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CAVALRY IN ROMAN FIELD-ARMIES DURING
THE FOURTH, FIFTH AND SIXTH CENTURIES AD

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ABSTRACT

The primary objective of this study is to investigate the reasons for the inclusion of cavalry, its extent and significance in Roman field-armies during the Fourth, Fifth and Sixth centuries AD. This is achieved by determining the attributes that were peculiar to cavalry and its utilization in conjunction with infantry. Evidence for the extent and importance of cavalry relative to infantry in field-armies is examined.

The secondary objective of this study is to establish the value to modern researchers of the Strategikon attributed to Maurice, as a source of evidence for Roman military affairs and cavalry in particular. The theoretical expertise of the author concerning the attributes and utilization of cavalry and the extent to which his treatise represented contemporary Roman practice, as opposed to his own ideals, are evaluated.

With respect to the primary objective it is concluded that the principal attribute of cavalry was a tactical mobility, which was put to various uses for the benefit of Roman field-armies. Nonetheless, nearby infantry was nearly always essential, for both tactical and strategic reasons, and probably constituted the majority in most armies.

With respect to the secondary objective it is shown that the author of the Strategikon demonstrated a sound theoretical appreciation of the attributes and utilization of cavalry. Furthermore, some of his proposals were validated in actual military operations. However, the author indicated that many commanders fell short of his ideals. Moreover, his proposals needed to be adapted according to specific circumstances. Therefore, the Strategikon should not be used to

reconstruct particular operations. Its value to modern researchers is as an exposition of fundamental tactical precepts that were sometimes adhered to by some commanders.

DECLARATIONS

I, Richard Wass, hereby certify that this thesis, which is approximately 90,000 words in length, has been written by me, that it is the record of work carried out by me and that it has not been submitted in any previous application for a higher degree.

Date

Signature of candidate

I was admitted as a research student in February 1993 and as a candidate for the degree of Doctor of Philosophy in February 1994; the higher study for which this is a record was carried out in the University of St Andrews between 1993 and 1999.

Date

Signature of candidate

I hereby certify that the candidate has fulfilled the conditions of the Resolution and Regulations appropriate for the degree of Doctor of Philosophy in the University of St Andrews and that the candidate is qualified to submit this thesis in application for that degree.

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Signature of supervisor

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INTRODUCTION

Contemporary accounts of warfare in the Roman world gave the impression that cavalry was the rising element in Roman armies after the so-called 'Third Century Crisis', during which the empire had suffered repeated incursions. In Chapter 1 it is shown that this has been associated elsewhere with strategic developments in and around the Roman Empire. It has been suggested that a distinction arose between the field-armies of a mobile strategic reserve force and stationary frontier forces. Under this putative strategy, whereas frontier forces maintained a guard against low intensity threats on the frontiers of the empire, field-armies manoeuvred within the empire and beyond its frontiers in order to conduct strategic campaigns. Cavalry has been seen as a major instrument of these field-armies by virtue of an alleged mobility advantage over infantry at the strategic level. This analysis of Roman strategy has by no means been accepted by all historians, however. Even if it were valid, the distinction between soldiers assigned to field-armies and those assigned to frontier forces is often longer clear and may not have been fixed at the time¹. Nonetheless, those operations that were deemed worthy of record in extant contemporary literature were mostly strategic campaigns and the forces involved can reasonably be called field-armies.

The primary objective of the present study is to examine cavalry as a component of Roman field-armies during the three centuries that succeeded the 'Third Century Crisis', namely the Fourth, Fifth and Sixth AD. In particular it investigates the claimed strategic mobility advantage of cavalry over infantry, any other

attributes that may have explained its inclusion in field-armies and its actual significance and extent as a component of those armies. This is achieved by determining the attributes that were peculiar to cavalry and examining how those attributes were utilized in conjunction with infantry. Evidence for the extent and significance of cavalry relative to infantry within field-armies is considered.

A secondary objective of the present study concerns a military treatise known as the Strategikon, which is attributed in several manuscripts to the emperor Maurice (582-602). This treatise addressed the theory of a broad range of activities by cavalry and to a lesser extent by foot-soldiers. However, the identification of its author as Maurice, or as anybody else with an understanding of contemporary warfare, is not certain. Moreover, even if the author were a competent tactician, the extent to which his writing reflected contemporary practice as opposed to his own ideals is not clear. This uncertainty lessens the value of the Strategikon to modern scholars as a source of evidence for Roman military affairs. In the course of reaching its primary objective the present study addresses this problem, by evaluating the author's expertise with respect to the attributes and utilization of cavalry, and by determining whether his proposals reflected contemporary practice or his own ideals. It does this from a theoretical perspective, by considering the feasibility of his proposals, and from an historical perspective by comparing his proposals to events that were recorded in practice.

Unfortunately the scope of this study is restricted by the availability of evidence. The end of the period addressed is imposed by a great decrease in historiographical writing for several centuries after the work of Theophylact². Theophylact, who wrote during the

early Seventh Century, addressed the reign of the emperor Maurice who was deposed in AD 602. The end of this reign also marked a juncture in Roman history that heralded profound changes in the circumstances and nature of the empire. It was the last reign during which the emperor's authority extended to its traditional frontiers in the east and in the Balkans. Not only were lands and cities lost, but increasing military pressure engendered fundamental changes in the political and military constitution of the empire as the Seventh Century progressed.

For periods prior to that addressed by Theophylact the available evidence is not evenly distributed. A disproportionate quantity of it relates to the Sixth Century and of that much was provided by Procopius in his accounts of the campaigns of Belisarius. The Fourth Century is poorly covered and evidence of the Fifth is scant in the extreme. Despite the patchy evidence, however, an attempt is made, on the basis of what is available supported by parallel examples, to identify fundamental principles that underlay the utilization of cavalry and that can, with caution, be applied throughout the period in question.

It is necessary to define the term 'Roman cavalry' as used in this study. Roman armies had since early times comprised soldiers of diverse ethnic origins and this diversity continued in the later empire³. The cavalry considered here included substantial contingents of allied non-Romans. These contingents often fought with their own commanders, tactics, weapons and varying allegiances to the Roman emperors. However, the ethnic composition of Roman armies is not central to the objectives of this study. Furthermore, contemporary authors often referred to all soldiers who fought on behalf of emperors as 'Roman', regardless of their places

of origin. In practice the distinction between Roman soldiers and allied non-Romans probably eroded during the later empire⁴. Therefore, it is now frequently difficult to segregate references to soldiers according to ethnic backgrounds. For this reason the term 'Roman cavalry' here refers to all cavalry in Roman armies.

Three appendices are included at the end of this thesis. These address topics that are not integral parts of the main investigation, but that are closely associated with some of the matters discussed. Appendix 1, which provides synopses and tactical analyses of some of the engagements in which Roman cavalry took part, presents a significant portion of the evidence upon which this study is based and demonstrates some of the roles that cavalry actually fulfilled on battlefields. It may be convenient to refer to this appendix in particular whilst reading the main text.

SOURCES OF EVIDENCE

Before seeking sources of evidence for an historical study one must decide what sort of information is required from them. In this case information is required about the following: the attributes peculiar to cavalry as a component of Roman field-armies; the utilization of those attributes in conjunction with infantry; the extent of cavalry relative to infantry in field-armies; the significance of contributions made by cavalry to military operations by those armies. Together the sources should address as completely as possible the full geographical extent of the empire throughout the Fourth, Fifth and Sixth centuries.

The sources of evidence that are available for this study fall into four categories. The first category is archaeological evidence comprising original weapons, equipment and other artefacts that were associated with Roman cavalry during the period. Representational evidence in the form of contemporary depictions of cavalry is the second category. The third category may be referred to as parallel evidence. That is to say primary evidence for cavalry in other periods that reveals something not apparent from contemporary evidence, but that can be reasoned to apply to the cavalry of this study as well. The final and most important category is literature composed during or shortly after the Fourth to Sixth centuries that recorded the actual activities of contemporary Roman cavalry or discussed its operation in the abstract.

Archaeological Evidence

Very much less archaeological evidence is available for the Roman empire during the period of this study than is the case for earlier periods. This is partly due to the preference of many archaeologists to excavate earlier sites. It is also due to the fact that the period saw the end of the Roman tenure of many sites. These underwent some form of evacuation, which tended to be detrimental to the archaeological record of the period immediately beforehand. Even where archaeological evidence is available, it is difficult to see any way in which it can attest directly the attributes, utilization, extent or significance of cavalry. Original artefacts, such as weapons, saddlery and quarters used by Roman cavalry, might give implicit indications of its attributes and utilization, but such indications are often uncertain. This problem is recognized by Goldsworthy with respect to the weapons and armour of cavalry¹. He points out that the designs may have been influenced by stylistic and cultural factors as well as purely military considerations. He also points out that the actual utilization of weapons in battle was greatly affected by the emotional states of soldiers. One could add to this any number of contingencies that might have compelled individuals to improvise ways of using existing equipment that had never been foreseen by manufacturers. Moreover, a serious difficulty with the use of archaeological evidence in this study is one of identification and application. Conclusions drawn from recovered artefacts can only apply directly to those specific artefacts and one must be cautious when extrapolating such conclusions to wider contexts. In particular, the evidence of a recovered artefact is often difficult to apply to the wider context of Roman cavalry

recorded in the literary sources. Sometimes it may even be difficult to associate archaeological evidence with Roman cavalry, as opposed to infantry or hostile forces². Therefore, other than a few references to research by others that is based upon archaeological evidence, such evidence is not greatly referred to in this study.

Representational Evidence

Representational evidence also becomes less common for the later empire due to a decline in the quantity of sculpture produced³. Of that which was produced the following items are referred to.

The Arch of Galerius in Thessalonika was constructed around AD 300. It commemorated a war fought shortly beforehand by the Caesar Galerius against the Persians and their king, Narses. Sculptural decoration on the surviving portions has been badly weathered in places, but illustrations of Roman cavalry both at rest and in action are still visible⁴. Details have survived which reveal the designs of weapons.

The so-called Barberini Ivory is a plaque, probably carved during the Sixth Century, which portrays an emperor, probably Justinian, on horseback⁵. It shows clear details of the horse, saddlery, the rider and the lance that he held.

Another ivory relief, which was probably carved during the Sixth Century and now adorns the pulpit of the cathedral at Aachen, portrays a Roman cavalryman attacking a mythical beast⁶. It also shows clear details of the horse, saddlery, the rider, his cuirass and lance.

In addition to these representations of Roman provenance, a few of Persian origin are also of some relevance. A graffito of Third Century date at Dura-Europos in Syria shows a fully armoured horse and rider. Some rock-reliefs in modern Iran, which were carved during the Third to Sixth or Seventh centuries, show members of the Persian aristocracy on horseback⁷. These Persian representations reveal details of equipment, in particular armour, that are not clearly apparent on the Roman portrayals. Nonetheless, equivalent Roman equipment may well have included similar design features⁸.

In the context of this study, representational evidence presents problems similar to those presented by archaeological evidence. Because the representations were intended to be commemorative or decorative and were not technical military records, they do not attest directly the attributes, utilization extent or significance of cavalry. The implicit indications of its attributes and utilization provided by depictions of equipment are subject to the uncertainties that affect the interpretation of actual artefacts. Moreover, because the depictions were not technical records, one wonders to what extent details were misrepresented due to the ignorance of sculptors or artistic considerations. There is also a problem of identification and application, similar to that affecting archaeological evidence. With respect to any individual contemporary illustration it is difficult to determine which, if any, body of cavalry referred to in the literary sources was represented by that illustration. Consequently, little use is made of representational evidence in this study.

Parallel Evidence

Parallel evidence is available from both before and after the period of this study. Reference is made to a discussion of horsemanship by Xenophon, who lived during the Fifth and Fourth centuries BC and was at one time a commander of Athenian cavalry. Early during the Second Century AD, Arrian produced a treatise upon tactics. This explained the principles according to which Hellenistic armies had been organized several centuries beforehand. It also described a display of horsemanship and skill at arms by a unit of Roman cavalry, which presumably Arrian had witnessed. The latter was of interest as a demonstration of the skills required of cavalymen and is analysed from a horsewoman's perspective by Hyland⁹. Probably around AD 230, Heliodorus was the author of a novel which recounted the tale of a mythical war fought between the Ethiopians and the Persians. Most of its contents were fictional, but a description of Persian cavalry was included which provides technical details of weapons¹⁰. Unfortunately, very little is known of Heliodorus beyond his own declaration that he was a Phoenician¹¹. Therefore, it is not known whether he was likely to have been knowledgeable of Persian cavalry, or merely to have repeated possibly inaccurate tales passed to him by others. That the description was fanciful is implied by the claim that lances were supported by attachments to horses' necks, which is something very difficult to envisage in practice¹².

The earliest parallel evidence dating from after the period of this study is the so-called Easter Chronicle¹³. This was composed by an anonymous author early during the Seventh Century in Constantinople. Quite possibly the author was a clergyman associated with the cathedral

church of Saint Sophia. He addressed the period from The Creation to the time of writing. Therefore, his work might have constituted a primary source of evidence for the present study. However, his major objectives were to establish a chronological framework for world history since The Creation and to record ecclesiastical affairs. Warfare was of no great interest to him and he recorded little of military matters during the period addressed by the current study. He did preserve a report from the emperor Heraclius that had been proclaimed in Saint Sophia and concerned a campaign waged against Persia during AD 628¹⁴. This was not long after the period of this study and the report included an interesting detail of the arrangements made to quarter some Roman cavalry in the field.

A military manual of the Tenth Century now known as the 'anonymous treatise upon Campaign Organisation', is of some slight relevance with respect to the operational practices of cavalry. Most of the parallel evidence referred to dates from the Nineteenth and Twentieth centuries. Captain Nolan, who was an officer of the British cavalry, wrote an historical survey of the tactics of cavalry with the objective of improving the theoretical understanding of his fellow officers. The War Office in London published the Manual of Horsemastership, Equitation and Animal Transport. This briefed soldiers concerning a wide range of equestrian activities by armies, including the basic training and maintenance of cavalry. Most use is made of a treatise composed by the French cavalry officer Captain Loire, who expounded a fairly comprehensive range of precepts for the operation of cavalry during a hypothetical European war. He explained these with reference to historical examples taken from the Franco-Prussian War (1870-1871)

and the value of his work was accepted by the War Office, which commissioned its translation into English.

One should not simply transpose, without question, precepts for the operation of cavalry in other eras into the period studied here. The use of parallel evidence depends upon the premise that certain facts of warfare have been immutable. It is reasonable to assume that the effects of weapons of like design were similar in whatever period they were used. Moreover, in the case of cavalry, tactics and other operational techniques were influenced by the idiosyncrasies of its primary instrument, namely the horse, which in essence have never changed. Therefore, discussions of cavalry in other periods may sometimes elucidate the principles behind the operations by cavalry in the period of this study. In particular, the treatises of the Nineteenth and Twentieth centuries have implications for the theoretical understanding of the author of the Strategikon. Unlike this author, the military credentials of the more recent theorists are known, as are the military circumstances in which their precepts were envisaged. As a result, although they cannot attest the pertinence of the Strategikon to contemporary warfare, they can sometimes help to validate or otherwise its proposals from a theoretical perspective.

Contemporary Literature

As an historical analysis this study refers primarily to literature composed during or shortly after the Fourth to Sixth centuries AD. Most of this was written in Greek, although a few authors composed in Latin or Syriac. A comprehensive criticism of each item of contemporary

literature referred to is not necessary, what follows is instead a judgement of the usefulness of each item to this study.

Administrative Documents

The administration of Roman armies and the empire as a whole must have generated a vast number of official documents, some of which have survived. Two are referred to in the course of the present study.

The Notitia Dignitatum was compiled in Latin, presumably by some part of the imperial bureaucracy¹⁵. It comprised a survey of the senior, secular offices of state in the eastern and western halves of the empire. The precedence and scope of authority of each office was explained in the form of lists that showed the other offices and organizations subordinate to each. Many offices were military commands, in which cases the units of soldiers under each command were named.

The Notitia was compiled after AD 395 and the extant version was kept up to date, in a haphazard fashion, until around AD 408. Subsequently, probably between AD 410 and 428, alterations and additions were made to the western section. These included a roll which recorded the field-army units stationed in each province of the western empire¹⁶. A number of discrepancies arose between different lists in the Notitia, in which the entry for a particular unit in one list did not correspond with the entry for that unit in another. This possibly resulted from clerical errors in antiquity that occurred when a unit was transferred and its new station was recorded, but its previous one was not deleted. Alternatively, errors may have crept into the Notitia in

the process of the repeated copying whereby the text has been transmitted to the present day.

Mann makes clear that the original purpose of the Notitia Dignitatum is a very complicated topic, for which even a preliminary discussion would be lengthy and unlikely to arrive at a definite conclusion¹⁷. It is evident that the compilers were concerned with the administrative structure of the empire, but did not need to include the sort of information that would have been useful for the operational command of Roman armies. As a result, there was no explicit indication of the functions of military units at a strategic or tactical level and few technical details of units were included. It is normally possible to distinguish between units of cavalry and infantry in the Notitia, but there must have been different types of cavalry and infantry which are no longer readily identified. Several descriptive terms were attached to units, but the precise meanings of these are often no longer apparent and may not have been rigid at the time. For instance, on the basis of the deployment of units of so-called scouts (exploratores) listed in the Notitia, Austin & Rankov suggest that these were not fulfilling a reconnaissance role¹⁸. Furthermore, the numbers of soldiers in units were not mentioned, although estimates based upon the Notitia for the total strength of Roman armed-forces seem to comply roughly with estimates based upon contemporary historical literature¹⁹.

Notwithstanding the problems with the evidence included in the Notitia Dignitatum it is referred to by others in order to deduce putative strategies that may have been adopted on some frontiers of the empire²⁰. In the case of the south-eastern frontier Parker uses it even to deduce something of the nature of the co-operation between units of cavalry and infantry²¹. Such

analyses make use of the locations of units cited in the Notitia. This technique may be valid for dates other than that of the Notitia, because many of these dispositions may well have remained since the reign of Diocletian (284-305)²². On the other hand, the technique may include several flaws. As a result of the first Battle of Adrianople in AD 378 it appears that the Roman army of the east underwent a great reorganization, which may have reduced the pertinence of the Notitia to the situation before that date²³. Even after that date, the locations cited in the Notitia presumably applied to the headquarters of units and did not reveal how detachments of units may have been located in different places²⁴. Furthermore, it is shown in the current study that many strategic undertakings by Roman armies involved the movement of those armies over long distances. This mobile element of Roman military activity could not have been recorded in a document that explained the administrative structure of the empire at a particular time. Above all, in the context of the current study, the absence of explicit information concerning the cooperation of Roman cavalry and infantry at the tactical level and concerning the practical aspects of cavalry, such as its numbers and weaponry, greatly restricts the use of the Notitia Dignitatum.

The law Code of the emperor Theodosius II (408-450) was a compilation of letters and edicts by emperors between AD 313 and 438²⁵. Most subsequent edicts by western emperors and a few by those of the east until AD 468, were included in the Novels. The edicts affected all aspects of the empire, including its military. Some had implications for the maintenance of armies and the conditions of service of soldiers, including cavalymen.

Theoretical Treatises

During the period addressed by this study several theorists produced abstract expositions of military practice, which sometimes included the operation of cavalry. Two fundamental questions arise concerning each of these treatises. First, whether or not an author was a competent tactician who was able to create a treatise that was pertinent to the circumstances of contemporary armies. Second, even if an author were competent, the extent to which his treatise was representative of contemporary military practice as it actually existed as opposed to ideals that were never realized.

A good example of a treatise that was more idealistic than realistic is the so-called De Rebus Bellicis. This was composed by an unknown author probably between AD 337 and 378. It included fanciful proposals such as an oxen powered ship and a driver-less chariot armed with scythes. Nonetheless, the De Rebus Bellicis should not be dismissed altogether, because it did contain some more sober proposals and even the wild notions may in some way have reflected situations that were actually arising in practice. With respect to cavalry, however, it included little and is not, therefore, referred to in this study.

The earliest treatise referred to in the current study is the Epitome of Military Affairs by Vegetius²⁶. This was composed in Latin probably during the late Fourth or early Fifth Century. It included four books which dealt with recruitment and training, organisation of military units, battle tactics, siege warfare and naval warfare. There is little evidence as to the identity of Vegetius, but he appears to have been a member of the imperial court and some argue that he was an experienced soldier. Unfortunately, he did not

clearly state the purpose of his treatise. In the prologue, it was claimed that the treatise had been composed for the benefit of an emperor and one might assume that Vegetius wished to guide that emperor in the reform of the army. The time for reform was ripe in the aftermath of the massive defeat of a Roman army by Goths at Adrianople. Some major reforms were instigated by the emperor Theodosius I (377-395), which seem to have included a great increase in the foreign contingents of Roman armies²⁷. Ironically, a large part of the foreign element comprised Goths who were permitted to settle on Roman territory near the Danube, but remained under their own government.

Whereas the reforms of Theodosius were perforce innovative, the treatise of Vegetius was very retrospective. He did not claim to have made original proposals and stated an intention merely to collate and summarize ancient writings about warfare. Some of these were cited, they included works composed several centuries earlier and the constitutions of previous emperors. The fact that Vegetius was dependent upon what was even then fairly distant history, raises doubts over the relevance of his treatise to contemporary warfare. He is accused by Stelten of having been governed by a nostalgic admiration for the legionary infantry of the earlier empire and having failed to recognize the changing needs of warfare, in particular the rising importance of cavalry²⁸. In his treatise most attention certainly was paid to infantry, although the necessity of cavalry to work with it was recognized. Perhaps Vegetius had no intention of addressing the pressing needs of contemporary armies and the purpose of his treatise was purely nostalgic. On the other hand, the value of his reminiscences to subsequent commanders was accepted during the Middle Ages, when his treatise was translated

into French and English. Because Vegetius placed the emphasis of his treatise upon infantry, the question of its pertinence to contemporary cavalry does not arise often. Whether or not this emphasis was anachronistic in the period, is considered in this study. It may be that the relative importance of cavalry and infantry is the most significant implication of this treatise.

