in front of the infantry. The Theban cavalry, we are told, was battle-hardened from recent conflicts; in any case, the Boiotians were known throughout Greece for the quality of their horses and horsemanship. The Spartan cavalry was 'in a sorry state' (6.4.10-11) due to lack of practice and the poor quality of the troopers. Only then does Xenophon go on to describe the infantry: drawn up twelve deep on the Spartan side, while the Theban formation was more compact (*elatton*) and up to fifty deep (6.4.12).

According to Xenophon, the cavalry made the first attack, and the superior Theban forces drove the Spartan cavalry back towards its own infantry. At this point the massed Theban infantry moved in, and the Spartan line broke (6.4.13-15).

As we can see, the accounts agree that the Thebans strengthened their left wing to make it fifty deep, but this tactic had been employed as early as 403 BC⁹—it was not as innovative as the biographers of Epaminondas claim. It was an application of the well-known military principle *frappez peu, mais fort:* concentrate forces at a few important points instead of dissipating them over a long front. Leuctra, in short, is not a convincing example of the application of abstract science to the realities of the battlefield.¹⁰

Geometry can, however, be used for other practical purposes: in reconnaissance, for taking bearings and estimating distances; and in cartography, for making sketch maps of the terrain.

Reconnaissance

Returning to Xenophon, we find among his works a short treatise *On the cavalry officer*. The text is preserved in its entirety, and in it there is no mention whatever of special qualifications or training for reconnaissance work—surprisingly to us, for in later times, reconnaissance becomes one of the key functions of cavalry. One would think that being able to orient yourself by day and by the stars at night; to memorize the features of a

landscape and describe them to others later on; or to draw a freehand map would be useful qualities for a cavalryman; but Xenophon does not mention any of these. Apparently, in the context of central Greece, first-hand familiarity with the terrain was a prerequisite for success, making drawn maps superfluous.

Indeed, reconnaissance does not seem to play any significant rôle in Greek warfare at this time. In the case of

Leuctra, a modern reader is struck by the fact that the battle-formation of the Thebans took the Spartans by surprise. Had they known where the Thebans intended to concentrate their attack, they could have redeployed their own forces accordingly—and removed the commander and his staff from the brunt of the enemy forces. In the event, it was the death of king Cleombrotus which sealed the fate of the Spartans.

Demetrius Poliorcetes imitated the oblique phalanx of Epaminondas at the battle of Gaza in 312 BC and placed most of his elephants, as well as his best cavalry, on his left wing. Ptolemy and Seleucus had already formed their line with a strong left wing and a weak right wing opposing Demetrius' forces, when spies, kataskopoi, reported how Demetrius had deployed his troops. They found time, however, to redeploy their army with a stronger right wing. Demetrius was less well informed and if he used scouts or spies at all, they failed to notice the soldiers of Ptolemy and Seleucus burying strange objects in the sand. When the order was given to advance, Demetrius' forces made good headway until his elephants were stopped by long rows of submerged spikes. 'Die Aufklärung hatte offenbar versagt', as Hermann Bengtson sarcastically remarks in his book on Herrschergestalten des Hellenismus.¹²

When he wrote his collection of *Stratagems* in the first century AD, Frontinus devoted a short chapter to reconnaissance and intelligence. The methods suggested for gathering information include kidnapping an enemy soldier and torturing him, but there are also examples of reconnaissance in a more familiar sense, one in the army of Aemilius Paulus in 282 BC, another under Scipio Africanus in 203 BC. A third example involves Quintus Fabius Maximus—not the Cunctator, but his great-grandfather of the same name, who served as commander against the Samnites in 322 BC and against the Etruscans in 310-308 BC.

Against the Samnites, Fabius was apparently victorious, since a triumph is recorded in his name; but his work was undone the following year, when his successors imprudently led a Roman army into an ambush laid by the Samnites at the Caudine Forks. According to Livy,¹³ writing three centuries later, a Roman army on its way from Capua to assist Lucera (which was said to be under siege by the Samnites) attempted to march

through two mountain passes, one after the other, only to find the Eastern exit blocked by the Samnites; turning back, they now found the Western end blocked as well. The consuls chose surrender as the only option available and were forced, along with their army, to march 'under the yoke' as a sign of their submission. While casualties were light, the damage to Roman prestige and self-esteem was enormous. Though it is easy enough to be wise two thousand years after the event, reconnaissance might have prevented this disastrous miscalculation; and the lesson will not have been lost on Fabius, who would be familiar with the country as well as with the enemy, and no doubt followed the events closely.

During his later command against the Etruscans, we are told, Fabius used his brother to scout ahead into the Etruscan forests, where no Roman had set his foot before. Frontinus comments that this took place *cum adhoc incognitae forent ... sagaciores explorandi viae*, 'at a time when more advanced methods of reconnaissance were as yet unknown' (Frontinus, *Stratagemata*, 1.2.2). So according to Frontinus—who, after all, had read more sources on ancient military history than any of us can ever hope to do, since most of them are now lost—reconnaissance in the modern sense of the word was not introduced until the early third century BC;¹⁴ and possibly as a response to the Roman disaster at the Caudine Forks.¹⁵

In modern times, maps have been indispensable for land warfare and army staffs have gone to great expense and effort to map their national territory as well as the territory of other nations where they might have to wage a land war. The erstwhile Austro-Hungarian Empire produced topographic maps not only of their own territories, but stretching all the way from the Baltic coast and down into Central Greece. Ernst Kornemann, and some later scholars, believed that the Roman Army, too, had its 'map department' producing and storing maps. There is no evidence whatever to support this claim; neither in the literary sources, 16 in the form of preserved maps, or among the finds of Roman military equipment, where maps, map-cases and instruments used for orientation or map-reading are conspicuously absent. Where the Roman army did use survey instruments on a large scale was for castrametation, a point to which we shall return shortly.

The nearest parallel to the military cartographers of more recent times are the *bematistai*, who accompanied Alexander's army on its march eastward. The precise functions of the bematistai are not clearly defined in our sources; they seem to have been at one and the same time land surveyors, geographers, and ethnographers. The purpose of their work is not entirely clear either: was it to produce a catalogue of Alexander's conquests, or simply to ensure that the army could find its way back to Greece? The scanty fragments attributed to the bematistai by Jacoby are not sufficient to give a definite answer to this question. Since the presence or absence of bematistai is not recorded as having any impact on the military success of Alexander's army, we can hardly speak of a military application of cartography. We also note that later armies moving into unfamiliar territory— Caesar's army into Gaul, for instance, or Trajan's into Dacia—do not seem to have been accompanied by latter-day bematistai.

Though cartography may not have made any great

contribution to the military campaigns of the fourth to first century, these campaigns made great contributions to the development of cartography. The conquests of Alexander and Caesar's expeditions to Germany and Britain increased the extent of the known world and acted as a stimulus to cartography, at the same time as contacts with the east brought new ideas to the science of astronomy. During the last three centuries before the beginning of our era, the science of cartography made greater advances than over the thousand years that followed.

These results were applied to practical map-making, as evidenced not only by the work of Eratosthenes, Marinus, or Ptolemy, but by the famous map which Agrippa had made and set up in the Porticus Vipsania in Rome. This map served a clearly political purpose, to illustrate and justify the achievements of Augustus, rather like the *Res Gestae*; and like the Res Gestae, it had counterparts elsewhere; we know that there was one in Autun (*Augustodunum*, in Central Gaul) and there may have been others.

Archimedes and the Siege of Syracuse

No account of geometry and warfare in the ancient world would be complete without a mention of the rôle of Archimedes during the Roman siege of Syracuse in 214-212 BC. The story is told by Polybius and in Plutarch's *Life* of Marcellus, the commander of the Roman force; ¹⁷ and by various later writers.

Archimedes, so the story goes, was living the peaceful life of a philosopher in the city of Syracuse when the king asked him to make some machines which could be used for practical purposes. According to Plutarch, Archimedes had accepted this task mainly as a chance to demonstrate geometry to the general public; and his first contrivance illustrated his famous proposition that if one would give him a place to stand, he could move the earth: using a system of compound pulleys, he demonstrated how one man could drag a large ship over land. Impressed by this, so Plutarch tells us (Marcellus, 14.8), the king asked Archimedes to produce some machines for the defence of the city, which he did; and by a happy coincidence, these were still at hand when, at a later date, the Romans attacked the city. It is more likely, and

in accordance with the narrative of Polybius (8.3.5), that these machines were produced in response to the imminent threat of a Roman attack.

Plutarch's account has a certain 'Star Wars' quality; he delights in describing the high-tech contraptions used by both sides in the conflict. Marcellus, for instance, had a gigantic catapult mounted on eight Roman galleys lashed together (14.3). One cannot help wondering if the ropes joining the galleys would hold up once the engine commenced firing, and how the machine was moved into the required firing position, as most of the oars would presumably be inoperable. Polybius does not mention this weapon, but he does speak of quinqueremes lashed together in pairs and carrying *sambucae*, an advanced form of scaling-ladder (8.4.2-3); in a later tradition this may have been elaborated into the large floating gun-platform of Plutarch.

In their description of the defensive machinery constructed by Archimedes, Plutarch is likewise more dramatic than Polybius; both tell us how cranes mounted on the battlements were used to overturn assault boats

approaching the foot of the walls, but Plutarch goes further and graphically describes how the cranes could lift entire ships out of the water and whirl them around in the air, an obvious exaggeration.¹⁹ We find a number of such tall stories about technical marvels in Roman literature; the tallest of them all in the *Natural History* of Pliny the Elder, who tells of an amphitheatre which could be turned on a pivot to form two theatres!²⁰

Both Plutarch and Polybius explain how, at the suggestion of Archimedes, the Syracusans had made slits in the walls for archers and light artillery. This was not particularly innovative, but along with everything else, the stream of missiles raining down upon the attackers from the walls persuaded the Roman soldiers that 'Archimedes' was everywhere, aiming his diabolical machines at them. The Roman commander, Marcellus, ironically described his adversary as a 'geometrical Briareus' (Plutarch, *Marcellus*, 17.1); a reference to the son of Cronus and Gaia, who had fifty heads and a hundred hands.

Reading Plutarch's narrative, we should remember that he was writing at a time when the Greek city-states of Sicily were long gone, and there was no harm in glorifying the military prowess of this former enemy; at the same time, he was writing a biography of a Roman commander and would, naturally enough, wish to make him appear great by virtue of the opponents which he eventually overcame. For this was the sad and anticlimactic end of the siege of Syracuse: on a night during the festival of Artemis, when most of the defenders were drunk or asleep, the Romans set ladders against the city wall and climbed over. During the subsequent sack of the city, Archimedes was killed.

Looking back over the account of the siege of Syracuse, the only major innovation seems to be the crane arms mounted on the walls to pick up men and ships—and even these combined principles which had previously been used in the Roman *sambuca* and in the *corvus*, the boarding-bridge which the Roman navy used to such effect during the First Punic War. Cranes of a sort were already well known for other purposes, such as building. The innovation was primarly a matter of scale: Archimedes took the crane beyond the dimensions previously attempted, proving his famous assertion that with sufficient leverage, a small force can lift a large weight.

Castrametation

Let us turn now to an area where the practical application of geometry is self-evident: castrametation. Laying out a camp in a systematic manner has obvious practical advantages, not least if the troops may have to turn out in the dark. The standard, or perhaps we should say ideal, Roman camp is described in detail by Polybius; and we can identify its real-life counterparts in the field from Syria to Scotland, laid out with meticulous accuracy. In Gaul, Britain, and Germany, the characteristic forum-basilica complex of many civilian cities is thought to have been inspired by the praetorium of the army camp; and it is often assumed, following Oswald Dilke's magisterial study of The Roman Land Surveyors (1971), that civilian surveyors were veterans who had received their training in the army. At least in the Western provinces, town-planning and centuriation would seem to be an example of the civilian sector reaping the benefit of a military application of theoretical science.

On closer examination, the picture is more complicated, especially as regards chronology. The earliest securely dated Roman camps showing the characteristic, rectangular ground-plan are found in Northern Spain, and dated to the middle of the second century BC. The Roman standard camp is described in detail by Polybius, writing about the same time; but neither the archaeological evidence nor that of Polybius indicates that the technique of castrametation was new, only that it was already in use by this date. Frontinus writes that 'in days of old, the Romans and other peoples were accustomed to build their camp every which way, resembling a Punic village, since in antiquity only cities had walls' (4.1.14). He goes on to say that 'Pyrrhus, the king of Epirus was the first to keep the whole army behind one fortification'. In the first sentence, the word murus, wall, is used: in the second, vallum which can mean a wall, an earthwork or a palisade. At the Battle of Benevento in 275 BC,

according to Frontinus, the Romans captured Pyrrhus' camp, studied its features and so, little by little, began to use the present method of camp layout: *paulatim ad metationem, quae nunc effecta est, pervenerunt.*²²

There is a variant of this story in Plutarch's life of Pyrrhus. Before his first battle on Italian soil, at Heraclea in 280 BC, Pyrrhus looks down at Roman soldiers building a camp. The story is one of several in Plutarch which emphasize Pyrrhus' respect for his Roman adversaries. But if the Romans used systematic camp-building at their first encounter with Pyrrhus, as Plutarch claims, they obviously cannot have learned it from the same Pyrrhus five years later, as Frontinus claims. We should not ignore the possibility that the anecdote has been modified in transmission: in its original version Pyrrhus was impressed by some aspect or other of Roman campbuilding-speed or discipline, perhaps-but at a later date this was reinterpreted to mean that the foreign invader was impressed by what was, by the time of writing, the distinguishing mark of a Roman legion: its regular camp layout.

Whatever our interpretation, we cannot rule out, even though archaeological evidence is lacking, that systematic castrametation was known to the Hellenistic world as early as the fourth century BC. This, however, would still be several centuries later than the first evidence for systematic, geometric town-planning in a civilian context. There are orthogonal town plans in Greek colonies of the seventh century BC; and in the fifth century, two hundred years before the arrival of Pyrrhus in Italy, Hippodamus from Miletus is credited with having perfected the geometric town-plan. The first Roman colonies on a regular plan—e.g., Ostia—also predate the arrival of Pyrrhus in Italy.

In the *Politics*, Aristotle gives an amusing character sketch of Hippodamus, emphasizing his vanity and excess of clothing, his long hair and his passion for philosophy. The Hippodamus depicted here is a very unmilitary type, ²³ and if Greeks of the fourth century could attribute the geometric town-plan to him, this clearly indicates that they made no mental connection between geometric town layouts and military precision—that, to them, orthogonal town-planning was of a civilian and not a military origin.

But what of the surveyors themselves? Here, we need to distinguish between decision-makers, the land commissioners, who would be of equestrian or senatorial status, and the operatives who carried out the actual work in the field. Dilke suggests that in earlier times the land commissioners played a larger and more active role, but as time went by, a greater part of the work and the responsibility devolved to the operatives. As far as the decision-makers go, the land commissioners responsible for the numerous colonies of the second and first century AD, these seem to have had no technical background except the general education which the Romans considered equally suitable for the lawyer, the general, the admiral and the politician. As land commissioners, they were the arbiters of important cases, concerning property which would be passed on for generations. They must have had some idea of geometry in order to check the work of their subordinates, but Roman surveying, though precise, was not very advanced, and they could always obtain specialist advice when needed.

Turning to the operatives, the field surveyors, it has been asserted that at least in the Roman West, they typically received their initial training in the army. The epigraphic evidence does not support this claim. Among the 14 inscriptions cited by Dilke, 11 concern freedmen and one a slave; under normal circumstances, none of these could have served in the army.²⁴ Within the army itself, there is no evidence that surveyors (mensores) enjoyed a particularly exalted status; in the few inscriptions referring to them, and in Domaszewski's Rangordnung, they appear alongside bugle-players and the caretaker of the regimental exercise hall.²⁵ Cicero is generally taken to be a reliable source for the views and prejudices of the Romans on questions of social status, and in the ninth Philippic, he derides Saxa, a member of the opponents' party, as castrorum antea metator, nunc, ut sperat, urbis: 'earlier he was a surveyor of camps and now he hopes to be a surveyor of the city,' i.e., Rome.²⁶ One notes the implication that just because you are qualified to set out a military camp, this does not qualify you to measure a civilian settlement. The identification of Saxa as a former military surveyor comes immediately after the information that he is a barbarian ex ultima Celtiberia, and along with the epithet honester condemnatus, turpiter restitutus it is used by Cicero to characterize Saxa as a thoroughly bad character.

If geometric castrametation had been directly inspired by academic geometry, then we would expect it to date at least as far back as civilian town-planning on the orthogonal model; and if castrametation had been the inspiration for civilian planning, we would expect it to enjoy a status on the same or a higher level. But this is not what we find in our evidence—in fact, quite the contrary. The earlier date of civilian surveying, and the low status of army surveyors, are far more consistent with the hypothesis that castrametation was derived from civilian town-planning, not from a direct application of academic geometry in the military field.

Conclusion

As we have seen in this survey of the available evidence, the pure science of geometry, even its applied forms such as cartography, had a very limited impact on the planning, implementation or outcome of military operations during the last four centuries before our era. The most widespread application of geometrical method, castrametation, does not seem to have been derived directly from academic geometry, but via the applied science of city planning. This is all the more surprising as these four centuries were an age when the 'pure' sciences of geometry, astronomy and cartography were developing at a rapid pace.

Although contrafactual approaches tend to raise more questions than they answer, one cannot help asking one-self why the ancients made so little use of academic geometry in warfare. We will not venture into the debate on technological stagnation in antiquity, where the possible causes of technological stagnation are as hotly disputed as the question whether there was any stagnation at all. One notes, however, that the abundance of cheap slave manpower has often been invoked to explain the apparent lack of interest in labour-saving devices. While this may or may not be true for civilian society, it obviously will not account for the situation in the armies, where there were no slaves in active service, except in emergencies.

Two other explanations come to mind. One is that the pronounced social stratification of the army worked against the application of academic science. The men with a long liberal education were primarily found in the higher commands, which were filled not by promotion from the ranks, but by political selection and as part of a civilian career. In the Greek city-states as well as the Ro-

man republic, the supreme commanders came and went; there were few career commanders and no officers' academies as we find them in later Germany and France. The rank and file, that is to say those who served as the repositories of the collective military experience, did not have a liberal academic education.²⁷

Against this hypothesis, one can point to some instances of career commanders: Xenophon, for instance, or the great Hellenistic warlords such as Demetrius Poliorcetes, Pyrrhus or Mithridates. They had a higher education and few higher ambitions apart from warfare, yet they did not, as far as we know, apply one in pursuit of the other.

The other explanation which comes to mind is based on the contrast between the largely military development of the mechanical sciences and the non-military development of the pure sciences. Could it be a question of resources? Today, any new discovery in the exact sciences requires large resources to develop—and so science looks to the military, which at least until recently had large resources at its disposal, and could allow itself the luxury of long-term planning. Modern applied science, on the other hand, can be underwritten by civilian industry, as it will bring revenue within the short to medium term.

In antiquity, the situation was the inverse. Mechanics could be applied for civilian purposes, as we see in the water supply of Pergamon, the flour-mill of Barbegal, or the mines of Spain and Britain, to mention only a few instances. But given the structure of ancient society, capital and resources to finance such large-scale projects would be available at unpredictable intervals, insufficient to keep a civilian mechanical sector alive and inquisitive.

Warfare, on the other hand, was a recurrent activity involving the construction of large machines such as catapults, water-wheels, ships or siege-towers; and so the military sphere was where the mechanical sciences developed.²⁸ The pure sciences, which were less dependent on

outside resources, could afford to remain apart and aloof from the world of warfare.

Department of History, University of Southern Denmark, Esbjerg

Bibliography

Anderson, J.K. 1970. *Military Theory and Practice in the Age of Xenophon.* Berkeley: University of California Press.

Barrow, Robin. 1996. *Greek and Roman Education*. Bristol: Bristol Classical Press.

Bengtson, Hermann 1976. Herrschergestalten des Hellenismus. Munich: Beck.

Bohec, Yves de 1990. L'armée romaine. Paris.

Dawson, Doyne 1996. The Origins of Western Warfare. Militarism and Morality in the Ancient World. Boulder, Colo.: Westview Press.

Dilke, O.A.W. 1971. *The Roman Land Surveyors: An Introduction to the Agrimensores.* Newton Abbot: David and Charles, 1971.

Dilke, O.A.W. 1985. *Greek and Roman Maps*. London: Thames & Hudson.

Dilke, O.A.W. 1987 Mathematics and Measurement. London: British Museum.

Domaszewski, A. von 1967. *Die Rangordnung des römischen Heeres*. 2nd ed. revised by Brian Dobson. Cologne.

Ertman, P.C. 1976. Curatores Viarum: A Study of the Superintendents of Highways in Ancient Rome. Ann Arbor, Mich.

Hanson, Victor 1988. Epaminondas, the Battle of Leuktra (371 B.C.)

and the 'Revolution' in Greek Battle Tactics, *ClAnt* 7, 1988, 190-207.

Goldsworthy, A.K. 1996. *The Roman Army at War 100 BC-AD 200*. Oxford: Clarendon Press.

Keppie, Lawrence 1984. *The Making of the Roman Army*. London: Batsford, 1984.

Kromayer, Johannes and Georg Veith 1928. *Heerwesen und Krieg*führung der Griechen und Römer (Handbuch der Altertumswissenschaft, 4.3.2.). Munich: C.H. Beck.

Landels, J.G. 1978. Engineering in the Ancient World. London: Chatto & Windus.

Marsden, E.W. 1969. *Greek and Roman Artillery*. Oxford: Clarendon Press.

Marrou, H.-I. 1956. Historie de l'education dans l'antiquité. Paris.

Sherk, Robert K. 1974. Roman Geographical Exploration and Military Maps, *ANRW* II.1, 534-62.

Tuplin, C.J. 1984. Pausanias and Plutarch's *Epaminondas*. CQ 34, 346-58.

Watson, G.R. 1969. *The Roman Soldier*. London: Thames & Hudson

Webster, Graham 1998. *The Roman Imperial Army*. 3rd ed. Norman: University of Oklahoma Press.

Notes

- Whether this always took place, and whether the commanders' speeches were nearly as good as the edited versions which have come down to us in the historical accounts, is another question altogether, which I shall not attempt to answer.
- 2 Some scholars are of the opinion that the fourth book is not an original part of the *Stratagems* but a later addition by another author. This does not, however, affect the general argument here.
- 3 Plutarch, Marcellus, 14.6.
- 4 Much of the first act of the comedy turns upon the contraposition of lofty and abstract concepts with concrete examples of a very earthy kind; with poor Strepsiades betwixt and between, never getting it quite right.
- 5 Pausanias, *Description of Greece*, *Boiotia*, 13.8-10; Diodorus, 15.39.2.

- 6 oligois politikois stratiôtais pros pasas tas tôn lakedaimoniôn kai tôn symmakhôn dynameis, Diodorus 15.39.2
- 7 ex isou kathistê, Pausanias, Boeotia 13.9
- 8 Xenophon, Hellenika 6.4.8-15.
- 9 At Munichia, in 403 BC, Kritias is said to have deployed his forces fifty deep.
- 10 For a detailed discussion, with references to older literature, see Hanson 1988.
- In the *Cyropaedia*, on the other hand, Xenophon tells us how Cyrus uses scouts to spy ahead of the advancing forces and find out how the enemy formations have been drawn up, e.g., at the battle of Thymbrara (*Cyr.* 6.2.4-II).
- 12 Bengtson 1975, 46
- 13 Livy, Ab urbe condita, 9.1-6.

- 14 Of the nine examples cited in the chapter, five have Romans as protagonists; three have Carthaginians; one has a Greek, but he is a mythical character—Teisamenos, the son of Orestes. And while the other eight examples show the value of reconnaissance and intelligence, in the Greek example the reports of the scouts turn out to be valueless.
- This did not prevent later disasters of a similar sort: e.g., the humiliating defeat of Lucius Cassius Longinus at the hands of the Tigurini in 107 BC, where the Roman survivors were likewise forced to march 'under the yoke' (cf. Caesar, *Bellum Gallicum*, 1.7.4); or Varus' defeat in the *Saltus Teutoburgensis*, where a vast Roman army was ambushed under circumstances reminiscent of the Caudine forks—except that in the case of Varus, the Roman soldiers did not get off with being humiliated, but were massacred by the enemy. Caesar made systematic use of reconnaissance units, both in his Gallic campaign and during the civil war (see Goldsworthy, 1996, 125-28 for details).
- 16 Sherk 1974, 559, quotes indirect literary evidence for two military maps, one of the Caucasus, the other of Ethiopia, i.e. outside the limits of the *Imperium Romanum* proper. If they existed, these maps will have been produced in the course of geographical exploration, not of ordinary military operations.
- 17 Polybius, History, 8.4ff.; Plutarch, Marcellus, 14-17.
- 18 On a smaller scale, Demetrius Poliorcetes had used catapults on ships during the siege of Salamis (307 BC) and Rhodes (305-304 BC). Marsden 1969, 169-73 offers a survey of the surviving evidence for ancient naval artillery and hypothesizes that 'the employment of artillery may have been one of the factors which led commanders to concentrate on boarding tactics and to build larger ships that could carry more catapults' and thus have been a contributory factor in the naval arms race of the third century
- 19 Plutarch, *Marcellus*, 15.3; for a discussion, see Landels 1978, 96-08
- 20 Pliny, *Natural History*, 26.116-21. The edifice in question was supposedly erected in the 50's BC by one Gaius Curio.

- 21 Polybius, History, 8.5.6; Plutarch, Marcellus, 15.5.
- 22 Frontinus, Stratagemata, 4.1.14. The account seems straightforward, yet the word paulatim is odd in this context. If the Romans found a fully developed, and superior, layout in Pyrrhos' camp, why would they not copy it immediately instead of paulatim, 'little by little'?
- 23 Aristotle, Politics, 2.8.1.
- 24 Similarly, among *c.* 100 *curatores viarum,* mostly of the Imperial period, studied by Ertman (1976), only two had previously held army commissions as *prafecti fabrum*.
- 25 The epigraphic evidence for the precise status of mensores within the army is sparse. An italian epitaph, CIL VI, 3606, commemorates a L. Iulius Priscus miles leg(ionis) I Adiut(rix) mensor agrari(us). From Lambaesis in North Africa, we have several inscriptions mentioning mensores, and in one (CIL VIII, 2564; AD 218) a legionary mensor is listed as a duplicarius, i.e. a soldier on double pay, alongside several tesserarii, the custos armorum and the librarius, implying that these functions were equivalent in rank. According to Watson (1969, 79) the rank of tesserarius roughly equals that of a sergeant in a modern army.
- 26 Cicero, *Phil.* 14.4.10. The *metator* was responsible for the general layout of the camp, which was then subdivided by *mensores*, one to each cohort (Bohec 1990, 52-53); a *mensor* was presumably inferior in rank to a *metator*.
- 27 A liberal education was expensive. In late fifth-century Athens, professors complained that the price had been forced down to a thousand drachmas—equivalent to the total earnings of a worker over a period of about four years.
- 28 Metrology was not very advanced at this time, and it was difficult to measure small units of force or mass with any sort of precision. Small-scale laboratory models as used in modern times were of very limited use for research purposes: on the contrary, the larger the machine, the more precise the empirical observations which could be drawn from its operation. For example, Philo of Byzantium, a pupil of Ctesibius, based much of his work on the study of military catapults.