Probably composed by the same Vegetius is a digest of equine veterinary techniques. This is of value for the study of Roman veterinary science but, because this science is not central to the military theme of the current study, the digest is not referred to here.

The second treatise referred to in this study is ascribed by Rance, on stylistic grounds, to Syrianus Magister who also composed a treatise on naval warfare²⁹. This identification is accepted for the purposes of this study. Syrianus addressed a wide range of topics connected with warfare on land and the operation of cavalry was discussed, although not in great detail. The date of writing is not certain, but evidence within the treatise suggests the Sixth Century, probably during the reign of Justinian but after the major campaigns of the general Belisarius (ie c 555-565).

Whether or not Syrianus was the author of this treatise does not greatly affect the present study, because in any case his military credentials are not known. The author is regarded as both an amateur tactician who wrote for a civilian readership and as the author of a practical handbook for commanders. Like Vegetius, he drew heavily from earlier works, but he did complement them with his own opinions and, in particular, he appears to have had some expertise in military engineering. For sections dealing with tactics, Rance proposes that he referred a great deal to the work of Aelian³⁰. During the First Century AD, Aelian had

produced an historical review of the tactics of the Hellenistic era, which was four centuries earlier still. Despite the early date to which the work of Aelian referred, it was respected by a number of late Roman commanders and military theorists besides Syrianus. Due to the lack of a detailed treatment of cavalry, however, the treatise of Syrianus is not often referred to here.

The third treatise referred to during the current study is the Strategikon attributed to the emperor Maurice³¹. The first eleven books of this were devoted to cavalry and addressed many aspects of its operation, although the possible presence and usefulness of foot-soldiers was mentioned. The twelfth book addressed the operation of infantry as well as cavalry. It was appended after the composition of the previous books, as is demonstrated by the presence of an epilogue at the end of the eleventh. Parts of the twelfth may have been composed before the first eleven, but it is apparent that it was amended for the purpose of its inclusion.

Most of the manuscripts that preserve the Strategikon attribute it to the emperor Maurice, but this identification is not certain. A comparison of the international situation implied in the Strategikon with that recorded in contemporary historical literature, suggests that it was composed between AD 575 and 628. Some references in it to historical events make the period AD 592 to 610 seem most likely. Therefore, the probable date of the Strategikon is consistent with the reign of Maurice (582-602) or of Phocas (602-610). The identification of the actual author is not crucial in this study. The significant question is whether or not he had the expertise necessary to write a treatise that had valid implications for contemporary cavalry and, if so, how his proposals reflected operational techniques that were actually put into practice.

That the author of the Strategikon included some anecdotes taken from real military operations, is taken by Dennis amongst others to imply that he was himself a commander. Furthermore, his assertive style of writing is taken by Rance to imply that the composition was at least directed by the imperial court. It is suggested that Maurice may only have commissioned the treatise and that it was written by one or more of his senior staff-officers, including perhaps his brother-in-law the general Philippicus. However, to judge the expertise of an author by his style of writing and a few anecdotal descriptions is tenuous. A more certain judgement would be based upon a consideration of the author's understanding of military theory and the pertinence of his proposals to contemporary practice. This is the second objective of the present study.

Without predicting the conclusions of this study concerning the Strategikon, one can survey the explicit indications of the author's military credentials and of the objectives of his treatise. In the prologue, the author stated that, as an act of devotion to the empire, he wished to help rectify the decline of Roman armed forces that had been brought about by the inexperience of generals and the poor training of soldiers. This declaration was consistent with the historical role of Maurice, who does appear to have been the architect of military reforms³². The author of the Strategikon did not claim to make radical new proposals, but rather to explain to serving officers the fundamental principles of operational practice. He claimed to have drawn in part from previous authors, which he seems to have done, although his treatise does not read like a straightforward compilation of ancient authorities, after the fashion of Vegetius. Also, he claimed to have drawn from his own experience, which raises one's hopes

concerning the relevance of his treatise to contemporary cavalry. Because the treatise was to be a practical handbook for serving officers, its author announced his intention to write in a plain style and, although written in Greek, to make use of the Latin terms commonly used by soldiers. The objective of combining existing authorities with the author's own experience for the benefit of serving army officers, was repeated in the epilogue at the end of the eleventh book. A similar prologue was included before the infantry section of the twelfth.

By and large, the presentation of the Strategikon was in keeping with the author's expressed objectives. His arrangement was systematic, with associated topics grouped together. He addressed in the first eleven books the training and equipment of individual cavalymen, their organisation in units, cavalry tactics for pitched battles, artful stratagems, logistics, drills, important considerations for generals, axioms for generals, incursions into hostile territory, siege warfare and the characteristics of hostile peoples. In the twelfth book, he dealt with co-operation between cavalry and infantry, matters pertaining to infantry, the layout of fortified camps and the hunting of wild beasts by armies. Tactics to be adopted on battlefields were described in the text and illustrated with diagrams. There are now some variations between diagrams included in different manuscripts, but they are still largely consistent with the text³³. The important features of these diagrams are reproduced in Figures 1-8.

Evidence for Roman military techniques provided by the theoretical treatises is not inherently historical. Instead, these works represented the perceptions and ideals of individuals which may or may not have reflected contemporary practice. Individuals may have reasserted

the status quo, reacted against its failings, or made proposals that were quite simply irrelevant. With respect to cavalry it is the Strategikon which is of most interest. It may be possible to clarify the theoretical foundations upon which proposals for cavalry in this treatise were based, by referring to more recent theory, especially that expounded by Captain Loire. However, the pertinence of these proposals to actual contemporary cavalry can only be ascertained by comparison with contemporary historical descriptions. Therefore, the Strategikon may have historical significance as a demonstration of contemporary military thought, but one must be careful not to create circular arguments by using it too directly to reconstruct actual practice.

Historical Literature

The earliest contemporary narratives referred to in the current study are the so-called Latin Panegyrics³⁴. These comprised, besides an exemplar from the early imperial period and a public address which concerned schools of rhetoric, ten laudatory orations in favour of western emperors which were delivered between AD 289 and 389. Each was probably composed by a separate author, mainly for presentation at grand ceremonial occasions in the imperial court of the western empire. Subsequently the panegyrics were collected, seemingly for use as models of rhetoric at a school of rhetoric in Gaul. As such, there was no political or historical purpose behind the collection. Even so, for modern scholars they form a valuable source of evidence, especially for the reigns of Diocletian and Constantine I³⁵. However, there are some problems with the evidence provided by the Latin panegyrists.

The Latin panegyrists did not present a balanced view of the fortunes of the empire, but rather extolled the achievements of particular emperors. Moreover, as Nixon & Rodgers observe, they made use of facts as symbols; "the aim of the speaker in narrating historical episodes such as a military campaign was to illustrate a quality of the emperor, and not to inform the audience of factual details"³⁶. Unfortunately, it is factual details, not the qualities of emperors, which are required for the current study. Nevertheless, two Latin Panegyrics did include relevant facts in the process of illustrating qualities of an emperor.

The anonymous 12th Latin panegyrist spoke in favour of Constantine I, probably at Trier during AD 313³⁷. Little is known of the 12th panegyrist, but he was probably a professor of rhetoric in Gaul and there is no reason to suppose that he had any great military knowledge. Nonetheless, he produced one of the best surviving narratives of events in the west during the civil war of AD 312, between Constantine and the pretender Maxentius. Of value to the current study are his accounts of the battles of Turin and the Milvian Bridge. Both of these were brief and did not address tactics very systematically, but some details were included that are useful for the tactical analyses of these battles.

The panegyric by Nazarius is the fourth in the collection, but in fact was delivered later than the 12th³⁸. He too spoke in favour of Constantine I, probably at Rome during AD 321. Apparently he was a well known rhetorician and may have been normally resident in Rome. Despite having composed his work nearly a decade after that of the 12th panegyrist, Nazarius told much the same story. There is no indication, however, that the work of Nazarius was affected by the earlier panegyric³⁹.

The reason for the common choice of subject matter was probably that since AD 313 events had been dominated by a political and military deadlock, between Constantine and the emperor of the east, who was Licinius. Such an impasse was not an appropriate topic for a panegyric. In the current study, it is again the accounts of the battles of Turin and the Milvian Bridge which are of interest. These accounts were largely compatible with those by the 12th panegyrist, but included a different selection of details. In particular, Nazarius addressed the topic of cavalry armour, which not only has implications for an analysis of tactics but also for the weaponry of Roman cavalry.

Ammianus Marcellinus produced a history in Latin which comprised 31 books. Of these the last 18 survive which cover the period AD 353 to 378. As a source of evidence for the general history of that period it is regarded by Jones and others as a priceless boon for modern scholarship⁴⁰. This view may well be justified, but in the current context one must consider the work of Ammianus from a narrower, military perspective and from a still narrower perspective of cavalry in Roman field-armies.

There is some uncertainty concerning the details of Ammianus' career, for parts of which there is little evidence⁴¹. References in his history clearly indicate that from AD 353 to 360 he was an officer on the staff of Ursicinus, who was a senior commander in the eastern Roman empire. With Ursicinus he served in the east, also in Gaul during some of the Caesar Julian's Gallic campaign⁴². In AD 363 he took part in the Persian campaign led by the then Emperor Julian, although in what capacity is not known. Thereafter he appears to have been free to travel widely in the empire for around two decades before settling in Rome⁴³. During these travels

he could have sought witnesses and other sources of information to add to that which he had acquired during his active career. It was, he claimed, by means of the meticulous interrogation of witnesses combined with his own experiences that he had amassed the information for his history⁴⁴.

Ammianus' experience as a staff-officer might lead one to expect that his writing would be informative of military affairs. Crump shows that this is the case with respect to the overall state of the Roman military establishment in the period that he addressed⁴⁵. Moreover, Austin shows that he provided useful information about military operations from the perspective of headquarters staff⁴⁶. There were some provisos, however. He was not involved with most of the campaigns that he described, which made the quality of his accounts susceptible to the vagaries of the informants and documentary sources available to him, which sometimes let him down. Matthews contends that his work was compiled around AD 390, during Ammianus' retirement in Rome⁴⁷. Therefore, the passage of time since his active career may have affected his judgements of that period. He did allow his analyses of causes and effects to be influenced by hindsight, as well as by his personal loyalties and prejudices, notably in favour of Julian and Ursicinus⁴⁸. Nonetheless, he conveyed an understanding of strategic intelligence and planning, that possibly reflected his duties as a staff-officer⁴⁹. Unfortunately, the requirements of the present study are on a smaller scale than the Roman military establishment overall, or even than the processes of campaign organization performed by headquarters staffs.

Headquarters staffs might sometimes have had a supervisory involvement with tactical operations and, subject to the provisos mentioned above, Ammianus

included such information. For example, he described quite well the techniques used in various sieges, both in attack and defence⁵⁰. It was most unlikely, however, that cavalry was often closely involved in stationary conflicts such as sieges. Ammianus also recorded the gathering of tactical intelligence by various means⁵¹. This was much more likely to have involved cavalry but, although in these episodes Ammianus reduced the scale of his topic from that of overall campaign organization, he did not often reach the minutiae of reconnaissance tactics which are relevant to the current study.

The greatest contribution made by Ammianus to the current study is his accounts of battles. Six of the analyses in Appendix 1 are based upon his accounts (App 1.4,5,6,7,8,9). Crump observes that he emphasized the factors that were decisive in the outcomes of engagements⁵². Austin believes that the arrangement of at least some of his accounts, which included reasonably clear associations of causes and effects, implies that he had a basic understanding of tactical theory⁵³. However, the plausibility of his accounts need not indicate that they were historically accurate. There was little mention in his work that he personally witnessed the battles that he described, even when he was present on a campaign. The vicissitudes of battles were in any case harder to describe than were the more methodical processes of campaign organization, siege warfare and tactical intelligence. These vicissitudes, combined with Ammianus' absence from battlefields, must have made him all the more susceptible to the failings of his sources⁵⁴.

One campaign for which Ammianus' sources may well have failed him was fought against the Goths and ended at the first Battle of Adrianople (App 1.9). This battle was fought on a large scale and had great consequences

for the empire. Even so, Ammianus' account of it omitted important details of the tactics and those which he did record were presented in a confused fashion. A major reason for this may well have been that the battle ended in a catastrophic defeat for the Romans. Coherent eyewitness accounts for such a traumatic event were probably hard to come by, even immediately afterwards. Ammianus alluded to this difficulty by including alternative versions of the fate of the emperor Valens in this battle⁵⁵. In fairness to Ammianus, the confusion of his description may well have reflected that which afflicted the Romans on the day.

Ammianus' treatment especially of Julian in battles was very possibly affected by his personal loyalties and prejudices. In particular concerning the Battle of Argenterate, he may have magnified the personal contribution made by the Caesar at the expense of other more significant events (App 1.4). A prominent incident in his description of this battle was the rallying of the routed Roman cavalry by Julian in person⁵⁶. It is apparent, however, from the descriptions of this battle by Libanius, Zosimus and indeed Ammianus himself, that cavalry was not greatly significant on either side. According to Zosimus, the Roman cavalry ignored Julian's attempts to send it back against the enemy⁵⁷.

The greatest disqualification of Ammianus as a source for the current study is the fact that he seems to have catered for an educated but civilian readership. His primary objective was to meet the refined literary expectations of this readership rather than to impart technical knowledge. As a result he had a marked tendency to place emphasis upon significant human deeds, events and objects that invited dramatic prose, whereas he glossed over details that were more tedious but quite possibly of great significance in the current study⁵⁸.

This may have been another factor that led Ammianus to emphasise the routing and rallying of the Roman cavalry at Argentorate. The greater importance of infantry in this battle was not reflected by the attention he paid to its much less spectacular tactics. Ammianus also omitted important details from his descriptions of two engagements fought by Julian in Persia, at Ctesiphon and Maranga (App1.5,6), despite the fact that he was in close proximity to them⁵⁹. Consequently, some informed imagination is required in order to complete reconstructions of tactics at these three battles. The same tendency to concentrate upon dramatic events affected his accounts of armies away from battlefields. For example, he paid much attention to the imposing appearance of Roman and Persian armoured cavalry⁶⁰. The appearance of armoured cavalry is of some relevance to this study, but it is unfortunate that Ammianus did not address in detail its mode of combat or how this compared with that of other cavalry. Presumably, he assumed that his readers were not interested in such details.

Despite the problems that afflict the evidence provided by Ammianus, he did provide the most informative single source of information for Roman cavalry during the Fourth Century. Therefore, for the current purposes his work constitutes an important abutment early in the period addressed by this study.

Julian may well have misrepresented military facts in panegyric orations that he addressed to Constantius II (337-361). Indeed, this was probably necessary in order to convey his affected admiration for that emperor. This bias does not often affect the present study, because he did not make many references that pertained to cavalry. One account which is referred to is that of the campaign leading to the defeat of the pretender Magnentius, by Constantius at the Battle of Myrsa (App 1.3)⁶¹. In this

one can suspect that Julian took every opportunity to pillory Magnentius as a commander, whether or not this was reasonable. The main contribution made to this study by these orations is descriptions of armoured cavalry employed by Constantius⁶². One might have thought that technical descriptions would not have been affected by personal or political bias. However, one can suspect that the personal association of heavily armoured cavalry with Constantius and the impression that its existence was his innovation, not to mention its spectacular appearance, were exaggerated in order to flatter that emperor.

Another panegyric oration of the Fourth Century, which is referred to in connection with armoured cavalry and the Battle of Argentorate, was one in praise of Julian by Libanius⁶³. Libanius was a professor of rhetoric in Constantinople, Nicomedia and Antioch⁶⁴. He was probably as guilty of misrepresentation as the panegyrists mentioned above and for similar ends.

Comparatively little literature of the Fifth Century has remained extant. Probably composed in that century was the New History of Zosimus, which addressed the first four centuries of the empire and culminated with the sack of Rome by the Goths in AD 410⁶⁵. Few details of this author are known. He was a fiscal officer in the imperial service and possibly a resident of Constantinople⁶⁶. The date of the composition of his work is not clear. Sometime between AD 450 and 503 is suggested by Ridley, with some subjective indications that it was towards the end of that period. Zosimus did not include a great deal of information that is relevant to the current study, but a few references to the New History are made with respect to events during the Fourth Century. Although Zosimus was writing some time after those events it is apparent that for the Fourth Century

he drew heavily upon the work of Eunapius, quite possibly to the extent of plagiarism. Eunapius was contemporary with many of the Fourth Century events that he described and appears sometimes to have had access to well informed witnesses. Unfortunately much of the work of Eunapius is now lost, but by virtue of his familiarity with it Zosimus was able to include some informative accounts including alternative versions of events described by Ammianus. In the context of the current study these included parallel accounts of the Battle of Argentorate and of Julian's Persian campaign.

Early during the Sixth Century, the Chronicle of Joshua the Stylite was composed in Syriac⁶⁷. This addressed the Persian war of the emperor Anastasius and provided a detailed account of events in Mesopotamia between AD 494 and 506. Little is known of Joshua, but he was able to supply a few details of tactics involving cavalry that are relevant to the present study.

The most prolific author referred to in this study was Procopius, who composed the History of the Wars, Buildings and the Secret History. These were written during the reign of Justinian (527-565) and constituted much of the evidence to have survived for many aspects of that reign. Buildings described notable items of architecture in the empire. The scandalous Secret History concerned imperial politics and other internal affairs. The History of the Wars initially comprised seven books which addressed, successively, wars fought against the Persians, the Vandals and the Goths, between AD 527 and 550. For much of this fighting the Roman commander-in-chief was Belisarius, on whose staff Procopius was an officer. He served as such probably until AD 542 and experienced all three theatres. Later in the 550's he appended an eighth book, which narrated

the campaigns of other generals in the same theatres until around AD 554, but with which he was not involved.

The seemingly very different characteristics of the three works of Procopius give rise to considerable controversy concerning the author's attitudes and the relationships between his works⁶⁸. The fact that his attitude does not appear to have remained constant raises doubts over the value of his works as sources of objective historical evidence. In the case of the Secret History, even the identification of Procopius as its author is questioned.

Cameron demonstrates, however, that it is possible to regard the three works as components of a whole. In this whole, Procopius expressed his perceptions of empire, both of his ideal empire and the Roman empire in practice. The contrasts between his works were due in part to the objectives that were specific to each. Furthermore, it is believed that the sentiments of Procopius concerning Belisarius and Justinian changed fundamentally during the period in which he wrote. During the earlier stages he had been an admirer of both, which was reflected in the first six books of the History of the Wars. Later he became disillusioned, seemingly after Belisarius rejected the throne of Italy offered to him by the Goths and, in AD 548, was removed from Italy altogether by the emperor. Thereafter, Procopius adopted a more cynical approach to both of his former idols, which was reflected in the last books of the Wars and in the Secret History. It is shown below that the sentiments of Procopius, especially towards Belisarius, may have affected his accounts of military operations.

Of the works of Procopius, most references in the current study are to the History of the Wars, because this one most concerned military affairs. As Procopius himself observed, his post as an officer on the staff of

Belisarius was an ideal vantage point from which to observe events in these wars⁶⁹. He did not give much indication that he had been closely involved in many tactical operations or battles. Most of the missions that he recalled having performed himself, were concerned with strategic intelligence gathering or supply⁷⁰. Nonetheless, he must often have had ready access to witnesses of tactical operations and battles not long after they had taken place. In view of this, one would expect his writings to be of great value to this study. Certainly he often chose to instruct readers in the technical details of military operations. However, it is shown in the case of Ammianus that an historian's hopeful expectations of an ancient author's good military qualifications are not always fulfilled. It would not be correct to accuse Procopius of having obscured important facts purely to make his account more sensational, at least to anything like the extent to which Ammianus did. Nevertheless, his compositions may have been subject to still more insidious influences.

Procopius appears to have been a loyal Roman and as such he may have been somewhat xenophobic, even against non-Romans fighting as Roman allies. It is conceivable that his accounts of the battles of Callinicum, the River Hippis, Taginae and possibly Tricamarum, were distorted by his dislike of non-Romans in Roman armies (App 1.15,18,28,29). In all four battles he explained how Roman dispositions and fortunes had been affected by the wavering loyalty of contingents of allied cavalry⁷¹. However, especially with regard to Taginae, it is often possible to explain the dispositions recorded by Procopius in purely tactical terms, without any reference to disloyal allies. Indeed, at Taginae the allies appear to have fought quite well.

At the beginning of the History of the Wars Procopius claimed that he had not spared even his closest acquaintances from the advertisement of their failings⁷². In truth, however, this may not have been the case. Damning criticisms of the imperial administration and of Belisarius in the Secret History, which Procopius wrote in confidence for the benefit of later generations, refuted the general approval of both expressed in his other works. Directly affecting this study is the fact that his loyal treatment of Belisarius in his earlier works, may have made him keen to deflect any blame for error away from the general and to exaggerate any credit due to him for success. The possibility that this could have led to misrepresentation of military operations may be apparent in his accounts of the battles of Callinicum and Rome (App 1.15,23). In both of these descriptions, Procopius alleged that the wise counsel of Belisarius had been overcome by the vociferous enthusiasm of some of his subordinates and the soldiers⁷³. Therefore, by implication, the responsibility for the subsequent failure of Roman arms in these battles lay with them rather than with the general. If this were the case then it reveals a surprising lack of authority on the part of such a senior officer as Belisarius. It is perhaps more likely that the causes of these defeats were tactical errors by Belisarius, which Procopius was eager to disguise. Moreover, analyses of these battles reveal anomalies in the tactics as recorded by Procopius, which may indicate that he was even prepared to tamper with the technical record in order to protect the reputation of his commander.