Army and Society in the Late Republic and Early Empire

Lawrence Keppie

The army which acquired and consolidated Roman control over Italy and soon the wider tracts of the Mediterranean world in the final few centuries BC consisted of legions of Roman citizens supported by contingents drawn from allied communities and subject tribes (Keppie 1984a, 14). Essentially the army in these early centuries consisted of a careful selection of able-bodied citizens who were required to present themselves annually for army service in the legions, led into war by their elected magistrates (Polybius 6.19; Hopkins 1978, 1-74; Patterson 1993). At the end of the campaigning season the legionaries returned home to tend to their farms which hopefully other members of the family had ministered to over the summer months. Soldiers were required to provide their own equipment and were initially unpaid: military service in defence of the state was an honour, a duty and a privilege.1

This system had worked well while the Romans were engaged on the defence of their home territory or in the conquest of adjacent areas. But as Roman domains became more extensive, and the distance between homeland and the scene of service increased, the system had to be adapted. From the early second century BC onwards, soldiers needed to overwinter in the provinces, first in Spain and later in such provinces as Macedonia and Asia (Brunt 1971, 416ff). Magistrates returning to Italy at the end of the campaigning season took home those whose term was adjudged complete, and their successors in office brought out new recruits. Soldiers were no longer fighting to defend their homeland, but to expand control over territories overseas; both they and their commanders hoped to profit from it. Nevertheless,

even at this time, only those with property could serve the state, though the 'qualification' was gradually lowered; from the later second century the state took over the provision of equipment, and after about 100 BC the ranks were open to any freeborn citizen, of whatever means. One can imagine that soldiers with experience were always preferred to youthful recruits, and when the former presented themselves voluntarily, they were gladly accepted. Such men looked for promotion to the centurionate, and began to consider themselves nearprofessional soldiers; it is impossible to know what percentage of such men might be found under arms in any particular year. The best known example of such a man is Spurius Ligustinus, reported by Livy (42.34.5-11). Presenting himself for service in 171 BC, he was concerned to secure an appointment appropriate to his lengthy and courageous service over nearly 30 years. His repeated absences abroad had not cut him off from family life: he reports that he had six sons and two married daughters. In the event Ligustinus was made chief centurion of the First Legion, other candidates deferring to his prior claim for preferment.

By the early first century BC the expectation of soldiers was for six years continuous service at some distance from their homes, though each man was legally bound to offer himself for further service, between the ages of 17 and 46, up to a maximum of 16 years. In a recent study Walter Scheidel (1996, 93-138) has estimated at up to 50% of all eligible males might see see some military service during their adult lifetimes. The pool from which soldiers could be drawn was always increasing as the population grew and Roman territory became

more extensive; after the Social War of 90-89 BC, all freeborn male inhabitants of Italy south of the River Po were Roman citizens.

The first century BC was categorised by all but continuous military conflict, and by intense political rivalries at Rome. The details do not concern us here. However, the bouts of civil war from 49 BC onwards, between Caesar and Pompey, between the Triumvirate and the Liberators in 44-42 BC which led to battle at Philippi, and then between Octavian and Antony, the last culminating in the battle of Actium in 31 BC, saw the enlistment of a vastly increased number of men who but for the special circumstances of the time would never have seen military service at all, and had no wish to prolong it beyond a hoped for victory of their faction. This increased demand for men, who were encouraged to service by lavish promises of land and money (which of course were in the end only payable to the victorious side in each phase of the wars) could not be met from Italy itself. Indeed many of the protagonists in these wars were necessarily denied access to the traditional recruiting grounds of peninsular Italy, by dint of their provincial power bases, and were thus forced back on sources of manpower more immediately to hand. One can think here of Pompey in the east in 49-48 BC, Brutus and Cassius in the eastern provinces in 44-42 BC, Lepidus in Africa in 41-36 BC, Sextus Pompey in Sicily and the western Mediterranean in 40-36 BC, and most obviously Antony in the east between 41 and 30 BC (Brunt 1971, 473ff, 698f). These commanders could conscript men from the communities of Roman citizens to be found in areas such as Spain, southern Gaul, north Africa and western Asia Minor, the descendants of earlier emigrants; it is difficult to quantify the numbers which would have been available, but important not to underestimate them (Brunt 1971, 159-264). But they could never have been sufficient. Thus the commanders looked also to non-citizens to fill the ranks. There were indeed precedents for this: in 55 BC Pompey had raised in Spain what the literary sources term a 'homegrown legion' (legio vernacula), and Caesar in Gaul had in 52 BC created a legion from non-citizen Gauls, named the Alaudae, the Larks, after their bird-crested helmets. In both these cases the need for additional troops, to be quickly available, outweighed conformity with standard procedures. The significant fact is that they, and other commanders and provincial governors during the civil wars that marred the succeeding decades, chose to form such recruits into legions rather than create additional cohorts of native and allied infantry. Presumably they had specific need of heavily armed infantry to bear the brunt of battle and stand in line with the regular legions.

Another result of civil war was that the number of legions in service greatly increased. In the middle of the first century BC, before civil war broke out, it was normal to find 12-14 legions in service each year, though this figure was often inflated by wars in progress, e.g. in Spain in the 70s; but by the time that Caesar crossed the Rubicon in January 49 BC, the number was about 21, by his death there were some 37 in service, and to these could be added the 10 veteran legions of his former command in Gaul which were in process of disbandment and settlement in colonies. At the time of Philippi it is likely that some 60 legions were in service, and hardly fewer by the time that Octavian met Antony and Cleopatra at Actium in September 31 BC (Brunt 1971, 473-509). Throughout the previous decade Octavian had been based in Italy, and thus could draw soldiers from normal sources, but Antony was unable to do so.

In contrast to earlier times when legions were in general reconstituted annually, and in any case disbanded after fairly short lifespans, Octavian chose in 41 BC after Philippi to retain the existing numerals and titles of many of the older legions which now became permanent institutions, and indeed for the most part continued to exist for up to four centuries (Keppie 1984a, 132ff). Some of Antony's older legions were accorded the same rights after Actium. The reason is clear-Octavian saw the value of adherence to his side of legions which had fought with Caesar. By 30 BC Octavian had effectively reunited as much of the old army of Caesar as still existed, under his legal heir. The 27 or 28 legions of this new army were distributed to provinces of the empire where military campaigning was imminent or external threats required action—principally northern Gaul to the Rhine, Spain, Syria and the Balkan provinces bounded on the north by the River Danube.

The social and economic impact of this long period of internal conflict during the first century BC was considerable. On the one hand, the cost in lives and money was significant (Brunt 1971, 435ff). On the other, the victorious troops received as their reward for adherence to the winning side land in Italy itself, usually at the expense of existing owners who were dispossessed without compensation and presumably, in a very large number of cases, financially ruined (Brunt 1962; Keppie 1983, 101ff).

The impact is reflected in the literature of the time, including the poems of Vergil (Eclogues i, ix), Propertius (Elegies i.21, i.22, iv.1.126-30) and Horace (Epistles ii.2.130-36). Older views that the discharged soldiers were spendthrifts and wasters, who quickly deserted their newly acquired farms and drifted to large towns, to Rome or the provinces of their former service have, I hope, been firmly discredited: these veterans aimed to become permanent landowners, and to some extent at least they succeeded (Keppie 1983). The soldiers saw in these land grants an opportunity for social advancement for them and their families; many must have been sons of small farmers, others former owners who had lost touch with their own farms, or sold up, or been forced out by aristocratic owners amassing large estates. The settlement schemes offered a chance of redress, and for Caesar and Octavian a means of introducing into the Italian countryside, and indeed to the provinces, a new class of middling proprietors keen to succeed.

In 30 BC, with the ending of civil war and the return of peace, we might have expected Octavian (or Augustus as it is easier now to describe him, from the title he assumed in 27 BC) to revert to normal sources of recruitment for the legions, and for a time at least we may suspect that he did. While our literary sources are poor in comparison with earlier and later epochs (e.g. Appian's Civil Wars close in 36 BC and Tacitus' Annals do not take up the story until the year of Augustus' death in AD 14), we have the narrative account by Velleius Paterculus (underestimated as a source of factual information on the latter half of Augustus' reign and the northern wars in which as an officer he took part), together with the much later account of Cassius Dio. Epigraphic material in the form of inscribed tombstones of serving and retired legionaries remains slight in comparison with that available for later generations, though a small number of retired veterans can be identified at towns in Italy or the provinces. Epigraphic evidence becomes important only after Augustus' death with the survival of substantial number of gravestones recovered at legionary fortresses on the Rhine, such as Mainz and Bonn, where it constitutes our chief testimony for the replacement in the legions of Italians by men of provincial origin. The process was gradual and probably, in the western provinces, it had not progressed very far by the time of Augustus' death. For legions based in provinces east of the Aegean, that is in Galatia, Syria and Egypt, the process of transformation began sooner, and progressed more quickly. From the beginning of Roman involvement with the East, there seems to have been a reluctance of Italians to serve there, or an aversion to it. At first sight this seems surprising: the East was a land of wealth, valuable raw materials, and caravan routes to the fabled Orient. It was also of course known for its bare and baking deserts, bleak in winter, and was the scene of several Roman reverses, particularly under Crassus at Carrhae in 53 BC. The dilution of the Italian component in the eastern legions began, I suspect, soon after Actium.

One of the two legions found garrisoning Egypt from Augustus' reign onwards was the XXII Deiotariana. The numeral, last in the Augustan series, suggests a unit not formed before Actium, and the title is a clear allusion to, or tribute to, Deiotarus, king of Galatia in Caesar's day, whom we know to have formed two legions from his own subjects, equipped in the Roman manner (Brunt 1971, 474, 506). Deiotarus himself died in 40 BC and his kingdom remained independent till the death of his son Amyntas in 25 BC when it was incorporated into the Roman Empire. We have to assume that the remnants of the royal forces were now accepted into the legionary strength of the Roman army, in a unique example of incorporation which it easy to think that shortage of more conventional forces might have encouraged, as does its subsequent posting to Egypt, always a 'special case,' where Roman military forces were commanded by an equestrian praefectus rather than a senatorial legate. Galatia, a mountainous zone with a strong Celtic (Gallic) element in its population, indeed remained an important source of legionary recruits throughout the Early Empire and after.² Some specific pieces of evidence can be adduced to flesh out our picture of recruitment to legions in the East: from Egypt have come inscribed slabs from Coptos (ILS 2483 = EJ 261; see Kennedy 1985) and, less conclusively, a papyrus perhaps listing legionaries of the Roman garrison under Augustus (Fink 1971, no. 3); both documents demonstrate that the legionaries were mostly from the East, and probably non-citizens by birth. A similar picture of legionary manpower comes from an unexpected source: tombstones recovered over many years in the territory of the old Caesarian colony at Narona in southern Dalmatia on the River Neretva. These commemorate veterans of a legion VII (presumably the later VII Claudia) who had settled there in or very soon after AD 14 (Wilkes 1969, 112, 245). The information they provide is valuable on two fronts: firstly the length of service is well beyond the 20 years laid down by Augustus in AD 5 (see below), indeed up to 33 years. Secondly, and more surprisingly, most of the men derived from cities and communities of Asia Minor, including the province of Galatia, only recently added to the Empire. Given their likely date of discharge from the army, they had been enlisted around 15-10 BC. The soldiers bear the names and voting-tribes indicative of Roman citizens, but close examination of the names shows that almost certainly they were noncitizens enfranchised to join the legion. Mitchell has demonstrated that legions VII and XI had served during Augustus' middle years in Asia Minor, moving to Dalmatia in the closing years of the reign, perhaps in or soon after AD 9, very probably in the aftermath of the Varus disaster (Mitchell 1976; cf Syme 1995, 254-55).

As noted above, some 27-28 legions were held permanently in service during Augustus' reign—this was twice the total regularly in commission before Caesar's time. This total actually seems quite modest, given the need to defend and consolidate control over a very extensive territory. The strain of civil war had caused military service to lengthen well beyond the six years which recruits in earlier times had to endure; with the return of peace it did not noticeably shorten. In 13 BC the length of service was fixed at 16 years, and in AD 5 it was established at 20 years, to which a period ostensibly 'in reserve' was added. In a recent article I have argued the possibility that these arrangements were concessions to the soldiers who had often to serve even longer at this time, rather than surreptitious or calculated attempts by Augustus to increase it, though later emperors tended to delay releases, because of the high cost of discharges (Keppie 1997b, 91).

In his recent survey of demographic patterns in the Roman army of the Empire, Walter Scheidel estimated that under Augustus between a fifth and a quarter of all those eligible for service would have needed to enlist annually to maintain the number of recruits required for 28 legions and the emperor's Praetorian Cohorts; his conclusions were based on calculating the numbers of young men who would turn 20 years of age in a particular year (Scheidel 1996, 93). As he observes this is a high percentage, and worthy of our close attention. I have not yet made a full study of the detailed figures he offers, but he seems not to have taken into account the trend towards enlistment of non-citizens, especially in the east, which effectively reduced the percentage required from the citizen body as a whole.

In 13 BC Augustus made an important break in the equation between military service and land settlement in colonies within Italy, which had become a standard expectation during the civil wars, and caused such disruption and discontent among the population at large, especially after the battles at Philippi and at Actium (Dio 54.25.5). He substituted a cash gratuity. In his last years Augustus did settle men on land at their home towns, presumably hoping to continue the traditional settlement schemes in a less provocative way (Augustus *RG* 16.2; Brunt 1971, 339; Keppie 1983, 208ff). His successors continued to provide some land in the provinces, but to most soldiers they gave a cash gratuity in its place (Keppie 1984b).

If the length of military service was inevitably a severe discouragement to many of those who had traditionally provided the legions' manpower, then another factor was its location. The long reign of Augustus witnessed an extensive series of military campaigns: the emperor had put into effect a strategic plan to reach clear geographical borders: the Euphrates, the Danube, to the Rhine and even beyond, and the completion of conquest of Spain (Wells 1972, 3ff). Archaeological discoveries in recent years have emphasised the comprehensiveness of Roman military efforts beyond the Rhine, to the Weser and the Elbe in the years from 13 BC onwards. No-one who has observed the massive foundations and post-pits which supported timber-framed buildings within the legionary winter-camps east of the Rhine at Haltern or Oberaden along the River Lippe need doubt the seriousness of Roman intentions (Kühlborn 1995; Wells 1998). More recently fresh discoveries of similar bases at Marktbreit near Wurzburg (Pietsch 1991) and Dorlar on the River Lahn (von Schnurbein and Köhler 1994) have added to the picture of organised preparations for permanent conquest. The scene of military service was moving ever further from Rome's Mediterranean heartland.

In AD 6 a severe brake was put on this relentless advance. Just as Roman forces moved northwards from the Danube and eastwards from the Upper Rhine to overwhelm the kingdom of Maroboduus in modern Bohemia (which would have created a much more manageable northern frontier line along the Elbe and Danube), revolt broke out in half-conquered Pannonia and Dalmatia between the advancing legions and the Italian heartland to the rear. Tiberius, leading the legions northwards from the Danube, hurriedly retraced his steps, and emergency measures were put in hand at Rome itself (Wells 1972, 237ff).

Hardly had the crisis passed, after three hard years of stern campaigning, than news reached Rome of a even more serious disaster, this time involving, at a stroke, the loss of substantial numbers of Roman legionaries: Varus, legate of Germany (and Augustus' great-nephew by marriage), had been ambushed east of the Rhine, and his three legions, together with auxiliaries, massacred. The location we now know was at or near Kalkriese north of Osnabrück (Schlüter 1993; Kühlborn 1995, 145ff). Thus by the event of one day, or rather three or four days during which morale crumbled in the face of persistent attacks, the Roman army lost some 10% of its legionary manpower. There were indeed some survivors of the defeat, as well as some detachments which had been placed in line-of-communications bases to the rear, who were able to escape westwards, and prisoners who lived on as slaves. This was not one of Rome's worst military disasters, but it is difficult to suppose that the losses were fewer than 10,000-12,000 men, not counting families, servants, slaves and those auxiliaries who remained loyal.3 There was panic at Rome: levies were held in the city (and presumably elsewhere as well, but the poor literary sources do not allow us to judge), fresh auxiliary regiments were raised, and cohorts both of free citizens (ingenui) and freed slaves, the latter significantly termed

voluntarii (Saddington 1982, 77-82). No new legions were formed at this time, but to judge from Tacitus's account of the mutinies which followed Augustus' death in AD 14, many slaves were enlisted into existing legions at this time (below).

In response to the loss of Varus' three legions, garrisons in provinces further south and east moved westwards in a shunting process, to plug the gap, or hold the line, at the western limit of the great northern frontier arc (Syme 1933, 28-33). The impact on Augustus himself is his closing years is well known: Quinctili Vare, redde legiones was a cry frequently heard from his lips (Suetonius, Aug. 22). But the impact on the army in general and indeed on society at large is more difficult to document—the loss of some 10,000-12,000 men, presumably of varying ages between about 17 and mid 50s, must have had a demographic impact; but it is hard to track it in the epigraphic record. The monument at Xanten, of the centurion Marcus Caelius, who fell in the Varian War, is familiar (ILS 2244). Families throughout Italy, indeed also in Spain and southern Gaul, and indeed any other areas which had seen sons depart for military service in these three legions, must have been devastated by the loss, and may have died out as a result. Nothing in our written sources alludes to any communal grief, and I am unable to identify memorials to others (apart from Caelius) who fell, though indeed gravestones to a few members of the lost legions can be cited; but none alludes specifically to the bellum Varianum, and most may simply be members of the legions who had completed their formal military services in earlier years and returned home (Keppie 1997a, 393-97).

Our sources do allow us to notice the longer-term impact on other units in the army, which can be recovered from Tacitus' detailed accounts of mutinies which broke out in the summer of AD 14 in summer camps where legions had been concentrated, first at or near Emona (Ljubljana) in present day Slovenia, and at or near Cologne on the Rhine frontier, when news of Augustus' death was announced. The mutineers demanded military service on fixed conditions, to end at 16 years (the traditional Republic maximum), with a cash gratuity paid out in camp immediately (Tacitus *Ann.* 1.16ff; Wilkes 1963; Keppie 1973; Keppie 1997b). Among the Rhine mutineers Tacitus alludes to the destabilising

effect of a *vernacula multitudo*, the dregs of Rome's noncitizen, indeed servile population, evidently drafted in large numbers into the legions in the immediate aftermath of the Varus disaster (*Ann.* 1.31; cf. Dio 57.5.4), which was now seeking a means of escape from long years destined to be spent on the cold northern frontier, far from Rome.⁴

Difficulty in finding additional recruits, or persuading them to service, under Augustus and his immediate successors, may come as a surprise, when we know that very much larger numbers had served in the civil wars only now fading from memory. But the difference in the numbers of recruits supplied is perhaps more apparent than real. It is by no means clear that we need to conclude that Italians had within a generation developed an aversion to military service or become less warlike; considerable numbers continued to serve. Many of those under arms in the civil wars were in any case recruited in the provinces, often from non-citizen communities. Certainly Augustus and his successors were reluctant to conscript Italy's youth when they did not come forward voluntarily. It is perhaps a surprise that sons and grandsons of those civil war veterans settled by Augustus throughout Italy seem to have been uninterested in serving; but many of the veterans themselves had been called out only in civil war conditions, and were not themselves long-serving near professionals.

Given these changes to the length, the location and the nature of military service during the first century BC, it is hardly surprising that the percentage of Italians, the traditional source of manpower in the legions, began to fall away. Tables prepared long ago by the late Prof. Giovanni Forni, on the basis of epigraphic evidence of tombstones, indicate that of legionaries recruited under Augustus, Tiberius and Gaius, about 62% were Italian, and of those recruited under Claudius and Nero about 50% were Italian (Forni 1953, 51ff; cf. Brunt 1974). The figures in reality apply only to the western provinces, especially the garrisons along the Rhine and the Danube, not to the East where we have practically no epigraphic testimony (Mann 1983). It may be wondered whether the impact of the Varus disaster was a factor in declining enthusiasm for service, though our limited sources offer no clue. Indeed it is not that Italians ceased to serve that comes as a surprise, but the fact that the percentage remained as high as it did under the Julio-Claudian emperors, given that service was now so long, in distant locations, and offered much less opportunity for enrichment. By the Flavian period of the later first century AD the number of Italians had become negligible, and by about AD 100 Italians had, to all practical purposes, ceased to serve. Fathers who in the past had sent sons to serve in the legions urged them to join a Cohort of the Praetorian Guard: service was shorter, safer and normally based in Italy, chiefly at Rome itself. Their places were taken by provincials, who might be descendents of Italian emigrants of long ago, or descendants of settlers placed there by Caesar and Augustus, or increasingly from non-citizen native communities who were happy to earn citizenship by the act of enlistment.

Perhaps an incident of admittedly half a century later, reported by Tacitus in his account of the civil war of AD 68-69, can serve to end this paper. When, at daybreak on 25th October 69 after a hard fought all-night battle between the legionaries supporting Vespasian's candidature for the imperial purple and those backing the incumbent emperor Vitellius, soldiers of one of the Flavian legions, III Gallica (which had been until recently part of the garrison of Syria) turned to hail the sunrise in oriental fashion, the Vitellians were convinced that Flavian reinforcements, which they knew to be approaching, were within sight of the battlefield, so that their cause was lost; they took flight at once (Tacitus, Hist. 3.24-25). The legion, which had once fought with Mark Antony and by this date had been stationed in the East for upwards of a century, had a make-up which was doubtless almost exclusively 'eastern'. The story vividly illustrates a changed cultural context. Yet, while the interests and experiences of the legionaries had diverged from those of the population of Rome, capital of the Empire, a city which most had never seen or were unlikely to visit during their military service, we cannot automatically suppose that soldiers who marched on Rome did so only to destroy or sack it; rather their aim was to overturn the government in favour of one they felt more legitimate. The army's loyalty to Rome was to remain strong long after its manpower had ceased to be ethnically Roman.

Hunterian Museum, University of Glasgow

Bibliography

- Brunt, P.A. 1962. The army and the land in the Roman revolution. *IRS* 52, 69-80.
- Brunt, P.A. 1971. *Italian Manpower 225 BC—AD 14*. Oxford: Clarendon Press.
- Brunt, P.A. 1974. Conscription and volunteering in the Roman army. *Scripta Classica Israelica* 1, 90-115.
- Fink, R. O. 1971. *Roman Military Records on Papyri*. Cleveland: Case Western Reserve.
- Forni, G. 1953. Il reclutamento delle legioni da Augusto a Diocleziano. Milan and Rome: Fratelli Bocca.
- Groenman-van Waateringe, W. & B.L. van Beek, W.J.H. Willems, S.L.Wynia (eds.) 1997. *Roman Frontier Studies 1995*. Oxford: Oxbow Books.
- Hopkins, K. 1978. *Conquerors and Slaves*. Cambridge: Cambridge University Press.
- Kennedy, D.J. 1985. The composition of a Roman military work party in Roman Egypt (*ILS* 2483: Coptos). *JEA* 71, 156-60.
- Keppie, L. 1973. Vexilla veteranorum. PBSR 41, 8-17.
- Keppie, L. 1983. *Colonisation and Veteran Settlement in Italy, 47-14 BC.* London: British School at Rome.
- Keppie, L. 1984a. The Making of the Roman Army. London: Batsford. Keppie, L. 1984b. Colonisation and veteran settlement in Italy in the first century A.D. PBSR 52, 77-114.
- Keppie, L. 1997a. Legiones XVII, XVIII, XIX: exercitus omnium fortissimus, in Groenman-van Waateringe, van Beek, Willems & Wynia (eds.) 1997, 393-97
- Keppie, L. 1997b. The changing face of the Roman legions (49 BC—AD 69). *PBSR* 65, 89-102.
- Kühlborn, J.-S. 1995. *Germaniam Pacavi: Germanien habe ich be-friedet*. Munster: Westfälisches Museum fur Archäologie/Amt fur Bodendenkmalpflege.
- Mann, J.C. 1983. Legionary Recruitment and Veteran Settlement during the Principate. London: Institute of Archaeology.

- Maxfield, V.A. & M.J. Dobson (eds.) 1991. *Roman Frontier Studies* 1989. Exeter: University of Exeter.
- Mitchell, S. 1976. Legio VII and the garrison of Augustan Galatia. *CQ* 70, 298-308.
- Patterson, J.R. 1993. Military organisation and social change in the later Roman Republic, in Rich and Shipley (eds.) 1993, 92-112.
- Pietsch, M. 1991. Marktbreit—ein neues augusteisches Legionslager bei Würzburg, Unterfranken, in Maxfield & M.J. Dobson (eds.) 1991, 196-202.
- Rich, J. & G. Shipley (eds.) 1993. War and Society in the Roman World. London and New York: Routledge.
- Saddington, D.B. 1982. *The Development of the Roman Auxiliary Forces from Caesar to Vespasian (49 B.C.-A.D. 79).* Harare: University of Zimbabwe.
- Sanders, H.A. 1941. The origin of the Third Cyrenaic Legion. *AJPh* 62, 84-87.
- Scheidel, W. 1996. The Demography of the Roman army, in *Measuring Sex, Age and Death in the Roman Empire*. Ann Arbor, Mich.: Journal of Roman Archaeology, suppl. 21, 93-138.
- Schlüter, W. 1993. *Kalkriese: Römer in Osnabrücker Land*. Bramsche: Rasche Verlag.
- von Schnurbein, S. and Köhler, H.-J. 1994. Dorlar. Ein augusteisches Romerlager im Lahntal. *Germania* 72, 193-203.
- Syme, R. 1933. Some notes on the legions under Augustus. JRS 23, 14-33.
- Syme, R. 1995. The eastern legions, in *Anatolica: Studies in Strabo*. Oxford: Clarendon Press (edited for publication by A.R. Birley).
- Wells, C.M. 1972. *The German Policy of Augustus*. Oxford: Clarendon Press.
- Wells, C.M. 1998. What's new along the Lippe, review article in *Britannia* 29, 457-64.
- Wilkes, J.J. 1963. A note on the Pannonian legions. *CQ* 56, 268-71. Wilkes, J.J. 1969. *Dalmatia*. London: Routledge & Kegan Paul.

Notes

- I From the early 4th century the soldier began to receive a daily sum to cover 'expenses', a *stipendium* which when computed to cover a whole year amounted to 120 denarii; the word *stipendium* came in time to denote a year's military service.
- 2 A similar uncertainty surrounds the origins of the other legion attested in Egypt under Augustus—the legion III Cyrenaica. The title indicates some service or success in North Africa, and the numeral ranks alone as one already twice duplicated in the army list of the Empire (by III Augusta based in Africa, probably serving with Octavian before Actium, and III Gallica, in Syria, known to have been with Antony). We know nothing of the origins and early history of III Cyrenaica, but can retain some suspicion that its antecedents were not entirely conventional (Sanders 1941).
- The cemetery located by excavation west of the Haltern fortress yielded graves of women and children as well as adult males, likely members of the garrison; some of the deceased were probably in promoted posts, even officers, to judge from the size of their monuments (Kühlborn 1995, 82ff with Abb. 12.)
- 4 Percennius, a leader of the mutineers in Slovenia, had in former life been an applause-leader in a theatre, possibly at Rome itself (Tacitus, *Ann.* 1.16).
- 5 In common with many legions based in the east, we lack detailed knowledge of men serving in it at this time; see Forni 1953, 222; Mann 1983, 144.

Veteranus and Munus Publicum

Stefan Link

Five years ago, Richard Alston provided an entirely new analysis of the legal and social situation of Roman soldiers and veterans within his comprehensive work Soldier and Society in Roman Egypt. His conclusions coincide to that extent with the communis opinio2 as he stresses the influence of privileges on the relations between veterans and the rustic and civic populationprivileges that were granted to the ex-service soldiers of the early and high empire. Concerning the question about the development of these privileges, however, he deviates decidedly from traditional interpretations. He neither sees a permanent increase of the granted privileges nor does he confirm a continuous decline of those allowances.3 According to Alston almost nothing changed within the legislation on the subject: 'In law,' he writes, 'the position of the ... veteran was not notably improved ...' (Alston 1995, 66). Nevertheless he agrees that changes did take place, however, not on a legal but on a de facto level: 'Status was maintained in law but not in fact' (67). 'The actual status of veterans was in decline in the second century.' And he also believes to have found the cause for this downfall: Since the veterans, most of the time, appeared as isolated individuals in their villages and cities, they were not able to build a strong 'pressure group'. It was impossible for them to put enough pressure on local officials to enforce their privileges in everyday life, and so they got more and more involved in society's canon of duties. Together with other members of society they were drawn into the mutual obligations: 'Veterans ... were integrated into civilian life. They were not outsiders. They were not an elite' (68).