Despite the grounds for suspicion that Procopius was not always honest, he did provide a greater quantity of evidence concerning later Roman cavalry than did any other source. His accounts must be approached with

circumspection, especially when they pertained to the reputation of Belisarius. Nonetheless, the conclusions that this study seeks would be seriously impaired if his works were not available.

Three authors, who were near-contemporaries of Procopius, are of interest because they provided alternative accounts of some episodes recounted by him, or of separate but related episodes. One of these was Corippus, who differed from the rest in being a poet. He composed a poem in Latin which described deeds by John 'Troglitas', or John 'the brother of Pappus' as Procopius referred to him, who was governor of Roman Libya from AD 546 to 552⁷⁴. The value of poetry as an historical source is not certain, because factual details are often obscure and may have been altered for literary reasons. Nevertheless, Pringle draws conclusions concerning the Roman army in Libya from the evidence provided by Corripus⁷⁵. The validity of these conclusions is considered in Chapter 2.

The work in Syriac referred to here as the Chronicle of Zachariah of Mitylene chronicled events between AD 440 and 569⁷⁶. Zachariah, who had composed an ecclesiastical history in Greek, was in fact only one of the authors referred to by an anonymous Mesopotamian chronicler who completed the extant work probably in AD 569. No section of the Chronicle is very informative of military affairs, but a few accounts of military operations that were also narrated by Procopius are of some value as alternative versions for comparison with his. This is especially so in the case of the Battle of Callinicum (App 1.15), aspects of the description of which by Procopius are doubted.

The third work referred to that includes alternative accounts of some military operations described by Procopius, is the Chronicle of John Malalas⁷⁷. This

author professed to trace history from The Creation to the time of writing. The extant work terminates at the death of Justinian which implies that it was completed shortly after AD 565. However, there is evidence to suggest that it originally continued to the ninth year of the reign of Justin II, that is to say AD 574. Of most value for the study of late Roman history are the final four books, which were each devoted to the reign of one emperor, beginning with Zeno (474-491).

Jones has a low opinion of the historical evidence provided by Malalas and there are no indications that he had any military experience. He was, however, an educated man who was probably employed as a civil-servant in Antioch until AD 535 or 540, after which he moved to Constantinople. For the period from the accession of Zeno, he claimed to have had the benefit of eye-witnesses, although he seldom cited who these were. Antioch was the heart of the Roman east and, of particular importance in this study, it was a base for campaigns against the Persians. Therefore, during his residence at Antioch, Malalas would have been ideally placed to receive eye-witness accounts and to have seen official documents concerning military affairs in the east⁷⁸.

Although the accounts of military operations by Malalas were better informed than those by Zachariah, they were not as detailed as those by Procopius. His most useful account was that of the Battle of Callinicum. Perhaps the differences between his version and that of Procopius, in particular concerning the willingness of Belisarius to offer battle, were the result of his ignorance. On the other hand, Malalas may well have had access to soldiers returning through Antioch shortly after the battle, who could have informed him thoroughly. It may be that the differences between the accounts arose

because Malalas was not affected by the sense of personal loyalty to Belisarius that was felt by Procopius. Therefore, although Malalas did not provide as much technical information for this study as did Procopius, his work and that of Zachariah may imply that Procopius was prepared to misrepresent military facts for personal reasons.

The Histories of Agathias were intended to be a sequel to the History of the Wars by Procopius⁷⁹. He addressed the period from AD 552 to 559, during which warfare continued in the east and in Italy. In Thrace, military action was required against an invasion by the Cotrigurs. Agathias probably began composing the Histories in the 570's and internal references reveal that he was still doing so during the reign of Tiberius (578-582), presumably until his own death⁸⁰. As a lawyer, he complained of the drudgery of his daily toil at Constantinople, where he was resident from AD 551 or shortly afterwards⁸¹. He claimed to have been persuaded to undertake an historical work by the momentous events that were happening around the empire and by the encouragement of friends. In no way did he share the qualifications of Procopius as a military historian, that is to say experience of warfare and close proximity to military operations. Indeed, he expressed doubt over his own ability as an historian of any kind, his previous literary experience having been as a poet⁸². However, he made the observation, of which a modern scholar might be sceptical, that the writing of history and poetry were closely related disciplines only distinguished by literary style. Therefore, one does not approach the work of Agathias with undue optimism for its contribution to this study. Not surprisingly, it receives strong criticism from modern commentators, notably Cameron⁸³.

Agathias is criticized by Cameron for having failed to address politics and having been most concerned with the moral implications of the actions of individuals, rather than with the causation of historical events. His literary style is dismissed as grandiloquent and over-affected by classical models. The factual accuracy of Agathias is also questioned. As the only source for many of the episodes that he described, his accuracy can often only be inferred from internal evidence. Bachrach is critical of Agathias and also Procopius with regard, in particular, to their descriptions of the Frankish military⁸⁴. He believes that both authors failed to record the heterogeneous ethnic and tactical nature of Frankish armies and understated the importance of Frankish cavalry. There is little explicit indication that Agathias attempted systematic factual research, or that he had many acquaintances in the political and military spheres who could have helped him to do so. In his preface, he complained that other historians had been influenced by the desire to include sycophantic praise of contemporaries and he announced the intention to avoid similar misrepresentation. This noble sentiment is dismissed by Cameron as merely a jealous reaction, due to his own lack of success in winning patronage⁸⁵. The availability of evidence must have been further reduced by the twenty odd years that had elapsed since the period about which he wrote. Of the evidence that was available, Agathias is felt to have been inadequately critical and not to have considered its plausibility. Moreover, there were instances where he may have tampered with the factual record in order to emphasize the moral aspects to which he attached importance. Overall, Cameron judges that different sections of the Histories were more or less informative, according to the sources available to Agathias. Although he sometimes preserved useful information, his failure to criticize his evidence

and his own dubious insertions mean that each episode must be judged individually according to its particular credentials⁸⁶.

In general these criticisms of Agathias may be justified, but of significance at present is the reliability of his accounts of specific military operations. The most notable accounts that he provided were of the battles of Ariminum, Capua, Phasis and Constantinople (App 1.31,32,33,35). Cameron dismisses the descriptions of all but the first as accounts that were elaborated with implausible and imaginary tactics and numbers, in order to serve the moralistic ends of Agathias⁸⁷. She concludes that he was not adept at providing accounts of military operations and that it is unfortunate that these accounts occupied a large part of his work. However, such a rejection of Agathias as a source for military history may not be justified.

Despite the accusation of grandiloquence, the descriptions of battles by Agathias are clear and concise. They do not give a prima facie impression of fanciful ornamentation like those of Ammianus, or of ignorant interpretation like those of the later author Theophylact. Certainly some of the numbers of soldiers and casualties recorded by Agathias are hard to believe, but figures in antique literature are often open to question. In the case of Agathias the figures do not much affect the dispositions and manoeuvres that he recorded. Moral rather than tactical explanations were included sometimes in his descriptions of battles, but it would be wrong to judge that the dispositions and manoeuvres are implausible as a result. He did leave modern analysts with a fair number of unanswered questions as to how and why events took place on battlefields, but this is a criticism that could be levelled at even the most thorough descriptions of battles. For

instance, that of the Battle of Dara (App 1.13), by Procopius, is one of the most comprehensive accounts of a battle in the period to have survived, but even it does not include much about the lie of the land which was very probably significant for the tactics of that engagement. With respect to Agathias, if one accepts a number of unknown factors, it is normally possible to conceive of plausible, tactical explanations for the major events recorded in battles, even if these were not explicitly recognized by the author. Concerning the actions of cavalry in particular, those recorded by Agathias are largely consistent with the fundamental precepts of its tactics, which are apparent in other sources of evidence and are discussed in Chapter 3.

The plausibility of each battle described by Agathias does require to be assessed individually, but this should be done with any author. As shown above, it is required for descriptions by Procopius due to occasions when his personal sentiments may have resulted in a biased record. If Agathias did lack personal contact with commanders then at least he should have been free from that sort of prejudice. Perhaps, however, his detachment from worldly affairs can be over-emphasized. His work may have been tedious, but the law was an instrument of the state and he practised it at the political heart of the empire. He may not have been formally connected with a general, but he was not that far removed from men of affairs. For instance, amongst those who encouraged the writing of the Histories, Agathias named the younger Eutygianus, who was a leading member of the imperial secretariat⁸⁸. Furthermore, in view of his lack of military experience, the fact that his descriptions of cavalry in action are consistent with the theory of its tactics apparent elsewhere, implies that he had access to knowledgeable sources of information. If some of his accounts of

battles were falsified, then the fabrication must have been the work of these sources rather than Agathias himself. For the purposes of this study, even if his sources did fabricate operations by cavalry, the fact that they were familiar with the theory of its tactics rendered the descriptions probably more useful than historically truthful descriptions by authors who were reliant upon less knowledgeable sources.

The History of Menander 'the guardsman' dealt with the period after that addressed by Agathias, probably until the accession of Maurice in AD 582⁸⁹. It was composed during the reign of that emperor and appears to have concentrated on Roman relations with foreign peoples, particularly the Avars and the Persians. Much attention was paid to diplomacy, but it is apparent that accounts of battles also had a high profile⁹⁰. Menander's title of 'guardsman' did not imply that he was an active soldier, although it did indicate a connection with the imperial court and he acknowledged the encouragement and financial support offered by Maurice to men of letters. This imperial connection may have assisted him in acquiring information concerning military affairs. Unfortunately, his work now survives only in fragments and most of the military episodes are missing. Only a few short descriptions of operations in the east are referred to in the present study.

Gregory, who was the Bishop of Tours from AD540 to 594, composed a History of the Franks which addressed the period from AD 347 to 591⁹¹. This history is not often referred to during the current study, because it seldom directly concerned Roman affairs. However, Gregory did include a few noteworthy details of cavalry tactics.

The History of Theophylact 'simocatta' addressed the reign of Maurice (582-602), including wars against the Slavs and the Avars in the Balkans and against the

Persians⁹². Theophylact was a lawyer resident in Constantinople from around AD 610 and there is no indication that he had any military experience. He probably composed his history in the late 620's, during the reign of Heraclius (610-641). Not only was he removed in time from the events about which he wrote, but the evidence available to him can only have been further reduced by the intervening reign of Phocas (602-610). Phocas violently usurped Maurice; prominent individuals, whose recollections might have been significant, did not survive the new regime. Notable casualties were the generals Comentiolus and Peter, about whose campaigns Theophylact wrote.

Theophylact did not cite his evidence, but Whitby demonstrates that he was probably reliant upon a number of written sources⁹³. Unfortunately, he did not correlate these well, which resulted in some chronological irregularities. Furthermore, when his sources lacked detail he does not appear to have been averse to invention, especially for eastern affairs between AD 582 and 589. His accounts of campaigns and battles are vague and disjointed, probably because he lacked the understanding of military affairs that was necessary to identify the important facts. Often he was lax in distinguishing between cavalry and infantry. Moreover, a major problem with the evidence provided by Theophylact is that he seems to have preserved the biases inherent in his sources. How this may well have affected his record of military operations is most apparent in his account of wars in the Balkan theatre, including of the Roman incursion from Viminacium (App 1.42). In this theatre, whereas the actions of the commander Priscus were favourably reviewed, his colleagues Comentiolus and Peter were criticized for inactivity. Amongst criticisms of Maurice, his decision to order soldiers to spend the

winter of AD 602 north of the Danube, which precipitated mutiny, was explained in terms of his avaricious desire to save the expense of maintaining them in Roman territory⁹⁴. In fact, it is possible to explain these actions of Maurice, Comentiolus and Peter in terms of sound military practice. However, one suspects that the source used by Theophylact for these episodes was written in support of Phocas and that it libelled Maurice and his commanders in the interests of the usurper. Unlike his colleagues in the Balkan theatre, Priscus prospered during the reign of Phocas and was therefore spared the same treatment. Theophylact appears to have lacked the military and geographical knowledge that might have enabled him to identify and remove such biases.

Despite the problems that affect the accounts of military operations by Theophylact these are still of interest as the historical descriptions of actual military practice most nearly contemporary with the probable date of the Strategikon. Therefore, in terms of dating, his record of military practice is the most appropriate for comparison with the proposals in that treatise.

The above historical works, which were composed not long after the events to which they referred, form the foundation of this study because they recorded cavalry in fact rather than theory. Even in the more detailed descriptions of military operations, there is seldom all the information required to leave no questions unanswered. It can be tempting to refer to the theoretical treatises, in particular the Strategikon, in order to fill gaps in historical descriptions. One must remember, however, that the Strategikon itself can only be validated with reference to these descriptions. Therefore, any such use of it can easily result in circular arguments. Instead, one should refer to the

dispositions, manoeuvres and other details recorded in the historical works in order to establish whether or not the proposals in the Strategikon were consistent with them. This should reveal the implications that this treatise now has for the principles that governed the actions of Roman cavalry in general.

The Evidence Overall

Using the evidence that is reviewed above, this study attempts to determine the reasons for the inclusion of cavalry, its significance and extent in Roman field-armies throughout the Fourth, Fifth and Sixth centuries. However, one must note the fact that the three centuries are not evenly recorded. Indeed, due to the dating of the extant contemporary literature, this study is strongly concentrated upon the Sixth Century. Even in that century, there were many military operations of which good records have not survived. With respect to the study of earlier Roman armies Goldsworthy identifies a problem due to interruptions in the evidence of adaptations, in response to changing local circumstances, of organization, tactics and equipment⁹⁵. It must have been the case that there were similar changing regional influences on the development of Roman cavalry throughout the period of the current study. Every effort is made to trace these but, due to the gaps in the evidence, it is a difficult undertaking. Hopefully, however, it is possible to identify certain immutable principles behind the operations of Roman cavalry that applied throughout.

Chapter 1 THE PROFILE OF ROMAN CAVALRY
IN CONTEMPORARY LITERATURE

In the historical literature of the Fourth Century, cavalry was given a high profile by means of a number of colourful descriptions. For example, when Ammianus recounted the ceremonial entry of Constantius II into Rome in AD 357, he described in detail the cavalry contingent in the emperor's escort¹. The same author specially mentioned the attributes of Roman cavalry at the Battle of Argentorate (357) and included several dramatic descriptions of Persian cavalry that opposed Julian's eastern campaign². Julian and Libanius also paid special attention to the cavalry of Constantius during their orations³. None of these authors accorded the same high profile to infantry.

Early during the Fifth Century, units of cavalry were included before units of infantry in most of the eastern section of the Notitia Dignitatum⁴. This might imply that cavalry enjoyed a senior status.

The authors of the Sixth Century were less dramatic in their treatment of cavalry than were those of the Fourth, but nonetheless it retained a high profile. There were the first eleven books of the Strategikon, parts of which were equally applicable to infantry but which proposed battle tactics almost entirely for the benefit of cavalry⁵. In this treatise generals were advised to keep cavalry in the majority in their armies, the reason being that, in addition to fighting on horseback, cavalymen could also fight on foot if need be⁶. Procopius included a fairly detailed description of a contemporary Roman cavalryman in the first chapter of the History of the Wars⁷. He provided no corresponding

description of an infantryman. In his descriptions of military operations, he often made more mention of deeds by cavalry than of those by infantry. For instance, in the eastern theatre, at the Battle of Dara (530) most of the action was accredited to cavalry although infantry was present on both sides⁸. At the Battle of Satala (530), shortly afterwards, he claimed that the fight involved only horsemen⁹. Concerning the war against the Vandals in Libya he seemed to give the credit for this victory to the Roman cavalry alone¹⁰. During the war against the Goths in Italy Procopius claimed that Belisarius had little faith in the Roman infantry and preferred to keep them out of harm's way during battle¹¹. Cavalry also featured quite highly in the work of Agathias. Theophylact tended to be lax in distinguishing between cavalry and infantry, but cavalry was mentioned more often.

A major distinction between literary references to Roman cavalry in the Sixth Century and those in the Fourth, is an increased indication of allied non-Roman contingents in Roman cavalry. Procopius frequently attested Hunnic and Herulian cavalrymen in Roman armies and the influence of Avar practices is apparent in the Strategikon¹².

Evidence such as this for the importance and extent of cavalry in Roman field-armies is subjective, because it is based upon the literary profile of cavalry rather than objective indications of its usefulness and numbers in armies. If the literary profile did reflect the real situation then it indicates that cavalry was predominant in Roman field-armies throughout the period. A reason why this may have been so is proposed by Luttwak and others, in connection with a strategy allegedly adopted as a result of the chaotic years of the 'Third Century Crisis'. During these years hostile forces had

frequently careered across the frontiers of the empire¹³. It is argued that prior to the Third Century Roman military planners had aimed at the preclusive defence of the empire, by means of armies deployed along the entire length of its frontiers. During and after that century they adopted instead a strategy of so-called 'Defence-in-Depth'. Under this putative strategy the frontiers were defended by a less esteemed soldiery, known as the limitanei. These were sufficient to repel small-scale attacks, but were not adequate to oppose major offensives on battlefields. If a major attack did arise they were to take refuge, with local inhabitants, in fortified strongholds and cities. From these they could harass an invader's communications and keep supplies with which to furnish a mobile strategic reserve force, which was known as the comitatenses, upon its arrival following its despatch from the interior. The comitatenses were the elite battlefield troops. Unlike the limitanei they were not, initially at least, stationed on any particular frontier, but could instead be deployed about the empire as hostilities dictated.

The relevance of this hypothesis to the study of cavalry lies in the suggested role of the comitatenses as a mobile strategic reserve, capable of rapid deployment across great distances. To achieve such deployment in time to meet an insurgent enemy, before it had had the opportunity to inflict significant damage, quite simply would have required the ability of the comitatenses to traverse the empire, on a strategic scale, at high speed. It is claimed that:

"The major instrument of this strategy was a wholly mobile cavalry force", which "doubled the strategic mobility of Roman expeditionary forces moving overland (ca fifty miles per day against ca twenty five)."

Luttwak, (1976) pp185-186.

If this hypothesis be correct, it would establish an explanation for the high profile of cavalry in contemporary literature.

However, a strategy of 'Defence-in-Depth' after the Third Century is by no means accepted by all. The evidence for it is not conclusive and a clear distinction between frontier troops and mobile strategic reserves may well not have existed. Some argue that to study military history of this period in terms of strategy in the modern sense is inappropriate¹⁴. Accepting for a moment that a strategy of 'Defence-in-Depth' was practised, to see cavalry as its major instrument relies upon two assumptions. First, that cavalry was significantly more mobile at the strategic level than was infantry. Second, that not only was cavalry the dominant arm of Roman field-armies, but also that it sometimes performed strategic functions in the absence of infantry, because any mobility advantage would have been lost if infantry were present. The validity of these assumptions is examined in the next chapter.

Chapter 2

ROMAN CAVALRY AT
THE STRATEGIC LEVEL

For any arm, an advantage of a mobility greater than that of an enemy granted the initiative to decide the time and place of an engagement, or to avoid or quit an engagement altogether. The War Office observed that:

"Mobility, which is the power to move rapidly without loss of strength, is an important factor making for success in war."

War Office (1937) p208

Provided that conditions were suitable for the movement of horses, there can be little doubt that cavalry was more mobile than infantry over short distances, that is to say at the tactical level. To have been an instrument of 'Defence-in-Depth', however, would have required strategic manoeuvres over far greater ranges. Often these would have involved marches that required days, weeks or even months to complete. Although many strategic manoeuvres could have been conducted wholly on land, cavalry would sometimes have been compelled to travel by sea. In addition to movement by land or sea, another significant element of strategic manoeuvres was the maintenance of cavalry, which required the provision of quarters, supplies and the husbandry of horses. This chapter considers how these factors affected the mobility of cavalry at the strategic level.

If any mobility advantage that cavalry may have had over infantry at the strategic level were to be realized, cavalry would have been required to perform strategic

missions in the absence of infantry. Also considered in this chapter is the extent to which this took place. That is to say, the extent to which cavalry was the dominant strategic arm of Roman field-armies and was able to dispense with the assistance of infantry.

Cavalry on the March

Even those strategic manoeuvres that involved sea voyages, would often also have necessitated long marches. For instance, the army of cavalry and infantry that the general Belisarius led against the Vandals in AD 533, sailed from Constantinople to Libya. Having beached at Caputvada on the Libyan coast, it was still required to march to Carthage, a distance that Procopius specified as five days' journey for the unencumbered traveller¹. Due to the inevitability that cavalry would have to march, it is likely that the importance attached to the topic by Captain Loire, applied equally to Roman cavalry:

"Marches form the basis of all operations of war. The maintenance of units and the success of all enterprises depends chiefly upon the organisation and execution of marches."

Loire (1916) p37.

Figures of 25 and 50 miles per day are suggested by Luttwak as having been the mobility on land of Roman infantry and cavalry respectively. It is important to consider how likely these are to reflect the truth, in particular whether the claimed two fold advantage of cavalry is valid.

Vegetius described route marches that had been performed regularly by Roman infantry with full weaponry. These covered 20,000 paces, which was nearly equivalent to 20 statute miles, in a day's march of five hours. He stated that in an emergency this distance could be increased to 24,000 paces². Goldsworthy points out that these marches did not include the construction of encampments or the movement of much baggage³. Therefore, he believes that they were not indicative of the mobility of Roman infantry under operational circumstances. However, a day's march of five hours did leave time to construct an encampment if necessary. Baggage must have been an impediment, but at least under favourable circumstances pack animals and horse-drawn carts might not have retarded infantry that much. An experiment was conducted recently in order to verify the figures provided by Vegetius. Men wearing replica First and Fourth Century Roman equipment, but without baggage or encampments, completed distances of 52 miles in two days and 100 in four⁴. Therefore, the figure suggested by Luttwak for infantry of 25 miles per day is of the right order.

Vegetius did not provide similar figures for the march performance of cavalry. He did state that it had been customary for cavalry to accompany infantry on route marches of 20,000 paces, during which it would perform various tactical manoeuvres⁵. It would, therefore, have completed a greater distance than did the infantry, but the manoeuvres would need to have been very extensive in order to achieve a 50 mile total.

In order to achieve the best march performance Captain Loire explained that a disciplined order and procedure of march was required, which extended the physical endurance of horses to the utmost⁶. Because this procedure was largely dictated by the needs of

horses, it is reasonable to assume that the same has always been so. Unfortunately, little evidence for the procedure adopted by Roman cavalry on the march has survived. In the Strategikon, it was prescribed that battle formations marching to an engagement should do so in open order, leaving adequate room for horses to turn⁷. The reason stated for this was that cavalymen should not be crowded and hence become fatigued. This prescription was not in the context of long range manoeuvres, but it may have presaged one of the techniques advocated by Captain Loire for cavalry on the march. He stated that columns of march should not become crowded and that long columns should be divided into separate units. There were several reasons for this, besides the comfort of cavalymen. Horses required breathing space and an open order reduced the problem of dust. Furthermore, intervals in columns of march prevented the sudden starts and checks of pace that would have occurred within solid columns. That the pace of a march remained as constant as possible was very important, because transitions between walk, trot and canter would, in themselves, tire horses.

In view of the fact that the needs of horses on the march can have changed little, it is reasonable to refer to some of the other techniques advocated by Captain Loire. These indicate that it was necessary to check the fitness of horses, their hooves especially and the security of their loads, before departure and at regular halts along a march. This was important because fit horses and loads that did not impede them, were essential for good progress by cavalry. Regular halts at which horses could rest and drink with cavalymen dismounted, probably every two hours or so, was also necessary in order to achieve the greatest possible progress in a day. When on the move, it was important that cavalymen

refrained from unnecessary violence towards their mounts and that they maintained balanced seats. For the latter reason, Captain Loire advised cavalry against spending long periods at walk, because cavalymen tended to slouch at that pace. Instead, he advised that periods spent at trot should alternate with horses being led in hand by cavalymen on foot. Ammianus saw tired Roman horses being led in hand by cavalymen during the retreat of the army from the Persian capital at Ctesiphon, after the death of Julian⁸. However, it is probable that prior to the introduction of stirrups, cavalry did not relish the trot so much as did Captain Loire. With stirrups a rider may rise and fall at the trot in time with a horse's strides, but without stirrups he must thump in the saddle which is tiring for both parties. Since the canter was not an appropriate pace during long marches, for cavalry without stirrups it is possible that a steady walk was the optimum pace. The introduction of stirrups to Roman cavalry is discussed in Chapter 3, it is believed to have occurred during the Sixth Century.

An important consideration for a commander planning a march was the tasks that were to be required of cavalry upon arrival. This was so because horses required a period of rest after physical exertion, the length of which depended upon the magnitude of that exertion and which might have lasted for several days. In particular, a commander needed to predict whether or not further marching was required on following days or if combat were likely. Alternatively, a period of recuperation may have been expected. According to this prediction, a commander had to decide how hard he could drive cavalry on a march, hence how far it could proceed in a day, without rendering it incapable of fulfilling its functions at its destination. In the words of Captain Loire:

"An exact balance must be struck between ultimate advantage and certain exhaustion. Unless this is done it is total ruin."

Loire (1916) p39

On a number of occasions Procopius observed the need for this balance in practice. He wrote that the Taurus mountains allowed one practicable route, via the 'Caspian Gates', by which Hunnic horsemen could invade Roman or Persian territory in that area⁹. If they used any other, they would arrive with horses too tired for further activity. During the Gothic War, Belisarius decided not to despatch cavalry from Urviventus to relieve Mediolanum, because upon arrival the horses would have been too tired to take action¹⁰. On other occasions, the urgency of a situation overrode the welfare of horses. Roman cavalry fled from the Battle of Anglon so fast that most of its horses expired¹¹. Theophylact recorded that some Persian cavalry horses were sacrificed in a rush to intercept an invasion led by Philippicus in AD 584¹².

A well planned march procedure would have increased the mobility of cavalry, but it would still have been subject to a number of external factors. To begin with, there were climatic conditions. These affected both cavalry and infantry, but horses were very intolerant of extreme weather, especially that to which they had not become accustomed. In the Strategikon, it was recommended that cavalry was exercised in hot weather so that it would be ready for this extreme. It was also recommended that attacks against 'Scythians' were launched in February or March, when their horses were in wretched condition as a result of the winter¹³. Captain Loire pointed out that cold weather made horses lethargic, also that wet increased the weight of their loads and caused harness to chafe¹⁴. The problems

experienced by cavalry in cold weather were amongst the reasons for the mutiny against the emperor Maurice in AD 602, by soldiers whom he had ordered to spend the winter north of the Danube. According to Theophylact one of their grievances was that they feared the exhaustion of their horses, which may have been due to a lack of fodder, but could also have been due to exposure of the horses to the cold climate¹⁵.

Another factor that would have affected mobility was terrain. Because horses evolved for life on plains and therefore lacked the agility to negotiate obstacles, it is probable that cavalry was more often impeded than was infantry. In the account by Zosimus of the march of Julian's army into Persia an area of mud and marsh was encountered that afflicted the Roman horses in particular¹⁶. When available, prepared roads would have facilitated the fastest progress for the least effort. In the case of metalled roads, there would have been a risk of slipping and of muscular and skeletal damage to horses, due to the hard surface. Many Roman roads included a levelled but un-metalled strip to either side, which may have been used as marching surfaces by cavalry so as to prevent such harm to its horses¹⁷. On many occasions prepared roads would not have been available or, for tactical reasons, would not have been appropriate. Under such circumstances, cavalry would have travelled across country. If in doing so it encountered close terrain, it was prescribed in the Strategikon that some soldiers were sent ahead in order to clear a route of obstacles and so prevent the horses from being worn out¹⁸. More than once Persians were recorded clearing obstacles ahead of their armies, it is more than likely therefore that Romans also did so in practice¹⁹.

Rivers were features of the landscape that often hampered manoeuvres by armies. Austin & Rankov discuss in particular the effects of rivers upon operations by Roman frontier forces²⁰. In the Strategikon it was explained that if a Roman army in retreat were to destroy a bridge behind itself, then this would obstruct a pursuing enemy especially if it comprised cavalry²¹. The problems that a river crossing entailed could have been significant even in friendly territory and were vastly greater if an enemy were present. An army was very vulnerable when its number was divided by a river. According to Libanius, Julian took advantage of this fact at Argentorate, when he commenced the battle before the entire Alamannic force had crossed the Rhine²². Procopius recorded a suggestion made by the Roman commander Artabanes that the advance of the Goths, led by their king Totila towards Faventia in AD 542, should be intercepted when only half the Goths had crossed a nearby river²³. In the event, this opportunity was lost due to the indecision of other commanders. During AD 553 in the same theatre, a Roman army led by Narses required to cross the Ariminus near the Gothic held town of Ariminum²⁴. There was a bridge at this location, but it had been seriously damaged by the Goths. A skirmish arose between a reconnaissance detachment led by Narses and cavalry led by the local Gothic commander Usdrilas. The Romans were fortunate that this resulted in the death of Usdrilas, which cowed the Goths and enabled a replacement bridge to be built over which the Romans crossed without further opposition.

Due to situations such as that at the Ariminus, it is not surprising that Vegetius, Syrianus and the author of the Strategikon all devoted chapters to the crossing of rivers²⁵. The author of the Strategikon explained that, if an army were to encounter a river or difficult

terrain, a reconnaissance party was to be sent ahead in order to survey the situation, as indeed was done by Narses at the Ariminus²⁶. Provided that an enemy was distant, a general was to supervise a crossing personally until his entire army had passed. Presumably, if an enemy were in the vicinity, he was to remain at the front lest an engagement arose.

There were several means by which rivers could be crossed²⁷. Normally the most convenient method must have been by using an existing bridge. Theophylact recorded an incident that demonstrates that even this might not have been straightforward and that the advice in the Strategikon, for a general to supervise a crossing himself, was wise²⁸. During manoeuvres in Thrace in AD 588, an army led by Maurice required to cross a tributary of the Eugenia, called the Xerogypsus, using an existing bridge. The bridge was narrow and there were marshes nearby, confusion gripped the crowded soldiers and some were pushed into the river. In order to resolve the disarray the emperor had to direct the crossing himself, which occupied his attention for an entire day.

If a bridge did not already exist, one could be built by an army. It was suggested in the Strategikon that armies near the Danube should carry materials for pontoon bridges, in order to traverse the numerous watercourses in that area²⁹. The incident at the Ariminus showed that in reality Roman armies on manoeuvre did build bridges. The weight of horses, however, can only have increased the task of bridge building. Therefore, the presence of cavalry must have increased the time and effort required to cross rivers by this means.

One alternative to the use of bridges, was to ferry soldiers on vessels of some description. Zosimus mentioned that Julian's cavalry in Persia crossed a water-way on ships³⁰. In addition to the carriage of

materials for bridge building, it was also prescribed in the Strategikon that ships were to be anchored in strategic locations during Danubian campaigns. Theophylact recorded that soldiers were transported by ships in this region and Menander claimed the probably exaggerated figure of 60,000 allied Avar cavalry which was ferried across the Danube by ship in AD 578³¹. If existing ships were not available, Syrianus wrote of portable boats that could be carried by armies and the author of the Strategikon advised that leather bags were carried on Danubian campaigns for the purpose of raft building³². That Roman armies did construct rafts and boats with which to cross the Danube was confirmed by Theophylact³³. Although cavalry was recorded crossing rivers by ships, its presence must have made the provision of suitable craft more difficult. Very much larger craft must have been required to carry horses, which would have made the transport of portable boats less convenient. Also, as is discussed below with respect to sea transport, the embarkation and landing of horses could have been a difficult operation, especially in the presence of an enemy.

Some rivers, notably the Rhine and the Danube, could be crossed during the winter when they froze. This was one reason why the author of the Strategikon advised that Danubian campaigns were launched during that season³⁴. Frozen rivers also rendered the empire more vulnerable to hostile peoples. In the winter of AD 559, the Cotrigur leader Zabergan was able to invade Thrace with a large number of horsemen having crossed the frozen Danube³⁵.

If none of the above methods of river crossing were appropriate, armies were compelled to ford or swim. Vegetius believed that cavalry could assist infantry when fording a river, by forming one line upstream and another downstream of a ford³⁶. That which was upstream would

break the current, that which was downstream could rescue any who were swept away. Perhaps this was done on occasion, but one imagines that often the lack of agility of horses would have made them less able than infantry to negotiate rocky river beds or steep banks.

Vegetius also believed that just as infantrymen should be able to swim, so should cavalymen and their horses³⁷. There were a number of instances when Roman cavalry did swim across rivers³⁸. Often such undertakings were successful, but on occasion disaster struck and a difficulty was the transport of equipment and weapons. In Persia, the infantry led by Julian crossed a canal on bridges that it had constructed³⁹. The cavalry, for reasons not stated, chose to swim in full armour. It may have been compelled to swim because the bridges were not sturdy enough to support horses. That it made the attempt implies that its armour cannot have been that extensive. Armour may have been worn as a protection against Persian archers, but it was perhaps part of the reason why some were carried off by the current and were drowned. In order to keep weaponry and equipment dry and perhaps to avoid a similar fate, Vegetius suggested that rafts were constructed from reeds, upon which equipment and weapons could be placed and which could be drawn behind on cords whilst men and horses swam. Ammianus recorded that Roman cavalry did build rafts in order to swim the Tigris during its retreat from Ctesiphon⁴⁰. An Eighteenth Century illustration of Tartar cavalry crossing a river, with equipment on reed rafts pulled behind horses, possibly resembled the scene on the Tigris (Fig 10). The use of rafts to carry the equipment and weapons of cavalry when it swam, was still being suggested to the British army in this century⁴¹.

It is significant that Danubian campaigns were the one context discussed in the first eleven books of the Strategikon, in which increased emphasis was placed upon infantry⁴². This was partly for tactical reasons, due to the defensive sites of the natives and the need to fight amongst the narrow passes, the difficult terrain and the many rivers of the region. It was probably also due to the strategic problems associated with long distance manoeuvres by horses over such terrain.

A third factor, which must have had a great effect upon the mobility of cavalry, was the extent of baggage and equipment that it carried. This was apparent during the Eighteenth Century, when light cavalry of the British army could complete 30 miles per day, whereas heavy cavalry was limited to 10⁴³. The weight born by each horse was significant and the heaviest component of this, other than the cavalrymen, was probably weaponry⁴⁴. Weaponry and other equipment used by Roman cavalry of the period is discussed in Chapter 3, although it is impossible to calculate its weight which must have varied much according to the designs of weapons and equipment that were carried. It would seem that the author of the Strategikon envisaged cavalry undertaking manoeuvres for several days, with little equipment other than that carried by individual cavalrymen. This is implied by the fact that the inventory of equipment for individual cavalrymen included saddle-bags, which were to be large enough to contain rations sufficient for three to four days, along with wicker cases in which armour could be carried behind saddles if separated from a baggage train⁴⁵. However, the length of time for which cavalrymen and horses could have survived with such a minimum of equipment would have depended much upon weather, availability of shelter and of provisions.

For strategic manoeuvres a great deal of equipment, supplies and manpower were required for the long-term subsistence of cavalry⁴⁶. If anything the needs of cavalry in this respect must have been greater than those of infantry, because of the need for provisions, tools, grooms, etc for horses. In the putative strategy of 'Defence-in-Depth', many of these would have awaited cavalry at its destinations in the fortified cities of frontier regions. However, some would have been required during marches. Some strategic manoeuvres would not have terminated at suitable supply depots at all, notably this would have been the case with offensive operations into hostile territory. Therefore, equipment, supplies and manpower must have been carried as baggage. It is unlikely that many items were carried by cavalymen themselves, because it would have tired men and horses very rapidly. More probably these items were consigned to a baggage train, which could have been transported in various ways.

Sometimes it was possible for armies on a march to be accompanied by ships that carried the baggage. Instances of this were the march of the army with Julian into Persia along the Euphrates, of that with Belisarius along the coast from Caputvada to Carthage and of some reinforcements from Campania to assist Belisarius in the defence of Rome against the Goths⁴⁷. In none of these cases is there any indication that the fleets had difficulty keeping pace with the armies. In many cases, however, there was no body of water along which a fleet could have followed an army. Indeed, the fleet with Julian's army was scuttled before the return north, perhaps because it would not have been able to proceed against the current of the Euphrates or Tigris, which flowed south⁴⁸.

During most marches baggage travelled by land. Some figures for the loads and speeds of various means of transporting baggage on land in recent times are included in Appendix 2. Unfortunately, these do not reveal the daily distances achieved, but they do indicate that the use of pack-animals would have offered the least hindrance to cavalry. In the Strategikon, it was prescribed that pack-animals might be needed to convey tents and coats of mail⁴⁹. However, the size and weight of items that could be carried on pack-animals was restricted. Cavalry on strategic manoeuvres might well have required heavy and bulky loads of provisions, materials and manpower, which in turn would have required the use of wagons. In addition to the baggage that travelled by sea, the above mentioned reinforcements for Belisarius in Rome also transported baggage on wagons drawn by oxen⁵⁰. Oxen could only achieve around two miles per hour for not more than 60 miles per week. Therefore, the progress of any force that made use of oxen must have been seriously delayed. Horse-drawn wagons were faster, but could not have transported so much weight. The author of the Strategikon noted that oxen would delay even infantry and prescribed that in an emergency pack-horses and camels were to be requisitioned⁵¹. Even so, one suspects that the presence of a baggage train was often the factor that limited the strategic mobility of both cavalry and infantry.

The procedure that cavalry adopted on a march and its rate of progress must have been significantly affected by the proximity of hostile forces. When close to an enemy there must have been a temptation for cavalry to abandon its column of march, in favour of a broader formation that was better suited to combat. Certainly Captain Loire recognized this temptation⁵². Unfortunately, adopting a broad formation required cavalry to abandon

roads in favour of a cross-country route, with the implications that this had for its rate of progress. Moreover, there were obstacles such as river crossings or defiles, which would have forced cavalry back into a column. For these reasons, the captain preferred if possible to keep cavalry on roads and to protect a column with a vanguard, flank-guards and reconnoitring patrols. In the Strategikon, cavalry in the vicinity of an enemy was urged to march in its battle units, the so-called moirai and meroi. Its baggage was to follow each meros, presumably as opposed to following at the rear of an entire column⁵³. The author recommended that cavalry should not traverse unfavourable terrain when in hostile country⁵⁴. Aside from its slow progress on bad ground, this probably reflected the fact that when the mobility of its horses was impeded, so too was its ability to fight. If it were necessary for cavalry to enter a narrow defile in dangerous surroundings, in addition to clearing a route of obstacles in advance, commanding points were to be seized until it had departed. Cavalrymen were to dismount and to march in columns on either side of the baggage, their horses being led in the centre by others. Possibly resembling the guards and patrols recommended by Captain Loire, light-armed soldiers were to form a screen on all four sides as terrain permitted.

Few historical descriptions of the measures adopted by Roman cavalry whilst marching through hostile country during the period of this study have survived⁵⁵. The army that Julian led in Persia comprised mostly infantry, but its order of march bore some resemblance to that prescribed in the Strategikon⁵⁶. Baggage was placed between two divisions in the column. To either side was a flank-guard and a rear-guard followed. 1,500 cavalry proceeded ahead and to either side in order to forewarn

the column of any attack. Infantry also constituted most of the army that Belisarius led from Caputvada to Carthage⁵⁷. He did not feel that a flank-guard was necessary on the right, because that side was protected by the sea. On the left he commanded allied Huns to proceed at a distance of few miles. At a similar distance in front he placed 300 of his guards, so that the army would not be compelled to enter battle unprepared. It is quite possible that both these detachments comprised cavalry. Around AD 553 in Italy, Narses despatched the commander Stephen from Lucca to carry an urgent message to Faventia⁵⁸. Stephen was escorted by 200 cavalry, which traversed countryside where a detachment of Franks was plundering. In order to evade interception the Romans marched by night, kept a close formation and protected their rear. Night marches may have been effective for a small force of cavalry, provided that there were not too many obstacles to be overcome. One imagines that a night march would have been less appropriate for a large force, which could more easily have become confused, or on a difficult path. Under such circumstances darkness probably would have facilitated surprise attacks, rather than have prevented them. Captain Loire strongly warned against night marches by cavalry⁵⁹.

The fact that horses were more susceptible to extraneous factors on a march than were men, makes it more difficult to derive a figure for the daily distance typically achieved by cavalry. During the Twentieth Century some figures were published, nevertheless, based upon operational experiences. Because there is no reason to suppose that the stamina of horses had declined since antiquity, it is worth reviewing these figures. Captain Loire believed that a march of more than 19 miles in a day was harsh and of more than 31 was forced⁶⁰. The

War Office published slightly higher figures, which specified 20-25 miles per day as being not too much and 40-50 as being forced⁶¹. The differences between these figures may well have been due to the various extraneous factors. It is interesting that Captain Loire noted that in 1806 some French cavalry pursued some Prussians for 23 days, during which it covered 575 miles. This equated to a daily distance of only 25 miles, yet half the French horses perished as a result. The conclusion must be that the daily range of 50 miles which is suggested for Roman cavalry is optimistic. Indeed, some of the recent figures were not that far in excess of those specified by Vegetius for infantry. What is more, the recent figures must have applied to cavalry under conditions which were reasonably favourable to its mobility. That is to say, to cavalry which did not encounter a feature of the landscape which was particularly impassable for horses, or which was not tied to a cumbersome baggage train. Under more adverse conditions, it is quite likely that cavalry could have proceeded only at the same pace as infantry, or even that it was rendered less mobile than infantry.

Cavalry at Sea

There were several campaigns during the Fourth to Sixth centuries in which Roman cavalry travelled by sea⁶². A small force of comitatenses was ferried from southern Gaul to North Africa, in order to quell a Moorish rebellion, in AD 373⁶³. The composition of this force was not specified, but it has been seen that some closely associate cavalry with the comitatenses. During AD 468 the emperor Leo I despatched a large force, which must

have included cavalry, from Constantinople against the Vandals⁶⁴. Over 1,000 ships were gathered from the eastern Mediterranean to form three fleets, two of which transported soldiers to Africa and the third to Sardinia. Two of these were successful, but the third was defeated at sea and the Romans abandoned this war. When Belisarius campaigned against the Goths, from AD 536 to 540, his army of cavalry and infantry sailed to Italy and later both arms were reinforced by sea⁶⁵. During his second campaign in Italy, between AD 544 and 549, the strength of Gothic forces prevented his army from moving by land and it was forced to sail from harbour to harbour for all five years⁶⁶. In AD 578 the Caesar Tiberius prepared a campaign against Persia and Menander recorded that he sent horse-transport ships to the East⁶⁷.