No matter how original, surprising and intelligible this interpretation might appear, according to my opinion it is little convincing at second sight. A more accurate analysis of the sources—particularly concerning the question of a liberation of the former soldiers from public liturgies—leads to a completely different idea of the legal-historic development of the privileges and of the social-historic way they were embedded in the society. Discussing Alston's outline, the following study attempts to provide a more accurate analysis.

For good reasons Alston begins his research with the juridical background: The question what kind of privileges could be claimed by the veterans for the time being can only be answered if one is aware which prerogatives they were entitled to. The most important sources available to answer this legal question are two edicts of Octavian4 and two further edicts of the emperor Domitian.5 To begin with, let us examine Octavian's decrees in more detail, in the first place the Greek decoration for Seleukos of Rhosos from 40 BC and secondly the Latin transcript of an edict that was dedicated to veterans who were released in Egypt in the thirties.⁶ The repeatedly copied text of this general veteran edict is not preserved very well, the edict for Seleukos is preserved slightly better. The crucial paragraph, however, is similar concerning the content⁷ and it can be restored quite well in both cases: Seleukos of Rhosos received for himself as well as his parents, his children, successors, and his wife poleiteian kai aneisphorian ton hyparkhon[ton], i.e. citizenship and freedom from taxes, houto[s hos hoitines to]i aristoi nomoi aristoi de dikaioi poleitai [aneispho]roi [eisin], so that they would be (Roman) citizens according to the best law and order. The same was granted by Octavian to the veterans in Egypt. He decided:

ipsis parentibu[s lib]erisque eorum e[t uxo]ribus qui sec[um] <sunt qui>que erunt im[mu]nitatem omnium rerum d[a]re, utique optimo iure optimaque legis (!) cives Romani sint {sunto};⁸ immunes sunto, liberi su[nto mi]litiae, muneribusque publicis fu[ngend]i vocat[i]o <esto>.

(...) to grant to themselves, their parents and children and their wives—those who are and those who will be with them—freedom from all taxes, so that they would be Roman citizens according to the best law and order. They shall be free from taxes, free from military service, and there will be freedom from performing public munera.

In this case the reference follows that the veterans should enrol into a tribus of their own choice. In other words: As well as Seleucos of Rhosos, at least the majority of the veterans that were endowed by Octavian with the exemption of taxes and liturgies were not Roman citizens at the time of their decoration. Only at this opportunity they were granted the citizenship (and the related possibility to choose a tribus). And a second point is important: In both cases this citizenship granted by Octavian was meant to be a 'best citizenship'. Apart from the liberation from the liturgies,9 the liberation from all taxes on the property was also included, and only through this exemption from taxes—so the texts say—could the newly acclaimed citizenship become a citizenship 'best according to law and order', a civitas optimo iure optimaque lege.10

Precisely the same wording was chosen by Domitian almost 120 years later as he dismissed and distinguished soldiers stationed in Egypt. He, too, stressed that the prerogatives were granted to let them, as his veterans, be *omni optumo iure c. R.*^{II} It is without a doubt this parallelism of the wording that induced modern scientists to equalise Octavian's and Domitian's measures or to go even further and interpret Octavian's catalogue of privileges as a 'Grundgesetz', a statute of imperial privileges for veterans (Wolff 1986, 97). Therefore they think Domitian's decoration to be only a renewed confirmation (or even extension¹²) of what Octavian had established already four generations earlier and what his successors had continued uninterruptedly. 'Veterans were exempted ... by Octavian's and Domitian's edicts,' wrote

Alston. 'Nero also ... seems to have continued the exemption.' And: 'The *immunitas* was extended to the parents, wife, and children of the veteran' (Alston 1995, 62).

Taking a closer look it quickly becomes obvious that this equalisation is misleading. Already the enumeration of the beneficiaries—'parents, wife, and children of the veteran'—is correct only for Octavian's measures, not for Domitian's. Indeed, the recipients are described as ipsi coniuges liberique eorum parentesque¹³ by Domitian as well (l. 15), but coniuges does not mean 'wives' in this case. The reason: Why should Domitian have ordered that the veterans themselves (ipsi) as well as their wives (coniuges) should receive the conubium, the right of intermarriage between a Roman and a non-Roman partner? Conubium for merely one of the partners would elevate their de facto marriage to the higher level of a iustum matrimonium, and it was the Roman partner who was to be given this privilege, i.e. in this case: the veteran Quadratus and his companions, not their wives. Therefore, the women should not appear in line 15 of the enumeration, and, as a matter of fact, they do not appear in the second one in line 18 (while they of course do reappear in the second enumeration of Octavian's edict). Accordingly, I would like to propose to punctuate in line 15 as follows: ipsi coniuges, liberique eorum, parentesque conubi[a eo]rum sument—'they themselves being married,14 their children and their fathers will claim the conubium.'15 Those privileged were therefore only the veterans, their children and their fathers; women are not mentioned here at all.16

But the confusing misinterpretations go further. Alston surely exaggerates when he claims: 'Exemption from *munera* ... was granted to all *veterans* by Octavian and Domitian' (62). Although this actually corresponds exactly to the pretentious wording of the present edicts—both Octavian and Domitian spoke explicitly of 'all veterans'¹⁷—at least in the case of Domitian it is a matter of rhetoric lacking in content. That his measures did not really apply, as he claims, to all veterans, emerges from his military diplomas with definite clarity: neither the released soldiers from the *alae* nor those from the cohorts were, according to the testimony of this evidence, granted the *conubium* for their fathers; they got it merely for themselves and their children (CIL 16.36, 37; RMD 4, 5). Therefore, Domitian's edict did address neither

the cohorts nor the *alae*, but solely the soldiers and veterans of the legions—though the emperor slightly arrogantly called them 'all'.¹⁸ This fact alone should be a warning to equalise the privileges of Domitian with those of Octavian: the latter decorated peregrine veterans while Domitian granted privileges to Roman citizens.

Let us now turn to the beneficiaries of Domitian's edict, in the present case M. Valerius Quadratus and his father. Comparing these two generations, an apparent contradiction becomes evident: M. Valerius Quadratus, former legionary and at the time of his discharge obviously a Roman citizen, did not have Roman parents, or, to be more exact: M. Valerius Quadratus' parents did not enjoy a iustum matrimonium, but only a de facto marriage, a marriage, however, that could be transformed into a iustum matrimonium by the allocation of a conubium. In other words: his father obviously was a Roman citizen—we even know that his name was Marcus, too (Col. 3, app. l. 1)—but his mother can hardly have been so. Had she been a civis Romana, his father would not have needed the conubium. Furthermore, the fact that he still needed it indicates that his son, our M. Valerius Quadratus, cannot have been a Roman citizen either at the time of his birth. Besides, we learn that he was registered in the tribus Pollia after he had become a civis Romanus. Altogether this leads with the highest degree of probability to the conclusion that Quadratus was the child of a soldier, one of those children whose fathers were Roman soldiers but whose mothers were natives and therefore not Roman citizens, in a word: Quadratus was one of those children who were commonly allocated the indication of origin ex castris, and who were often registered for the not very esteemed tribus Pollia, when they were granted their own citizenship at the time of their joining the legion. And that his father served in a legion (and not just in one of the auxiliaries) follows from the fact that he had not yet got the conubium but received it only just now.19 Had he served in a cohort, e.g., this privilege would have been granted to him at the time of his own dismissal, and he would not have been forced to lead an illegitimate marriage until the dismissal of his son.

These reflections lead to the result that, on the one hand what Domitian granted here in the year of 88/89

and in the year 93 respectively, had not yet been granted one generation earlier when Quadratus' father was released from the legion—otherwise he would have already had the conubium—and on the other hand that what Octavian had granted to his veterans 120 years earlier had no longer been granted before Domitian's decree—otherwise Quadratus' father would not have needed the right to marry a peregrine woman, since his wife would have become a Roman citizen, too. The idea that 'in law the position of the ... veteran was not notably improved' is therefore—at least if judged by this example —obviously misleading. On the contrary: under Domitian the situation of the veterans of the legions improved considerably, and in fact our M. Valerius Quadratus assumed this to be so. At any rate he insisted that he wanted his three children to be admitted as Roman citizens because of a 'benefaction of this best emperor', beneficio eiusdem optumi principis (col. 3, app.).

So the veterans of the legions did not receive the privileges in question at the beginning of the Flavian dynasty (or at the end of Nero's rule), the time when Quadratus' father retired from service. Therefore Domitian's privileges cannot have been the steady continuation of Octavian's measures. This leads to the question what the legal position of the former soldiers was like during the 120 years in between.

The best starting-point for an answer to this question provides the so-called *charis Neronos*. We know about it from a decision that was given in 63 AD by the *praefectus Aegypti* C. Caecina Tuscus to a group of veterans, who persistently and repeatedly pestered him with always the same request until he finally had to refuse. 'I told you before', he wrote, 'that the situation of each of you is neither similar nor the same. For some of you are discharged from legions, others from *alae*, others from cohorts, others from the fleet. Therefore there cannot apply the same right to all of you. But I will deal with this matter and I have written to the *strategoi* of the nomes so that the benefaction of the emperor will be granted unabridged to every single one according to his claim.'²⁰

Tuscus could not have said it more clearly: that the veterans of the Roman army were not granted equal (as Alston claims²¹) but different privileges, according to the kind of unit they had served in. Actually, this is not surprising: as far as the soldiers of the fleet were concerned

we supposed that they did not receive military diplomas at Nero's time (Link 1989, 25-28), and concerning the veterans of the legions we know this for sure, while auxiliary-veterans were entirely entitled to such diplomas. However, it is irritating that Tuscus chose the title peri tes poleitias for his remarks and thus made a statement to the effect that veterans of the different units enjoyed different privileges depending on their citizenship. At first sight this only applies to the soldiers of the fleet who did not receive the citizenship at the time of their discharge. Former auxiliary-soldiers did get it, and therefore they should not differ from the former legionaries who had been Roman citizens all the time. Nevertheless, Tuscus wanted to differentiate clearly between legionary and auxiliary veterans, as proven by the private record which the veterans took for themselves: 'The procedure of the legionaries is one thing, that of the cohortales another, and the one of the soldiers of the fleet a third."22 So, where was the difference between the former legionaries and the former auxiliary-soldiers peri tes poleitias? And how were the strategoi of the nomes involved?

In the treatment of this question Alston demonstrates good judgement. 'It was in the interests of the *nome* and village authorities', so he describes the contradiction of interests, 'to have as many people as possible available to perform liturgical duties. It was in the interest of the veterans to preserve their privileges'(64). Actually this was the only point where the veterans could get into a conflict with the *strategoi* of the nomes: liturgies. The remaining question to solve is why the *praefectus Aegypti* was of the opinion that his reference to the citizenship, his answer *peri tes poleitias*, was at the same time an information about the duty to perform or the freedom from liturgies.

In attempting to solve this question the third of the five known edicts of Augustus to Cyrene provides the crucial support. Obviously in reaction to a request from the Cyrenaica he decided 7/6 BC:

If people from the province Cyrene have been honoured with the Roman citizenship I order that those, nevertheless ... have to perform liturgies, apart from those who were granted, either by means of law or decision of the senate, be it by a decree of my father or by myself, together with the citizenship also freedom from contributions.²³ And I wish that those, who were granted freedom from contributions, are exempted from taxes on the property that they had owned at that time, but that they have to pay taxes for everything they have acquired since.²⁴

This last decision clearly brings out the tenor of the whole letter: Augustus was obviously interested in cutting back the privileges of new Roman citizens: not all their property, but only a part of it would be exempt from taxes. This decision does appear a little narrowminded; but its specific artfulness is due to the fact that it was enacted retrospectively, that it explicitly relates also to Caesar's and Augustus' own edicts from the time of the civil war, i.e. to those edicts in which he had granted his veterans and their descendants civil rights and exemption from military service and taxes, and freedom from all liturgies in their home towns.25 But in times of civil war, when he was particulary dependant on his soldiers, nothing had indicated that veterans and their descendants should only be exempted from taxes on that part of their property which they had already owned at that time, and that they would have to pay taxes on all possessions acquired later.26 Therefore, the decision of the edict from Cyrene forms a complete and subsequently performed limitation of rights that had been granted by Octavian himself on a considerably larger scale.27 Or, in a word: after the lex Munatia Aemilia had authorised the triumviri to grant, among other privileges and under the title 'best Roman citizenship', an unrestricted freedom from taxes, Augustus limited the scope of this freedom drastically by his ruling 7/6 BC, retrospectively as well as for the future.²⁸

The same applies to his second decision, his opinion on the question concerning a duty to perform or the freedom from liturgies. He decided: the fact that a non-Roman citizen of a provincial town was honoured with the Roman citizenship was not intended to lead to his freedom from civic liturgies, on the contrary: only those who were bestowed with both citizenship *and* exemption from taxes, only those who where bestowed with a *civitas optimo iure optimaque lege* should also be awarded freedom from liturgies.²⁹

On this basis, Tuscus' reply to the veterans is easy to

explain: 'Some of you are discharged from legions', he said, 'others from alae, others from cohorts, others from the fleet. Therefore the same right cannot apply to all of you'. One has indeed to admit that he, in order to give his answer a more impressive form, exaggerated a little when he distinguished between the veterans from the alae and those from the cohorts—the veterans themselves, as we saw, did not mention this distinction in their own private records—but at least it becomes clear what the difference between former legionaries and former auxiliary soldiers was: Legionaries had—at least in theory—always been Roman citizens and as such they were exempted from liturgies. But auxiliary soldiers received their citizenship not earlier than at the time of their dismissal from service. So they belonged to the group of new citizens, those who were, according to the edict from Cyrene, only freed from liturgies in case they were granted freedom from taxes as well. And since, as proven by their military diplomas, they received the citizenship and the conubium but not exemption from taxes, they still had to perform liturgies. The same applied to the third group, the oarsmen: as at this time they did not receive the Roman citizenship at all they could naturally be forced to serve as liturgists. And as the question concerning this duty or the freedom from it was finally answered in all three cases with reference to the particular citizenship of the veterans, Tuscus did indeed do right to put his reply under the title: [epi t]on missikion, per[i]tes poleitias.

So the last piece falls into place and we will return to the privileges for the veterans. Now it becomes obvious: As they had to perform liturgies according to the quality of their citizenship they cannot have been exempted as veterans. Accordingly, the possibility can be ruled out that almost all veterans as such received exemption from liturgies already in the first century BC. On the contrary: Neither the veterans who did not receive Roman citizenship, nor the members of the auxiliaries who were honoured with the (new-)Roman citizenship at the time of their discharge, were as a result freed from liturgies. Only the former members of the legions who had never received citizenship as a reward but had always been Roman citizens—at least according to fiction—enjoyed an exemption, of course only in non-Roman municipalities, too. And there they were exempted as old-Roman citizens, not as veterans—a fact which Domitian took into consideration in his veteran edict, applying only to discharged legionaries, as he did not grant them freedom from liturgies and therefore ignored the according lines of Octavian's edict. But also the remaining privileges he allowed the veterans from the legions were neither granted by his predecessors nor were they adopted by his successors.³⁰

Until the second half of the second century nothing changed concerning this legal situation. The reply that was given, probably by Antoninus Pius, to a physician of the legion, Numisius, is typical: as long as he, being a legionary physician, would be an active soldier he should be exempted from liturgies as a *soldier*, after the completion of his service he *being a physician* should belong to that group of physicians that could be freed form liturgies by the cities.³¹ The idea to exempt Numisius as a *veteran* did not occur to Antoninus Pius (which is even more striking as it is not at all sure whether Numisius would succeed in joining the numerically limited circle of privileged physicians³²).

Another example: The veteran Sempronius complained he had to provide camels although de iure he was exempted from this liturgy. In order to support his claim he cited from constitutions of emperors from Hadrian to Antoninus Pius and Lucius Verus.³³ Above all, what catches the eye is that he took only decrees into consideration that dealt with the liberation of the citizens of Antinoopolis-Sempronius was allegedly an Antinoopolite himself-but he could not provide a single evidence for the exemption of veterans. This indicates neither, as Alston claims, that the privileges of the veterans were more and more belittled while those of the Antinoopolites remained the same,34 nor that 'veteran Antinoopolites began to rely more upon their Antinoopolite status to defend their position than their veteran or Roman status' (1995, 65)35—all this simply has to be explained by the fact that Antinoopolites were entitled by law whereas veterans were not.

The idea that veterans *as such* should be exempted from liturgies did not appear until late in the second half of the second century. The first example is the petition of a man called Apollinarios who complained AD 172 that he had been forced to provide liturgies incessantly year after year although this was forbidden even in the

case of the locals, and furthermore he claimed to be an old man. Additionally the five-year exemption for veterans, he said, had been ignored and he had been obliged already two years after his dismissal.³⁶ Although we do not exactly learn from this complaint from what kind of liturgies the veterans were exempted (possibly from all of them)—what becomes obvious is that this entirely new form, the exemption of veterans as such, was from the very beginning only granted on a limited scale: it only applied for five years. This ambivalence of concession and restriction was linked to the concept of granting privileges to veterans, developing only at the end of the second century, which can be followed in excerpts from a few sources: 'A muneribus, quae non patrimoniis indicuntur, veterani post optimi Severi Augusti litteras perpetuo excusantur' (Dig 50.5.7)—in other words: Later they were indeed exempted for all time but only from certain munera, not from all of them. And, furthermore: 'Vacationum privilegia non spectant liberos veteranorum' (Dig. 50.5.8.2)—they were only exempted themselves, not their children (as certainly neither their parents nor their wives).37

In summary, the following picture emerges: To exempt a commendable comrade-in-arms was a common form of honouring in late-republican Rome—popular not least because the burden connected with it fell only upon the particular community; Rome did not have to bear any costs. The Roman commanders could therefore be quite generous and free their veterans from all litur-

gies. To a responsible administration of the empire, however, such burdens on the cities were unacceptable; and so Augustus, released from the constraint of civil war, to a large extent revoked the privileges given earlier: exemption from liturgies was now granted only to those who had been granted exemption from taxes as well. This means, furthermore, that the innumerable soldiers who, at least since Claudius' reign, became Roman citizens at the time of their discharge, were no longer granted exemption from liturgies. One can even claim that the restriction of the privileges accompanying the Roman citizenship established the basis for its extension: Only if he did not undermine the economic life of the cities could the emperor afford to engage his veterans as vehicles of a lasting Romanization on a large scale.³⁸ No earlier than at the end of the second century of the empire the idea emerged that veterans as such should be able to claim exemption from liturgies. In Severan times, this idea lead to a cleverly devised concept in which both, the reasonable claim of the veterans for a reward as well as the cities' interests were taken into account. So there is no reason at all to believe that the development of veteran privileges was characterised by a continuous improvement, a continuous worsening or even by a legal immobility on the one hand and an actual decline on the other.

Department of History, University of Paderborn

Bibliography

- Alston, R. 1995. Soldier and Society in Roman Egypt. London: Routledge.
- Atkinson, K.M. 1966. The Third Edict of Augustus, in: *Ancient Society and Institutions. Studies presented to V. Ehrenberg*. Oxford, Blackwell.
- Campbell, J.B. 1984. *The Emperor and the Roman Army 31 BC AD* 235. Oxford, Claredon Press.
- Campbell, J.B. 1994. *The Roman Army 31 BC AD 337. A Source-book*. London, Routledge.
- Horstkotte, H. 1991. Review of S. Link, Konzepte der Privilegierung römischer Veteranen, 1989, BJ 191.
- Lesquier, J. 1918. L'armée romaine d'Egypte. Cairo.
- Link, S. 1989. Konzepte der Privilegierung roemischer Veteranen. Stuttgart, Steiner.

- Link, S. 1995. ...ut optimo iure optimaque lege cives Romani sint, ZRG 112, 370ff.
- Oliver, J.H. 1960. On Edict III from Cyrene, *Hesperia* 29, 324ff.
- v. Premerstein, A. 1929. Die fünf neugefundenen Edikte des Augustus aus Kyrene, *ZRG* 48, 467ff.
- Rainer, M. 1986. Bürgerrechtsprobleme im 2. Jahrhundert, in: Beiträge zur antiken Rechtsgeschichte. Festschrift für A. Kränzlein. Graz: Leykam.
- Schneider, H.-Ch. 1977. Das Problem der Veteranenversorgung in der späteren Roemischen Republik. Bonn: Rudolf Habelt.
- Sherwin-White, A.N. 1973 (repr. 1987). *The Roman Citizenship*. 2nd ed. Oxford: Claredon Press.
- Stahl, M. 1978. *Imperiale Herrschaft und provinziale Stadt*. Göttingen: Vandenhoeck & Ruprecht..

- Stroux, J. / Wenger, L. 1928. *Die Augustus-Inschrift auf dem Marktplatz von Kyrene*. Munich: Bavarian Academy of Sciences.
- de Visscher, F. 1940 (repr. 1965). Les édits d'Auguste découverts à Cyrène. Louvain.
- Westermann, W.L. 1941. Tuscus the Prefect and the Veterans in Egypt, *CPh* 36, 21ff.
- Wilhelm, A. 1943. Zu dem dritten der Edikte des Augustus aus Kyrene, *AAWW* 79/80, 2ff.
- Wilhelm, A. 1974. Akademieschriften zur griechischen Inschriftenkunde III, Leipzig.
- Wolff, H. 1986. Die Entwicklung der Veteranenprivilegien vom Beginn des 1. Jahrhunderts v.Chr. bis auf Konstantin d.Gr., in: Eck, W. and H. Wolff (ed.), *Heer und Integrationspolitik*. Köln: Böhlau.

Notes

- 1 London, 1995.
- 2 Cf., e.g., B. Campbell (1994, 193): 'All veterans could look forward to a relatively privileged status in comparison with the rest of the lower classes, since they were exempt from certain taxes and personal services ...'
- A certain insecurity remains, respecting which of the two he considers as *communis opinio*, compare p. 54 ('The picture is of a more and more powerful soldiery, enjoying greater and greater privileges ... This generally accepted view ...'; accordingly also p. 65) with p. 64: 'The traditional view of the evidence is that it shows a gradual erosion of the privileges of the veterans.'
- 4 FIRA I² 55 (Seleucos of Rhosos); FIRA I² 56 = Campbell, Roman Army No 340 (general veterans' edict); both edicts are arranged next to one another by H. Wolff (1986, supplement, a and b).
- 5 W. Chr. 463 = ILS 9059 *extrinsecus* = FIRA I² 76 = Campbell, Roman Army No 341.
- 6 FIRA I² 55: ... [Autoi kai g]oneusi, teknois ekgonois te autou gynaiki te toutou hetis me[ta toutou] est[i estai monei mentoi (?)] poleiteian kai aneisphorian ton hyparkhon[ton did]men houto[s hos hoitines to]i aristoi nomoi aristoi de dikaioi poleitai [aneispho]roi [eisin, kai strateias lei]tou[rgia]s te demosias hapases pare[sis esto] ...
 - FIRA I 56: ...Visum ⁴[est] edicendum mi[hi vete]ranis dar[i] om[nibus], ut tributis ⁵[et vec]ti[galibus omnibus portoriis]que [publicis] ... ⁸... ipsis parentibu[s lib]erisque eorum e[t uxo]ribus qui sec[um] <sunt qui>⁹que erunt im[mu]nitatem omnium rerum d[a]re, utique ¹⁰optimo iure optimaq[u]e legis (!) cives Romani sint {sunto}; immunes ¹¹sunto, liberi su[nto mi]litiae muneribusque publicis fu[ngen¹²d]i vocat[i]o <esto>. Item in [quavi]s tribu s(upra) s(riptis) suffragium ¹³[fe]rendi c[e]nsendi[que] potestas esto; et si a[b]sentes voluerint ¹⁴[c]enseri, detur. Quod [cum]que iis, qui s.s. sun[t, ip]sis, parent(ibus) ¹⁵[co]n[iu]g(ibus) liberisq[ue] eorum ...
- 7 That is not surprising if one takes into account that both privileges are based on the same model, namely the *lex Munatia Aemilia*, proclaimed 42 BC; on the same subject: K.M. Atkinson 1966, 30ff.
- 8 The meaning of this last obviously confused part of the text is clarified by the wording of the edict for Seleucos of Rhosos: houto[s hos hoitines to]i aristoi nomoi aristoi de dikaioi poleitai

- [aneispho]roi [eisin], 'so that they would be (Roman) citizens according to the best law and order.'
- That they, being Romans and thus citizens of another community, could not be drawn into the liturgies of their cities would have been self-evident according to ancient republican standard; cf. for example the different rewards provided for the successful accuser by the lex Acilia repetundarum (FIRA I 7, ll. 77–79): If he wanted to become a Roman citizen he could; if he did not want to become a Roman citizen he should at least enjoy the provocational right and the 'liberation from all public munera in his own city'. In other words: As the bestowal of the citizenship as such included the provocational right it contained evidently also the exemption from the civic liturgies in the native community of the honoured. Yet, this notion seems to have been eroded; the veteran edicts, however, expressly mention the liberation from the liturgies.
- In more detail: Link 1995, 370ff. In fact this exemption only reproduced the freedom from taxes that was granted to the Roman citizen in Italy: Even if he was not liberated *de iure*, *de facto* he was indeed free from tax-payments since the Roman state did not raise any taxes of all Roman citizens living in Italy after 167 BC.
- FIRA I 76: ... ¹²Visum est mihi edicto significare: universoru[m] ¹³vestrorum {vi} veterani milites omnibus vectigalib[us] ¹⁴portitoribus publicis liberati immunes esse deben[t, ut] ¹⁵ipsi coniuges liberique eorum parentesque conubi[a eo] ¹⁶rum sument, omni optumo iure c.R. esse possint, et om[ni] ¹⁷immunitate liberati apsolutique sint et omnem i[mmu] ¹⁸nitatem <habeant; item ut ii,> q.s.s.s, parentes liberique eorum <eiu>[s]dem iuri[s] ¹⁹<eiu>[s]dem condicionis sint, utique praedia, domus tabern[ae?] ...
 - M. Valerius M. f. Pol(lia) Quadratus ... dixit ... in militia sibi L. Valerium Valentem et Valeriam Heraclun et Valeriam Artemin omnes tres s(upra) s(criptos) natos esse, eosque in aere incisos civitatem Romanam consecutos esse beneficio eiusdem optumi principis.
- 12 As stated by Schneider (1977, 226-27): 'Da eine Verordnung Domitians aus der Zeit 87–89 n.Chr. ausdrücklich die Befreiung von Veteranen von *vectigalia* usw. erwähnt, ist anzunehmen, dass diese Vergünstigungen von Oktavian noch nicht zugestanden

worden waren'; analogously Campbell (1984, 444). Slightly abrupt this idea of continuous grants is confronted by Schneider with the following and definitely right conclusion (228): 'Das umfangreiche Immunitaeten umfassende Edikt Oktavians stellt nur ein Privileg, aber noch keine staatlich geregelte Veteranenversorgung dar. Bei der Einschaetzung dieses Edikts muss die aussergewöhnliche politische Situation und damit vor allem der starke Einfluss der Soldaten zu dieser Zeit berücksichtigt werden.'