There may well have been other occasions upon which Roman cavalry travelled by sea, but it was approached with some trepidation. This is apparent in a speech which Procopius attributed to the Praetorian Prefect, John 'the Cappadocian', in which John tried to dissuade Justinian from launching the campaign against the Vandals in AD 533⁶⁸. Amongst the arguments against it was the fact that the march from Constantinople to Carthage would take 140 days, the only alternative being a long crossing of the open sea. Despite John's reservations this voyage went ahead and formed the best recorded instance during the period of there having been no convenient land route by which a strategic manoeuvre could have been conducted. Procopius was present on this voyage, on the staff of Belisarius, and was able to relate a fairly wide range of technical details concerning the route and the ships employed⁶⁹. These may well have implications for the sea transport of Roman cavalry in general and how this affected its strategic mobility.

Before leaving Constantinople the fleet and the army were blessed by the patriarch of the city and then sailed to Perinthus on the Propontis. Five days were spent in this location whilst a large number of horses, sent from imperial studs in Thrace, were loaded. The fleet then proceeded to a place off Abydus on the Dardanelles, where it anchored and was detained for four days by a calm. From this point the fleet was to sail across more open seas, for which Belisarius decreed that it was to remain in close convoy and always to anchor in one group. Strong winds carried it into the Aegean to Melea, then to Taenarum and then to Methone on the south-west coast of the Peloponnese. Due to a lack of wind at Methone the fleet anchored and the army disembarked. During the voyage the fleet's bread had become rotten and, as a result, 500 soldiers died before Belisarius requisitioned local supplies. Leaving Methone the fleet reached the harbour on the Adriatic island of Zacynthus, where it took on board water for the crossing to Sicily. This crossing lasted 16 days in a languid wind before the fleet came to land near Mount Etna. The army disembarked upon Sicily whilst Procopius was despatched by Belisarius to Syracuse, in order to gather intelligence concerning the Vandal fleet and the Libyan coastline. When Procopius had established that the Vandals were unlikely to intercept the Romans at sea, because they knew nothing of the imminent attack, he returned to the fleet at Caucana which then set sail across the Mediterranean. Having passed close to Gozo and Malta strong winds brought the fleet to Caputvada on the Libyan coast. This place was separated from the Vandal capital at Carthage by five days' journey for the 'unencumbered traveller'. Further down the coast a purpose-built harbour at Stagnum was only a few miles from Carthage. A debate ensued amongst Belisarius and his staff over whether to sail to Stagnum, or to beach immediately at Caputvada.

Belisarius pointed out that if they remained at sea they ran the risk of encountering a hostile fleet or, worse still, a storm. Furthermore, he feared that, whereas the Romans could land unopposed at Caputvada, by the time they had reached Stagnum the Vandals might have been prepared to resist the disembarkation. Therefore, it was decided that the Roman soldiers and horses should leave the ships at Caputvada.

Procopius did not describe in detail the designs of the ships which accomplished this voyage, but he did include some overall statistics for the fleet⁷⁰. He explained that in addition to 92 oared warships, intended for sea fighting, the fleet included 500 transport ships. Upon the latter around 6,000 cavalry and 10,000 infantry were conveyed. Although horses were captured in Libya this source could not have been relied upon, so one can assume that at least 6,000 horses were shipped, probably plus some remounts. The transport ships ranged in capacity from 3,000 to 50,000 medimnoi. A medimnos was a unit of volume. In all the transport ships were crewed by 30,000 sailors.

One is wary of statistics in ancient literature in case they contained inaccurate estimates, were adjusted for literary effect or were incorrectly copied by later scribes. There is no direct means by which the figures provided by Procopius for the fleet can be confirmed. Hyland and Austin & Rankov consider the capacity of some earlier horse transport ships⁷¹. However, a better parallel with which to place Procopius' figures into perspective is provided by evidence for the sea transport of cavalry horses later during the Middle Ages, which is discussed by Hyland, Waley and Pryor⁷². This is not to suggest that the cavalry transport ships of the Sixth Century resembled those of subsequent centuries, but they were unlikely to have been any more sophisticated than

the later ships. Therefore, the mediaeval parallel may indicate whether or not the figures provided by Procopius were plausible. It also highlights some of the special implications of the sea transport of horses.

Procopius did not specify whether men, horses, equipment and provisions were segregated into different ships, as was sometimes the case in Crusader fleets, or were evenly distributed. The range of capacities demonstrates that the ships were not identical, but to translate these capacities into burden tonnages is not straightforward. A common bulk cargo was grain, for which the volumes mentioned by Procopius would have corresponded to burden tonnages of between 120 and 2,000 tons⁷³. Ships of such burdens had existed earlier in antiquity⁷⁴. A few of the greater size were specially built to transport grain from Alexandria to Rome, but with the demise of Rome as the imperial capital during and after the Third Century, so the need for these ships had declined. Despite the figures provided by Procopius, van Doornick suggests that the ships commanded by Belisarius in fact ranged from 120 to only 200 tons burden, which were still large for the period⁷⁵. On average each ship carried at least 12 horses and 32 soldiers, not to mention equipment and provisions. The mediaeval evidence demonstrates that these figures were large. In AD 762 the emperor Constantine V created a fleet of 800 ships each of which could carry 12 horses. It was not until the Crusades during the Twelfth Century that evidence emerges for the sea transport of horses being well mastered by the maritime republics of North Italy. Even late in that century the capacity of ships was only around 40 horses.

On average the crew of each transport ship on the voyage to fight the Vandals numbered 60, which was another large figure. Procopius mentioned oars in

relation to the warships and not the transporters, but the size of the crews suggests that the latter also had oars in addition to sails. This is also implied by the fact that after the army had disembarked at Caputvada Belisarius commanded the fleet to follow it along the coast, using sails when the wind was favourable and resorting to oars when it was not⁷⁶. During the Crusades some horse transport ships did have oars. Oars rendered ships less dependent upon the wind. However, to be of benefit to fleets which travelled in convoy, such as that of Belisarius, all the ships would need to have been so equipped. Against this benefit the horse capacity of an oared vessel, compared with that of a sail only vessel of the same size, was considerably reduced.

Procopius provided no indication of where or how horses were accommodated on board. Horses would have required protection from the elements, either in deck houses, under awnings or below deck. The warships were decked and it is likely that the transporters were as well. In addition to protection from the elements, provision had to be made for the feeding and watering of horses, the cleaning of their stalls and securing them against the pitching and rolling of the ships. The first contemporary technical descriptions of the internal arrangements of horse transport ships date from the Thirteenth Century. A contract agreed in 1246, between Louis IX of France and the republic of Genoa for the lease of ships for the Sixth Crusade, specified that stabling arrangements should include feed troughs, stall rails, litters made of grass rope to aid cleaning and ring bolts. It is quite probable that Roman horse-transport ships contained stalls which were similarly equipped. The purpose of the ring bolts was probably to secure slings which passed under horses' bellies. It is not likely that horses were actually suspended, because

they would not have survived long as such, but slings would have prevented them from falling due to the motion of the ships.

The positioning of stalls within a ship is established for one built at Brindisi in 1278. Thirty horses were slung in a single row, along the centre line, with a gangway to port and starboard leading to two stern doors. The compartment was roughly 120 feet by 12, each horse was allowed a width of just over two feet. Roman ships may well have resembled this layout, even if they lacked the stern doors. The dimensions would have depended upon the size of the horses to be shipped. The width allowed per horse in the Brindisi ship was far too small to accommodate the destriers of mediaeval knights, therefore smaller horses or mules were anticipated, perhaps similar to the cavalry horses taken to Libya by Belisarius.

In addition to stabling arrangements the well-being of horses at sea depended upon their husbandry and provisioning during a voyage. A fair bulk of fodder had to be stowed according to the length of a voyage, but most critical was the water supply. During a Venetian expedition to the Levant in 1123 the fleet had to stop for water on a daily basis, most probably because of the presence of horses. In another contract involving Louis IX, this time for the provision of ships by Venice, it was specified that each horse should have a daily water ration of just over six gallons. This accords with modern figures for equine water consumption⁷⁷. On this basis, for the crossing from Zacynthus to Sicily on the way to Libya, for the horses alone the average ship would have required at least 1,100 gallons of water, a weight of nearly five tons, in order to last the 16 days of that crossing. Due to the delayed passage from Zacynthus to Sicily the fleet's water spoiled, except that which had

been stored in the hold where the sun could not reach it⁷⁸. Procopius did not record any disastrous consequences of this particular mishap, but the need to store and keep fresh a vast volume of water must have been a significant difficulty.

Due to the size, weight and lack of agility of horses, the embarkation and landing of cavalry with its mounts would have been a very much more hazardous and lengthy undertaking than was the case with infantry. Procopius gave no indication of how it was achieved. It may have been by means of gangways reaching ashore, or horses might have been hoisted. Perhaps horses could have been lowered into the water and made to swim ashore, but this would have been a very inelegant process subject to sea conditions and it seems more likely that they were transferred directly to dry land. The landing of horses was especially difficult if an enemy chose to resist it. In the Twelfth Century the Byzantine navy had built specialized horse-transport ships equipped with stern doors and ramps. These vessels were rowed backwards onto a beach, whereupon fully armed and mounted cavalry disgorged with such force that few chose to resist it at that point. Specialised horse-transport ships with stern doors quite possibly predated their first mention, which was during the Byzantine offensive against Egypt in 1169. Specialised horse-transport ships were mentioned, without technical details, in the military treatise of the late Ninth Century emperor Leo VI. However, there is no reason to believe that Belisarius had the benefit of specialised ships of any description, let alone of the stern door variety. Perhaps the lack of an elegant means of landing horses, in particular against opposition, was a reason why Belisarius advocated disembarking on the beach at Caputvada.

That cavalry would have been vulnerable during an actual transfer from ship to shore if the Vandal army were present, may not have been the only reason why Belisarius feared an opposed landing. No matter how well horses had been cosseted on board ship they would not have been fully fit for combat for a while after landing. Confinement at sea would have left the animals physically stiff; boredom and the strange surroundings during the voyage might also have affected them psychologically. This problem was noted by the Crusaders and could persist for up to several days after landing.

Overall it appears that the statistics provided by Procopius, for the voyage of the Roman army to fight the Vandals in AD 533, were plausible although on the high side. If correct they have implications for the sea transport of Roman cavalry and its horses in general. The statistics indicate that by the Sixth Century the Romans could transport large bodies of cavalry, with horses, over long distances at sea. The need to convey horses might have been reduced if cavalymen could acquire them at destinations, either by legitimate means or by capture. Roman soldiers did capture horses in Libya and later, in Italy, Procopius reported that they captured and rode many⁷⁹. Cavalry in hostile territory could not, however, have relied upon such fortuitous provision from the outset and must have transported at least a minimum number of horses. There is no reason to suppose that by the Sixth Century specialized horse-transport ships were built from scratch, but ships would have required substantial modifications in order to permit the carriage of horses. On short journeys, of perhaps a few hours, and in reasonable seas horses could simply have been tethered in the open and left to stand for the duration of a trip. Such a vessel was illustrated on a Roman mosaic of the Second Century AD in

Tunisia, which shows three race horses standing in an open boat⁸⁰. During longer voyages horses required shelter. The shelter had to include facilities for feeding and cleaning the animals and securing them against the motion of ships. In addition to accommodation for horses facilities to store and keep fresh large quantities of fodder and water were required. As a consequence the transport of a number of cavalry with its mounts must have required a fleet of much greater capacity than did that of an equal number of infantry. Ships also required to be equipped for the embarkation and landing of horses, which was very much more problematic than was that of pedestrian soldiers. Landing cavalry in the face of opposition must have been especially difficult, which may explain Belisarius' reluctance to land too close to Carthage and, during his later Italian campaigns, his abandonment of a proposed landing near Rusciac after the Goths had deployed cavalry along the shore⁸¹.

Due to the problems posed by the transport of horses in ships it must have been the case that cavalry was an impediment to the strategic mobility of an army whenever the sea had to be crossed. Its presence must have been a deterrent against the use of ships and, if sea transport were inevitable, there must have been an incentive to reduce the contingent of cavalry in an army, or to find a supply of horses at a destination.

Maintenance of Cavalry

Quartering

In addition to accommodating men, the quarters of cavalry accommodated horses. The quarters of cavalry during the earlier empire are researched in other studies, but it is found that the study of how cavalry horses were accommodated is not straightforward⁸². The evidence for it, which is mainly archaeological, is seldom conclusive. Indeed, many claims that certain sites were associated with cavalry are disputed.

For the period addressed by the current study, the problems that arise are demonstrated by the quadrangular fort of Qasr Bshir, which is largely still standing in modern Jordan⁸³. This fort was constructed during the reign of Diocletian (284-305), in order to fulfil some function in the province of Arabia and it remained in use throughout the Fourth and perhaps into the early Fifth Century. It is associated with cavalry on the basis of 23 chambers that are identified as stables, due to the presence of stone mangers in each. However, even if these were stables, they need not have housed cavalry mounts. The equine capacity of these chambers did not match the human capacity of the fort, which is estimated to have been between four and five hundred. Therefore, if a cavalry unit were stationed at Qasr Bshir it would have required further equine accommodation, either in the quadrangle or outside the walls. This may have existed, but there is little physical evidence of it. An alternative putative function for the fort that would explain the small capacity of the stables, was as a fortified residence and administrative centre for peripatetic imperial officials. Whatever its actual

function was, in view of the uncertainty surrounding this still substantially intact fort, it can be appreciated that the study of less intact cavalry forts and of temporary campaign quarters, which have left much less archaeological evidence, is yet more problematic ⁸⁴.

Horses could have been accommodated in the open or provided with some form of enclosed stabling. In quarters that were to be occupied for long periods, some enclosed stabling would have been beneficial for sick animals and perhaps for those that were to be ready for action at short notice. Even horses that were left in the open needed to be confined in some way. In long term quarters and in secure circumstances, horses may have been grazed in fenced or walled enclosures. If there had not been time to enclose pastures, or horses were likely to be required for action at short notice, then it is more likely that the animals were tethered close to cavalrymen. The need to provide defences for horses would have depended upon the proximity of hostile parties.

Captain Loire discussed the benefits and drawbacks of two basic types of campaign quarters for cavalry⁸⁵. As with his discussion of cavalry on the march, the needs of horses will have altered little with time, therefore some of his observations have implications for Roman cavalry. One type of quarters that the captain considered was billets in the buildings of towns and villages. These had the advantage of providing the best shelter for horses, men, equipment and supplies, especially during winter. From a tactical perspective, they had the benefit of concealing cavalry in already existing buildings, rather than its presence being advertised by newly erected encampments. Encampments also left cavalry very much more exposed to the elements, which caused fatigue and so reduced its operational performance. They

did provide the tactical advantage of enabling cavalry to remain concentrated, which was better for defence and permitted it to prepare for operations more promptly. There must also have been circumstances when encampments were essential, because no buildings suitable for billets were available.

Whatever the type of cavalry quarters, Captain Loire emphasized that they needed to be more defensible than did those of infantry. This was because cavalry required more time to prepare for action than did infantry, due to the need to make ready its horses. Even when it was ready to fight, as explained in the next chapter it was less apt at the protracted defence of stationary sites than was infantry. For these reasons, sites chosen for the quarters of cavalry were to be as strong as possible. Ideally, the quarters of cavalry were to be protected by natural obstacles and a thorough reconnaissance maintained to warn of the approach of an enemy.

Regulations cited in the Theodosian Code, for the compulsory provision by householders of accommodation for imperial officials and soldiers, imply that Roman cavalry made use of billets⁸⁶. These regulations were decreed by emperors of the east and west between AD 361 and 435. Often no distinction was made between soldiers and other officials, but one regulation that was decreed in AD 400 gave a military man the right to demand as a billet one third of a private dwelling and stabling if required⁸⁷. It is suggested by Petrokovits that the failure of archaeologists to identify positively any quarters for comitatenses in the western empire is due to the fact that these soldiers were generally stationed in towns⁸⁸.

The author of the Strategikon discussed the construction of encampments. He stipulated that cavalry advancing to engage an enemy should construct a base camp in a strong place between 30 and 50 miles from an

anticipated field of battle⁸⁹. Baggage, non-combatants and surplus horses were to be left in this camp, guarded by infantry if it were present. A forward camp was then to be constructed closer to an enemy, to which cavalymen were to advance with some reserve horses and a day's supply of fodder. If they met with a reverse, they could take refuge in this forward camp. If they were successful, those in the base camp would move forward to join them.

In practice, Roman armies were recorded in both billets and encampments. It is possible that billets were preferred, but that encampments were necessary when there were no suitable buildings. During its campaign in Persia, Ammianus reported that the army with Julian constructed camps⁹⁰. It may well have been that, in hostile territory, this army was not able to appropriate suitable buildings as billets. Procopius recorded that the army led by Belisarius against the Vandals, during its march to Carthage, passed nights in towns when available but otherwise constructed encampments⁹¹. One of these, which was constructed when Vandal forces were drawing near, bore some resemblance to the prescription in the Strategikon for a base camp guarded by infantry⁹². In this case Belisarius ordered that a fortified base camp was constructed on a defensive site, in which were deposited spare weapons and other surplus baggage, under the guard of infantry. Cavalry then advanced against the Vandals and, having been successful in combat at Decimum, it passed the night near the battlefield. On the following morning it was joined by the infantry and the baggage.

The recuperative benefits for cavalry of billets were recorded in the Easter Chronicle shortly after the period of this study⁹³. In AD 628 cavalry commanded by the emperor Heraclius constructed an encampment near the city

of Canzacon. Each cavalryman kept in this camp just one horse, the remainder were billeted in the houses of the city on account of the wintry weather. Not only did this presage the recommendation by Captain Loire of the benefit of billets for the welfare of horses, but it may also have presaged his advice concerning so-called 'billet-bivouacs'. These were to be used when billets were too few to contain an entire body of cavalry. Those horses for which there was room were to be billeted, but the remainder were to bivouac in the nearby countryside rather than to clutter the streets.

In the Strategikon, fortifications for encampments were mostly discussed in the section of the twelfth book that pertained to infantry and in the context of Danubian campaigns, which also were to involve large contingents of foot-soldiers⁹⁴. A camp was to be fortified with wagons or a palisade lining the perimeter, a rampart and a ditch. Outside these, caltrops were to be scattered and small pits dug with spikes placed at the bottom. If a camp were not fortified, outposts were to be established around it according to terrain. Sites near hills were to be avoided, because these were exposed to missiles. Those near thick woods were also to be avoided, because these were vulnerable to surprise attacks. When in hostile country, sites besides sizable rivers were beneficial because rivers offered some protection.

Special measures required for the defence of cavalry in quarters were mentioned in the Strategikon⁹⁵. If an enemy were distant, cavalry was to remain outside fortifications, both in order not to be cramped and to impress enemy scouts. Nonetheless, sufficient space was to be available within, lest circumstances became more dangerous. Cavalry inside a fortified camp was to be placed in the middle, presumably as a measure to protect

horses from missiles. During Danubian offensives cavalry was to be within fortifications, provided that sufficient forage could be gathered for its horses. If this were not possible, then it was to remain outside and a ring of sentinels was to protect the grazing animals. That infantry was more able than cavalry to defend camps seems to have been accepted by the author of the Strategikon. If possible, he believed that infantry should guard base camps. It was not only to remain inside fortifications but was also to man outposts, which would delay pursuers and so enable fugitive Roman cavalry to re-group, or at least to enter a camp in good order.

Fortifications actually constructed to protect Roman camps were seldom described in great detail. Ammianus explained that the soldiers retreating after the death of Julian in Persia pitched camp in a broad plain surrounded as if by a natural wall, which allowed only one exit⁹⁶. These natural defences were strengthened with sharpened stakes. The camps erected by Belisarius' soldiers in Libya were fortified with palisades and ditches⁹⁷. Cavalry and infantry that marched from Campania to reinforce Rome against the Goths, passed a night protected by a barricade of wagons⁹⁸. Contemporary authors recorded a number of incidents that reveal the vulnerability of cavalry in encampments. In particular its horses were often a fairly exposed target, which was exploited by Roman commanders on a number of occasions⁹⁹. In Italy, according to Procopius, soldiers led by John 'the nephew of Vitalian' were able to capture Gothic horses at pasture, which were then mounted by some horseless Romans and ridden against the enemy's camp¹⁰⁰. On two occasions during an eastern campaign led by the Roman general Dagisthaeus in AD 549, horses were captured in raids on Persian bivouacs¹⁰¹.

In brief, in whatever manner cavalry was quartered it required accommodation for horses and protection for an arm that was not adept at self-defence. These requirements were additional to those of infantry and must have constituted an impediment to manoeuvres by cavalry.

Supply¹⁰²

According to the author of the Strategikon, when campaigning in hostile territory a general's primary concern was to ensure supplies for his army¹⁰³. Earlier in the Sixth Century, a similar view had been expressed in a speech that Procopius attributed to the commanders John 'the nephew of Vitalian' and Valerian¹⁰⁴. This stated that the outcome of war depended much upon the commissariat and that those who lacked supplies were bound to be defeated. Doubtless this was the case for infantry, but for cavalry there were the additional requirements of its horses, notably the need for fodder and water¹⁰⁵. The penalty for failing these requirements was felt by a Persian army which comprised almost entirely cavalry and campaigned in Lazica under the general Mermeroes in AD 552/3. According to Procopius, Lazica did not provide a sufficient supply of fodder which, coupled with the exhaustion of a long march, resulted in the death of 20,000 Persian horses¹⁰⁶. So as to avoid such a fate, generals were advised in the Strategikon to familiarize themselves with sources of provision in the theatres in which they were to campaign¹⁰⁷.