- 13 Regarding the different interpolations used to eliminate the difficulties of the wording, cf. Link 1989, 80f.
- 14 So this is nothing but the positive version of the well known form from the military diplomas: *siqui caelibes essent*, cf. Link 1989, 82.
- 15 Campbell's English version is based a good deal on pure imagination (Campbell 1994, No 341). Ipsi coniuges liberique eorum parentesque conubi[a eo]rum in his translation turns out to be 'they themselves, the wives who married them, their children, and their parents.' Although he does not make any comment to the effect how he got to this version-almost as free but constructed vice versa was the one he offered earlier (Campbell 1984, 284) he seems to have carried out two major infringements: an intervention in the wording and in the Latin usage of the words. In the first place he obviously rearranges the text and pulls up conubi[a] in order to place it together with coniuges; apart from that, instead of the unambiguously recorded conubi[a] he probably reads conu{b}i[uae] (with regards to the parents of the veterans Lesquier already proposed conu{b}i[ui]; 1918, 337 note 2). Then Campbell translates conu{b}i[uae] (or something like that) as 'wives who married them'. But by doing this he does not only create a severe pleonasm, but also the common usage of the words is against him: 'convivus ist ungebräuchlich, conviva der Gast' (Wolff 1986, 103, note 151).
- 16 Alston draws the opposite conclusion (217): 'The decree shows that wives of legionary veterans would not be granted *conubium* but citizenship, making the grant of *conubium* unnecessary.' But for what reason did the edict then grant the *conubium*, too?
- 17 Unless Domitian (according to the most recent reconstruction of Wolff 1986, 44s.) claimed that 'the veterans (and) soldiers of all camps' should be freed from the burden and be decorated by the remaining privileges (l. 12s.). Probably, however, we should not read *universoru[m ca]strorum* but *universoru[m] vestrorum*; cf. Link (1989, 79). Though, the content remains unchanged.
- 18 So far concerning Alston's argument 'the use of the term 'veteran' without any specification of the unit with which the soldier had served suggests that there was no great status differential between the veterans of different units' (61), cf. also his compilation p. 215-17, note 23.
- Misinterpreted by H. Horstkotte (1991, 762f.): 'Tatsaechlich kann Quadratus auch als ehelicher Sohn eines peregrinen Vaters Legionar geworden sein …' Horstkotte overlooks that Domitian

- did not grant a citizenship in his edict—not even to Quadratus' father. Had he been a peregrine he consequently could not have used the conubium he had been given. In spite of Horstkotte's polemic the fact that it was granted to him is a hint that he was a Roman citizen. A slight insecurity remains only concerning the question weather he already had been a legionary. But in this case not the question for the person of Quadratus (who is not much more than an example) is important but the question for the type.
- 20 Daris, Documenti no. 101; Campbell, Roman Army, no. 337: ... [Epi t]on missikion, per[i] tes poleitias. [Touskos]. Eipon hymein kai proteron hoti ouk estin homoia oude he aute [hekaston] hymon hpothesis. Hoi men gar hymon eisin ek legionon [missik]ioi, oi de ex eilo[n, ho]i de ek speiron, hoi de ek tou eretikou, [hoste m]e einai to auto panton deikaion. Melesi de moi peri tou[tou kai] egrapsa tois kata [n]omon strategois, hina he charis holokleros [tou kyri]ou hymein tereth[e] kata to hekastou di[kai]on....
- 'Although modern writers and, to a certain extent ancient writers perceive a status differential between the soldiers of the legions and those of auxiliary units, the use of the term "veteran" without any specification of the unit with which the soldier had served suggests that there was no great status differential between the veterans of different units and a detailed survey of the evidence fails to produce any significant legal difference between the veterans of the various units' (60-61). Also his summary (216, note 23) misses the legal facts: 'The veterans,' he writes, 'were similar enough in legal position to make common cause'. In fact the veterans did summarise their legal cases, but this was prohibited by the prefect several times—obviously with an eye for the fact that they were not very close concerning their legal situation.
- 22 Daris, Documenti no. 103; Campbell, Roman Army, no. 337b: ...
 Touskos eipen hemein: Kai en tei parembolei eipa hymein kai nun
 to auto lego: Alle he agoge{i}he ton legeonarion, allo he ton khortarion, al[l]o he ton kopelaton. Proeste hekastos eis ta eidia kai me
 geisthe argoi. That both papyri definitely refer to the same event
 was substantiated in great detail by Westermann 1941, 21-29.
- 23 According to Wenger's addition (cf. the following note); cf. de Visscher 1940, 20 and 104f.
- 24 FIRA I 68: Ei tines ek tes Kyrenaikes eparkheas poleiteai teteimentai, toutous leitourgein ouden elasson em meirei toi ton Hellenon somati keleuo, ektos t[o]ut{i}on hois kata nomon e dogma synkletou, e toi tou patros mou epikrimati e toi emoi, aneisphoria homou sun tei poleiteai dedotai. Kai toutous autous, hois he aneisphoria dedotai, touton ton pragmaton einai ateleis, hon tote eikhon areskei moi, hyper de ton epikteton panton telein ta geinomena. Modern researchers mainly concentrated on explaining the mysterious insertion em merei to ton Hellenon somati; cf. for example Stroux and Wenger (1928, 46ff.); v. Premerstein (1929, 467ff.); de Visscher (1940, 89ff.); Wilhelm (1943, 2ff. and 1974, 106ff.); Oliver (1960, 324ff.); Atkinson (1966, 21ff.); Sherwin-White (1973, 334ff.); cf. also Renehan, Greek lexicographical notes, s.v. soma. If

- one leaves this yet unsolved and probably insoluble problem aside, the edict reveals even more clearly the profound turn in the Roman civil-rights-policy.
- 25 This alone excludes M. Stahl's (1978, 67) idea that the Cyrene edict would only relate to civic liturgies and left a general exemption from taxes untouched (especially since, as stated before, no principle freedom from taxes existed even for Roman citizens in the provinces). Sherwin-White, on whom Stahl bases his conclusion, does not claim this. Regarding the extensive scope of this decision on fundamental principles cf. also v. Premerstein 1929, 468.
- 26 This, however, Schneider believes (1977, 226) following Lesquier (1918, 334) (cf. note 27).
- 27 Supported by de Visscher (1940, 106 and 108). The fact alone that Octavian was now forced to restrict the formerly unlimitedly granted freedom from taxes makes Lesquier's supposition, adopted unreservedly by Schneider, according to which the formerly granted exemption from taxes referred only to the land on which the veterans were allowed to settle, unlikely.
- 28 That this decision was of a fundamental character is proven by the fact that Domition fell back on it *expressis verbis* as he provided, as an exeption, citizenship and *conubium* for his discharged pretorians: He, too, granted them immunity in this restricted form; on CIL 16.25, cf. Wolff 1986, 105f., and Link 1989, 72ff.
- 29 Not any *civitas* necessarily freed its owner from liturgies. Only this certain one, *that civitas optimo iure* named in the *lex Munatia Aemilia* and corrected by the ruling that is reflected in the Cyrene edict also exempted its owner from liturgies.
- 30 In more detail Link 1989, 88ff.
- 31 CJ 10.53.1; Campbell (1994, no. 169): 'Quum te medicum legionis secundae adiutricis esse dicas, munera civilia, quamdiu reipublicae causa abfueris, suscipere non cogeris. Quum autem abesse desieris post finitam eo iure vacationem, si in eorum numero es, qui ad beneficia medicis concessa pertinent, ea immunitate uteris.' Why Alston excluded this document from his compilation (p. 63f.) remains unclear.
- 32 Dig. 27.1.6.2. Horstkotte interpreted this rescript as a 'special settlement-privilege ..., that intended to make the start into a civil life easier for former legionary physicians', by granting them an entry into the circle of priviliged physicians without further examination (1991, 763). But this is a misinterpretation of the exact wording si in eorum numero es, meaning Numisius was only going to be granted the privileges in case, si, he belonged to this cir-

- cle, and only under this condition. Also his second objection is weak: There is no hint whatsoever that Numisius intended to leave the legion earlier and therefore probably had to relinquish privileges that would have been granted to other veterans; quum autem abesse desieris post finitam eo iure vacationem surely has to be translated in a way meaning Numisius did not want to take part in the already mentioned munera, not that he did no longer want to be a member of the legion.
- 33 P. Wuerzb. 9; this important source appears in Alston but is missing in Campbell (1994).
- '... the collection of petitions related to Antinoopolite status and liturgies strongly suggest that veteran status was no longer a powerful claim on the authorities' (65).
- 35 Emphasis added by SL.
- 36 BGU I 180 = Daris, Documenti No 105 = Campbell, Roman Army No 339: ... [D]iatetak[tai, k]yrie, tous ouetranous ekhein meta t[en apo]lysin pent[a]ete khro[n]on ana[pause]os. Para de tauten ten [di]ataxin e[go] epereasthen m[e]ta dietian tes [apo]lyseos... —Methodically Alston's interpretation appears to be too simple. The fact that towards the end of the second century more and more veterans refered to the privileges that they were entitled to certainly does not prove that these privileges up to then had been considered natural and therefore had not to be claimed. On the contrary: The fact that the veterans had not claimed any priviliges before clearly indicates that they had had no right to do so.—Supporting this approach and contradicting the other are all parallel cases, as for example the granting of privileges to the Antinoopolites: They, as Alston stresses continually, liked to refer to their privileges and therefore left a considerable track in the papyrological tradition—interpreted also by him as an indication that their position was and remained strong, not that it was weakened.
- 37 Concerning further restrictions: Dig. 49.18.2,4,5.
- 38 As already stated by v. Premerstein (1929, 468): 'To grant the same exeptional situation (like the one old-Roman citizens enjoyed) also to the new citizens, who mostly emerged from the economically strong section of their native communities, could have easily become fatal for the often enough already ailing finances of the communities and would therefore have imposed limits on a generous granting of the Roman citizenship. Accordingly Augustus put up the principle for the Cyrenaica—and definitely not only for it—that new citizens of a peregrine native community should remain obliged to perform liturgies.' On the same lines: Rainer 1986, 89.

Rome and her enemies: Warfare in Imperial art

Niels Hannestad

By the end of the Republic, the Roman Empire had almost completely encircled the Mediterranean Sea, which became the *Mare Nostrum* to the Romans. For the preceding two centuries, its imperialism had mainly been directed towards old nations, many of them Greek. During this process Roman art became increasingly influenced by that of its opponents, as expressed so aptly in Horace's later words (*Epist.* 2.1.156):

Captured Greece took captive her uncivilized conqueror and introduced the arts into rustic Latium

The expansion to come had the goal of incorporating the barbarian periphery, but continuous fighting also took place with the only other empire left, the Persian Empire. The enemies of the future were outside the Graeco-Roman cultural sphere. They were barbarians.

The late Republic had developed an iconography to portray victory, predominantly to be expressed in coinage: Barbarians, their hands tied behind their back, shrink beneath trophies, barbarians surrender, and victorious ancestors are depicted. A curious and very un-Greek representation is the depiction on a denarius (RRC 286/I) (plate 2I) of the mighty warrior M. Sergius Silus, who lost his right arm in battle. He had an iron hook fixed into the stump; and mounted, holding both sword and the severed head of a Gaul in his raised left hand, he continued fighting. The Republic also witnessed the invention of the triumphal arch, perhaps the most successful piece of propaganda architecture ever invented. In origin, the triumphal arch was actually a

statue base carrying the victorious general in a chariot, and functioning, as Pliny (*HN* 34.12.7) tells us, to elevate the person represented over all other mortals. To pass through the arch was to symbolically pass under the yoke.

With the introduction of the principate, the refined political system, by which Augustus in 27 BC regularised his one-man rule, a new State Art was formed (Hannestad 1986, chap II; Zanker 1987). The period also witnessed a new setting: the Imperial forum (La Rocca 1995). Greek forms and prototypes were still basically the models to draw on as regards iconography. Roman State Art, however, developed in a different direction, and in representing battle the combatants are never idealised or singled out, as we know it from Greek art. Roman battle scenes are grim.

Augustus claimed to be only *primus inter pares*, but his power was based on victory in civil war, which could not to be celebrated as a *bellum iustum piumque*, a just and fair war. The final clash was disguised as a war against Egypt and its notorious queen, Cleopatra. The conquest of Egypt was advertised by coins such as the denarius (*RIC*² (nos.) 275a-b; 544-46) (plate 22) showing Augustus on the obverse and a crocodile on the reverse, and simply stating AEGYPTO CAPTA.

After the war, Augustus is shown on coins as victorious in naval battle, in types like those showing Victory on the prow of a ship, himself crowning a rostral column or standing in a triumphal chariot; but such coins give no specific reference, only the legend IMP CAESAR. Augustus had two triumphal arches erected in his honour, one for the precarious victory over Mark Antony at

Actium in 31 BC and a second for the return from Parthia in 20 BC of the long-since-conquered military standards—a victory with no battles fought. Both arches were situated on the Forum Romanum. The first was demolished, perhaps to give room to the next, of which only the foundation and some fragments of the structure exist. A series of denarii illustrating the arch gives a better impression (*RIC*² no. 350) (plate 23). Parthian archers crown the building, but otherwise conquered foes are rare in Augustan art.

This same 'victory' is the motif on the breastplate of the cuirass of the Prima Porta statue of Augustus (plate 24). In the centre of the scene, the Parthian king presents an eagle-crowned standard to a cuirassed Roman, who cannot be identified with certainty. These two figures are surrounded by personifications and gods, to give the scene of surrender a touch of serenity and make it something approved of by the gods. The armoured emperor is addressing his soldiers by giving an *adlocutio*, as evidenced by his elevated right arm (the original fingers more extended). He is calmly moving towards the spectator, guiding him by this gesture and the direction of his stern gaze. Following the instruction, you know exactly where to stand in front of this commanding statue, representing the master of the world.¹

The main monument of the period is the Ara Pacis Augustae, the Altar of Peace, dedicated on 30 January 9 BC. It happens to be the first state monument of the new system of government, the Principate, to be fairly well preserved, and it continues to be considered among the founding monuments of Imperial Rome.2 It celebrates the new era of peace, the pax romana, inaugurating a Golden Age, massively proclaimed in state art, and a key topic in poetry. However, no conquered enemies are rendered on the Ara Pacis—only a seated Dea Roma, symbolising that fighting has ceased. The tone of the Ara Pacis is aloof, and this goes for much Augustan State Art, including the portrait of the emperor himself. The previous hundred years had witnessed continued fighting, much in civil wars, and Augustus produced what people wanted most eagerly: peace. The doors of the temple of Janus were closed three times in his reign.

During the next generations of rulers, state art developed further by forming a series of set-piece motifs to illustrate the capability of the current ruler of this system, which never formally became a hereditary monarchy. The mode of representation evolved has been termed the 'Grand Tradition' which came to make a great impact on later European art: the emperor mingles on equal terms with gods and personifications to represent an allegory of universal significance (Koeppel 1982). Various emperors had various politics, and they were to a very high degree able to put their mark on the state art of their period, and along the same lines, the ruler portrait, so to speak, became the political manifesto of the emperor (Zanker 1979; Hannestad 1986, passim). Warfare is usually rendered in an abstract way: the emperor going to war (profectio); enemies surrendering in front of the emperor, who forgives them, thereby demonstrating clementia. The emperor returns victorious (adventus), and finally celebrates a triumph, but the captives dragged along with the procession are never shown.

However, the military aspect is always present in State Art, as the security of the realm should be a matter of concern to a responsible ruler. It could be emphasised but also referred to in more general terms. Adding new land to the empire was basically considered a good thing. Victorious generals of the imperial family took on the republican tradition of adopting the names of the conquered people, such as Germanicus. And last, but not least, everyone was aware that the army was the main power basis of the emperor, who was the chief commander.

Almost every emperor celebrated triumphs and erected arches on such occasions. Good relationships with the army were always stressed, whether this was actually the case or not. Gaius invented the *adlocutio* motif on coins, to be used by all later emperors. The most refined version of this motif was struck under Nero, who never cared for the army. Nero also had his triumphal arch rendered on coins in a very detailed, bold, three-quarter-face composition (F. Kleiner 1985).

Claudius was the first great organiser after Augustus. Part of his scheme involved the annexing of new territories, some of them by war. The wars were, of course, not fought by the scholarly emperor himself, but he was entitled to the credit. During the Early and High Empire, the capability of the emperor as a general was not essential, and whether he or his generals fought the wars is not necessarily reflected in art. Most spectacular was the

Claudian conquest of Britain, begun in 43. Claudius gave his son the name Britannicus. A triumph was granted, coins celebrating the victory were minted, and an arch erected, spanning the Via Lata. A very provincial artistic offshoot of this war has emerged in the recently excavated *sebasteion* in Aphrodisias in Caria. A great part of the reliefs adorning this building celebrate the imperial family. One of these reliefs rather oddly depicts Claudius, in heroic nudity, knocking down the personified Britannia (R.R.R. Smith, *JRS* 77 (1987) 115-17, pls. XIV f.).

The Flavian dynasty came to power without any formal legitimacy, being in no way related to the Julio-Claudian house.³ Vespasian and his son and successor, Titus, had earned their merits by suppressing the Jewish rebellion, and much early Flavian propaganda in the arts centres around the Jewish war. It is a much-favoured motif in coinage such as the sesterce struck in 71 (plate 5). The reverse shows the emperor standing in full armour and leaning on a spear, his foot on a conquered helmet while he looks down at the female personification of Judaea, sitting in grief beneath a palm tree; the legend explains the scene as IVDAEA CAPTA.

The unfinished arch of Titus in the Forum Romanum is the sole preserved major monument celebrating this war. Of the planned decoration, only the twin internal panels of the archway have been carved in full scale to depict the magnificent celebration of the triumph itself.⁴

The arch of Titus remained unfinished, owing to the premature death of the emperor. His younger brother and successor, Domitian, had no share in the Jewish war. He turned the focus to the North, following the policy laid down by his father, and added new land in Germania by conquering the land wedge between the upper reaches of the Rhine and the Danube. This wedge was indeed a dangerous point on the border, as Augustus had already perceived and tried to remedy. The Germanic tribes were quickly defeated. Domitian celebrated a triumph and adopted the name Germanicus. An aureus (*BMC* II no. 143) (plate 26) refers to this war by depicting a mourning Germania, seated on a shield, before which lies a broken spear.

Domitian took great pride in State Art, but owing to

his later damnatio memoriae, his coinage is, like Nero's, the main evidence. Of his many triumphal monuments, only two relief panels survive, found stored beneath the Palazzo della Cancelleria—hence the name—and they show two most unique scenes. On the one, the young Domitian receives his father in Benevento, when he returns from the East. The scene demonstrates how Vespasian approved of his son's handling of affairs in Rome in the preceding period (which he did not). The second panel (plate 27) tells of a very reluctant Domitian, his face re-cut to become a Nerva, departing for the Germanic war, by his hesitance defending himself against accusations of being a warmonger (Hannestad 1986, 136). Virtus pushes him forwards while the encouraging couple, Mars and Minerva, appealingly turn their faces to him. In front is preserved a wing of Victory, flying ahead to assure the successful issue of the war. The scene differs in its entire composition from an ordinary profectio scene in which the emperor leaves the city firmly and steadily. These two panels must have been part of a major series showing the usual stock of setpiece compositions, including the triumph, similar to the eleven panels from a lost arch of Marcus Aurelius (see below). The two surviving panels of Domitian were apparently too strange or personal for reuse, while the rest of the series could be adapted to serve the propaganda of a new emperor.

Trajan became the great—and last—conqueror to expand the empire beyond its defensible limits.⁵ The Nabatean kingdom was annexed as the province Arabia; Dacia was conquered in two bloody wars, and finally the Persians were forced to give up Armenia and the lowland as far as the Zagros range bordering the Iranian plateau. Trajan furnished himself with three victory names, Germanicus, Dacicus and Parthicus, and he had himself depicted on coins in the act of crowning a new Parthian vassal king (BMC III nos. 1045ff.) or trampling the personifications of Armenia, Tigris and Euphrates with the legend armenia et mesopotamia in potestatem P(opuli) R(omanae) REDACTAE (BMC III nos. 331f.) (plate 28). Trajan's wars exerted heavy pressure on resources, but also resulted in some short-term profit. In particular, the conquest of Dacia, with its rich gold mines, enabled him to build the vast forum in Rome, as

large as those of his three predecessors put together, and the last to be created. He could proudly announce that the cost was paid from his personal share of the booty (ex manubiis), and state art emphasises the role of the emperor as Commander in Chief.

The Forum of Trajan marks the zenith of Roman power and is the monument to be referred to in later times as symbolising the greatness of Rome (La Rocca, 1995; Packer 1997). The enclosure wall was bordered with bound Dacians of colossal size, eight of which have been re-placed on the Arch of Constantine. Likewise, four sections of a continuous representation of a great battle, presumably from the facade of the Basilica Ulpia, have been re-used on this same arch. In its mode of representation, this Great Trajanic Frieze is an ideal synthesis of war and the ensuing triumphal celebration, held in the Grand Tradition (Hannestad 1986, 168-70; Leander-Touati 1987). The two scenes depicting the emperor, now with his head re-cut to a portrait of Constantine, have both been placed in the central passageway. On the one, a fierce battle is fought around the central figure of the emperor, while the turmoil is easing on both sides (plate 29). To the right in this section, Roman soldiers proudly display the trophy of trophies: severed heads of the enemy. The emperor is mounted, his mantle flying above his bare head; he lifts his right arm as if he were Jupiter himself. He is the epitome of the aggressive soldier emperor, who in the following century was to become the all-dominant type. The major part of the coins which refer to the Dacian wars are correspondingly aggressive. The barbarians cringe, wretched and small, at the feet of the emperor, and like a Near Eastern monarch, Trajan, with his foot on the head of a diminutive Dacian, treads him into the dust (BMC III nos. 242f. and 822ff.). This very picture is evoked by the Cynical philosopher Dio Chrysostom, as showing one of the most fundamental qualities the ideal monarch (i.e. Trajan) should possess: to be terrible to his country's enemies. On the opposite panel, the scene has changed without any marked transition, to an adventus. With a crowd of lictors as background, Trajan stands before the gates of Rome. He is being let into the city by Virtus, and at the same time being crowned by Victory.

On this same Forum, behind the Basilica Ulpia, the

viewer could observe the Column of Trajan, showing a very different representation of the Dacian wars, held in the so-called narrative tradition, by which all aspects of warfare are registered. Up the shaft of the column in 23 turns winds a more than 200m long frieze, in the same manner as a book scroll would appear, if it were to be held in only one corner. And the column with its band is undoubtedly meant to appear like a scroll in stone. On the earlier coins depicting the column, it is not surmounted by the statue of Trajan, as it came to be, but by the library's bird, the owl of Minerva, and flanking the column were the twin buildings of the Biblioteca Ulpia, which contained the written pendant, Trajan's own commentarii on the wars. Both Dacian wars are pictured on Trajan's Column, separated by a standing Victory reporting success on a shield. The models for the individual scenes were probably those sketches made in the field with a view to producing paintings to be carried in the triumphal procession. The scenes are extremely detailed with a wealth of antiquarian details. They relate history, but are not historical in the strict sense. They present formally organised scenes depicting typical activities of the campaign: marches, battles (plate 30), the surrender of the enemies, sacrifices and the adlocutio (plate 31). As the emperor is shown addressing his soldiers, he is also shown attending his men when they are busy building roads or making fortifications, etc. He is never accompanied by the gods. In the very few instances when deities appear, they are part of the setting. From his river, Danubius looks kindly on Romans crossing, and in the great battle of Tapae (plate 30), Jupiter Tonans supports the Roman cause, but keeps in the background like an approaching thunderstorm. In nearly all scenes the emperor is represented, but in a very different mode compared to the great battle frieze. He is the primus inter pares, not invulnerable and god-like as in the Great Trajanic frieze. The column of Trajan had a successor in the Column of Marcus Aurelius, a replica, but very different at the same time (see below).

Hadrian had to face realities. Expansion had gone too far. He withdrew from the East, and he wished to do likewise from Dacia. The great wall across Britain was built: the empire began to entrench itself within permanent borders. Hadrian took on the appearance of a

Greek, the first emperor to wear a beard, but he was an experienced commander. His propaganda includes the military aspect, but in very general terms (Hannestad 1986, 191), and focuses instead on the empire as a commonwealth of equal members. On coins, Hadrian is received by grateful provinces, and sometime he restores them: he raises the humble female personification kneeling before him. Each province is named by an inscription and identified by attributes, such as a palm tree for Iudaea. In an early issue, he restores Oikumene with the inscription restitutori orbis terrarum (BMC nos. 121ff.). This very general representation of the emperor's concern for the realm became a main motif of the chaotic next century. Warfare is absent in Hadrian's propaganda; he never tramples conquered foes,6 and the defeat of the second Jewish rebellion, just as bloody as the first one suppressed by Vespasian and Titus, is silenced as regards coinage.

The relatively stable period of Hadrian continued during the reign of Antoninus Pius, but great changes lay ahead. Growing unrest along the borders turned into invasions, and during the 160's the North witnessed the first great wave of migrations. Germanic tribes besieged the great port of Aquileia in North Italy, which came as a terrible shock to Rome. Antoninus Pius had spent all his time in Rome; Marcus Aurelius and Lucius Verus, his co-regent during the first years, had to act, taking command in person. Lucius went East to fight the Persians. They were defeated (by his generals) with heavy losses and a punishing plague followed. Along the northern border, Marcus was forced to fight enervating wars more or less continuously for eight years. In his Meditations, composed during his stay at the northern frontier, he takes the role of the mild father of the nation, the image also presented in other sources. The view of the battlefield was for him horrendous (Med. 8.34): 'You have seen a hand or foot cut off, a head severed from the trunk, and lying some way off, you have an image of what man makes of himself. But this emperor was to wage more bloody and merciless wars than the Empire had ever experienced. The battles mostly took place in what is modern Bohemia, but to annex the land was now out of the question. The coins show a predominance of military types, culminating with the triumph in

176. It was his second triumph for victory in the wars *Bellum Germanicum* and *Bellum Sarmaticum*. Marcus could now boast of four victory names (against Trajan's three) and Faustina, the empress, became the first *Mater Castrorum*, 'Mother of Camps' a title regularly to be used in the following century, and frequently appearing in coinage.

Marcus' northern campaigns have resulted in two important and very different monuments: the relief panels from a lost triumphal arch and the Aurelian Column. The first upholds the Grand Tradition, with its congeries of gods and mortals within the same frame, where 'historical' scenes alternate with allegorical ones (plate 32). Among preserved monuments of this genre these relief panels represent the culmination, but also the end. They are now found dispersed, with eight reused in the attic of the Arch of Constantine, three on exhibit in the Palazzo dei Conservatori, and a fragment with a head in the Ny Carlsberg Glyptotek, Copenhagen.⁷ The architectural form and location of the monument is otherwise unknown. The 15-year old Commodus was shown standing in front of his father in the triumphal chariot but has been cut away following his damnatio memoriae. The panels on the Arch of Constantine have had the head of Marcus changed to one of Constantine for the new context.

The panels portray the ideal emperor by all his virtues. He goes to war, he makes proper sacrifices, he defeats the enemy, but forgives them when they surrender, thereby showing clementia. He brings order to the subdued land by inserting a vassal king. He returns, celebrating the triumph, finishing it with the sacrifice to Jupiter Optimus Maximus on the Capitol, and finally he shows munificentia by distributing money to the Roman People. The panels follow the general trend of the 'Grand Tradition' and accordingly no fierce battles are fought. The emperor is shown philosopher-like with long hair and beard, his face worn and tired, telling its tale of what a heavy burden imperial office must have been. Always at his side, as if watching him, is his second-in-command and son-in-law, Pompeianus, a stern military-looking man, with hair and beard cut short, as it became the fashion for the ruler image of the next century (cf. plate 15). With great artistic, as well as symbolical, effect, the Emperor and his second in command are set up against each other. Severe and relentless, Pompeianus appears the professional soldier of the future, while Marcus embodies all the traditional virtues, not least *humanitas*. However, Marcus' portrait was manipulated, in one of the few cases where we can tell. From the court physician, Galen, we learn that Marcus was just as closely trimmed as his staff, 'right down to the skin', for hygienic reasons, as protection against the plague (Hannestad 1986, 236).