Sometimes cavalry could have been supplied from its immediate surroundings. To this end, Syrianus believed that the members of quartering parties, which were to

precede armies, should have the expertise to identify good pastures and water supplies¹⁰⁸. In the Strategikon it was proposed that, if it had not been possible to gather supplies in a base camp before a battle, then servants were to forage after cavalrymen had advanced to a battlefield¹⁰⁹. Cavalry making use of local supplies was recorded in practice on several occasions. For example, during his second campaign in Italy, when Belisarius was compelled to manoeuvre his soldiers by ship, stormy weather forced these to spend some time in the harbour at Croton¹¹⁰. He distributed the cavalry contingent in passes leading to the town, partly in order to guard these passes, also so that the cavalry might secure supplies for its horses. In AD 582, before Maurice defeated the Persians at Constantina, Menander noted that he encamped his army near that city in an area that provided cavalry with water and fodder¹¹¹. However, the experience of the Persians in Lazica demonstrates that local sources could not always have been relied upon. During the winter of AD 374, the emperor Valentinian I was deterred from a campaign against the Alamanni partly by a lack of fodder in that theatre¹¹². The mutiny against Maurice, by soldiers who feared the effects upon their horses of a winter spent north of the Danube, is suggested above to have been indicative of the damage done to horses by exposure to the cold¹¹³. It may also have been indicative of the lack of fodder in that region during winter.

Reliance upon local sources for supplies could have been exploited by enemies. The destruction of the forage in a region was proposed in the Strategikon as a means of resisting hostile cavalry¹¹⁴. The Romans did enact scorched earth tactics in practice, for instance in order to hinder an invasion of Mesopotamia by the Persians in AD 359¹¹⁵. In the late Sixth Century, the Roman general

Philippicus regarded a naturally waterless tract, between the rivers Bouron and Arzamon, as an effective defence against Persian cavalry¹¹⁶. Roman cavalry was equally vulnerable to the destruction of its sources of supply. The author of the Strategikon recalled an incident in which Roman horses perished as a result of eating barley poisoned by the Persians¹¹⁷. Because he felt that the near presence of an enemy would prevent foraging, when cavalrymen moved from a base camp to a forward camp they were to take with them a day's supply of hay or grass¹¹⁸.

Ensuring supplies for horses was especially difficult when cavalry was besieged. Vegetius warned that if a siege were likely, all provisions were to be gathered within the defences including forage for horses¹¹⁹. Procopius claimed that the fall of Beroea, near Antioch, to the Persians in AD 540, was due to the foolishness of the defenders who had brought horses and other livestock within the fortifications¹²⁰. Consequently, the water supply for the town was exhausted. During the siege of Rome by the Goths, after the aqueducts had been severed, Procopius reported that the Romans were scarcely able to water their horses¹²¹. They were fortunate that adequate forage for the animals was provided by vegetation growing within the city, which grew quite extensively¹²². After the siege had been lifted, the Romans were able to inflict hardship upon Gothic cavalry in the same way. There was an area of grass near the city of Auximus, in which Gothic cavalry was besieged¹²³. Whenever Goths attempted to gather forage from it, they were set upon by Roman soldiers. At a later date, Goths who had been encircled on Mount Lactarius soon lacked provisions for themselves and their horses¹²⁴. This compelled them to offer battle against the Romans who surrounded them, in which they were defeated.

In order to overcome shortages or interference by enemies, there were means other than local resources by which cavalry could have been supplied. If it were moving into a region in which cities or strongholds were held by Romans, then supplies stored in these may have been available. This was advocated in the Strategikon, as a means of supplying armies sent to repel incursions and was an element of the putative strategy of 'Defence-in-Depth'¹²⁵. It was practised by the Romans during the Gothic War. For instance, Roman cavalry and infantry that landed in Italy in AD 537, received provisions from the inhabitants of Calabria¹²⁶. Later Belisarius decided to seize the fort of Pisaurus, on the Adriatic coast, because its situation was suitable for the pasturage of horses¹²⁷. According to Procopius, John and Valerian urged that the town of Ancona, which was also on the Adriatic coast, should be relieved from its assailants in AD 552¹²⁸. These commanders pointed out that, if it were to fall, there would be no stronghold in Roman hands between Dryus and Ravenna in which supplies could be deposited for Roman soldiers and their horses.

Often it must have been the case that there were no strongholds in Roman hands. For instance, Procopius recalled that when the army with Belisarius arrived at Caputvada the walls of all towns in Libya, with the exception of Carthage, had been dismantled by the previous Vandal king Gizeric¹²⁹. Goldsworthy explains that under such circumstances an army could have been supplied by regular convoys from a supply base, or supplies could have been carried with an army as baggage¹³⁰. The former would have required that a possibly significant portion of an army's strength was detached in order to guard convoys, whereas the latter required a larger and more unwieldy baggage train. The latter method was proposed in the Strategikon, where it

was stipulated that armies in hostile territory were to carry supplies on wagons, with individual soldiers or in some other way¹³¹. Cavalrymen themselves could not have carried many supplies, especially not fodder for horses. The author advised that in battle they should each have a pound or two of bread, barley, meal or meat and some water, for use afterwards¹³². Saddle-bags large enough to contain rations for three to four days were included in the inventory of their equipment¹³³. If provisions were required for periods longer than that, it is probable that wagons, pack animals or possibly ships were required. The above mentioned cavalry and infantry that was supplied at Calabria in AD 537, advanced towards Rome with grain transported on wagons and further provisions in ships¹³⁴.

The detrimental effect that baggage, especially when transported on wagons, had on the rate of progress of cavalry is discussed above. Fodder alone would have added considerably to the weight of baggage. In the Tenth Century, the treatise upon Campaign Organization included the statement that it was not feasible to transport fodder for cavalry sufficient for more than 24 days¹³⁵. There is no reason to suppose that the same would not have been so in earlier times. The burden would have been far greater still if water were carried. Despite this and contrary to the hopes of Philippicus, in AD 586 the Persian general Kardarigan did succeed in leading cavalry across the arid tract between the rivers Bouron and Arzamon, by means of transporting water-skins on camels¹³⁶. This must have been, however, a considerable achievement against major difficulties. Theophylact did not record how long the march lasted, but it probably covered a distance of around 20 miles¹³⁷. It must, therefore, have continued for a day or two at least. Modern horses consume between 40 and 130 pounds

of water per day and horses in antiquity cannot have been much different¹³⁸. Indeed, on the march and in hot conditions the consumption would have tended towards the higher estimate.

Overall, it can be seen that whether supplies were acquired from local sources, strongholds, or were carried on baggage-trains, the supply needs of cavalry must often have impeded its freedom of manoeuvre. As was the case with the provision of quarters, the needs of the horses of cavalry made this impediment greater than that which affected infantry.

Husbandry of Horses

The husbandry of horses, such as grooming, cleaning and veterinary attention, was essential for their fitness and, therefore, for the good performance of cavalry¹³⁹. Little mention was made of these duties in contemporary literature, probably because such mundane necessities were taken for granted. Nevertheless, husbandry would have consumed considerable labour.

Procopius mentioned a force of Roman cavalry in Illyricum, which had stopped to pass the night in a bivouac¹⁴⁰. He did not provide many details of this bivouac, but he did state that the commanders gave the men the usual orders to care for the horses. There must have been occasions, for example when a small detachment manoeuvred in hostile country, that only cavalrymen were present to care for their own mounts. This would have been a laborious burden upon them in addition to their martial duties. Under more secure circumstances or when a large force was present, there would probably have been servants. Servants in Roman armies were mentioned by Ammianus, Theophylact and in the Strategikon¹⁴¹. They

could have relieved cavalymen of the need to look after horses, but would have added to the baggage-train, quartering and supply requirements of an army. Again, this was a handicap that cavalry would have suffered to a greater extent than infantry.

Dominance and Autonomy of Cavalry

It is shown in the first chapter that contemporary literature tends to give the impression that cavalry was the most important arm of Roman field-armies during the period of the current study. However, it would not be wise to conclude that it was the dominant strategic arm based solely upon such subjective evidence, let alone to state that cavalry sometimes performed strategic operations in the absence of infantry.

Cavalry did enjoy a high profile in the historical literature of the Fourth Century, but on closer examination it is apparent that infantry also played major roles in campaigns of that century and was generally more numerous. For instance, Zosimus described the civil war fought by Constantine I against Maxentius early in that century. He cited ratios of cavalry to infantry in the armies of that war that ranged from 1:9.4 to 1:12¹⁴². Ammianus made an observation in passing that is indicative of the significance of cavalry relative to infantry. In his description of Julian's army as it marched into Persian Assyria he commented that Julian placed himself at the head of the infantry, "which was the main strength of his entire force"¹⁴³. When one studies the composition of other armies described by Ammianus and also by Julian, notably at the battles of Myrsa, Argentorate and Adrianople, generally the same

seems to have been the case. Vegetius claimed that his scanty treatment of cavalry was because it was less in need of reform than was infantry, not because it was less important; nonetheless, it is apparent that he attached considerable importance to infantry¹⁴⁴. Elton suggests that cavalry comprised a greater proportion of regional frontier forces as opposed to field-armies, because cavalry was more suitable for the patrol duties required on frontiers¹⁴⁵. He also suggests that in field-armies units of cavalry were often paired with units of infantry on a permanent basis¹⁴⁶.

Consequently, it can be seen that the spectacular descriptions of cavalry by historical authors of the Fourth Century do not imply its predominance in practice. Instead, it was the case that the glamorous image of cavalry, especially armoured cavalry, enabled authors to indulge in dramatic interludes. These must have grasped the imagination of civilian readers, as they still do, but over-emphasized the significance of cavalry.

Cavalry was normally listed first in the eastern section of the Notitia Dignitatum, which may have implied that it enjoyed a senior status in those Roman armies¹⁴⁷. One wonders, however, whether a senior status need have reflected its importance in practice, let alone the numerical presence of cavalry. Concerning the latter, numbers of cavalry and infantry were not stated in the Notitia, but roughly twice as many infantry units were listed and these are thought to have been larger than cavalry units¹⁴⁸. Furthermore, in the absence of an explicit statement in the Notitia of the seniority of cavalry, one ponders what ulterior motives or random factors might have affected the positioning of units in the lists.

Whereas cavalry units headed most lists in the eastern section of the Notitia, in the western section

cavalry came first in some but not in the major lists. Those units under the overall command of the western Master of the Foot were included before those under the Master of the Horse¹⁴⁹. In the roll that showed the distribution of units around the western provinces infantry units were placed above cavalry units¹⁵⁰. Indeed, no cavalry at all was recorded in the provinces of Spain and Illyricum.

The marked contrast between east and west in the Notitia is perhaps indicative of the greater importance of infantry in the west, where there were not the massive open plains that favoured cavalry in the east. It is hardly likely, however, that Spain and Illyricum were completely devoid of cavalry. These provinces may have depended upon local and irregular mounted forces, which did not qualify for entry in the Notitia¹⁵¹. Perhaps there were reasons why cavalry in general tended to be disparaged in the western section of the extant copy of the Notitia that were nothing to do with the situation in practice.

Mann suggests that the precedence of infantry in the western section of the extant copy of the Notitia was connected with the rise of the Master of the Foot to dominate western politics during the Fifth Century, until the collapse of the empire in the west¹⁵². The roll that showed the units in the west had no counterpart in the eastern section and was not mentioned in the index for the western section. This may well indicate that it was a subsequent addition and the precedence that was given to infantry may imply that it was the work of the office of the Master of the Foot. Various references in the Notitia and the political history of the western empire make it seem likely that the addition was made between AD 410 and 428. It is important to emphasize that the rise of the Master of the Foot was a political phenomenon that

had no bearing upon the operational status of infantry relative to that of cavalry. The listing of infantry before cavalry may have been nothing more than force of habit by clerks who were accustomed to dealing with infantry.

If the above explanation for the arrangement of cavalry and infantry in the western section be correct, then it indicates that it did not relate to the status of cavalry relative to infantry in practice. Similar ulterior motives or random factors may have pushed cavalry to the top of the eastern section, in just the same way that infantry benefited in the west.

Historical authors of the Sixth Century also gave cavalry a high profile, but they were normally more restrained than were those of the Fourth, which makes their treatment of it seem more genuine. Unlike the colourful prose of Ammianus, the dry and factual description of a Roman cavalryman by Procopius did serve a practical purpose, by instructing readers in contemporary military technology¹⁵³. Therefore, in view of the absence of a similar description of an infantryman, one is willing to accept this as an indication that Procopius did regard cavalry as the most significant arm. The importance of cavalry is also implied by his descriptions of military operations in which it was generally prominent. Cavalry was prominent also in descriptions by Agathias and by Theophylact.

The impression that cavalry was of greater significance than infantry is given by the emphasis placed upon it in the first eleven books of the Strategikon¹⁵⁴. The discussion in this treatise of battle formations comprising tens of thousands of cavalry gives the impression that strategic roles were anticipated for large all-cavalry forces¹⁵⁵. Several of the operations that were discussed seem to have been of a

fairly strategic nature. For example, guidance was offered for incursions into hostile territory, meeting incursions into the empire, constructing forts in frontier regions, conducting and withstanding sieges¹⁵⁶.

That the importance attached to cavalry appears to have increased between the Fourth and the Sixth Century, makes the lack of evidence for the intervening century all the more unfortunate. It might have revealed the causes and process of this change. The development of Roman cavalry during the period is felt by Coulston to have been spurred on by contact with the horsemen of nomadic steppe tribes, notably Huns and Avars¹⁵⁷. He cites the adoption by Roman cavalry of specific items of equipment and techniques that had previously been used by these horsemen. For instance, he states that Roman archery was vitalized by the nomadic example and that other weapons and saddlery were introduced from this quarter. However, in the absence of much broad, literary evidence for the Fifth Century, it is difficult to fit these specific examples into the wider context of the attributes and utilization of Roman cavalry as a whole that is central to the current study. It is notable that even late in that century, in AD 478, a field-army raised by the emperor Zeno comprised 30,000 infantry and only 8,000 cavalry¹⁵⁸. One should not assume that its increased importance necessarily implies that cavalry became better able to dispense with the support of infantry at the strategic level.

The reason stated by Vegetius for his concentration upon infantry demonstrates that the concentration of the first eleven books of the Strategikon need not have implied that cavalry was dominant in reality, even if the author were a competent tactician whose proposals reflected contemporary practice. Several of the operations that were discussed in those books, such as

stratagems on battlefields, reconnaissance and surprise attacks on enemy encampments, were of a tactical nature¹⁵⁹. In the operations that were of strategic nature one suspects that infantry was envisaged as being not that far away. There was an acceptance in the Strategikon of the presence of infantry in the same theatre, at least within one or two days' march from cavalry¹⁶⁰. One should also bear in mind the twelfth book and the treatise of Syrianus, in both of which cavalry and infantry were envisaged operating together.

In most cases, when an operation by Roman cavalry during the Sixth Century was described, it was either in the presence of infantry or it had only recently separated from infantry. This was the case in most of the battles described in Appendix 1. Even operations by all-cavalry detachments, which are considered in the next chapter, generally served the interests of armies that comprised both arms.

It is not surprising that, throughout the period, infantry was seldom far distant from cavalry. It is shown above in this chapter that the practicalities of strategic manoeuvres must often have favoured infantry over cavalry. Armies fulfilling strategic missions would also have been required to perform various non-combative tasks, such as administration or labouring, during which horses would have been redundant consumers. Moreover, it is shown in the next chapter that the combative aptitude of cavalry was dependent upon its tactical mobility, which rendered it ineffective in circumstances that were not appropriate for mobile tactics. During a long campaign stationary fights would probably have arisen, notably when attacking or defending particular sites.

The infantry that assisted cavalry in non-combative tasks and even in pugnacious stationary tasks need not always have been full-time warriors. It seems that some

Persian infantry comprised artisans. For instance, Zachariah recorded a raid into the district of Amida, by 700 Persian cavalry in AD 528¹⁶¹. This was accompanied by infantry, the stated purpose of which was to gather plunder. The Persian infantry at the Battle of Dara was dismissed by Procopius as a crowd of siege labourers, booty gatherers and servants¹⁶². At Dara the Persian infantry may have been of little value in combat, certainly it failed to baulk the Roman pursuit, but collecting booty and working in sieges were often essential tasks for strategic undertakings. Roman authors seldom slighted Roman infantrymen as mere artisans, but this may have been due to a sense of pride. Even if they were artisans, the contribution that they made may well have been essential.

Roman authors described some operations by hostile forces in which infantry was not mentioned, including a Persian incursion that culminated in the Battle of Callinicum in AD 531¹⁶³. Several of these involved siege warfare, the taking of plunder and of captives. Vegetius discussed siege warfare primarily from the perspective of defenders, but he made clear that it was a laborious and stationary process for all involved¹⁶⁴. The carriage of plunder and captives must also have been a burden upon an invading force, which would have been contrary to mobile tactics¹⁶⁵. That infantry was not mentioned in these operations, might seem to have contradicted the claim that cavalry could not have undertaken strategic tasks without the assistance of infantry. However, if the infantrymen involved were classed as artisans who did not fulfil aggressive roles in battles, then they may not have been deemed worthy of mention, despite the essential tasks that they performed. It is possible that a similar snobbish attitude, or simply the attraction of the dramatic nature of cavalry, sometimes concealed the

presence of infantry in descriptions of Roman forces. At the Battle of Satala for example, Procopius did not mention any infantry in the Roman army. Nevertheless, possibly it was present either in the town or a little further away.

The tendency for authors to omit the presence of infantry from their accounts, is apparent in the passage in which Procopius marvelled at the defeat of the Vandals by Belisarius¹⁶⁶. In this he mentioned the Roman cavalry, but not the infantry that was present. This is all the more surprising because, in a separate passage, he recorded the numerical composition of the army that fought the Vandals, which is one of the few for which such figures exist¹⁶⁷. Despite his omission of infantry from the one passage, he recorded that the army that Belisarius led to Libya comprised around 10,000 infantry, yet around only 6,000 cavalry.

Pringle suggests that the numerical predominance of infantry on this campaign against the Vandals, was due to exceptional circumstances¹⁶⁸. Soldiers may have been required to labour in an anticipated siege of Carthage, for garrisons and for non-combative duties. These were examples of the more mundane duties that could have been vital for a campaign, but for which horses would have been a redundant nuisance. Belisarius may not have been aware of the large extent of the Vandal cavalry. Procopius recalled that, whilst the army was in Sicily before the crossing to Libya, Belisarius became concerned that he did not know in what ways the Vandals would resist the Romans¹⁶⁹. It is proposed that a strong complement of infantry was desired lest hostilities entered rough country. One can add as a further deterrent against the use of cavalry in this campaign, the long sea voyage required to convey the army from Constantinople to Libya. All these considerations would

have discouraged the use of cavalry, but they were by no means unique to this war. Wars in the East, in the Balkans and in Italy also involved assaulting defended locations, required garrisons and administrators, and also presented armies with difficult terrain. Belisarius may have been ignorant of the extent of the Vandal cavalry, but correct intelligence would not have reduced the need for soldiers to perform pedestrian duties. Although the long sea crossing was unusual, even it was not unique. Therefore, the numerical composition of his army in Libya may well have resembled that of many others. It is probably no more than coincidence, but it may be significant that the ratio of cavalry to infantry in this army roughly matched the ideal proportions stated in the twelfth book of the Strategikon, for the so-called 'Convex' battle formation of cavalry and infantry¹⁷⁰.

The exceptional circumstances alleged to have affected the army led by Belisarius are believed by Pringle to have ceased after the defeat of the Vandals. He states "that in view of the mobility of the enemy with which the Byzantine army had to contend, cavalry would usually have predominated over infantry in later Sixth Century Byzantine armies in Africa"¹⁷¹. A campaign fought by John Troglitas, governor of Roman Africa from AD 546 to 552, is cited as an example of this¹⁷². This campaign was recorded by the poet Corippus, from which evidence it is asserted that John deployed 1,000 to 2,000 infantry and 8,000 to 16,000 cavalry. Unfortunately, this evidence is not conclusive. Corippus did state that John campaigned with nine units called agmina and these are equated with units called moirai in the Strategikon, that are reckoned to have been 1,000 to 2,000 strong¹⁷³. He listed the names of the commanders of the agmina and described them arraying for battle¹⁷⁴. Some of the commanders were stated as having been on horseback

themselves and Corippus made poetic use of military terms to describe the deployment of the units, but he did not state explicitly the type of soldiers in each. Therefore, one can question the reliability of such poetic evidence as an historical source for the composition of a Roman army. Furthermore, the assertion relies upon the assumption that agmina were equivalent to moirai, or were at least fixed and uniform units. It is not implausible, therefore, that the army led by John in fact resembled that led by Belisarius.

Conclusion

It can be seen in this chapter that a strategic manoeuvre by cavalry was a complicated undertaking, which was more subject to extraneous factors than was a manoeuvre by infantry. As a result, although in suitable circumstances and over short distances horses could move more rapidly than pedestrians, it cannot be stated that this advantage was apparent at the strategic level. Indeed, sometimes the presence of cavalry would have impeded the movement of armies at the strategic level.

Contemporary literature does give the impression that the importance attached to cavalry as a component of Roman field-armies increased during the period of the current study. It is unlikely, however, that Roman cavalry ever operated as a strategic weapon without the assistance of infantry, although infantrymen may sometimes have been little more than artisans. For many tasks required on strategic operations the presence of horses would have been a handicap and, throughout the

period, infantry constituted an essential element and probably the majority of Roman field-armies.