The relief panels illustrate the horrors of war, but only indirectly. In contrast, on the Column of Marcus they are very direct and insistent (plates 33-34). This column, which was modelled on Trajan's, was voted in 180 after the death of Marcus and completed about 193. The relief band, reporting on the two wars Bellum Germanicum et Sarmaticum, twines upwards, and, as on Trajan's Column, the two wars are separated by a Victory writing on a shield. Although very much influenced by the predecessor, as a historical document it has nothing of its stringency and only a few scenes can be identified with certainty. Two of these are, however, markers in ancient art, as they portray miracles. In one, a bolt of lightning sets fire to an enemy siege machine, thereby saving the Emperor himself, who was besieged in a fort; in the other a thunderstorm sweeps the enemy away. This event has been described by several authors, in most detail by Cassius Dio (72.8.2). The Roman army was trapped in a valley, exhausted by the burning sun and by thirst: 'Suddenly many clouds gathered, and a mighty rain, not without divine interposition, burst upon them.' It is this deliverance we see in the form of a demonic cloud formation, from whose body the rain is pouring down. The Romans storm forth, some with their shields over their heads for protection against the cloudburst, while the barbarians are veritably flushed away. The rain demon is a peculiar figure, entirely without parallel in classical art, and is a precursor of the Medieval fable figures. At the great battle of Tapae shown on Trajan's Column (plate 10), Jupiter appears in the background, as though a thunderstorm is brewing, but he is not interfering directly in the battle. Now fate is decided by supernatural powers in quite a different manner than when there was a concrete relationship between the Romans and their gods, when *pietas* meant the observance of sacrifices and rituals. Such events as the lightning destroying the siege machine and the sudden appearance of a saving thunderstorm were regarded as incontrovertible miracles, invoked by prayer. The two miracle scenes illustrate the ongoing change of religiousness of society. Consequently the column depicts only four very insignificant sacrifices against the many different and very detailed on Trajan's column.

Compared with its predecessor, the Aurelian Column bears an almost hysterical sense of doom. Thus, one scene (LXI) shows barbarians guarded by Roman cavalry, beheading their compatriots. The fear of the bound barbarian awaiting his fate is shown with great effect. The written sources relate that the war against the northern barbarians was exceedingly bloody. Alone in the first fateful offensive across the Danube, 20,000 men were lost. The barbarians, on their part, were pressed forward from the north and east, while the Romans were short of men and supplies and were forced to admit that their frontier defence could not withstand the pressure. The situation has thus changed fundamentally since Trajan's time, and the Column clearly shows this. During the Dacian wars, the Romans had sometimes been exposed to great pressure, but were never fundamentally in peril. Now both sides fought for survival.

The barbarians' faces are highly expressive studies in ferocity or fear, with no tendency towards personal characterisation, as is seen on Trajan's Column or on the Aurelian panels. Correspondingly, the Roman soldiers have become mere stereotypes. Generally, the faces are coarse and vulgar, representing a type which came to dominate society right up to the Emperor himself in the following century (plates 35-36).

On Trajan's Column, captives are led away in a quiet and dignified manner, or collected in camps. In the Aurelian Column, this occurs with the greatest possible violence. In one scene (plate 34), the male population of a village is killed and women and children dragged off into captivity. The emperor stands with an escort, including the ubiquitous Pompeianus, floating on a segment of turf in the midst of the turmoil and watches a soldier hacking an already fallen and defenceless barbarian to death. Often women and children try to escape,

but in vain, and the Roman soldiers do not shrink even from cutting down captive women.

The Severan dynasty is the last stable period before military anarchy. The main monument of the dynasty is the triple-gated arch on the Forum Romanum, dedicated in 203, to celebrate a victory over the Parthian Empire. It differs from earlier arches erected in Rome in that the usual relief slabs in the Grand Tradition of the Marcus Aurelius panels do not occur here, but have been replaced by four square fields which look like triumphal paintings transposed to stone. This form of presentation, which in style follows the tradition of the Aurelian Column, is not felicitous here, and had no imitators. The Grand Tradition was gone, and the later arches of Diocletian and Constantine were forced to loot older monuments for grand scale representative reliefs.

For nearly a century, until the reign of Diocletian, no major monument was built by the hastily shifting emperors of the military anarchy. The political messages of the time become low-level focussing on the capability of the emperor as a general (Hannestad, 1986, 285-301). Some of these emperors were almost illiterate, but all were keen warriors; a brutal face became the ideal. This goes for Philip, nicknamed the Arab, owing to his origin as a son of a Nabatean chieftain (plate 35), under whose rule Rome in 248 celebrated its millenary. The army became all-dominant as an economic and political power, modelling the mental framework; as a letter of the period states: 'everyone is in the army'. To cope with the horsemen of the newly founded Sassasian Empire in Persia, Gallienus introduced a military reform that created the heavy cavalry, which became the fundamental force of the Medieval period, and he excluded senators from taking commands. The army was no longer for amateurs.

The short-lived emperors all claim eternal victory. Almost by definition, the victory is absolute, and given to the person who, by being emperor, is *semper invictus—semper triumphator*. A common type in Aurelian's coinage portrays the emperor as RESTITVTOR ORBIS (terrarum) and he embellishes himself with victory titles in numbers that would be equalled only by Constantine the Great, all with the epithet *Maximus*, caused by the ever-increasing word inflation: Arabicus M., Carpicus M., Dacicus M., Germanicus M., Gothicus M.,

Palmyrenicus M., Parthicus M., Persicus M., Sarmaticus M. Like the coin reverses, the many titles reflect the tendency of the times. Every emperor asserts that everything is bigger, stronger, and better than ever before, so that state propaganda became reduced to pure formula without any real content.

Out of this chaos emerged with the reign of Diocletian a bureaucratic militarised system, the Tetrarchy. As guardians of the restored order, the four Tetrarchs stand in Venice, reproduced in two porphyry reliefs set into the south corner of San Marco (plate 36). With one hand they grip their sword and with the other embrace each other. Virtus and concordia augustorum, the two fundamental and essential imperial virtues since Severan times, are illustrated here. The bearded man on the left in each group is an Augustus, while the clean-shaven one at his side is the, by definition younger, Caesar. The mask-like faces are glowering fiercely at a hostile world threatening the system. They are clad in the characteristic military uniform of their times: plain cuirass with jewel-studded belt, and above this a paludamentum. On their heads they wear the so-called Illyrian bearskin cap, which is itself synonymous with the Tetrarchy as a system. A world of difference from the Prima Porta statue of Augustus with its almost civilian appearance, stressed by the ornate cuirass and open composition, addressing the spectator—from the emperor as primus inter pares to the emperor as dominus et deus.

Constantine had to make a fresh start. With the establishment of a universal monarchy and the foundation of a new imperial capital in Constantinople, Constantine accepts the full consequences and overtly invokes all Roman emperors' more or less secret ideal, Alexander the Great. The type is announced with the vicennalia issue, to which belongs the medallion struck in Siscia in 326/7 (RIC no. 206) (plate 37). Constantine is now presented as a Hellenistic ruler, unambiguously wearing a jewelled diadem. With head thrown back, and eyes wide-open, he looks to God on high. His portrait encompasses a blend of Augustus and Trajan, suiting to the imperial salutation of Late Antiquity: felicior Augusto, melior Traiano. Eusebius blandly states that 'monarchy excels all other kinds of constitution and government'.

The portrait of Constantine, as rendered on the me-

dallion, establishes the emperor mask of all future emperors and the reverse outlines the relation to the enemies: the emperor fully armed, carrying a trophy, drags a diminutive, bound barbarian with him while he treads down a similarly small, tied barbarian in front of him.

The old system, the principate, as invented by Augustus, had failed to cope with the world that had emerged. Run by an educated nobility, it was geared for economic and military expansion. State art was sophisticated in giving variegate messages to the viewer, and often the touch of the individual emperor is felt. Regarding 'Rome and her enemies', State Art of the Early and

High Empire tells of expansion and consolidation, but in the later period of the Adoptive Emperors, future collapse can be sensed. In order to keep the Empire intact as to internal structures, and dam up the waves of barbarians, the military aspect became all-important in the State Art of the Later Roman Empire. State art of the Early and High Empire may not tell the truth, just as Late Roman State art does not, but it says something of how Rome became increasingly stressed by her enemies.

Department of Classical Archaeology, University of Aarhus

Bibliography

- Conlin, D.A. 1997. The artists of the Ara Pacis: the process of Hellenization in Roman relief sculpture. Chapel Hill and London: University of North Carolina Press.
- Darwall-Smith, R.H. 1996 Emperors and Architecture: a study of Flavian Rome (Coll. Latomus, 231). Bruxelles: Latomus.
- Elsner, J. 1995. Art and the Roman Viewer. The Transformation of Art from the Pagan World to Christianity. Cambridge: Cambridge University Press.
- Favro, D. 1996. *The Urban Image of Augustan Rome*. Cambridge: Cambridge University Press.
- Hannestad, N. 1986. *Roman Art and Imperial Policy*. Aarhus: Aarhus University Press.
- Hannestad, N. 1994. Tradition in Late Antique Sculpture. Conservation—Modernization—Production. Aarhus: Aarhus University Press.
- Kaiser Augustus und die Verlorene Republik: eine Ausstellung in Martin-Gropius-Bau, Berlin 7. Juni—14. August 1988. Mainz: Philipp von Zabern.
- Kleiner, F.S. 1985. *The Arch of Nero in Rome. A study of the Roman honorary arch before and under Nero*. Rome: G. Bretschneider. Kleiner, D.E.E. 1992. *Roman Sculpture*. New Haven and London:

- Yale University Press (despite serious drawbacks, cf. review by N. Hannestad in JRS 84 (1994) 192-97.
- Koeppel, G. 1982. The Grand Pictorial Tradition of Roman Historical Representation during the Early Empire, in *Aufstieg und Niedergang der römischen Welt* II.12 (eds. H. Temporini & W. Haase). Berlin: de Gruyter, 507-35.
- La Rocca, E. 1995. *The Places of imperial consensus. The Forum of Augustus The Forum of Trajan*. Rome: Progetti Museali.
- Leander-Touati, A.M. 1987. The Great Trajanic frieze: the study of a monument and of mechanisms of message transmission in Roman art. Stockholm: Svenska institutet i Rom.
- Packer, J.E. 1997. *The Forum of Trajan in Rome* (3 vols.). Berkeley, Los Angeles and Oxford: University of California Press.
- Pfanner, M. 1983. Der Titusbogen. Mainz: Philipp von Zabern.
- Steinby, E.M. (ed.) 1993ff. *Lexicon Topographicum Urbis Romae*. Rome: Quasar.
- Wegner, M. 1956. Hadrian. Plotina—Marciana—Matidia—Sabina (Das römische Herrsherbild, II.3) Berlin: Gebr. Mann.
- Zanker, P. 1979. Prinzipat und Herrscherbild, *Gymnasium* 86, 353-68. Zanker, P. 1987. *Augustus und die Macht der Bilder*. Munich: C.H. Beck (English ed. 1988, Ann Arbor: University of Michigan Press).

Notes

- In the museum, the statue is turned too much to the right, thereby revealing that the right arm is oversized according to natural proportions. This same unhappy view is constantly repeated in most frontal illustrations, cf. Hannestad *Klio* 81 (1999) 284-86 (review of Elsner 1995).
- 2 For a general survey with bibliography, see S. Settis in *Kaiser Augustus* 1988, 400-26 and most recently, Conlin, 1997. On the
- re-working in post-Augustan time, see Hannestad 1994, 20-67. On Augustan Rome in general, Favro 1996.
- 3 On Flavian Rome in general, see Darwall-Smith 1996.
- They, too, are only partly finished, Pfanner 1983. Presumably the arch should have been as richly adorned as the Arch of Trajan in Benevento.
- Various aspects of the expansion to the north are treated in the

WAR AS A CULTURAL AND SOCIAL FORCE

- exhibition catalogue (Ancona) *Traiano al confini dell'Impero* (ed. G.A. Popescu) (Milano: Electa 1998).
- 6 The statue of an armoured Hadrian, his foot on a subdued barbarian from Hierpytna, now in Istanbul (inv. 585) is actually reworked, presumably from a statue of Domitian. It is obvious, however, not noted, as illustrated in the Pl. 13.a in Wegner 1956, cf. N. Hannestad *JRS* 84 (1994) 192-97, review of Kleiner 1992.
- 7 G. Koeppel, 'Die historischen Reliefs der römishen Kaiserzeit IV'

Bonner Jahrbücher 186 (1986) 47-75. It has been suggested that a parallel series featuring Commodus existed, see E. Angelicoussis, 'The Panel reliefs of Marcus Aurelius', *Römische Mitteilungen* 91 (1984) 141-205. Recently the bottom part of a relief of similar size and composition has been noted on the Forum Romanum behind the Curia—oral communication from Tonio Hölscher, who noticed it and had it transferred to the courtyard of the Antiquario Forense.

From Bronze to Iron: The Rise of European Infantry

Klavs Randsborg

By fierce deeds let him teach himself to fight, and not stand out of fire (he has a shield) but get in close, engage, and stab with lance or sword, and strike his adversary down.

Tyrtaios of Sparta (c. 650 BC)

Introduction

This paper has three general theses (cf. table 4). (1) That a number of human issues and phenomena transcend the recognized patterns of culture. (2) That Europe, towards the close of the second millennium BC, after 1200 BC, experienced a highly important challenge to the dominating aristocratic or elitist norms of society, built up since the Stone Age. And, (3) that the social discourse of the idea of egality found new force, both north and south of the Alps, after about 700 BC and in the middle centuries of the first millennium BC.

The puzzled reader may ask what this has to do with the rise of European infantry. The quick answer is that the footmen in question—similarly equipped with lance and heavy shield (possibly a short sword for close combat) were fighting shoulder to shoulder in small and large 'regiments'. Importantly, they were mostly full members of society, indeed, its citizens (although the participation of outsiders, certainly allies, should not be ruled out). In this, they differed from later mercenaries or the conscripts of the modern regimental armies, at

Table 4. Chronological/cultural table

ВС	GREECE	CENTRAL EUROPE	DENMARK
2000	(Palaces)	Early Bronze Age	Late Neolithic
1500	Palaces	Middle Bronze Age	Early Bronze Age
1200	Collapse	Cremation, grave-goods disappearing	
1000	Centres*	Late Bronze Age	Late Bronze Age
800	Aristocratic 'back-lash'		
500	City-states	Early Iron Age (the West elitist)	Late Bronze Age/ Early Iron Age

^{*} mostly petty aristocracies, partly egalitarian ideology, emphasis on sanctuaries.

least before the time of Napoleon. The classic example of such an infantryman is the Greek hoplite (named after his large bronze-clad shield, the 'hoplon'), in full panoply from 700 or 650 BC onwards (Hanson 1991). Less well known, and far less discussed, is the both similar and related military development in other parts of Europe. Certainly, the hoplite way of fighting was not exclusively Greek. Everywhere, it enabled men to fight

harder by reducing fear and preventing flight. It also joined kinsmen and non-kinsmen, and the skilled with the less skilled.

Although ripe with guesswork, these theses seem to work both as a general model of the social discourse from the Bronze to the Iron Age, and of the military development of the period. Let us first go north, and into some detail.

Hjortspring

Find, Boat, and Crew

One of the truly famous archaeological finds from the Iron Age in Europe was the huge military sacrifice found in a tiny bog at Hjortspring on the island of Als (off Southeastern Jutland) (Randsborg 1995) (plates 38-39). It contains a magnificent boat or huge canoe with room for some 22 paddlers-cum-warriors, plus the weaponry and other equipment for a small fighting force substantially larger than the crew of the boat. The date of the sacrifice was *c*. 350 BC, the time of Philip II, the father of Alexander.

The Hjortspring find was excavated in a masterly fashion during the early 1920s (minor digging for peat before the excavation means that the find is not complete); the work carried out to preserve the delicate wood was outstanding for its period (Rosenberg 1937). The find has recently been conservated anew and is exhibited beautifully in the Danish National Museum. But perhaps its deeper secrets are only beginning to be revealed.

The boat is of knot-free lime from very tall trees and only weighs about 500kg. Its total length is 19m long in all, with interior measurements of little more than 13 x 2 x 0.75m. It is made of five broad, thin boards and has identical prominent double-prows at both ends, the lower 'beak' by far the most powerful, although this is not visible. At one end there is a small quarter-deck with three ornamented seats, the one for the steersman, while the other two face the crew. A rudder was also found at the other end which would seem to imply the presence of a fourth 'commander' or 'veteran' warrior who indicated the cadence to the two times nine paddlers facing away from the quarter-deck. Up to eighteen long and

narrow paddle-oars (common warriors) and two punting-poles (commanders) were found, corresponding to the suggested crew, but, for obvious reasons, omitting the steersmen.

At sea it would have been possible to ram enemy vessels of similar construction amidships with the strong lower beak of the prows, perhaps using the quarter-deck as a fighting-platform.

The warriors would no doubt have drilled a great deal together, and the disciplined lifestyle on board the boat would, for instance, have created further bonds between the paddlers on the same bench. Thus, fighting on land and following the order of seating on the boat, a small phalanx might have been formed by two ranks of nine warriors with the veterans on the wings. The weaponry would indicate, however, that the seniors would have made up a third rank of four. The weapons found were sufficient to equip at least four boats of the size of the preserved vessel, and thus four or more phalanxes with a total front of at least 100m.

Weaponry and Fighting Force

The offensive weaponry found at Hjortspring includes II short single-edged iron swords, 8 lances with bayonet-shaped heads, 65 common spears with heads (a very large one is decorated), 65 spears or javelins with heads (3I broad, 34 narrow), 3I javelins with small antler/bone heads (table 5). The defensive weaponry comprises some ten coats of chain-mail, in fact, the earliest in Europe. There are 52/53+? broad wooden shields with a lenticular wooden boss, and II/12+ narrow ones—the first being the heaviest, but all requiring a strong hand and arm. (There are 67/68 shield-handles, plus ten unfinished

Table 5. Weapons of the Hjortspring sacrifice, distribution according to suggested naval and military function and rank (cf. Randsborg 1995).

	PADDLER/FIGHTER	COMMANDER
Crew/Fighting Unit (total of 22 men/boat)	18 (82%)	4 (18%)
Mail-coats		10+ (?)
Swords		II
Lances, bayonet, iron head		8
Lances, common iron head(total of 65)		
— big decorated variant	I	
— common variant	64	
Javelins, iron head (total of 65)		
— broad variant	30	
— narrow variant	34	
Javelins, antler/bone head	31	
Shields(total of 63/65+)		
— narrow variant		11/12+ (18%)
— broad variant	52/53+ (82%)	
Shield-handles(total of 67/68, plus 10 unfinished spares)		
Fighting dogs		I+

spares.) It is striking that longbows are missing. Obviously, this common and highly useful weapon was not up to contemporary military standards, perhaps because of its association with hunting, and not with the fighting between honourable men, perhaps because it prolonged the period of fighting and increased the number of casualties.

This allows for the reconstruction of a mobile fighting unit of four commanders (mail, narrow shield, sword, lance with bayonet head/lance with large decorated head) and two time nine common warriors (broad shield, one spear, one javelin (half with a broad, half with a narrow head). Half of these warriors would also have had a javelin with a small head of antler/bone (round in cross-section), perhaps for piercing mail. Members of the force were most likely to have been rather young, although the probability that teenagers were included is not great, due to their insufficient physical power and stamina in full paddling and line fighting. The commanders or veterans were probably in their late twenties or thirties. Bones of Rottweiler-type

dogs would indicate the use of fighting hounds, possibly by the commanders.

The composition of the force reveals both uniformity and a specialization of tasks. In particular, the lack of a veteran javelin is noteworthy. The mail, narrow and more manoeuvrable shield, bayonet-lance, and short sword all imply fighting at close quarters in the confusing, but decisive, concluding phase of battle.

This scenario is, of course, hypothetical; for instance, the veterans of the 4+ boats may have formed a special unit, although this would have left the rest of the fighters without senior command. Indeed, a striking structural similarity is seen with the contemporary early Roman legion, including two tiers of common warriors and a third of Veterani, without javelin but with mail. The foremost Roman ranks, the light young scout troops, or Velites, are missing at Hjortspring, but may be represented by the curious javelins with antler/bone heads. Incidentally, rocks, chipped to equal size probably for use as missiles, were also found in large quantities at Hjortspring. Once more, we are reminded of the miss-

ing longbows which operated at much longer distances, and which were more precise, than javelin, spear, or rock.

Beliefs

The Hjortspring find should be interpreted along traditional archaeological lines for military bog offerings of the Early Scandinavian Iron Age (before the mid-first millennium AD), as being a gift to the gods upon achieving a major victory over an enemy force. The enemy equipment, full or in parts, was sacrificed in bogs and other wet places. The main reference is to ancient Roman and Greek authors describing and explaining such events. In the case of Hjortspring, there was only room for a single boat, perhaps the leading one, in the tiny bog. More may lie elsewhere or have been used to return the defeated and humiliated warriors to their base (there is no trace of human sacrifice), perhaps to fight another day. In the bog, the boat points due north, in the direction of Hel, the Nordic Land of the Dead.

As to the religious dimension, the Alsian home force, or militia, after having defeated the naval invasion, sacrificed the spoils, probably to the God of War (Tyr). (Two rare, but undated, Tyr place-names are preserved just east of Hjortspring, perhaps even indicating the site of the battlefield.) The ship is the symbol of the Fertility God of Frej, encapsulating the warriors, and enabling man to travel upon all surfaces. In fact, both the earthly powers of fertility and the transient ones of water (Odin?) are present in the bog—ever since the Stone Age the traditional sanctuary of the North.

Other Early Iron Age sacrifices in bogs include human bodies, costly metal vessels, female neckrings etc., fine waggons, common pots (with food), etc., all of which were probably offerings to specific deites.

Barbarian and Mediterranean Military Forces

Traditionally, the Hjortspring find has been considered 'primitive' and 'poor' (Bronze Age-like boat, very little iron, etc.), despite the fact that the mail and several of the short swords (with inward-curving edge) reflect Mediterranean types. Actually, as implied, the find is clearly a small Barbarian edition of the South European armies of the time, made up of units or 'regiments' of similarly equipped shield/spearsmen in close mutual

support, using phalanx tactics for decision in pitched battle. Such tactics, as we shall see, were quite different from the dominating middle range and thus more fluid ones of the Bronze Age.

The Hjortspring army was no doubt an amphibious elite force, judging from its small size, magnificent boat and fine weaponry. However, Barbarian armies, thousands in strength, were also known in this period. These were probably made up of militia forces involving a large part of the male population, sometimes even all able men.¹

Interestingly, Barbarian Iron Age migrations may thus have come about for military reasons. The necessity to launch substantial forces to fight against Mediterranean armies would have taken a large part of a male population from home. Logistics would therefore have called for additional support from the women, which probably resulted in the migration of all the men, women, children.

Such an army is a very slow one. Elite forces, by contrast, moving by foot, horse, or ship, were mobile and skilled in the art of surprise attack, as well as in bolstering other forces.

Although cavalry is no part in the Hjortspring fighting force, mail was originally probably a cavalry defensive weapon.² Thus, when fighting at home, the 'commanders' or 'Veterani' might have been mounted. In fact, a local militia force, fighting (and beating) a Hjortspring amphibious force, may have had the benefits of using cavalry for scouting, movement at the flanks, and pursuit (cf. Spence 1993).

The Enemy

The Hjortspring find also contained various other equipment, including bronze dress accessories, various vessels in bronze (?), wood and clay, wooden dishes, spoons, a spindle, a scoop (for the boat), wooden discs with handles (perhaps 'gongs', with sticks), a flute, various tools (for repair of boat and weapons), thin ropes, a cheek-piece, and, not least, a series of fine turned wooden boxes etc. The technology used in the production of the latter was not rivaled in the North for a thousand years. Surprisingly, they seem to imitate contemporary Greek *pyxides*, as made in Athens in the fourth century BC and traded, with other fine-wares, across the

Mediterranean, for instance at the emporium of Spina near the Po estuary and in close proximity to Central Europe.

The southern *pyxides*, wooden and other, found ceramic imitations in the greater Hamburg area, and only there. According to Tacitus (around AD 100), this is the ancient home of the Lombards, 'hemmed in by mighty peoples, they find safety, not in submission, but in the risks of battle' (*Germania*, 40). This therefore seems to be the region of origin of the Hjortspring amphibious force. It would have made its exit at the Elbe, crossing the narrow land-bridge to Jutland at the later Hedeby, and alighted from the Sli inlet just south of the island of Als.

Possibly, the naval operation, being in need of constant support (unlike Alexander's troops, for instance, who were supplied from the fleet (cf. Engels 1978)), was only a mobile arm of a failed much larger southern 'SeaLand' invasion. The focal objective of the Hjortspring amphibious force during such an operation would have been an attack to the rear of the main enemy forces, perhaps to plunder the island of Als for supplies, perhaps to control it.

Incidentally, the hypothesis of a much larger invasion—no doubt rare in the history of Iron Age Denmark—rather than a mere naval operation, would perhaps explain the rarity of military sacrifices in Iron Age. In the Iron Age, raiding could not have been uncommon, so major sacrifices of weapons and boats may indicate military events beyond the usual.

Hjortspring and After

The fate of the Hjortspring force would lead us to suppose that the tactics necessary to counter phalanxes would possibly have been much the same as those of the attackers, in addition to mobility, and, *sans doute*, attacks on the lines of supply—even denying logistics to the enemy.

Actually, this is a concise description of the successive development—in later Antiquity and the early Middle Ages—of northern Germanic light mobile armies and amphibious elite forces (cf. Adler 1993). Right up until the time of the arrival of the Medieval cavalry and infantry, such armies relied on old-fashioned lance and shield tactics, and thus on phalanx fighting. Many warriors did not even carry a sword and were therefore highly de-

pendent on the protection of their neighbours in battle. The only defensive weapon was a large, though manoeuvrable round shield with a round iron boss; often decorated, it was the pride of the fighter.

The elite army of the military sacrifice at Ejsbøl, Southern Jutland, for instance, from the fourth century AD, is a composite one (Ørsnes 1984; cf. Randsborg 1995). Some 60 swordsmen (including 12-15 commanders, mainly horse [nine]) were supported by a company or two of foot soldiers (120 in all) with only lance, javelin and shield. From the same period, at Nydam (also Southern Jutland) there is a military sacrifice with fine boats, reflecting a mobile force composed of a company of swordsmen (also carrying lance, javelin, and shield), supported by 240 fighters with only lance, javelin, and shield plus a large platoon of bowmen with axes. There was a small cavalry unit attached to this force, though merely commanders.

The rarity of the sword is all the more remarkable because, undoubtedly, the weaponry and other military equipment from the Nordic military sacrifices had a close resemblance to the weaponry of many Roman auxiliary infantrymen and troopers, often of Germanic extraction. A possible reason why swords (which were then rather large, and double-edged) were rare, could be their high cost, but this cannot be the whole answer. A better explanation is that the ancient 'Greek' way of close phalanx fighting lived on in Scandinavia, always outside the Roman Empire.

The second observation, that of the composite nature of the Germanic Late Roman and Migration period forces, takes us both back to Hjortspring and to the contemporary, highly professional, multi-functional, Roman army. Adding the Nordic warship to this picture, we note a society raising elite forces, no doubt organized in 'ships' (and 'harbours'), for offensive warfare. The additional full militia or local army would be composed of common fighting men, possibly even women (though not as official fighters).