The author of the Strategikon did not address the practicalities of strategic manoeuvres in great detail, but his treatment of quartering and supply had some confirmation in practice. Contrary to the initial impression that one receives from the Strategikon, its author did accept the need for co-operation between cavalry and infantry, not only in the twelfth book.

Chapter 3

ROMAN CAVALRYEQUIPMENT AND HORSES

The designs of equipment, especially weapons and armour, used by Roman cavalry must have had implications for its attributes and utilization. Coulston points out that the designs of cavalry weapons and armour both dictated and were dictated by their tactical functions¹. A consideration of its equipment might, therefore, have been a means to address the primary objective of this study. However, Goldsworthy recognizes that designs could have been influenced by stylistic and cultural factors as well as military considerations². Furthermore, he believes that the emotional state of soldiers in battle would have affected greatly the ways in which they used weapons. One could add that ways of using equipment, that had never been foreseen by manufacturers, may have been improvised by individuals in the face of any number of contingencies. Consequently, one should not assume that there was a direct link between the designs of equipment and the attributes and utilization of cavalry. Nonetheless, a review of equipment and horses provides background information for the consideration of Roman cavalry at the tactical level in Chapter 4.

Much of the evidence used in other studies of Roman military equipment is artefactual or representational. Therefore, the findings of these studies are difficult to apply to the current study, due to the problems of using archaeological and representational evidence. In particular, there is the difficulty of associating specific items of archaeological or representational evidence with the wider context of Roman cavalry recorded

in the literary sources. This difficulty is all the worse because the equipment used by Roman cavalry was probably far from uniform across the empire and throughout the Fourth, Fifth and Sixth centuries. State arms factories, which existed by the Fourth Century and were listed in the Notitia Dignitatum, must have imposed some uniformity³. However, local production did not cease entirely with the introduction of state factories and it is not known how the factories developed after the time of the Notitia⁴. For instance, in the east the production of archery equipment seems to have remained in the hands of the indigenous craftsmen who had been practising it for centuries⁵. Even in state factories, allowance was presumably made for the special needs of different military units and the fashions of times and places must have had an effect. Furthermore, it is likely that non-Roman contingents allied to Roman armies made much use of their own native equipment.

For these reasons this chapter is not intended to be a comprehensive review of the evidence available for the origins, development and detailed design of individual items of cavalry equipment in the later Roman empire. Instead, it is concerned with the overall panoply of cavalry equipment, especially weapons, primarily as it was recorded in the literary evidence that forms the basis of this study.

Cavalry Mounts

Good war-horses were essential for the success of cavalry. During the period addressed by this study, Roman cavalry mounts were supplied from several sources,

including imperial stud farms, compulsory provision by holders of honorary titles, purchase and capture⁶.

Most of the evidence for the physical attributes of Roman cavalry horses, in the form of skeletal remains and the dimensions of stables, dates from the earlier empire⁷. In any period, however, a good cavalry mount had to be a well tempered animal, which would remain steady and obedient in the confusion of battle⁸. During hand-to-hand combat it required agility and prompt reactions. An experienced cavalry mount might have taken an active role, by predicting the needs of its rider and assailing opponents with teeth and hooves⁹. Roman authors sometimes commented upon horses that displayed such qualities. At the second battle at the Milvian Bridge, where Belisarius became involved in the thick of the fighting, Procopius noted that he was riding a horse that was experienced in combat and knew how to save its rider¹⁰. Agathias made a similar observation about the horse ridden by Narses at the Battle of Ariminum, which was well schooled and agile in combat¹¹. After the battle of Solachon, Theophylact noted that a captured Persian horse was of fine appearance and good in battle¹².

An extensive programme of schooling must have been required in order to create good cavalry mounts, but there is little evidence from the period of this study to show how this was achieved. Archaeological and literary evidence from the earlier empire suggests that some cavalry quarters were provided with training grounds, which may well have been used for the schooling of horses as well as the tactical training of military units¹³. Some cavalry quarters in the later empire may well have had similar facilities. In the Strategikon, it was stated that horses should be made accustomed to manoeuvring on rugged ground, but little more was

specified¹⁴. Syrianus felt that horses in the front ranks of battle formations especially should be experienced¹⁵. One wonders what proportion of Roman cavalry mounts were schooled to a high standard. The generals' horses mentioned above very possibly exceeded the average standard, especially compared with horses pressed into service at short notice during campaigns.

During the Middle Ages, the aggressive nature of stallions was thought to be essential for warhorses and no man of action would have ridden a mare under any circumstances¹⁶. In the Nineteenth Century, however, Captain Nolan did not object to the use of geldings¹⁷. It appears that Roman cavalrymen may also have made some use of geldings. According to Syrianus, geldings were more suitable than stallions for use on reconnaissance missions, because they were less likely to advertise their presence with neighs¹⁸. Horses brought into Roman armies by allied nomadic tribesmen were most probably gelded, because this would have been essential for the large herds that were part of nomadic pastoralism¹⁹. Ammianus noted that Sarmatians gelded their horses for this reason and also so as not to betray ambushes with neighs²⁰.

The number of horses assigned to each cavalryman had some important implications for Roman cavalry. Horses must have been lost on campaign due to disease and injury; sometimes exhausted or sick horses would have required periods of rest. Under such circumstances, spare mounts would have been needed if all cavalrymen were to remain on active service. However, the presence of remounts would have added to the difficulties of supply and quartering faced by Roman cavalry and increased other problems during strategic manoeuvres, especially by sea. Spare horses were seldom mentioned in contemporary historical literature, but they were

mentioned in the Strategikon and it is reasonable to assume that they were present on major operations²¹.

Saddlery

The performance of cavalry mounts and the ability of cavalymen in combat must have been greatly affected by the design of saddlery. Most of the evidence for Roman saddlery, notably the artefactual record, comes from the earlier empire. Examination of this evidence and experiments conducted on horseback with replicas of Roman saddlery by Hyland, Connolly and others, reveal that early Roman saddlers achieved a fair degree of technical sophistication²². Bits appear to have been powerful in comparison with those of the modern world. This would have yielded firm control in the confusion of battle, but necessitated sensitive hands in order to avoid injury to horses. It is notable that these bits required a high hand position, which would have allowed reins to be held in the left hand with a shield supported on that forearm. A very significant discovery is that Roman saddles provided a very secure seat, despite a lack of stirrups. This was achieved by means of four horns which were attached to the wooden frame, or tree, of a saddle. Two of these protruded from the cantle and supported a rider's lower back. The other two protruded from the pommel and against these a rider could have braced his thighs.

There is no reason to suppose that the earlier technology of saddlery was abandoned during the period of this study. Connolly & van Driel-Murray believe that four-horned saddles continued at least into the early Fourth Century²³. Nazarius recounted that when Roman

armoured cavalymen were incapacitated by maces at the battle of Turin, they were held fast by their saddles²⁴. One imagines that they were prevented from slipping by horns. Allied cavalry probably used whatever saddlery had been developed by its native people. There is evidence that Huns had saddles with wooden trees²⁵. Ammianus indicated that the Alamanni used bits that enabled a cavalryman to hold a shield and reins with one arm and to fight with the other²⁶.

A development that took place probably late in the reign of Justinian and was possibly inspired by the Avars, was the adoption of stirrups by Roman horsemen²⁷. There is a little evidence that Huns were using stirrups several centuries beforehand²⁸. Iron stirrups were included in the inventory of equipment in the Strategikon²⁹. To an extent, however, the significance of the introduction of stirrups was lessened by the use of four-horned saddles. Some feel that without stirrups cavalymen would have been very insecure in combat and that this would have greatly reduced the effect of Roman cavalry³⁰. For sword fighting in particular, it is felt that stirrups were a necessity³¹. The experiments conducted with replicas of four-horned saddles demonstrate, however, that Roman cavalymen would have been firmly seated without stirrups³².

There may be a tendency to think of stirrups too much as a balancing aid and, therefore, as a substitute for horns. On a modern saddle, the primary function of stirrups is to prevent a rider's legs from aching and if significant unequal pressure is placed upon them a saddle will slip sideways. A four-horned saddle would also have slipped if a sufficient lateral pressure were exerted on the horns, but the horns would have supported a rider to front and rear in a way that stirrups could not have done.

There is debate concerning the use of horseshoes in antiquity³³. A small amount of literary, archaeological and representational evidence may imply the existence of various types of horseshoe in the Roman world. However, a lack of widespread evidence implies that shoes were not in common use. Syrianus mentioned iron plates that protected hooves against caltrops and other hazards, but otherwise there is little mention of horseshoes in the evidence cited in the current study³⁴. Besides protection against caltrops and other sharp objects, shoes would have reduced the wear of hooves on abrasive ground or metalled roads. Against these benefits, there would have been potential veterinary problems resulting from the use of shoes³⁵. Furthermore, Captain Loire stated that forges and farriers needed to be available when cavalry was on manoeuvre, in order to replace horseshoes³⁶. Forges, iron, fuel and farriers would have been a substantial addition to a baggage-train and, therefore, a hindrance to mobility, unless they were available at destinations. For these reasons, the hooves of Roman cavalry may well normally have been left without protection.

Standards and Musical Instruments

Standards and musical instruments were important items of equipment for both cavalry and infantry when in battle³⁷. The former were necessary for maintaining the cohesion of formations and for marking rallying points, the latter for the transmission of orders. When the rout of the Roman cavalry at Argentorate was stopped by the appearance of Julian, Ammianus explained that the soldiers recognized their commander by his purple

standard, which resembled a serpent as it streamed in the wind³⁸. When Belisarius laid siege to the Goths in Auximus, Procopius himself suggested that the differing notes of the trumpets of cavalry and infantry were used to instruct the soldiers to advance or retreat³⁹.

The use of standards and trumpets by cavalry was discussed in the Strategikon. Commanders of tagmata were to give orders by voice, banging shields, hand signals or trumpets⁴⁰. In a different section of the treatise, however, it was recommended that the number of trumpets be limited, both to avoid confusion and because a silent deployment would unnerve an enemy⁴¹. For these reasons, when on level ground only one trumpet was to sound in the centre of each line of battle. On hilly terrain, in a high wind or near rushing water, a further trumpet in each division was to repeat signals.

According to the Strategikon, each division, sub-division and tagma was to have a unique standard⁴². The importance of these as a means of maintaining cohesion, was emphasized in a speech which the herald of each tagma was to address to the men shortly before battle⁴³. They were urged to watch their standard, not to move ahead of it and were warned that leaving their standard would result in defeat. Fifteen to twenty of the best men were to be assigned to guard each standard, which also indicated the importance attached to standards⁴⁴. At the Battle of Satala it was, according to Procopius, the fall of the Persian general's standard that precipitated the rout of the Persian cavalry⁴⁵.

It was suggested in the Strategikon that each tagma should have a duplicate standard⁴⁶. This was not to be shown in battle, but on a march it would exaggerate the apparent size of an army when observed by enemy scouts. In the section of the treatise that dealt with reconnaissance, it was suggested that the size of an army

could also be exaggerated by elongating its formation⁴⁷. This method was adopted by Julian in Persia⁴⁸. However, the author of the Strategikon did not suggest any method for making an army appear smaller. This might imply that Roman armies of the late Sixth Century often suffered a shortage, rather than a surfeit, of soldiers.

Weapons and Armour

Amongst the descriptions of armament in contemporary literature, possibly the most striking referred to armoured cavalry of the Fourth Century. Nazarius wrote of horsemen in the army of Maxentius at Turin⁴⁹. These had armour that comprised iron protection for riders and peytrals that covered horses' breasts and forelegs. Later in the century, several colourful descriptions of cavalry employed by Constantius II were composed. Ammianus described the soldiers that escorted Constantius into Rome in AD 357:

"And there marched on either side twin lines of infantrymen with shields and crests gleaming with glittering rays, clad in shining mail; and scattered among them were the mounted cataphracti, whom they call clibanarii, all masked, furnished with protecting breastplates and girt with iron belts, so that you might have supposed them statues polished by the hand of Praxiteles, not men. Thin circles of iron plates, fitted to the curves of their bodies, completely covered their limbs; so that whichever way they had to move their members, their garment fitted, so skilfully were the joinings made."

Ammianus Marcellinus XVI.10.8

Julian mentioned cavalry in his panegyric orations of Constantius:

"What emperor can one cite in the past who first planned and then reproduced so admirable a type of cavalry, and such accoutrements? ... Your cavalry was almost unlimited in numbers and they all sat their horses like statues, while their limbs were fitted with armour that followed closely the outline of the human form. It covers the arms from wrist to elbow and thence to the shoulder, while a coat of mail protects the shoulders, back and breast. The head and face are covered by a metal mask which makes its rider look like a glittering statue, for not even the thighs and legs and the very ends of the feet lack this armour. It is attached to the cuirass by fine mail like a web, so that no part of the body is visible and uncovered, for this woven covering protects the hands as well, and is so flexible that the wearers can bend even their fingers."

Julian Orations I.37C-D

In Julian's second oration he described the deployment of this cavalry at the Battle of Myrsa:

"Of these troops some carry lances and are protected by cuirasses and helmets of wrought iron mail. They wear greaves that fit the legs closely, and knee-caps, and on their thighs the same sort of iron covering. They ride their horses exactly like statues, and need no shield. In the rear of these was posted a large body of the rest of the cavalry, who carried shields, while others fought on horseback with bows and arrows."

Julian Orations II.57B-C

When composing a panegyric oration of Julian, Libanius felt that he could characterize Constantius in part by reference to his cavalry:

"He covered his cavalry with mail more carefully than the Persians and used armour to protect even his horses from being wounded."

Libanius Orations XVIII.206

These descriptions indicated that some Roman cavalry of the Fourth Century wore extensive armour. Unfortunately, in view of the poetic language one is not certain just how all-enveloping this armour was in reality and how well horses were protected is even less clear. Neither Ammianus nor Julian mentioned armour for horses and Nazarius indicated that only the breasts and forelegs were protected. The detailed design of the armour of Roman cavalry is the subject of other investigations of primarily artefactual and representational evidence which, for the reasons stated above, are difficult to apply to this study⁵⁰. The Arch of Galerius sports the sort of representational evidence that one should not automatically assume illustrated the cavalry of any particular description⁵¹. Nonetheless, it is possible that the Roman cavalrymen shown on the arch with helmets, shields and armoured tunics that extended to their elbows and thighs, leading horses that were not armoured, were similar to those in some of the above descriptions. The technical accuracy of this portrayal is questionable, because the cuirass skirts shown probably would have prevented cavalrymen from straddling horses, but the extent of armour may have been roughly accurate.

There were a number of factors that may have encouraged the use of armour by Roman cavalry. The appearance of armour seems to have had an unnerving effect upon enemies⁵². Nazarius observed that the armour of Maxentius' cavalry at the Battle of Turin doubled the terror inspired by his army⁵³. During Julian's eastern

campaign, Ammianus made a similar observation concerning the effect of Persian armour on Roman soldiers⁵⁴. Indeed, the psychological impact of the appearance of armoured cavalry was implicit in the attention paid to it in contemporary literature. Armour also provided a more concrete tactical advantage over opponents without it⁵⁵. Ammianus explained that an unarmoured Alamannic horseman with a lance, was not by himself able to harm an armoured Roman cavalryman⁵⁶. Often the adoption of armour by Eurasian peoples seems to have been in response to the threat of archery⁵⁷. The Notitia Dignitatum shows that there was probably a greater deployment of armoured cavalry in the east than in the west⁵⁸. It also shows that there was a larger number of state factories in the east that were dedicated to the production of armour⁵⁹. This may well have reflected the distribution of potential enemies that themselves made extensive use of armour and archery. In the east were the Persians and eastern districts were harried by the mounted archers of a succession of nomadic steppe tribes.

Against the factors that encouraged the use of armour by cavalry were some significant drawbacks. The addition of armour must have substantially increased the cost of maintaining cavalry. Theophylact included armour amongst a number of items that had been "devised by the inebriation of wealth"⁶⁰. That it must have been expensive was confirmed by the high price paid for armour by mediaeval warriors⁶¹. Stronger, more mature and therefore more expensive horses would have been required in order to bear the burden of armour⁶². Due to the added strain caused by armour a larger number of remounts would have been necessary, which would have increased expense and the logistical problems faced by armies. Some mediaeval armoured knights required five horses each⁶³.

Heliodorus claimed that armoured Persian cavalrymen needed to be hoisted into their saddles⁶⁴. The hindrance caused by the lack of flexibility and the weight of armour was attested elsewhere. Vegetius believed that armoured cavalry was protected from wounds, but was more easily captured due to weight⁶⁵. Having passed through the gaps in Constantine's line at Turin, Nazarius noted that Maxentius' cavalry was prevented from manoeuvring by "the rigidity of iron"⁶⁶. Ammianus commented that Roman armoured cavalrymen were easily slain if they were thrown from their horses and, at Argentorate, he recorded that a Roman horse collapsed under the weight of armour⁶⁷. These accounts comply with a popular conception about mediaeval armoured knights, namely that if they fell from their horses they were immobile and impotent. This conception is certainly exaggerated, however. There are stories of knights in full armour vaulting into their saddles without stirrups⁶⁸. Nevertheless, the weight and restriction of armour must have created some tactical difficulties, especially if it extended to horses⁶⁹. In the Nineteenth Century Captain Nolan believed that a cuirass would intimidate an enemy, but that just its weight was detrimental to a charge⁷⁰. That the encumbrance of armour made cavalry less able to deal with rough or boggy ground, may have been another reason why armoured cavalry was more common in the east, where there was a greater extent of level and dry country upon which it could operate.

Probably a greater problem than weight and lack of flexibility was the heat that must have built up rapidly within armour⁷¹. It may have been that the term 'clibanarius', which was sometimes used by Ammianus and others to refer to armoured cavalry, was derived from the name of a type of oven. The resemblance might only have been one of appearance, but it is also possible that the

temperature inside was felt to bear some similarity, especially in a Middle Eastern summer. Joshua recorded that a Roman soldier once loosened his armour so as to gain relief from the heat, only to be struck and killed by an arrow⁷². The effect of heat upon horses may have been greater still. In an animal of large mass regulation of body temperature was critical and a protective covering would have blocked the natural means of heat loss. Zosimus recorded a battle in AD 272, between armoured Palmyrene cavalry of the rebellious Queen Zenobia and light Roman cavalry⁷³. The Romans feigned a withdrawal and the Palmyrenes pursued, until they and their horses were exhausted by the heat and weight of their armour. A counter-attack was then launched by the Romans which routed the tired Palmyrenes.

Not only was armour costly in terms of financial and other resources, heavy and hot, but the protection that it provided was by no means total, no matter how all-enveloping it was. Roughly 1,000 years earlier, Xenophon noted that a horse's head, breast and flanks could be protected, but that its belly would remain exposed⁷⁴. At Turin, Nazarius explained that armoured cavalymen were thrown when their horses were struck in the vulnerable parts, which must have included the bellies⁷⁵. At Argentorate, Ammianus commented upon the vulnerability of Roman armoured cavalry to foot-soldiers, who could sneak up and pierce horses' sides⁷⁶. Another vulnerable point must have been horses' legs. According to Heliodorus, the legs of Persian horses were protected by greaves⁷⁷. However, equine greaves could only have protected the lower legs, must have been difficult to fasten securely and would have had a detrimental effect upon the movement of horses' legs. Therefore, it seems unlikely that horses' legs were often protected in reality. This may

well have been the reason why Syrianus believed that archers should be trained to shoot at horses' feet⁷⁸.

Vegetius explained correctly that a head of triangular section, rather than a barbed head, would aid a javelin to pierce armour⁷⁹. If armour were pierced it seems likely that a wound would have been worsened by fragments of armour that penetrated the flesh⁸⁰. However, Vegetius claimed that armour-piercing heads were seldom used in his day. There were some references during the period of this study to armour being pierced in practice, but also some to the successful protection that it offered⁸¹. Vegetius also mentioned that stones hurled from slings could be effective against armour⁸². The demise of armoured cavalrymen and horses due to concussive blows was recorded on a number of occasions and Goldsworthy believes that slingers could have been more effective against armoured targets than were archers⁸³. Nazarius graphically explained how the armoured cavalrymen at Turin were struck with iron maces, which caused them to reel helplessly in their saddles⁸⁴. Joshua reported that, in AD 503, the inhabitants of Edessa resisted an attack by armoured Persian cavalry and that Persian horses and men fell to stones from slings⁸⁵.

The visual impact of heavily armoured cavalry must have been useful on ceremonial occasions, such as the entry of Constantius into Rome. In view of its drawbacks, however, it is not surprising that its effectiveness in battle is dismissed by some modern analysts⁸⁶. Hyland suggests that the alarm expressed by Ammianus at the sight of Persian armoured cavalry implied that it was not common in Roman armies⁸⁷. Ammianus' dramatic language was generally more intended to excite civilian readers than to reflect reality, but it does seem that heavily armoured cavalry was not very common in Roman armies of the Fourth Century. At the Battle of

Turin it was not mentioned by Nazarius as being in Constantine's army, but this may have been so as to increase the dramatic effect of his panegyric⁸⁸. The heavily armoured cavalry that was mentioned at Turin and that at Argentorate experienced difficulty. It was not mentioned at the Battle of Adrianople. Therefore, one suspects that the importance attached to heavily armoured cavalry by Nazarius, Julian, Libanius and Ammianus was exaggerated for rhetorical reasons.

In the Notitia Dignitatum numerous units of cavalry were listed, many of which had technical terms attached to them. The meanings of these terms are no longer clear and may not have been rigidly descriptive even at the time. Therefore, one may be mistaken if one attaches too much significance to them. However, the terms cataphractarii, clibanarii and armigeri (the latter also applied to infantry) are believed to have denoted armoured cavalry. One can hazard a guess that these terms indicated different extents of armoured protection and that the remaining units, which were in the majority in the Notitia, were not armoured⁸⁹.