Technologically, economically, socially, and in terms of organization, the Nordic warship of the age was a highly formative institution, a fine expression of the aspirations and potential of society, even requiring the warriors to perform the same tedious but egalitarian duty of rowers. A striking parallel is possibly found in

the high degree of similarity in size and lay-out of contemporary farmsteads.³

The first naval barriers in Denmark are from just before the birth of Christ, thus long after the period of Hjortspring (Jørgensen 1997). Others are from the early Migration Period (around AD 400), but most are dated to the period after AD 700, in particular to the eleventh and twelfth centuries AD. The naval barriers, being placed in inlets, usually at the mouth, serve to prevent the inroad of enemy elite amphibious forces, thus forcing the smaller unit to disembark and become prone to attacks from numerically superior local forces. The barriers are clustered in the south of Denmark, which is transected by major waterways and corridors of transport, indeed, international routes. (Also, after AD 1000, these regions have been the most important in the country.)

The collective perspective is exciting. It has important ramifications for our vision of the somewhat later Viking Age warfare, the rise of armed followers of magnates and kings—the heavy infantry and cavalry of the day—and, even, for the military structure of the High Middle Ages in Scandinavia.

For instance, the division of the forces into small elite ones, the later *lids* (or armed followers of the magnates), and larger militias goes a long way to explain, even nullify, the confusion over the notably rather small Viking Age and Medieval armies on the attack and the large size of the militia force, called the *leding*, but in Latin, confusingly, the *expeditio*. The operational existence of the militia has even been brought in doubt (cf. Lund 1996).

After this *excursus*, let us turn back to the temporal and spatial horizons of Hjortspring.

Society

Northern Europe

Apart from Hjortspring, Southern Scandinavia and Northern Germany are almost completely devoid of military finds in the earliest Iron Age (cf. Randsborg 1995; also for the non-referenced items below). No weapons are found in the graves (all cremations), the villages and hamlets are unfortified, and, as mentioned, made up of smaller farmsteads of roughly similar size, no boundary walls are seen, no naval barriers, etc., etc. Still, a highly developed military organization existed in a society belittling military prowess (as well as social stratification). Clearly, the social discourse was a very different one from that of the Bronze Age, especially the Early Bronze Age (second millennium BC).

In the Early Bronze Age, weapons were common in both graves and sacrificial hoards of valuables, including a few cultic items like the Sun Chariot and the Skallerup Waggon, forerunners of the many specifically cultic objects of the following periods. In the Early Bronze Age graves, usually in prominent burial mounds, differences in personal equipment, including exotic bronze and gold, reflected the display and competition among the elites. The settlement was then scattered and made up of large farmsteads, some with wide structures up to fifty metres long. Competition (and social mobility) also

showed in the weaponry, dominated by various combinations of fine sword, dagger, axe, fighting lance with powerful bronze head, and, bow-and-arrow. There were, however, almost no defensive weapons, except for thick fighting skull-caps and coats, both of wool; even shields are missing, or very rare, at any rate small, round, and light. The stress was on appearance and beauty, down to the finely ornamented weaponry, the elegant dress, and a beardless face.

Towards the close of the Early Bronze Age cremation gradually became the all dominant rite. This did not affect the amount of grave goods. After c. 1200 BC, however, the aristocratic use of mounds and burial goods as a means of display and competition quickly disappeared. Instead, rich sacrifices of female bronze jewellery, some weapons (including separate finds of bronze shields and rare helmets), huge cult axes, bronze vessels, gold cups, gold rings, lur trumpets, etc. dominated. This led to the sequence of Early Iron Age sacrifices—equally divided into separate categories—among which was Hjortspring.

Thus, in the Late Bronze Age (around and after 1000 BC) sanctuaries and sacrifices had taken over from graves as the prime medium of investment of metal artefacts, and no doubt served as important social foci. In spite of the aristocratic attempts, connected with Western Cen-

tral Europe, to restore the old order, the demonstration of social inequality was suppressed, in particular after *c*. 8-700 BC, where even the sacrifices themselves became simpler. At the beginning of the Iron Age (500 BC) settlement was dense, with complete field-systems, where the individual farms were small, but all families were in control of cattle and other means of production.

Towards the close of the Late Bronze Age, indeed already around 8-700 BC, both the fine long-sword of bronze and the lance with a large head of bronze had disappeared. Such fine weapons were eventually supplanted by a cheaper lance or spear with an iron head. As to defensive weapons, the shield was at first round and large, and looked much the same across Europe from Late Bronze Age Denmark to Iron Age Greece. It was made of decorated sheet-bronze (or leather). In the earliest Nordic Iron Age, however, the shield became oval or square, much heavier, and usually made of wood. This change in shield, along with the introduction of the simple lance with an iron head, evidently reflect new tactics of fighting, in formation and at close quarters.

In conclusion, the new weaponry and tactics appear in the aftermath of the decline of aristocratic Bronze Age values and weaponry, and led, some centuries later, to the Hjortspring phalanx of the fourth century BC.

Central Europe

Much the same development is seen in Central Europe as in the North, including richly equipped late second millennium BC burials. Therefore, only selected features are highlighted here. One of these is the resurgence of aristocratic values (and sword-dominated weaponry) in the first quarter of the first millennium BC in the 'Celtic' west. In the second quarter of the first millennium BC (the local Early Iron Age) this milieu found itself at the extreme end of commercial Greek interests, which supplied the local aristocracy with the means—however short-lived and probably poorly understood, apart from their splendour—to triumph. Thus, a Colonial Western Greek bastioned city-wall in mud-brick (which no doubt suffered from the heavy rains of Central Europe) was built in the sixth century BC at the Heuneburg hillfort and princely centre, Southwestern Germany. Here, as elsewhere in the region, for instance, Near Eastern furniture with ivory fittings was imported and Archaic Greek monumental sculpture imitated (Kimmig 1983). Indeed, a link, based on economic interests, is clearly seen between Central Europe, the Etruscans, Magna Graecia—in several respects the shamelessly rich 'America' of Hellenism—and, even the Near East.

In western Central Europe the long-sword disappeared with the advent of the strong Mediterranean impact of the sixth century BC. It was supplanted by (twin) spear and dagger, no doubt a reflection of Greek phalanx and similar fighting.

In eastern Central Europe links were forged with Northern Italy (Stary 1982). Here twin spear (and axe) dominated fighting, again, on the Mediterranean model from about 600 BC on, with swords disappearing even earlier. Further north, in Central Poland (en route to Scandinavia), pictures on the cremation urns of the same period tell the same story (La Baume 1963). The dominant weaponry was (usually) two spears and the new oval pan-European shield—the Hjortspring one—which usually is called Celtic. (In fact, it is Italian in origin; only the Greeks still carried round shields during the middle centuries of the first millennium BC).

Central Poland had many traits in common with Northern Europe, although it also adopted Steppe features. The cultural phenotype was 'bleak' (poorly equipped cremations, rather few sacrificial hoards, but very many settlements with small house structures). There was little stress on social stratification; rather, a strong egalitarian ethos is felt.

Also from Central Poland is the impressive (and extremely well preserved) Biskupin fortified township from around 700 BC, which displays features strangely and strikingly similar to, for instance, the lay-out of Greek colonies in Southern Italy (Niesiołowska-Wędzka 1989; cf. Hoepfner & Schwandner 1994). The said features comprise parallel streets at equal intervals along which there are house structures of the same size and lay-out, and built on to each other. Only the street along the inner-side of the enceinte of Biskupin connects the parallel streets. Planned Greek cities are known from between the late eighth and the early third century BC, with Naxos and Syracuse on Sicily being the earliest, and novel Krane on Kephallénia, Greece, possibly the last (Randsborg, forthcoming).

Thus, Biskupin, along with a few other similar com-

plexes of the same region, may themselves be colonies (perhaps from Central Europe proper), adopting the structure of contemporary colonial Greek settlements, although built in wood, not in stone, and considerably smaller. At any rate, in Eastern Europe, from Poland to the Mediterranean, the contemporary egalitarian discourse was very much felt, by contrast to the then largely aristocratic west.

Common to both regions were the many fortified settlements of the early first millennium BC—be they princely or not—as well as the (mainly later) experiments with spear-shield warfare. Such centres would, along with the local sanctuaries, have served as foci of society in much the same way as the city centre and the central sanctuaties and temples in the small Greek polis of the age. The Europe of the early to mid-first millennium BC was made up of communities, not countries.

Southern Europe

In Aegean Greece, after 2000 BC (if not before), aristocratic life focused on a series of larger and smaller palaces and other centres, foci of administration, communication, even long-distance trade, production, distribution, and cult (Dickinson 1994). In the 'palatial' period, for instance at Mycenae, princely tombs held a weaponry dominated by sword and dagger, lance playing only a secondary role.

Infantrymen occasionally occur in Bronze Age imagery too, lined up behind huge shields (seemingly of hide). They may wear a boar-tusk or other helmet, carry a very long lance, and, a long sword or a dagger. In battle and hunting scenes alike they are interspaced—in almost Near Eastern fashion—by lance- and bowmen without shields. Such foot-soldiers lacked mobility, however, and did not fight in phalanxes.

The aristocratic Aegean Bronze Age society went through several stages, but collapsed definitively around 1200 BC, leaving only minor 'European' styled leadership, incidentally with a weaponry, for instance long-swords, similar to that of Central and Northern Europe. In fact, the earliest full two-piece breastplates, made famous by the Greek hoplite and the modern dragoon alike, is a Central Europan invention of the 13th century BC, probably a bronze version of a leather cuirass. A fine vase of the 12th century BC (the famous so-called 'War-

rior Vase', from Mycenae) shows marching ranks of helmeted and perhaps armoured (leather?) warriors equipped only with spear and a light 'Thracian' shield. This is both very different from the images of infantrymen of the palatial period, and is a very early representation of what was to come.

Similar mobile infantrists, but with sword and a somewhat larger round shield, are seen in contemporary Near Eastern imagery, for instance fighting Egyptians from both land and sea. It is an interesting perspective that each of these massed and similarly equipped warriors, to judge by the weaponry, might have been an aristocrat in a Central or Northern European context.

In the Aegean Iron Age grave goods were few, and fewer still after c. 700 BC, with particularly few weapons (Osborne 1996). Almost exclusively in the Barbarian far north of Greece, including Macedonia, do burial customs allow a view of the weaponry. Early graves from Macedonia (the royal centre of Vergina), with parallels in other parts of the Mediterranean and in Central Europe around 1000 BC, hold about the same number of lances and swords, but only in two cases were the two weapons deposited in the same grave (Rhomiopoulou & Kilian-Dirlmeier 1989). Possibly, a symbolic distinction between senior and junior warriors was made at burial, one spear being omitted in all cases (along with the shield).

At Vítsa in Epiros, from c. 850 BC on, the light infantrist of the 'Warrior Vase', with lance (and a supposed shield) as the dominant weapon, is found in a cemetery holding 108 lances, nearly half in pairs, versus only 19 swords (Vokotopoulou 1986). In fact, it is possible, hypothetically, to reconstruct the force at Vítsa along the lines of Hjortspring.

Perhaps in this we see a pattern of general significance with aristocrats (or others), in the centuries after 1200 BC, leading uniformly equipped spear- and shieldsmen into battle, thus preceding the classic heavy Hoplite phalanx by several hundred years.

By contrast to the Aegean, in other parts of Southern Europe elite burials and other such manifestations were not infrequent during the early first millennium BC From Spain come stelae with pictures of aristocrats and their shield, possible helmet, sword, lance, bow and arrow, chariot, mirror (or sun-symbol), etc. (Almagro

1966). From Sardinia come figurines of warriors with helmet, greaves, and perhaps pectoral, carrying shield, sword, and bow and arrow, or, long war-club, and dagger (but no lance) (Stary 1991).

In Central Italy elite graves were rather common. Here we can see that the sword was being replaced by the dagger after 700 BC, then the dagger by the axe for close fighting, while the lance became ever more important (as did helmet and body armour) (Stary 1979). In Etruria after *c*. 650 BC the defensive weaponry was often in Greek style. Nevertheless, the Etruscans, like other Italians and Europeans, never fully traded mobility for protection. In fact, the light Greek Peltast would have been more of a model of fighting than the prestigeous heavy Hoplite, with his very costly defensive weaponry (Best 1969).

Greek vase-painting from the post-palatial and, especially, the earliest Iron Age is almost completely devoid of images. In the later Geometric period, images re-appear with, among other things, key events in the lives of the elite. Sword and bow-and-arrow dominate the weaponry depicted between *c*. 850 and 700 BC, with the lance being shown only in a quarter of the images (van Wees 1994). This may, however, not be a full representation of the actual weaponry of the time, nor of all contemporary warfare, but rather represents the weaponry of the elites. For instance, half the scenes show fighting at sea (Ahlberg 1971), and chariots are common.

In the early seventh century BC, by contrast, lances make up almost all the weapons shown in Greek vase-painting (close to 90%). Interestingly, also the Iliad

(composed in or shortly after 700 BC) has the lance as the, by far, most often quoted weapon (more than 80% of all weapons mentioned are lances). Indeed, the first pictures of Hoplite fighting (in full panoply), including the famous 'Chigi vase' made in Corinth around 650 BC, are also of this period.

There are practically no representations in Greek art of siege warfare, which anyway did not play a large role in Greece during the Archaic and Classical periods (almost all the city walls are of the period between (450)/400 and c. 200 BC (Randsborg, forthcoming)). Incidentally, clear offensive superiority was not reached in this siege-warfare until about 300 BC. By contrast, contemporary Near Eastern warfare, in a region dominated by fortified cities, very much consisted of sieges, with only a few major pitched battles given. Also in this respect, early European infantry warfare, with battles between phalanxes in the open landscape, was quite unique. On the battle-field a measure of mobility is always a prerogative. Sieges, by contrast, require stamina—and logistics.

In conclusion, shield/lance-dominated infantry fighting came about in Greece in the post-palatial Iron Age. The hoplite tactic was parallel to the development of the highly competitive *poleis*. Links between the egalitarian ideology of the polis (whatever its particular constitution) and the organization of the citizen phalanx have already been discussed (van Wees, this volume). Other important links are with a strong economy allowing for substantial investments in military equipment.

Conclusions

The history of Europe during the late second and the first millennium BC can be viewed as variations over a few central themes of the social discourse of the period. On a structural level, much the same phenomena were at work in Denmark as in Greece in any one major period.

However, common cultural history, in particular archaeology, tend to mask this fact with their focus on the strong desires at self-expression and thus on visual cultural differences between regions, underlined by the fact that production and distribution were mainly local.

The societies of European Antiquity certainly saw

disparate levels of production, organization, and intellectual accomplishment, especially during the centuries around the birth of Christ, and along the north-south axis. Upon first inspection, we find societies culturally positioned in a geographical pattern, even hierarchy. Often the robust centre-perphery perspective, inspired by an economic view of the world, is applied by scholars. In contrast to this is the historical 'stage by stage' model, stressing social discourse and communication across boundaries, indeed, common bonds.

In the present case, the rise and fall of aristocraties,

and the changing elitist and egalitarian ideology, comply with the stage-discourse model. The same is the case of the rise, during the early first millennium BC of a Europe made up of small 'communes', aristocratic or otherwise ruled, of well-defined societies, centres, and important sanctuaries.

The changing patterns of warfare were semingly the results of (I) a general shift towards lance-shield fighting (with rather cheap weapons), at work already before c. 700 BC, probably already in the twelfth century BC. Furthermore, of (2) the tactics connected with 'regimental' or phalanx fighting in the open field. And, (3) the particular Greek elaboration of the once exclusively aristocratic heavy defensive weapons of metal. These factors had a tremendous impact on European warfare, in the Mediterranean as well as elsewhere.

Whichever way we are connecting the elements, the rise of lance-shield fighting—thus, of European infan-

try—was seemingly linked with the decline of aristocratic norms and life-styles at the end of the Mediterranean Bronze Age. The phalanx is concomitant with the rise of poorer but focused and highly competitive societies, in Greece as well as elsewhere in Europe.

The new weaponry and, in particular, the new tactics might well have meant more blood shedded, but they also allowed for a high measure of decision in battle. The latter is a prerogative both for superior and for inferior, but still well-organized armies. It is also a necessity in military expansion, as in the case of the Romans. As has been noted, the European way of decisive warfare developed in exactly this way, fought by infantry and 'regimental' armies (Hanson 1991). Decisiveness lives on till this very day, even though technology and education have changed the concept of war dramatically.

Department of Archaeology, University of Copenhagen

Bibliography

- Adler, W. 1993. Studien zur germanischen Bewaffnung. Waffenmitgabe und Kampfesweise im Niederelbegebiet und im übrigen Freien Germanien um Christi Geburt. (Saarbrücker Beiträge zur Altertumskunde, 58). Bonn: Habelt.
- Ahlberg, G. 1971. Fighting on Land and Sea in Greek Geometric Art. (Skrifter utgivna av Svenska institutet i Athen, 4', XVI). Lund: Gleerup.
- Almagro (Basch), M. 1966. *Las estelas decoradas del suroeste peninsular*. (Bibliotheca Praehistórica Hispana, VIII). Madrid.
- Best, J.G.P. 1969. Thracian Peltasts and their Influence on Greek Warfare. (Studies of the Dutch Achaeological and Historical Society, I). Groningen: Wolters-Noordhoff.
- Carman, J. (ed.). 1997. *Material Harm. Archaeological studies of war and violence*. Glasgow: Cruithne Press.
- Dickinson, O. 1994. *The Aegean Bronze Age*. Cambridge: Cambridge University Press.
- Engels, D.W. 1978. Alexander the Great and the Logistics of the Macedonian Army. Berkeley: University of California Press.
- Fabech, C. & J- Ringtved (eds.), 1999. Settlement and Landscape. Proceedings of a Conference in Aarhus, Denmark, May 4-7 1998.

 Aarhus: Jutland Archaeological Society/Aarhus University Press
- Frizell, B.S. (ed.) 1991. Arte militare e architettura Nuaragica. Nuragic Architecture in its Military, Territorian and Socio-Economic Context. Proceedings of the First International Colloquium on Nuragic Architecture at the Swedish Institute in Rome, 7-9 December, 1989. (Skrifter utgivna av Svenska institutet i Rom, 4°, 48).

- Hanson, V.D. (ed.). 1991. *Hoplites. The Classical Greek Battle Experience*. London: Routledge.
- Hoepfner, W. & E.-L. Schwandner. 1994. *Haus und Stadt im klassis*chen Griechenland. Wohnen in der klassischen Polis I. Munich: Deutscher Kunstverlag.
- Jørgensen, A.N. 1997. Sea Defence in Denmark ad 200-1300. Jørgensen & Clausen (eds.) 1997, 200ff.
- Jørgensen, A.N. & B.L. Clausen (eds.). 1997. Military Aspects of Scandinavian Society in a European Perspective, AD 1-1300. (Publications from The National Museum. Studies in Archaeology & History, 2). Copenhagen.
- Kimmig, W. 1983. Die Heuneburg an der oberen Donau. (Führer zu archäologischen Denkmälern in Baden-Württemburg, 1). 2nd ed. Stuttgart: Theiss.
- La Baume, W. 1963. *Die pommerellischen Gescichturnen*. (Römischgermanisches Zentralmuseum zu Mainz. Kataloge vor- und frühgeschichtlicher Altertümer, 17). Mainz.
- Lund, N. 1996. Lið, Leding og Landeværn. Hær og samfund i Danmark i ældre middelalder. Roskilde: Vikingeskibshallen.
- Niesiołowska-Wędzka, A. 1989. *Procesy urbanizacyjne w kulturze luzy-ckiej w swietle oddziaływan kultur Poludniowych*. (Polskie Badania Archeologiczne, 29). Wrocław: Polski Akademia Nauk.
- Ørsnes, M. 1984. *Sejrens pris. Våbenofre i Ejsbøl Mose ved Haderslev*. Haderslev: Haderslev Museum).
- Osborne, R. 1996. *Greece in the Making. 1200-479 BC*. London: Routledge.
- Rhomiopoulou, K. & I. Kilian-Dirlmeier. 1989. Neue Funde aus der

- eisenzeitlichen Hügelnekropole von Vergina, Griesisch Makedonien. *Prähistorische Zeitschrift* 64:1, 86ff.
- Rindel, P.O. 1999. Development of the village community 500 BC-100 AD in West Jutland, Denmark, in Fabech & Ringtved 1999, 79ff.
- Rosenberg, G. 1937. *Hjortspringfundet*. (Nordiske Fortidsminder, III.1). Copenhagen: Gyldendal.
- Randsborg, K. 1995. *Hjortspring. Warfare & Sacrifice in Early Europe*. Aarhus, Oxford and Oakville, Conn.: Aarhus University Press.
- Randsborg, K. (ed.). Fortcoming. *Kephallénia. Archaeology & History. The Greek Cities*. (Acta Archaeologica, Supplementum) (2 vols.). Copenhagen: Munksgaard.
- Rich, J. & G. Shipley. 1993. *War and Society in the Greek World*. London: Routledge.
- Spence, I.G. 1993. *The Cavalry of Classical Greece. A Social and Military History*. Oxford: Clarendon.
- Stary, F.P. 1979. Foreign Elements in Etruscan Arms and Armour:

- 8th to 3rd centuries BC. *Proceedings of the Prehistoric Society* 45, 179ff.
- Stary, F.P. 1982. Zur hallstattzeitlichen Beilbewaffnung des circumalpinen Raumes. *Bericht der römisch-germanischen Kommission* 63, 17ff.
- Stary, F.P. 1991. Arms and Armour of the Nuragic Warrior-Statuettes. Frizell (ed.) 1991, 119ff.
- Vokotopoulou, I. 1986. Vítsa. Ta nekrotapheía mias molossikís kómis. A-G. Ipourgeio politismou. (Dimosieimata tou archaiologikou deltiou, 33). Athens: Ekdosi tou tameiou archaiologikon poron kai apallotrioseon.
- Warry, J. 1980. Warfare in the Classical World. An illustrated encyclopedia of weapons, warriors and warfare in the ancient civilizations of Greece and Rome. London: Salamander.
- Wees, H. van. 1994. The Homeric Way of War: The Iliad and the Hoplite Phalanx (I) & (II). *Greece & Rome* (2nd Ser.) 41:1-2, 1ff., 132ff.

Notes

- 1 Caesar, for instance, tells of a Barbarian 'army' of 92,000, or almost 25% of the tribal population of the Helvetians and their allies, as counted by the Romans in terms of males fit for fighting (Caesar, BG 1.29). This number is, of course, extreme.
- 2 Slightly earlier Scandinavian rock-carvings, as well as Polish decorations on pots, show horsemen with spear and shield.
- 3 E.g., Rindel 1999 (data).

War in History. Doctrine, Leadership and an attempt to Illustrate the Effect on Society

K.G.H. Hillingsø

Introduction

That war is a cultural and social force needs no other proof than the fact that English is the language of this conference held in Copenhagen and that this paper produced by a Danish soldier is in English or at least the kind of English used by someone who does not have English as his mother tongue! Following the Second World War, where the major part of Denmark was liberated by the victorious Anglo-American coalition, English became the most important language, after Danish. Before 1939, German or French would have been preferred as conference languages in this country, at least by the participating military personnel.

However, whereas language preferences have changed, the reasons for the interest in military history remain unchanged. In general, military history is studied in the Danish as in other armed forces

- to make soldiers, sailors and airmen understand the influence of the special elements of danger, fear, and confusion on their ability to solve the given tasks,
- to prevent the repetition of mistakes of the past, and
- to prevent officers from remaining tied to theories derived from history in a situation where the theories, in reality, are outdated because conditions have changed.

Specifically those military historians engaged in teaching and instructing officer candidates and higher ranking personnel and in developing doctrine¹ study military history

- to gain inspiration for the development of the doctrine or to examine whether the existing doctrine is still correct, and
- to find examples which can illustrate why the doctrine is written as it is.

As the greatest military historian of our time, the British Professor Michael Howard said in 1973:

It is the task of military science ... to prevent the doctrines from being too badly wrong. All scientific thought is a sustained attempt to separate out the constants in any situation from the variables, to explain what is of continuing validity and to discard what is ephemeral, to establish certain abiding principles and to reduce them to their briefest, most elegant formulation. (Chesney Memorial Gold Medal Lecture 1973).

In Geschichte und Militärgeschichte, Allmayer-Beck points out that the soldier holds the only job where you cannot gain experience in peacetime (von Gersdorff (ed.), 189). It is therefore natural that of the armed forces, the army attaches the greatest importance to the study of military history. Soldiers must simulate more

than 90% of the conditions of war, and this simulation gives at best a superficial picture of the outcome of the battle. As opposed to this, sailors and airmen in their daily struggle with the elements perform 90% of the tasks they have to perform in time of war, and of the last 10% almost all—except for the feeling of fear—can be simulated realistically because of the long range of their weapon systems.

Military history, however, plays an important role in all three forces, and therefore the military scholar should be well equipped to discuss with the civilian historian. There is, however, a snag in this observation if the military scholar is involved in the business of doctrine development. The military scholar, male or female, attached to army, navy or air force, is bent on preparing herself or himself and young officers, as well as other ranks, for leadership in war and for warfare. The main tool for planning and leading his troops is doctrine. If he/she is not very objective, he/she will tend to browse through military history to seek out examples—battles, phases and episodes in battles—that can be used to illustrate the prevailing doctrine or prove his/her personal ideas about the need for that doctrine to be adjusted. Hans van Wees points out that the role of the military in the rise of democracy in the Greek city states has been cited and manipulated by way of justification after the fact. He may well be right, at least that is very often what a soldier would do to history. Furthermore, most often the military scholar will be a generalist knowing the little he/she can use from all periods of history, and not a specialist in an epoch or episode. Finally, the military scholar mainly studies what others and often other military personnel have written. Such writings are often subjective, especially when written by participants who will tend to present their lucky strikes as the result of logical analysis and meticulous planning, and to explain away their failures. And to a great extend they use secondary or tertiary sources in English, German or French and not primary sources in more obscure languages, as the historians do.

The way military scholars utilize military history when they deal with doctrine development can be described with the following example. The two basic methods for destroying enemy forces are a) the envelopment to crush or force the enemy to surrender, and b) penetration aimed at putting the enemy leadership out of action and thus paralyzing or demoralizing his soldiers to make them easy prey. The British general Fuller called these methods, respectively, body warfare and brain warfare (Fuller 1920, 311; 1928, 93). These methods are generally referred to as inventions of Hannibal and Alexander the Great and illustrated by the battles of 216 BC at Cannae and 331 BC at Gaugamela, in spite of the fact that envelopment and penetration had taken place in many battles before the days of these two illustrious generals. I would therefore suggest to the historian that she/he mainly use the soldier, sailor or airman to explain why the warring parties and the fighters did what they did on a particular occasion. Because that is what the military man understands as he has spent his adult life looking for the best way of destroying enemy forces and protecting his own.

Interaction between the civil and military parts of society

When dealing with the subject of the conference it is difficult and perhaps even wrong to single war out from the general military impact on society. Many people will know that the sceptre of a royal head of state is just the artistic interpretation of the mace—the club used in battle. In feudal times, by the way, the mace was the main weapon of warring clergimen as they were not allowed to draw blood and thus could not use sword and lance in combat (Howard 1976, 5).

You probably also know that one of the functions of

a parade originally was to introduce the soldiers to the commander and the colours under which they were going to fight. Today the parade has mainly a representative function, and a degeneration of it is the guard of honour formed in front of the church by friends of the bride and groom. This was of course more obvious in the good old days, when this line was formed solely by sword-bearing officers, than it is today where the young are armed with less martial tools such as oars or tennis rackets. Another example of the former combat

relevance of today's parade is the countermarching of the band. This maneuvre is a repetition of the drill of the 16th and 17th century musketeers.

It is probably rather common knowledge that the title 'civil engineer' was introduced in the 19th century to distinguish the non-military bridge and road builder from the soldier who until then had almost held a monopoly on engineering (Pyenson 1996, 136). For instance the French military engineering schools in the late 19th century had standards at least equalling if not exceeding those of the universities, and until this century the US Military Academy at West Point was one of the few higher technical schools in the States (von Gersdorff 1974, 192 ff.).

It is less known, however, that for instance surgery, mapping, meteorology, and radio-communication were originally military specialties. The armed forces were first at schooling medical specialists to work with technical dexterity, speed, and detailed anatomic knowledge as it was easier to patch up seasoned soldiers than to train new ones (Pyenson 1996, 136). The military systematized mapping of territories, the stars, and naval hydrography. The use of radio and the organization of meteorology derived from military needs not least in connection with aviation. Even the standard metre was constructed by military experts from the French Bureau des Longitudes (Pyenson 1996, 138).

Doctrine and leadership

In the following I will give some examples of doctrine and leadership from the period in focus at this conference. As war essentially is a conflict between states, classes or coherent groups, I will not deal with individuals and duels but only with armies and warfare. Emphasis will be on land warfare as I will focus on tactics.² And I must remind the reader that I only relay the interpretation that military historians generally give.

The Greeks

The first example chosen is Greek warfare until 400 BC. The Greek concept was adapted to the democratic city-state. Male inhabitants of the town were organized in a phalanx that was 8 men deep so that the hindmost man could influence the battle with his spear. They were armed with a 6m long thrusting spear—infantry lance or pike—and a sword. They protected themselves with helmet, breastplate, and greaves in bronze, and a round shield one metre in diameter, which they carried on the left arm in straps. Straps being a new invention protecting the fingers.

The doctrine was to run forward with the lance, thrust it at the uncovered parts of the opponent's body, and when too close to the enemy to use the lance they hacked at him with the sword.

The shield not only protected the bearer but also part

of his neighbour to the left, and the phalanx that was able to keep up cohesion and constant pressure on the opponent for the longest time carried the day.

The leader fought in the ranks with the others. If he was a skilled and strong warrior he probably fought on the right flank unprotected by any neighbour. From there he would be able to lead the outflanking of the enemy's left followed up by the rolling up of the enemy phalanx. Apart from the lumbering attack this was generally the only manoeuvre in battle.

In sea battles the Greeks used the galley with strengthened bow. They tried to ram and sink the enemy vessel, and if it did not sink directly they bombarded the enemy crew with spears or other missiles, boarded and fought with their swords.³

The Macedonians

Around 300 BC the warships and naval doctrine were generally unchanged, but on land the Macedonians had improved the organization and tactics. When Alexander the Great entered Persia he had an army well suited for sustained campaigning abroad. The forces contained a variety of specialists including bowmen, slingthrowers, engineers and logisticians, but the core of the army was made up of the heavy cavalry, the Cataphracts or Companion Cavalry, and the light infantry, the Hypaspists or Shield Bearers (Keegan 1987, 35).

The main weapon of the Companions was a 2,5 to 3m long thrusting spear, and they wore a cuirass for protection. Thus what made the Companion Cavalry heavy was not so much their armament but their ability to manoeuvre and attack. The cavalry was no longer some stray horsemen used for scouting, harassing, or as messengers; it was now a phalanx on horseback. The ordinary, heavy infantry was protected like the Greek infantry and armed with sword and a 4m long pike, whereas the Hypaspists, according to some sources, used a short lance (Lauffer 1978, 52). This sounds right because it enhanced mobility, and in general the infantry was now more mobile as the phalanx could vary its depth and be subdivided (Keegan 1987, 36-38). It was thus able to move more quickly and to take up formations suited for the terrain, the enemy formation, and other special circumstances. The standard infantry formation of the Macedonians was a phalanx 16 ranks deep.

The doctrine was to start the battle by bombarding the enemy with stones and arrows to wear him down—what we today would call preparatory fire. The bombardment was followed up by an attack using a formation suited to the actual circumstances.

At Gaugamela in 331 BC Alexander concentrated his main forces on the right flank and manoeuvered using an oblique order (cf. p. 122, above) with the result that the Persian king Darius' forces lost cohesion. Then Alexander attacked with his companions aiming at Darius, who eventually fled. Alexander then solved the problems that had arisen where he had weakened his formation to make his right flank strong, and when the Persians heard of Darius' flight and began to flee, Alexander started the pursuit (Fuller 1972, 102-6).

Alexander led by indulgence and example. He was conspiciously clad and spoke to his troops—or at least to his officers—before the battle. He also presented himself in front of the formation on his renowned horse Bukefalos, which he did not use in battle in its later years. And until his wounds made it impossible he fought at the head of the Companions, or the Hypaspists if infantry went in first (Keegan 1993, 45-46, 61-63; Lauffer 1978, 197-212).⁴

The Romans

Around 200 BC the Romans began to break up the Greek inspired phalanx into Maniples (companies, as they would be called today) of 120 men. This made the phalanx—the Legion—more manoeuverable and better suited to adapt to the terrain, and gave the Romans a smaller formation—the Maniple—with a certain ability to fight on its own. (Keegan 1993, 264).

The legion consisted of 3,000 to 4,000 light and heavy infantry and 300 cavalry. The light infantry, the Velites, were armed with a sword, two throwing spears—javelins—and carried as the only protection a round shield 1m in diameter. The heavy infantry was divided into three groups according to age and experience.

The youngest were the Hastati, then came the Principes, and the oldest group was formed by the Triarii. The heavy infantry was armed with two javelins and a sword, except for the triarii, who carried a thrusting spear (lance), a sword and a dagger. For protection they all wore a helmet and breastplate of bronze, and a semi-cylindrical, rectangular shield. The cavalry had lances, swords and round leather shields. On the march everybody carried entrenching tools (Montgomery 1968, 86-89; Keegan 1993, 264).

The legion organized for battle with the velites in front. Behind them stood the main force, the heavy infantry, in three lines. The first line consisted of the 1200

hastati, the second of the 1200 principes, and the third line of the 600 triarii, all broken up in maniples placed in a chequered formation where the maniples of the second line covered the intervals between the first and the third (Montgomery 1968, 86).

The doctrine included the building of fortified camps. In hostile country a camp was erected at the end of every day. It served as a base and defence position into which one could retire if things went wrong on the battlefield (Montgomery 1968, 87-89). On the battlefield the maniple legion fought in open formation against an enemy formed in phalanx and could thereby, through its manoeuverability, break the phalanx apart. Against the loose formations of the barbarians the whole legion could fight in close order as a phalanx. The idea of offensive battle was to put the enemy under relentless and constant pressure. It was opened by the velites who after having thrown their javelins retired into the formation of the heavy infantry to fight between maniples or to protect flanks. At this point the hastati would be within range of the enemy, throw their javelins, and go for the enemy with their swords. When the hastati were worn down they were relieved by the principes. The triarii were the last reserve. They only rarely went into combat, but if the victory had not been secured by the attack of the hastati and the principes, they would form a single line and retire through the triarii who would then attack as a phalanx. In adverse conditions the triarii could also form a hedgehog formation to protect the others with their lances or secure the retreat to the fortified camp. Cavalry was used to scout, harass the enemy, protect the flanks and in the pursuit.

Against an even enemy with discipline and training equal to that of the Romans the maniple legion was not sufficiently flexible. This was seen in the battle at Cannae in 216 BC, where the Carthaginian Hannibal demonstrated his operative superiority and gave us the classic example of the double envelopment. He let the Roman infantry advance and press his centre back. Thereby the Romans were lured forward, abandoning their conven-

tional linear formation and squeezing themselves together to push through. When the Carthaginian formation was concave and the Romans had too little space to develop their fighting power, Hannibal advanced his infantry from the left and right and turned them inwards on to the Roman flanks. At the same time he attacked the Roman rear with his cavalry, and the Roman army 'was swallowed up as if by an earthquake' (Fuller 1972, 129).

Although the maniple legion after Cannae was enhanced and used with success against Hannibal, e.g., in the battle at Zama in 202 BC, the Romans in the last century BC introduced the professional cohort legion. This legion of up to 6,000 men was broken up in cohorts of 600, consisting of one maniple of hastati, one of principes and one of triarii. The battle formation thus mixed the three groups of heavy infantry, and enabled the best and most experienced soldiers to influence the rest directly. The heavy infantry was now a force of professional Roman soldiers, whereas the light infantry, the velites, were foreign auxiliaries.

Armament and doctrine were not changed very much. Only the lance of the triarii had been replaced by javelins, and these were now only thrown at very close range (25m) where the effect was optimal. The cohort legion manoeuvred and fought in formations adapted to terrain and other circumstances. They could use one (simplex acies), two (duplex acies) or three lines (triplex acies). Triplex acies, with four cohorts in the first, and three in the second and third line, was the preferred formation. The third line was a much more flexible reserve than the triarii had been in the maniple legion, and could be used to circumvent the enemy.

The Roman leaders were conspiciously dressed. Caesar, for example, wore a red cloak, his battlefield oratory was famous and he took part in the battle, though only in special cases in the first rank (Keegan 1987, 332). But there he had the officers, in particular the centurions—the backbone of the army—company commanders raised from the ranks because of their skill and bravery.⁵

The Vikings

A paper produced for any conference in the Scandinavian countries would be incomplete—at least seen with Scandianvian eyes—if the Vikings were not mentioned. However, in this context I find it relevant to deal with Viking warfare as it took place within the time span in question, and Romans and Vikings undoubtedly met in combat.

The Viking Age is generally defined as the periode from the 8th to the 11th century AD (Griffith 1995, 16-19). To be more specific, from AD 793 when the Vikings sacked St. Cuthbert's Abbey on Lindisfarne, to 1066 when Harald Haarderaade's landing in England aborted or, if you like, when the Rouen Vikings from Normandy beat the Anglo-Saxons at Hastings.

The Vikings fought foreigners, but they mainly fought other Vikings. We don't know much about their art of war. The Icelandic Sagas are of course great reading, but they were written 100 or more years after the events, and were meant to be stories told to entertain, not to rely literal and well-attested fact (Griffith 1995, 28-37, 212-15; Jensen 1993, 10-19). They convey the same truth about Viking warfare as would a Sylvester Stallone or Schwarzenegger video about late 20th century warfare.

The Vikings generally operated on a small scale against weaker or unprepared opponents, but large scale organized warfare was undertaken in Royal army campaigns with 5,000 or more men (Griffith 1995, 122-26). The army could be split up in units, 'battles', of men from the same area. It probably fought in columns rather than in line, the boat crew being the smallest tactical unit (Griffith 1995, 189).

They were armed with throwing spear, a sword, and/or an axe. Later in the period the sword was double edged without point as it was used for slashing and not for stabbing. Generally the axe would be the light type used by farmers, but a cumbersome two-handed, long-handled axe was used by the professional soldiers—the house-carls. Poorer Vikings could carry a stabbing spear. And then some would use bow and arrow. The famous archers are mentioned in the Sagas, but in general the use of missiles was not considered to be as honourable as the use of sword and axe (Griffith 1995, 163).

For protection they carried a round shield. A metal helmet, never with horns (Griffith 1995, 24; Jensen 1993,

369), was worn, but probably only by high-status men as only 80 helmets have been found worldwide. The poorer men probably only wore a leather or woollen cap. Mail shirts came into use, some so long that they even covered the ankles, but the ordinary Viking probably only protected his body with sheepskin or the like.

The doctrine was simple. First the enemy was bombarded with stones, arrows and spears to wear him down or discourage him. Then the Vikings attacked in close order, trying to split up the enemy and drive him off the battlefield by relentless pressure. A lot of yelling was heard at least in the beginning, later to be replaced by puffing and groaning.

We know of two, probably Roman inspired, formations:

- The shield burgh much like the Roman testudo, in which 6x5 men covered themselves or the leader with their shields (Griffith 1995, 143), and
- The *svinefylkja* (swine's wedge) which the Vikings used in attack to break up the enemy formation. Like the Roman swine's-head formation it had two men in front, right behind them three men, then four etc. (Griffith 1995, 188-96).

Horses were only used in combat at a very late stage. Till then they were a means for transport.

So were the boats. From around 800 the Vikings used the combination of galley and sailing ship that we today call the Viking ship. This was a means of strategic transport that in the biggest versions theoretically could hold up to 200 men. The average ship could hold around 100, but only for short trips. For long distance voyages the ship probably only took 30 men on board with all their gear, provisions etc.

Naval battle was avoided if possible as the ships were too valuable to be risked. If necessary, however, the ships lined up to meet the opponent bow to bow where the bravest and most skilled men would probably be positioned. The defender tied his ships together and made a raft of decks where he could fight as on land. The attacker could do the same or lash his boats to those of the enemy. They rowed up to the enemy, grappled, lashed,

boarded, and fought as on land. Sea battles were antipersonnel, not anti-ship warfare. The reinforcing of the ship's stern ('barded ship') was probably done more for protection than for ramming (Griffith 1995, 196-202).

The leader of the Viking horde, be he king or chieftain, was conspicuously dressed so that everybody could see him and follow his example. His position would be in the centre of the battle formation, probably marked by men carrying a banner—in the heathen days the Raven banner. As the loss of the leader could decide the outcome of the battle he might in the opening phase be protected from the enemy missiles by the shield burgh, but when infighting started he would emerge and fight at the head of his men (Griffith 1995, 127-32 and 142-53).

Lessons learned and forgotten

As shown the Macedonians learned from the Greeks, the Romans learned from the Greeks and the Macedonians, and the Vikings seem at least to have learned from the Romans. But it is also obvious that change of doctrine is not a logic development towards still higher combat efficiency. The youngest doctrine does not always seem to be the most efficient, there are strange lapses in the process, and lessons that were learned not only by another army but even within one's own seem to be forgotten.

Manoeuvre, or mobility, in battle is one of the deciding factors. Units manoeuvre to get into a position whence they can use their weapons against the enemy with maximum effect or to minimize the effect of the weapons of the enemy. The Greek phalanx had very little manoeuvrability, the Macedonian army developed into a highly mobile force, but soon manoeuvrability in battle was again reduced. Until the cohort legion was introduced in the Roman army the outcome of the battle was mainly decided by the ability of the legion to put constant pressure on the enemy, as was the case in the battles fought by the Greeks. This could be due to the fact that the Roman cohort legion was conscripted, but it does not explain why the Romans did not until a much later date, use cavalry the way the Macedonians had. It seems that the lessons learned about how heavy cavalry could change and decide a battle were forgotten for many years.

This was not the last time a vital factor was forgotten by the Romans. After they had brought their navy to good use against the Carthaginians, they forgot about the importance of a navy and neglected it. And more astonishing, later as they finally developed heavy cavalry to counter an enemy on horseback, they let the infantry deteriorate and forgot that well-led infantry with a high morale and the will to stay in position has substantial power of resistance against cavalry. This lesson, by the way, was also forgotten in the centuries where the armoured knight dominated the battlefields of Europe until the 13th century where the British longbow archers, and later the Swiss pikemen and the Hussite gunners, killed the myth of the invulnerability of the armoured knight.

When you look at the Viking doctrine you see that although the Vikings had taken up some details from the Romans the tactics were basically very primitive: attack head on and force your way into the enemy force. But an efficient battle formation, not to speak of the manoeuvering of the cohort legion, was not adopted. This was not due to lack of knowledge, as the Danes as early as the third century BC apparently had become acquainted with a phalanx-type battle formation (Randsborg 1995, 53-62). The explanation could be that the Viking warriors, except for the house-carls, were militia and thus not sufficiently trained to fight in a phalanx. It could also be that experience had shown them that their tactics were superior to the phalanx tactics. The Hjortspring find seems to suggest that stray and minor units of well-trained warriors able to fight in a phalanx had visited Denmark and succumbed to the hordes of locals. But the simple reason might well be that past experience was forgotten.

To sum up it can be concluded that there are many similarities between the way war was fought by different societies within the time-span 400 BC to AD 1000. The warring class of the societies probably learnt from past generations, and also forgot or discarded what had been passed down to them. The social structure decided the military possibilities, e.g., to build a fleet or to conscript large numbers. It also had some impact on the doctrines

adopted, but the main reasons for using a certain method were probably the same as today:

 the others (the formidable enemy or ally or the older generation) did things in this way, and the doctrine or method seemed to work.

In other words: the fighting men did, other things being equal, as they thought best no matter how their society was composed or built up.

Effects of war on society

In my mind there is no doubt that war and those who fight wars have affected society and that war can be regarded as an important cultural factor. It is, however, impossible to prove whether in the period discussed here military development changed society or development in society brought a change in doctrine. In general I believe that society changed first, as the military establishment always has been and still is very conservative. I also believe that changes were initiated by individual reformers who had vision as well as power, or at least influence, to force them through. Some of these individuals might of course have held high military positions.

However, what we today consider to be basic factors in psychological behaviour and leadership are without question strongly influenced by the studies of war, including the wars in the period in focus at this conference. This paper will be rounded off by a few examples of how the study of warfare has influenced modern psychology and leadership, taken from Géza Pérjes' chapter on military history and psychology (von Gersdorff (ed.) 1974, 201-9) and a compendium produced in February 1998 by the Center for Leadership of Danish Defence and Faggruppe Management at the Royal Danish Defence College.

Psychological research in wartime stress has shown that fatigue caused by fighting not only influences the muscles but also the nervous system. The nervous system is also influenced by uncertainty, and uncertainty is a constant factor in battle. Psychologists point to the closed battle formations as used by Greeks, Macedonians, Romans, and Vikings as an explanation for how the warriors were able to function under the extreme stress in battle. Today soldiers are spread thinly over the battlefield because of the enhanced effect of weapons and to keep casualties down, and you try to compensate for the stress at least by letting the soldiers fight in pairs.⁶

Another factor that compensates for stress is the noise that the soldier himself produces. The Vikings and other ancient warriors are known to have used war cries and hammering on the shields. As studies have shown this not only spread fear amongst the enemy but also bolstered the noise-makers. Therefore modern soldiers are trained to yell and scream when in close combat thereby at least gaining self confidence.

Turning to leadership you will find that Scientific Management is based on the studies of leadership and management under the most extreme circumstances namely military leadership in battle. Scientific Management is also called Taylorism as the system was drawn up by the American engineer Taylor around the turn of the century. Taylorism is based on the principles of unity of command, specialization, and leadership through exception. Today's Total Quality Management is by many seen to be a hidden return to Taylorism.

The concept of personal control was developed by the US paratroopers in 1944, and even the latest fashions in leadership theory were developed on the basis of studies of war and the military:

- Benchmarking is the measuring of own performance against the performance of others in order to get inspiration for changing own methods in order to obtain better results. To illustrate benchmarking it is mentioned that German officers in 1914 studied a travelling circus to find the most rational way of pitching and pulling down tents. During the conference another example was mentioned when Tønnes Bekker-Nielsen talked about how Pyrrhus and the Romans mutually gained good ideas by watching the opponent constructing his camp.
- Value based leadership or culture management is the principle of running an organization through

the furthering of common values and attitudes. It is generally acknowledged that this principle has been practised in military organizations since the beginning of organized warfare.

But the most striking example is that the type of leader that led the armies between 400 BC and AD 1000 is still held in the highest esteem. Leaders are today seen to belong to three categories: the heroic type, the manager, and the technologist. The military leaders of the period discussed here were all of the heroic type. And although we live in the post-heroic age (Keegan 1987, 310 ff.), and the values of the manager and the technologist are well recognized, the heroic leader is still the most sought after.

Royal Danish Defense Academy, Copenhagen

Bibliography

Allmayer-Beck, J.C. 1974. Militärgeschichte in ihrem Verhältnis zur historischen Gesamtwissenschaft, in Gersdorff (ed.) 1974, 177-99.

Faggruppe Management i samarbejde med Forsvarets Center for Lederskab 1998. Krigens indflydelse på samfundet – set fra et management og ledelsessynspunkt. Copenhagen: Forsvarsakademiet.

Forman, Paul (ed.) 1996. National Military Establishment and the Advancement of Science & Technology. Dordrecht, Boston and London: Kluwer.

Fuller, J.F.C. 1920. *Tanks in the Great War*. London: John Murray. Fuller, J.F.C. 1928. *On Future Warfare*. London: Sifton Praed.

Fuller, J.F.C. 1970. The Decisive Battles of the Western World. London: Granada (Paladin).

Gersdorff, Ursula von (ed.) 1974. *Geschichte und Miltärgeschichte*. Frankfurt: Bernard & Graefe.

Griffith, Paddy 1995. The Viking Art of War. London: Greenhill

Howard, Michael 1976. War in European History. Oxford: Oxford University Press.

Jensen, O.R.H. 1993. Vikinger. Copenhagen: Munksgaard.Keegan, John 1987. The Mask of Command. Harmondsworth and New York: Penguin.

Keegan, John 1993. *A History of Warfare*. London: Hutchinson. Lauffer, Siegfried 1978. *Alexander der Grosse*. Munich: Deutscher Taschenbuch Verlag.

Montgomery of Alamein, Bernard 1968. A History of Warfare. London: Collins.

Parker, H.M.D. 1958. *The Roman Legions*. Cambridge: W. Heffer & Sons

Perjès, Géza 1974. Geschichte und Militärgeschichte, in Gersdorff (ed.) 1974, 201-9.

Pyenson, Lewis 1996. On the Military and the Exact Sciences in France, in Forman (ed.) 1996, 135-52.

Randsborg, Klavs 1995. *Hjortspring. Warfare and Sacrifice in Early Europe*. Aarhus, Oxford and Oakville, Conn.: Aarhus University Press.

Notes

- Doctrine: Fundamental principles by which the military forces guide their actions in support of objectives. It is authoritative but requires judgement in application (*NATO Glossary of Terms* (AAP 6) 1995).
- 2 Tactic(s): The employment and leading of military units in combat. At the tactical level of war battles and engagements are planned and executed to accomplish military objectives assigned to tactical formations and units (generally from the smallest unit up to division (10.000 20.000 men)). Compare with
 - —operational level: at which campaigns and major operations are planned, conducted and sustained to accomplish strategic objectives within theatres or areas of operations, and
 - -strategic level: at which a nation or group of nations deter-

- mines national or multinational security objectives and deploys national, including military, resources to achieve them. (NATO Glossary of Terms (AAP 6) 1995).
- 3 On Greek warfare see, e.g., Montgomery 1968, 59-70; Keegan 1993, 248-57.
- 4 On Macedonian warfare see, e.g., Montgomery 1968, 70-83; Keegan 1987, 27-63; Keegan 1993, 257-263; Lauffer
- 5 On Roman warfare see Montgomery 1968, 85-133; Keegan, 263-281; Parker
- 6 This and other of the subjects touched upon are treated by the French colonel Ardant du Picq in his *Études sur Le Combat*, *Combat Antique* and *Combat Moderne*, Paris: Chapelot 1914.



Plate I. The Chigi Vase. Museo di Villa Giulia, Rome. H. 26.2cm. C. 640-630 BC. The shoulder frieze showing hoplite formations about to join battle. (After *Antike Denkmaeler* II Taf. 44)



Plate 2. Detail from plate 1.



Plate 3. Red figure chalice krater by the Niobid Painter. Musée du Louvre, Paris. H. 54cm. C. 460 BC. Side A (After FR Taf. 108).

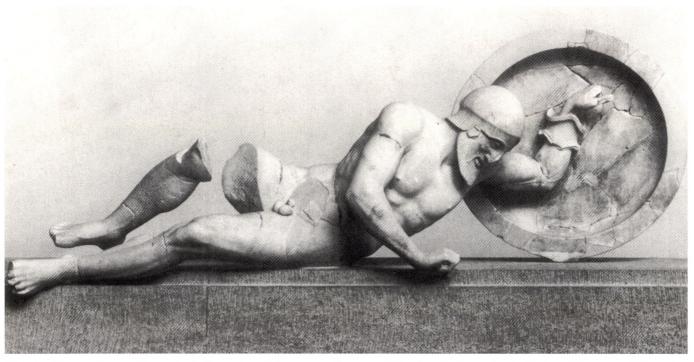


Plate 4. Dying warrior from the left corner of the east pediment of the Aphaia Temple in Aigina. *C.* 480 BC. The Glyptothek, Munich. (After Ohly, D. *Die Aegineten, Band I: Die Ostgiebelgruppe*, Munich 1976, Taf. 64).

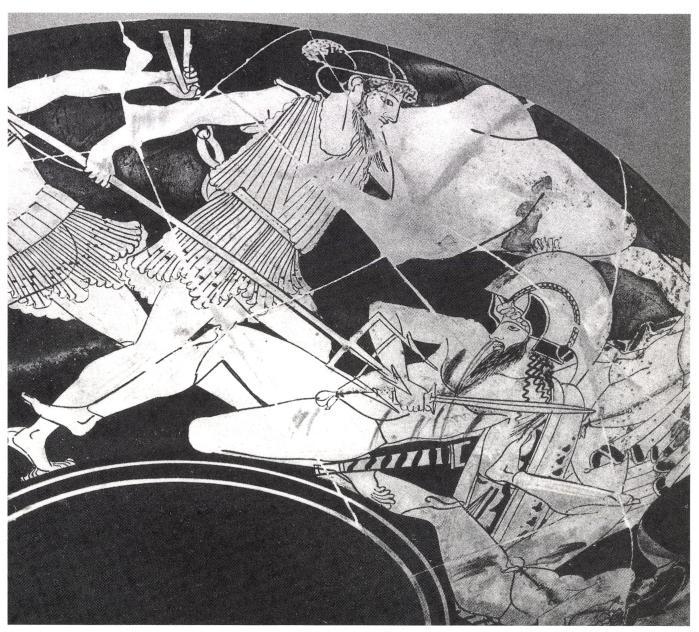


Plate 5a. Red figure kylix by the Brygos Painter. Berlin F2293. D. 32cm. C. 490-480 BC. (After CVA Berlin 2 Taf. 67-68).

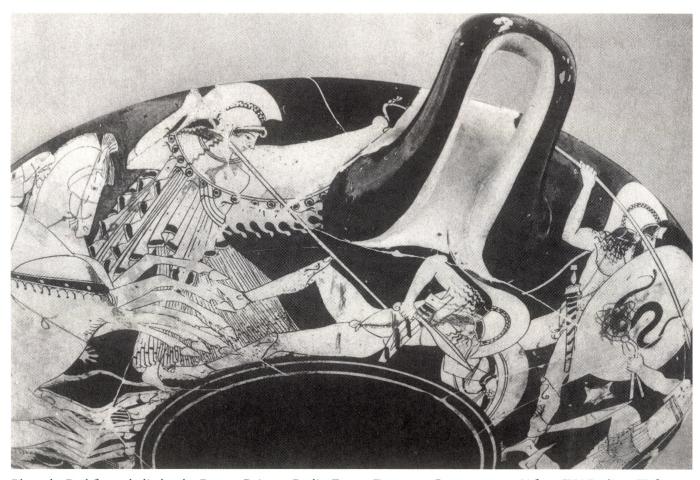


Plate 5b. Red figure kylix by the Brygos Painter. Berlin F2293. D. 32cm. C. 490-480 BC. (After CVA Berlin 2 Taf. 67-68).



Plate 6. Red figure volute krater by Euphronios. Arezzo, Museo Archeologico Nazionale inv. no. 1465. H. (including handles) 59.5cm. *С.* 510-500 вс. (After *FR* Taf. 61).



Plate 7. Black figure volute krater decorated by Kleitias, the so-called Francois vase. Firenze, Museo Archeologico inv. no. 4209. H. 66cm. *C.* 570 Bc. (After *FR* Taf. 13).

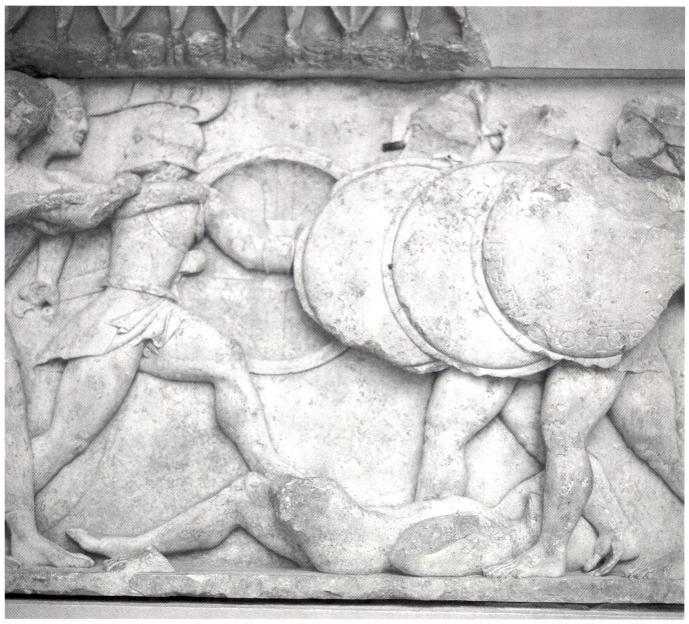


Plate 8. Detail from the north frieze of the Siphnian Treasury at Delphi. Delphi Museum. *C.* 525 BC. (Photo: Niels Hannestad).



Plate 9. Detail from the north frieze of the Siphnian Treasury at Delphi. Delphi Museum. C. 525 BC. (Photo: Niels Hannestad).



Plate 10. Detail from the north frieze of the Siphnian Treasury at Delphi. Delphi Museum. C. 525 BC. (After G. de Miré, *Delphi*, 1943, pl. 84).



Plate II. Detail from the north frieze of the Siphnian Treasury at Delphi. Delphi Museum. C. 525 BC. (Photo: Niels Hannestad).



Plate 12. Red figure kylix by the Sosias Painter. Berlin F2278. C. 500 BC. Tondo. (After CVA Berlin 2 Taf. 49).



Plate 13a. Black figure volute krater by Kleitias, the so-called François vase. Firenze, Museo Archeologico inv. no. 4209. H. 66cm. C. 570 BC. (After FR Taf. 1-2).



Plate 13b. Black figure volute krater by Kleitias, the so-called François vase. Firenze, Museo Archeologico inv. no. 4209. H. 66cm. C. 570 BC. (After FR Taf. 1-2).



Plate 14. Black figure amphora by Exekias. Antikensammlung, Munich inv. no. 1470. H. (with restored foot) 42 cm. C. 540 BC. Side A (After CVA München 7 Taf. 351).



Plate 15. See plate 14. Side B (After CVA München 7 Taf. 352).



Plate 16. Red figure chalice krater by Euphronios. New York, Metropolitan Museum inv.no. 1972.11.0. H. 45.8cm. *C.* 510-500 Bc. (After *Euphronios der Maler* 1991 p. 94).



Plate 17. Laconic black figure drinking cup by the Hunt Painter. Berlin 3404. Tondo. (After Stibbe Taf. 74).

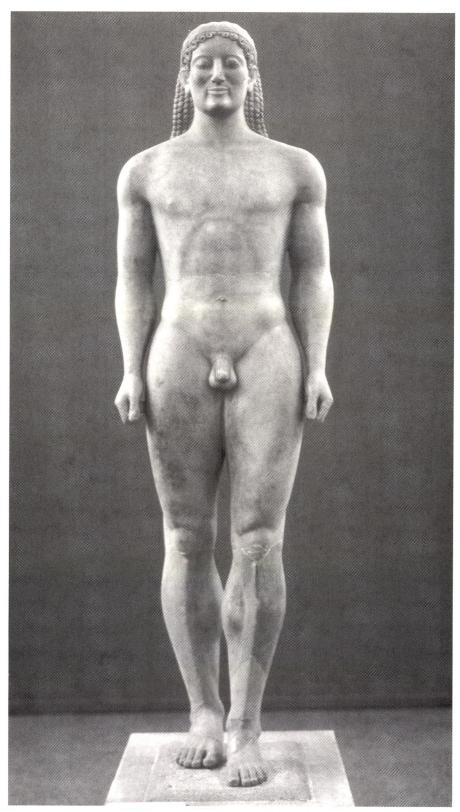


Plate 18. Kouros statue from Anavyssos in Attica. Athens, National Museum inv.no. 3851. Parian marble. H. 1.94 m. C. 525 BC. (Photo: Niels Hannestad).



Plate 19. Grave stele of Aristion. Athens, National Museum inv. no. 29. From Velanideza in Attica. Pentelic marble. H. of shaft as preserved 2.40m. *C.* 510 BC. (Photo: Niels Hannestad).



Plate 20. Grave relief from Athens. Athens, National Museum inv. no. 737. Pentelic marble. H. 2.64m. Second half of fourth century BC. (Photo: Niels Hannestad).



Plate 21. Denarius c. 115 bc. Rev: rider holding severed head. (Author).



Plate 22a-b. Denarius. Obv: Augustus. Rev. crocodile. (Bibl.Nat., Paris).



AECVPTO

Plate 23. Denarius of Augustus. Rev.; Parthian Arch. (Bibl.Nat., Paris).



Plate 24 Augustus from Prima Porta. (Vatican).



Plate 25a-b. Sesterce. Obv. Vespasian. Rev. Iudaea Capta. (Nat. Mus., Copenhagen).





Plate 26. Aureus of Domitian. Rev: captive Germania. (British Museum)



Plate 27. Cancelleria Reliefs, detail of frieze A: profectio of Domitian. (Vatican).



Plate 28. Sesterce of Trajan. Rev: Trajan amidst subdued areas. (British Museum).



Plate 29. Great Trajanic Frieze, Arch of Constantine: Emperor in battle. (DAI, Rome).



Plate 30. Trajan's column, scene XXIV: Battle of Tapae. The Roman auxiliary, who bites his teeth into his trophy (the severed head of a Dacian) not to lose it, is a unique example of irony in Roman State art. (Author).

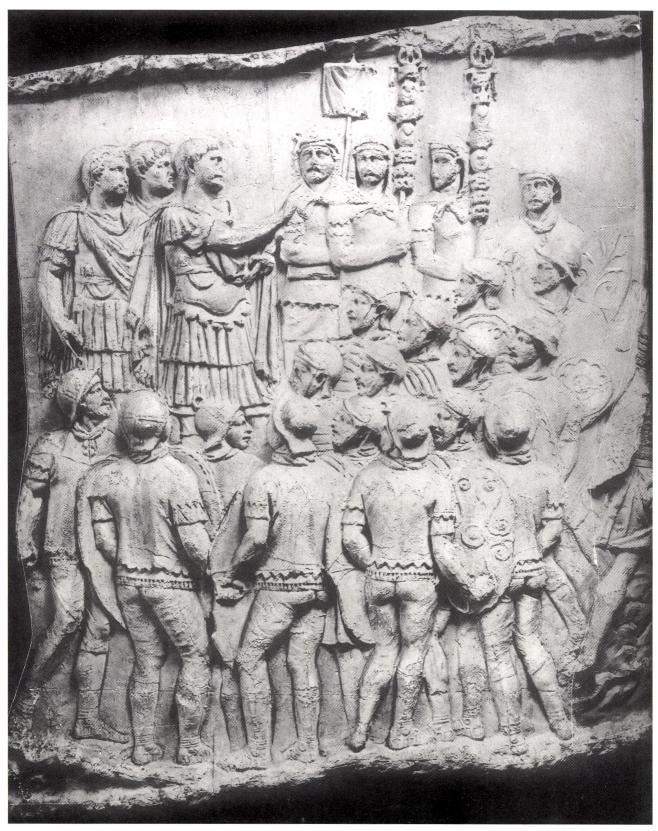


Plate 31. Trajan's Column, scene LIV: adlocutio. (DAI, Rome).



Plate 32. Panel relief of Marcus Aurelius, Palazzo dei Conservatori: clementia scene. (Fot. Un. 1956).

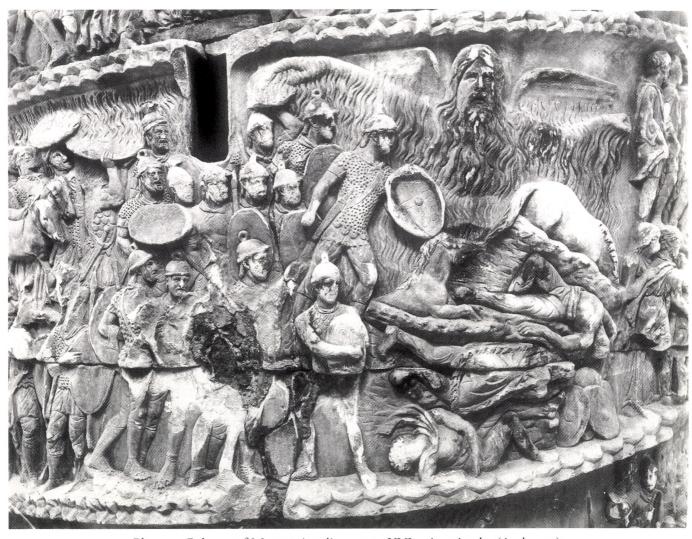


Plate 33. Column of Marcus Aurelius, scene XVI: rain miracle. (Anderson).



Plate 34. Column of Marcus Aurelius, scene XX: devastation of a village. (Anderson).

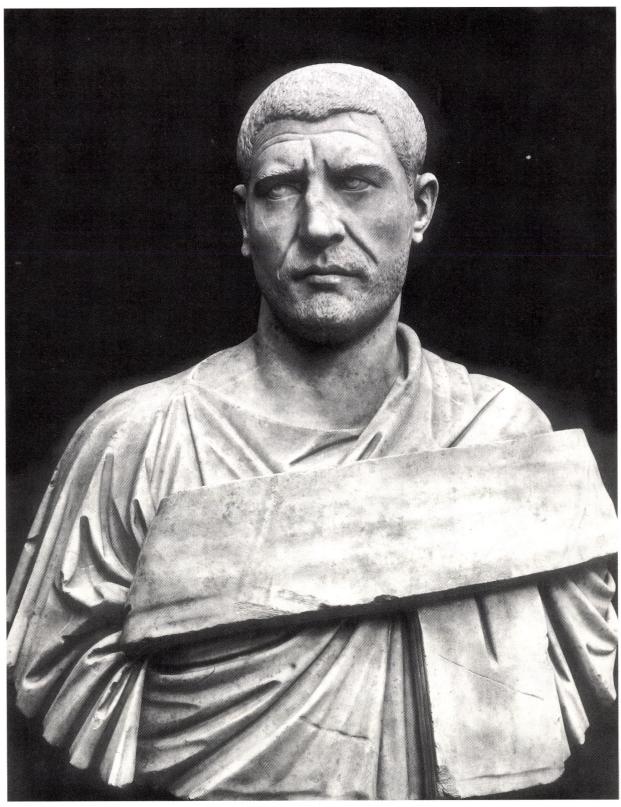


Plate 35. Philip I the Arab. (Vatican).



Plate 36. Tetrarchs, San Marco, Venice. (Alinari).





Plate 37a-b. Gold medallion. Obv: Constantine. Rev: Victorious Constantine. (British Museum).

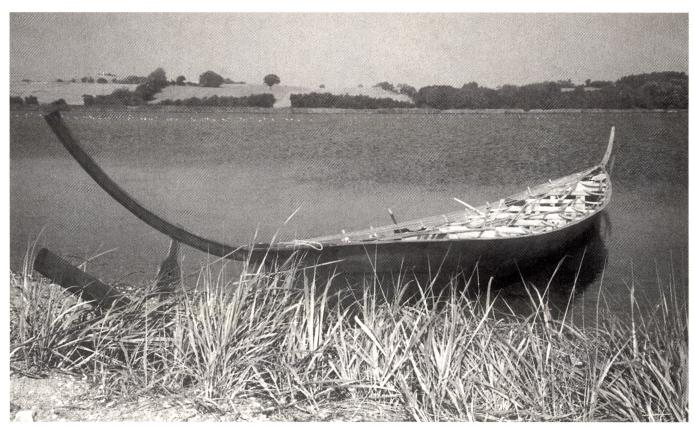


Plate 38. The Hjortspring boat. Recent trials have brought the boat above eight knots; dry rides in waves of one and a half metre in open sea are also possible. (Photo: Klavs Randsborg).



Plate 39. The Hjortspring boat, detail. (Photo: Klavs Randsborg).

Index

Achaia 22-23, 28 Athenaeus 90, 95 Actium, battle of 131, 146-47 Attalus I 95 Aeschylus 29, 33, 76 Attalus II 100 Afghanistan 99, 101 Augustus 17, 124, 130-33, 138-40, 146-47, 153 Agrippa 124 Babylon, Babylonia 34-35, 102 barbarians 15, 146, 151 Aigina 77, 113 Aitolia 22, 29, 85 bematistai 124 Akarnania 22, 29, 85 Benevento, battle of 125 Alexander 16, 75, 90-91, 95, 101, 120-21, 124, 167 boats 18, 156, 158-59, 171 Alexander mosaic 111 Boiotia, Boiotians 121 Alexandria 17, 95, 101-2 Byzantium 81 amphibious operations 158-60 Caesar 124, 131, 170 antidosis 81 Cannae, battle of 167, 170 Antigonids see also Macedonia 75, 81 Caria 35, 92 Carthage 84, 167, 172 Antigonus III 81, 92, 94 Antiochus I 91, 93, 96-98, 100, 102 cartography 120, 123-24, 127, 168 Antiochus III 91-93, 95, 97-98, 100-102 castrametation 121, 125-27 Antiochus IV 91, 99-101 Caudine forks, battle at 123 Antiochus VI 100 cavalry 31, 122, 159, 169, 172 Antiochus VII 91 cemeteries see graves Antiochus IX 95 chariots 163 Cilicians 85 Antiochus X 95 citizens, citizenship 17, 134, 138-42,155 Antoninus Pius 141, 150 Antonius, Marcus 131, 146 city planning 120 Civil war (Rome) 131, 142, 146 Apollo 24 Claudius 147-48 Appian 93 Ara Pacis 147 Clearchus of Soli 99, 101 colonies 126, 133, 162 Archelaus 101 Archilochus 24, 28-29, 35 Columella 47-49 Archimedes 124-25 commanders 15, 124-25, 142, 157, 167, 172 Commodus 150 Argos, Argives 23, 29, 36 Aristagoras of Miletus 36 Constantine 150, 152-53 Corinth, Corinthian War 25, 34, 45-46, 75 aristocracy 37, 81, 85, 155, 160-64 Aristophanes 21, 121 corvus 125 Crete, Cretans 24, 36, 38, 75, 84-85 Aristotle 21, 31-32, 45-47, 54-55, 57-58, 61, 82-83, 126 Arkadia 22-24, 36-37 Cyprus 81

Cyrene see Kyrene

artillery 98, 124-25, 128

Illyrians 85, 152 Dalmatia 133-34 India 92, 96, 98 Delian League 79 Issos, battle of III Delos 84-85, 115-16 Janus, temple of (Rome) 147 Delphi 25-27, 31, 36, 38, 101, 113 Jews 91, 148, 150 Demetrius I 99-100 Demetrius of Phalerum 90, 101 Iulius Pollux 54-55 Kephalennia 161 Demetrius Poliorcetes 82, 84, 101, 123, 127 Knidos, battle of 80 Diocletian 152 Kyrene 37, 142 Domitian 138-39 education 120-21, 126, 153 land grants 132 legion 130-35, 137-42, 169-70, 172 Egypt 35, 78, 132-33, 137-41 Leuctra, battle of 121-23 Eirene 116 libraries 95, 102, 149 elephants 98, 123 engineers 124-28, 168 liturgies 18, 61, 76, 82, 85, 137-42 Livy 93 Epaminondas 121 Lokris 22, 29, 85 Ephorus 36, 122 Lycia 35, 92 epicureanism 99-100 Lydia 30, 97 Epirus 23, 95, 162 Macedonia, Macedonians 18, 23, 94, 111, 130, 162, 169, Erasistratus of Ceos 97 172 Eratosthenes 96 Mantineia 36 Eretria 23 maps see cartography Eumenes II 95, 101 Euripides 21 Marathon 33 Marathon, battle of 59-60, 112 fleet see naval warfare Marcus Aurelius 150 Frontinus 120, 123, 125-26 medicine 97-98 funerary monuments see graves Megara 60 Galatia, Galatians 94, 96, 132-33 galleys see warships mensores 126 mercenaries 19, 20, 28-29, 35-36 Gaugamela, battle of 111, 167, 169 Messenia 21, 36 Gaza, battle of 123 metatores 126 geometry 120-21, 124, 126-27 Mithridates 90, 127 gratuities, cash (to veterans) 133 mutinies 134 graves 16, 17, 22-28, 32-33, 115, 132, 160 Mycenae 162 Hadrian 141, 149-50 Naukratis 78 Hannibal 167, 170 naval warfare 16-17, 38, 59-60, 72-85, 98, 124-25, 146, Harpokration 30-31, 59, 61 163, 168-69, 171 Heraclea, battle of 126 Nero 142, 147 Herodotus 24, 26, 28-32, 36-37, 76-78, 112 Nikias 73 hippeis 31, 46-47, 51-62 Octavian see Augustus Hippodamus from Miletus 126 Oinoë, battle of 112 Homer 24, 26, 29, 38, 77, 84, 92 Olympia 25-27, 110 hoplites 16, 20, 23, 25, 31-32, 36-37, 45-62, 110, 113, 115, oratory 120, 170 162-63

Palestine 35, 123

horses see also cavalry, 30, 47, 122

WAR AS A CULTURAL AND SOCIAL FORCE

Scipio Africanus 123 Pannonia 134 Parthia, Parthians 94 seisakhteia 62 Seleucid dynasty 74, 90-102 Pausanias 21-22, 33, 36, 112, 122 Seleucus I 91, 93, 97-98, 102-3 Peisistratus 29, 32 Seleucus II 81 pentakosiomedimnoi 46-47, 52-55 Pergamon 17, 95, 100, 102, 114, 127 Seleucus IV 99 Severan dynasty 152 Persia, Persian Wars 25, 35, 38, 75, 77, 79, 116, 152, 169 phalanx 20, 25, 61-62, 110-12, 161, 163-64, 168-70, 172 shrines see sanctuaries Philip II 121-22 Sicily 33, 46, 57, 73-74, 84, 124-25, 161 Philip the Arab 152 siege warfare 95, 98, 124-25, 128, 163 Philonides from Laodiceia 99-100 Solon 46, 50, 55-56, 61-62, 78 philosophers 99, 120-21, 124, 150 Sparta, Spartans 21, 26, 36, 46-47, 75, 77, 79-80, 84, 112, physicians 97-98, 141, 151, 168 121-22 piracy, pirates 77, 83-85, 115 spies 123 Plato 21, 45, 120 Strabo 28, 82, 96, 103 Plutarch 24, 30-31, 47, 60-61,124-25 Stratonice 97 poliorketics see siege warfare symposia 27 polis 19, 20, 29, 32, 117 Syracuse 36, 74, 124-25, 161 Polybius 81, 90, 92, 103, 122, 124-25 Tacitus 159 Pompey 131 Tapae, battle of 151 Posidonius 103 taxation 16, 18, 54-55, 76-79, 82, 85, 137-42 Praetorian guard 135 Tegea 28 Priene 35 tetrarchy 152 Ptolemies 74-75, 81, 90-92, 97 Thasos 74 Thebes, Thebans 121 Ptolemy I 90, 102 Ptolemy II 103 Theocritus 103 Ptolemy III 81 Thermopylae, battle of 36 Ptolemy IV 92 Thessaly 20-21, 23, 28, 30-34 Ptolemy VII 90 thêtes 47, 52, 57-62 Punic Wars 84 Thrace 74, 77, 80 Thucydides 22, 28, 30, 32-33, 36, 46, 55, 57-60, 73, 78-Pyrrhus 95, 125-27 quadriremes see warships 80, 84, 101, 103 quinqueremes see warships Tiberius 134 reconnaissance 122-23 timber, timber supplies 74, 81 Titus 148 recruits 130, 134-35 Rhodes, Rhodians 72-73, 75, 77, 81-85 tombs *see* graves sacrifice 155 Trajan 148-49 Salamis 23 trierarkhia 76, 79-80, 82-83, 85 Salamis, battle of 60, 84 trireme see warships sambuca 124-25 triumph 123, 146-48, 150 Samnite wars 123 Trojan war 114

Tyre 35

Varus, P. Quintilius 134-35

vase-painting III, II3-15

Samos, Samians 37, 74

Sardinia 163

sanctuaries 22, 24-29, 39, 110, 160

Vespasian 135, 148 veterans 18, 132, 137-42, 157 vikings 160, 171-72 virtus 148-49 Vitellius 135 warships *see also* naval warfare 72, 74, 76-80, 83-84, 98, 124-25, 128, 159, 169

Xenophon 31, 37, 56, 58-59, 122

Zama, battle of 170

zeugitai 46-62

Title. - Titles should be kept as short as possible and with an emphasis on words useful for indexing and information retrieval.

Abstract, Summary. – An abstract in English is compulsory. It should count 10-15 lines, outline main features, stress novel information and conclusions, and end with the author's name, title and institutional and/or private postal address. – Papers in Danish may be provided with a summary in another language by agreement between author and editor.

Typescript. – Page 1 should contain title, author's name and the name of the Academy. Page 2: Absract, author's name and address. Page 3: Table of contents if necessary. Consult a recent issue of the series for general layout.

When typing leave a 4 cm right margin. Indicate the position of illustrations and tables in the margin. Manuscripts can be forwarded on disquettes or CD, but in any case a print out must also be attached.

Figures. – All included illustrations must be marked with the authers name. It is of utmost importance that the author notices the quality of the illustrations. Fold-out figures and tables should be avoided.

References. – In general, the editor expects all references to be formally consistent and in accordance with acceptes practice within the particular field of research. Bibliographical references should be given in a way to assure avoiding misunderstandings.

Correspondence

Manuscripts are to be sent to

The Editor, Det kongelige Videnskabernes Selskab, H.C. Andersens Boulevard 35, DK-1553 Copenhagen V, Denmark. Tel: +45 33 43 53 00. Fax: +45 33 43 53 01. E-mail: kdvs@royalacademy.dk. Questions concerning subscription to the series should be directed to our

Commision agent:

C.A. Reitzels Boghandel og Forlag Nørregade 20, 1165 København K Tel. +45 33 12 24 00 Fax: +45 33 14 02 70 info@careitzel.com www.careitzel.dk

Editor

Flemming Lundgreen-Nielsen

©2001. Det Kongelige Danske Videnskabernes Selskab. All rights reserved. No part of this publication may be reproduced in any form without the written permission of the copyright owner.

Det Kongelige Danske Videnskabernes Selskab Prices abroad in DKK

II	STEENSBERG, AXEL: Hal og gård i Hejninge.	69	BRANDT, SØREN: Infinitive Control in Danish.
	En arkæologisk undersøgelse af to sjællandske		1995. 150 рр200 DKK
	gårdtomter. 1986. 93 pp. incl. 63 ill. 5 tavler200 DKK		
		70	Poetry of the Baxtiārīs. Love Poems, Wedding Songs,
12	LUND, JOHN: Sūkās VIII. The Habitation Quarters.		Lullabies, Laments with Introduction, Translation &
	(Publications of the Carlsberg Expedition to Phoenicia 10).		Notes. By Fereydun Vahman & Garnik Asatrian. 1995.
	1986. 207 pp. incl. ill., fig. og plancher 400 DKK		216 s
	DECKED C.I. Now Condend Advantaged and Advantaged a		HANGEN MOCENCHEDMAN, The Trial of Columns
13	BECKER, C.J.: Nørre Sandegård. Arkæologiske undersøgelser	71	HANSEN, MOGENS HERMAN: The Trial of Sokrates –
	på Bornholm 1948-1952. 1990. 200 pp400 DKK		from the Athenian Point of View. 1995. 36 pp60 dkk
14	OLDENBURG, EVELYN: Sūkās IX. The Chalcolithic and	72	Sources for the Ancient Greek City State. Symposium
	Early Bronze Age Periods (Publications of the Carlsberg		August, 24-27 1994. Acts of the Copenhagen Polis Centre Vol.
	Expedition to Phoenicia 11). 1991. 125 pp250 DKK		2. Ed. by Mogens Herman Hansen
			1995.376 рр
15	EIDEM, JESPER: The Shemshāra Archives 2.		
	The Administrative Texts. 1992. 164 pp350 DKK	73	KØLLN, HERMAN: Die Wenzelslegende des Mönchs
			Christian. 1996. 51 pp80 DKK
16	RASMUSSEN, HOLGER: To færøske gårdanlæg.		
	Dúvugarðar i Saksun og bylingen Heimi í húsi på	74	Introduction to an Inventory of Poleis. Symposium
	Koltur. 1992. 85 pp		August, 23-26 1995. Acts of the Copenhagen Polis
			Centre Vol. 3. Ed. by Mogens Herman Hansen.
17	RIIS, P.J., JØRGEN JENSEN, MARIE-LOUISE BUHL		1996. 411 рр500 DKK
	& BENEDIKT OTZEN: Sūkās X. The Bronze and Early		
	Iron Age Remains at the Southern Harbour. (Publications	75	The Polis – as an Urban Centre and as a Political Community.
	of the Carlsberg Expedition to Phoenicia 12). 1996.		Symposium August 1997. Acts of the Copenhagen Polis
	65 рр		Centre Vol. 4. Ed. by Mogens Herman Hansen.
			1997. 547 рр 600 дкк
18	SØRENSEN, KNUD: A Dictionary of Anglicisms in Danish.		
	1997. 405 pp600 DKK	76	Polis and City State. An ancient concept and its Modern
			Equivalent. Acts of the Copenhagen Polis Centre vol 5.
19	RIIS, P.J.: Vulcentia Vetustiora. A Study of Archaic Vulcian		Ed. by Mogens Herman Hansen. 1998. 217 pp200 DKK
	Bronzes. 1998. 137 pp. 123 figures		
		77	Medieval Analyses in Language and Cognition. Acts of the sym-
20	EGEROD, SØREN: Atayal-English Dictionary, edited by Jens		posium The Copenhagen School of Medieval Philosophy, Jan.
	Østergaard Petersen. 1999. 358 pp 480 DKK		10-13, 1996. Ed. by Sten Ebbesen. 1998. 563 pp 380 DKK
21	A Comparative Study of Thirty City-State Cultures, edited	78	Defining Ancient Arcadia. Acts of the Copenhagen Polis Cen-
	by Mogens Herman Hansen. 2000. 636 pp600 DKK		tre, vol. 6. Ed. by Thomas Heine Nielsen & James Roy.
	, 0		1999. 696 рр620 DKK
22	War as a Cultural and Social Force. Edited by Tønnes Bekker-		
	Nielsen and Lise Hannestad. 2000. 288 pp300 DKK	79	DALGÅRD, SUNE: Poul Laxmands Sag. Et dyk i dansk
			historie omkring år 1500. 2000. 233 pp 248 DKK
68	Law and the Islamic World. Past and Present. Papers		
	presented to the joint seminar at the Universities of	80	MEJER, JØRGEN: Die Vermittlung der Philosopie im
	Copenhagen and Lund, March 26th-27th, 1993, organized		Altertum. 2000. 240 pp 180 DKK
	by Christopher Toll, Jan Hjärpe, Jakob Skovgaard-Petersen		
	and Ditlev Tamm. Edited by Christopher Toll and Jakob		
	Skovgaard-Petersen. 1995. 184 pp325 DKK		