Differing extents of armoured protection were recorded in practice. In the descriptions cited above, Nazarius and Libanius mentioned armoured horses, whereas Julian and Ammianus did not. At the Battle of Myrsa, it seems that the cavalry at the rear of Constantius' deployment wore less armour than that at the front. This battle may well have been typical of those that involved heavily armoured cavalry insofar as less well protected horsemen were active as well. During Julian's advance to Ctesiphon, Ammianus mentioned that Roman cavalry was able to swim in full armour⁹⁰. This implied that the armour cannot have been very extensive. Coulston points out the likelihood that if armoured cavalry were required to perform tasks for which armour was an unnecessary

nuisance the protection would probably have been dispensed with⁹¹.

Very probably the majority of Roman cavalrymen possessed only shields and helmets, or had no protection whatsoever⁹². Cavalry shields must have struck a compromise between a design that offered the greatest protection on horseback and one that was convenient for use on foot. The former would have been tall and narrow, which protected riders from head to foot without being too cumbersome, but unfortunately would not have been suitable for use on foot for which a shorter design would have been necessary. It is likely that different compromises were reached according to customs, tactical circumstances, other weaponry etc. An oval design, such as that illustrated on the Arch of Galerius, was one compromise that may have resulted. Recent experiments on a wooden horse, with replicas of such a shield that measured 1.3 by 0.65 metres and weighed 7 kilograms, a long Roman sword and a four-horned saddle, demonstrate that such a shield was a useful counter-balance when wielding a sword⁹³.

It is very difficult to make detailed comments about the offensive armament of the Roman cavalry in any one contemporary description of the Fourth Century. Many weapons were of the shafted variety, but even within that classification there was room for much variation which was not addressed in most descriptions. The lightest would have been for use first and foremost as missiles⁹⁴. Heavier shafted weapons would have been more useful at close quarters, although some of these might still have been suitable for throwing⁹⁵. For the purposes of the current study, shafted weapons are referred to as lances, although they were by no means all the same.

If lances were not too heavy, they could have been wielded in one hand or thrown. This would have enabled

cavalrymen to use their reins in combat and to support shields. In the Strategikon, anonymous 'ancient authorities' were cited which had stated that lances of horsemen behind the fourth rank could not reach the front⁹⁶. Elsewhere in the treatise a hypothetical formation of horsemen was considered, in which each rank occupied 8 feet⁹⁷. Taken together these passages imply that sometime before the late Sixth Century cavalry lances had existed that exceeded 24 feet in length. Lances of such length would have required to be held in more than just a single hand. During the Middle Ages, long lances were wielded in the so-called 'couched position' under the right arm⁹⁸. There is little evidence for the use of the 'couched position' in antiquity. Heliodorus claimed that Persian cavalry supported heavier lances in loops attached to horses' necks, so that cavalrymen could still use reins⁹⁹. One is doubtful that such an arrangement would have been practicable in reality, due to the consequences for horse and rider when a tethered lance struck its target. Therefore, it seems most probable that Roman cavalry wielded long lances in both hands, which precluded the use of reins and shields. This may have been the true reason why the armoured cavalry described by Julian at Myrsa did not have shields.

Captain Nolan made clear that lances were effective by virtue of the impetus of a cohesive formation¹⁰⁰. Consequently, lances required an even field and were of little use in a melee. Maintaining a cohesive formation must have been difficult if lances were held in both hands. Hyland suggests that perhaps horsemen on either flank of a formation did not wield lances and instead used their reins to 'herd' their comrades towards an enemy¹⁰¹.

After the initial contact with an enemy, when lances

would have been dropped or broken and the vital cohesion and impetus lost, it is most likely that cavalymen would have resorted to hand-to-hand weapons. Several types of hand-to-hand weapon might have been used. Axes or maces were a possibility¹⁰². Huns and Goths made use of lassoes¹⁰³. Malalas recorded that Areobindus, a Roman commander during the Fifth Century, used a lasso "as in the Gothic custom"¹⁰⁴. Probably, the choice of hand-to-hand weapon was often a sword¹⁰⁵.

According to Julian, amongst the less armoured cavalry in Constantius' army at Myrsa were mounted archers¹⁰⁶. That during the Fourth Century there was a standing partnership between armoured horsemen and mounted archers, was implied by Ammianus when he stated that the two together formed a formidable branch of the cavalry arm¹⁰⁷. He did not state how the archers and armoured horsemen co-operated, but Constantius' deployment at Myrsa did bear at least some resemblance to that prescribed in the Strategikon¹⁰⁸.

Haldon and Eadie suggest that by the Sixth Century the heavy armour of Roman cavalry that was described during the Fourth Century had been dispensed with¹⁰⁹. This is thought to have been due to developments in Roman tactics, which involved a much greater use of mounted archery and which were probably inspired from the late Fourth Century by the Hunnic example¹¹⁰. Ammianus briefly described Hunnic tactics, which involved small groups of lightly equipped horsemen manoeuvring at speed¹¹¹. After launching a barrage of missiles from a distance, these would rush to close quarters with swords and lassoes. This description may or may not have been realistic because, as Matthews explains, it seems that Ammianus' understanding of Hunnic ways and culture was naive in several respects¹¹².

From the Sixth Century some descriptions of the panoply and armament of Roman cavalry have survived, which were much more objective than were those from the Fourth. In the first chapter of the History of the Wars, Procopius described a Roman cavalryman of his day¹¹³. He mentioned that there were some who derided such cavalymen, which may have implied that their equipment was a fairly recent innovation. It comprised a cuirass and greaves that protected shins and knees. A quiver was suspended from the right and a sword from the left. Some carried a lance and a form of shield that was strapped to the shoulders so as to protect the face and neck. These cavalymen were skilled horsemen and archers, who could shoot arrows through shields and armour to either side whilst riding at speed. Their armour was not impregnable, which was demonstrated in a skirmish near Rome recounted by Procopius¹¹⁴. This involved a Hunnic guard of Belisarius, named Bochas, who was assailed by twelve Goths with lances. Most of the Goths failed to penetrate his armour, but one was able to wound him near the armpit, which was exposed, and another pierced his thigh.

Agathias provided a brief description of Roman cavalymen at the Battle of Capua¹¹⁵. These carried short lances and shields, with bows, quivers and swords suspended at their sides. A few carried heavier lances.

Syrianus stated that the armour and armament of cavalymen should resemble that of infantrymen¹¹⁶. This may have been so in loose terms, but there must have been substantial differences in detailed design if either arm were to fight well. He also stated that horses should have protection for the head, neck, breast and feet.

A more comprehensive description was included in the Strategikon¹¹⁷. In this treatise, cavalymen were to have hooded coats of mail that reached the ankles. When

not in use, these were to be transported on baggage trains in leather cases, but light wicker cases were also to be issued in which cavalrymen could carry them behind their saddles. Neck-pieces of Avar design, plumed helmets and, for some senior soldiers, iron gauntlets were to provide additional protection. The horses of officers and those in the front ranks of battle formations, were to have iron chamfrons and peytrals of iron or felt. Alternatively, horses were to have breast and neck protection of Avar design. Decoration of armour with tassels and pennons was to boost the self-confidence of cavalrymen and to intimidate enemies. With the exception of some allied cavalrymen, all were to have bows suited to the strength of each man and cases that could contain strung bows. They were to have quivers for 30 to 40 arrows and spare strings in their saddlebags. Large hooded cloaks were to cover both armour and bow-cases, so as to protect these from the wet. Furthermore, the cloaks would hide the glint of armour when on covert operations and provide additional protection against arrows. Each cavalryman was to have two lances, in case the first missed, both of Avar design. Lances were to have thongs attached to the middle of the shafts and pennons. Shields were mentioned in connection with those allied cavalrymen who lacked bows, but in the discussion of tactics it was implied that shields were to be used by all cavalrymen who wielded lances¹¹⁸. Cavalrymen were also to have swords and lassoes.

A possible close parallel with the panoply specified in the Strategikon, was illustrated by a rock-relief at Taq-i-Bustan in Persia, which showed the king Chosroes II (591-628) on horseback¹¹⁹. The king wore a coat of mail that reached his knees and a helmet. His face and throat were protected by an aventail. A lance, that may have been heavier than that envisaged in the treatise, was

balanced on his shoulder. In action this lance would probably have been held in both hands. There was a small circular shield and a bow-case and quiver were slung from the king's waist. His horse was protected by a chamfron and peytral. It is possible that, unlike the cavalrymen in the Strategikon, Chosroes lacked stirrups, but damage to the relief has obscured this detail.

It is clear from the inventory in the Strategikon that, by the late Sixth Century, the Avars had exerted a great influence upon the equipment of Roman cavalry. That the lassoes were intended as weapons is doubtful. As mentioned above, lassoes were used as such by some cavalrymen and Malalas mentioned their use in battle by Huns during the Sixth Century¹²⁰. In the Strategikon, however, lassoes were listed amongst items of saddlery rather than weaponry. There was no mention of lassoes in the tactics prescribed in the treatise.

It appears that the lance envisaged in the Strategikon was fairly short and light. Elsewhere it has been calculated, on the basis of internal evidence, to have been around 12 feet in length¹²¹. It was possible for a cavalryman to carry two lances. Furthermore, lances were sufficiently manoeuvrable to perform an exercise at the gallop that involved a cavalryman shooting his bow, replacing it in its case, grabbing a lance from his back, wielding the lance, returning it to his back and resorting to the bow¹²². Presumably the thong attached to a lance was the means by which it was suspended on a cavalryman's back. In battle, cavalrymen were to wield lances at shoulder height, presumably in only one hand because shields were also to be used¹²³. Lances were not only to be thrust but could also be thrown¹²⁴. Whether lances were thrust or thrown, it was observed that pennons would reduce accuracy and range and would interfere with archers shooting from behind.

Therefore, pennons were to be removed when still about a mile from a battlefield. Coulston points out, however, that a pennon would have aided the extraction of a lance from an unfortunate victim, by preventing an over-deep penetration¹²⁵.

One imagines that the lance used by the Roman general Sittas at the Battle of Oenochalakon was longer and heavier than that envisaged in the Strategikon, which was why he planted it in the ground during a respite rather than placing it across his back¹²⁶. It may also have been the reason why he did not carry a spare. The type of lance that was envisaged in the Strategikon may have resembled that portrayed on the pulpit of the cathedral at Aachen and that on the Barberini Ivory¹²⁷. Both portrayals, which were reliefs of Roman origin carved during the Sixth Century, showed a lance of roughly 12 feet in length.

The agility that could be achieved by a cavalryman with a lance, provided that it was not too long, was demonstrated by Totila before the battle of Taginae¹²⁸. In order to display his prowess to both armies, he rode into the gap between them where he wheeled his horse in circles and practised gymnastics in the saddle. As he did so he was able to pass his lance quickly from hand to hand, to throw it into the air and then to catch it. This appears to have been a more ambitious version of the exercise prescribed in the Strategikon.

The need for a hand-to-hand weapon such as a sword, in addition to a lance, was experienced by Sittas at Oenochalakan¹²⁹. His lance was not lost in combat, but was trampled by the horse of another Roman after it had been planted into the ground. Sittas was compelled to continue the fight with his sword.

By the Sixth Century, bows had become much more prominent in descriptions of cavalry armament. Procopius attested the importance of mounted archers in the army that Belisarius led against the Goths¹³⁰. He also alluded to the influence that Hunnic allies had had upon the development of mounted archery in Roman armies¹³¹. In general it does seem to have been the Persians and nomadic horsemen from the steppes, such as the Huns, which inspired Roman mounted archery¹³².

The design and performance of Roman bows is researched extensively in other studies¹³³. It is believed that they had a maximum range of up to 250 yards, an accurate range of between 100 and 200 and could pierce armour up to about 100. The stiffness and length of bows had to be suited to the strength and reach of individual cavalrymen, as was noted in the Strategikon. They were costly items, which required 5 to 10 years to manufacture and were irreparable if seriously damaged. Damp weather reduced the stiffness of bows and therefore reduced their range and power, as was appreciated in the Strategikon and recorded in practice by Zachariah¹³⁴. Due to the susceptibility to damp, the cost and the fragility of bows, it must have been important that cavalrymen took great care of them and bow-cases were essential items.

Mounted archers required to be skilled marksmen, who were able to control their horses accurately by means of only their legs and seats. Syrianus emphasized that an extensive programme of training was necessary for all archers, including mounted archers¹³⁵. In addition to the exercise mentioned above, which would have prepared cavalrymen to change weapons quickly when circumstances demanded, cavalrymen in the Strategikon were to be trained on foot to shoot rapidly at a target¹³⁶. They were then to practice shooting in all directions from a

horse at the gallop. It was accepted in the treatise that some allied soldiers would lack these skills, but according to Procopius Roman cavalymen and their Hunnic allies were adept archers¹³⁷. Even so, Goldsworthy observes that horses cannot have provided the stable platform required for accurate shooting; consequently horse-archers most probably provided a general barrage, rather than the precision sniping of individual opponents¹³⁸.

No matter how skilled were mounted archers, there were limitations to the effectiveness of bows besides those mentioned above. At the battles of Dara and Membresa, Procopius noted the adverse effect upon archery of a contrary wind¹³⁹. Furthermore, bows were of little use at close quarters and in a melee archers would have had little choice but to resort to hand-to-hand weapons. For this reason, the author of the Strategikon urged commanders to come to close quarters as rapidly as possible in order to overcome Persian archers¹⁴⁰. This tactic was used by Romans largely on foot at the Battle of Ctesiphon¹⁴¹.

Haldon suggests that the cavalry panoply described by Procopius did not include armour for horses. He believes that the absence of armour was necessary to facilitate the mobility that was beneficial for mounted archery¹⁴². Certainly it was the case that Procopius did not mention horse-armour in his description, or in his accounts of operations by Roman and allied cavalry. He did mention that some Gothic cavalry led by Vittigis, which was not well versed at mounted archery and was armed with lances and swords, did have armour for both horses and riders¹⁴³. Armoured Roman horses were not mentioned by Agathias either. However, perhaps one should not attach too much significance to the fact that Procopius and Agathias did not mention Roman horse-armour. In his

description of a cavalryman's panoply, Procopius may well have been interested in the human element rather than the horse. Agathias did not make much mention of armour even to protect cavalrymen. In view of the vulnerability of horses and the inclusion of horse-armour in the inventories by Syrianus and in the Strategikon, one should not be surprised if cavalry mounts witnessed by Procopius and Agathias were in fact armoured to some extent.

The horse-armour described by Syrianus and in the Strategikon was not all-enveloping. It covered the frontal aspect of horses and may well have been intended as a protection against missiles, infantry spears and cavalry lances during frontal attacks, such as those prescribed in the Strategikon. That it was less extensive than the horse-armour described during the Fourth Century is not certain. As discussed above, the evidence for the extent of horse-armour in the earlier period is tenuous. Nazarius may have described horse-armour that was not much different to that envisaged in the treatises of the Sixth Century. Ammianus, Julian and the reliefs on the Arch of Galerius did not record horse-armour at all.

The descriptions of armour for cavalrymen by Procopius and the author of the Strategikon did not include the ornamental prose that made the Fourth Century references so striking. Nevertheless, the human-armour of the Sixth Century need not have been much less extensive, if at all, than that of the earlier period. Indeed, the extent of armour during the earlier period is built up in the reader's imagination by the grandiose descriptions, the factual contents of which were actually rather vague. The cavalrymen on the Arch of Galerius were protected from head to thigh¹⁴⁴. Procopius and the author of the Strategikon envisaged cavalrymen fairly

well covered from head to ankle, although perhaps the greaves mentioned by Procopius offered slightly better protection than the ankle length coats of mail in the Strategikon. It is possible that had the later authors indulged in the flowery prose of their Fourth Century predecessors, then their descriptions of Sixth Century armour would have seemed much the same.

Therefore, rather than extensive armour for cavalry having been dispensed with by the Sixth Century, it may have been the case that, despite its drawbacks, it spread from small, specialist contingents to a much broader section of Roman cavalry. Unlike the heavily armoured cavalry described by Julian at the Battle of Myrsa, some cavalry in the Sixth Century appears to have used shields. This need not, however, have been because the later armour was less protective. Instead, it may have been because the adoption of lighter lances, which could be wielded in one hand, made the use of shields possible.

How the use of shields was envisaged in the Strategikon is not absolutely clear. In the inventory, shields were mentioned for allied cavalymen who could not use bows¹⁴⁵. However, during an advance in battle all lancers were to use shields in order to protect their own heads and their horses' necks¹⁴⁶. This implied that shields were to be fairly large. It was explained that it was not possible to draw a bow with such a shield supported on the left forearm¹⁴⁷. Nevertheless, the diagrams of battle formations showed some archers with shields (Fig 1)¹⁴⁸. Very probably some of this contradiction was the result of scribal errors. If a shield were small it may have been possible to support it on the left arm whilst using a bow. If it were too large to do so, it is conceivable that archers could have hung shields on their backs with their lances. This may have been done by Roman cavalymen at the Battle of Capua who,

according to Agathias, did have bows, lances and shields¹⁴⁹. Such an arrangement would have been advantageous for archers, because it would have given them the benefit of a shield when they were compelled to use hand-to-hand weapons at close quarters. Shields were recorded in use at close quarters by Sixth Century Roman cavalry on several occasions¹⁵⁰.

The form of shield described by Procopius, which was strapped to a cavalryman's shoulders, is thought to have been a face-guard of nomadic design which was adopted by Roman cavalry¹⁵¹. It must have been useful as a form of protection that was effective even when bows were in use. One wonders, however, why it was not recommended in the Strategikon. Perhaps it was less effective than a conventional shield in hand-to-hand combat.

At the Battle of Myrsa there appears to have been a distinction between the armament of 'heavy' cavalry, which comprised heavily armoured lancers in the front ranks and that of 'light' cavalry, which comprised less protected horsemen in the rear. Some of the 'light' cavalrymen were mounted archers. The technical terms attached to units in the Notitia Dignitatum may also have implied that there were firm distinctions between 'light' and 'heavy' cavalry. A similar distinction was not made in the Strategikon, nor was it apparent in the descriptions by Procopius and Agathias. That is to say, the later evidence did not record a fundamental difference between the armament of cavalry performing 'heavy' duties, in the front ranks of battle formations, and the armament of cavalry performing 'light' duties, such as archery, surprise attacks or reconnaissance. Haldon suggests that these cavalrymen could have been transferred between 'light' and 'heavy' duties as circumstances required¹⁵². This flexibility would have been most significant if it could have been achieved at

short notice, that is to say as a battle progressed. Such multi-purpose cavalry would not have been a completely new innovation during the Sixth Century, however. Goldsworthy cites the existence of Roman cavalry capable of both 'light' and 'heavy' duties during the earlier empire and there is no reason to suppose that it ever became completely extinct¹⁵³.

The extent of armour probably was never very significant with respect to the distinction between armament suitable for 'light' and 'heavy' duties¹⁵⁴. It is mentioned above that the effect that armour had upon the mobility of cavalry should not be overstated. Probably more significant was the equipping of individual cavalymen with both bows and lances, to be carried together, which prepared them for both 'light' and 'heavy' duties. The increase in such 'composite' cavalymen may have been the most fundamental change in the armament of Roman cavalry between the Fourth and Sixth Century. It would have given Roman commanders far greater freedom and tactical initiative. An example of the freedom and initiative created by 'composite' cavalymen was noted by Procopius at the Battle of Taginae¹⁵⁵. He observed that, whereas the Goths could wield only lances, the Romans could use bows, lances, swords or shields according to the needs of the moment.

Even if the rise of 'composite' cavalymen resulted in less distinction between 'light' and 'heavy' horsemen, one should not imagine that all Roman cavalymen of the Sixth Century were equipped with a full panoply that included armour, shield, sword, lance and bow. The cavalry described by Procopius and Agathias and discussed in the Strategikon, represented the prime mounted strength of imperial field-armies¹⁵⁶. It seems very likely that less well equipped cavalry existed in order to perform more mundane tasks even in field-armies, but

that this was not deemed so worthy of mention in contemporary literature. Furthermore, even for the prime cavalry of imperial field-armies, the panoply specified in the Strategikon represented an ideal. It was accepted that this ideal would not always be achieved, notably that some allied soldiers would not be able to use bows and that some horses behind the front ranks might not be armoured¹⁵⁷. Even for those cavalrymen who were practised in all forms of combat, it seems inevitable that loss and breakage of weapons must sometimes have deprived them of items.

ROMAN CAVALRY AT THE
TACTICAL LEVEL

Having concluded in Chapter 2 that the strategic mobility of cavalry was not the reason for its inclusion in Roman field-armies and that infantry was essential at the strategic level, one must decide why cavalry was included in those armies. If anything, the importance attached to it in Roman field-armies increased during the period of this study. The present chapter considers the roles fulfilled by Roman cavalry at the tactical level. In doing so it presents an interpretation of tactics prescribed in the Strategikon, where appropriate in the light of principles which were expounded more recently, mostly by Captain Loire. This interpretation is compared with actual operations by Roman cavalry described in contemporary literature.

It is likely that, when cavalry is discussed in writing, its roles are classified for the sake of clear explanations. One should realize that these classifications were not clearly distinguished in practice. On the contrary, effective cavalry was prepared to act according to the needs of the moment, which frequently could not have been predicted. For this reason, Captain Loire warned against the condition of 'Regulationitis', in which a cavalryman was trained to act according to "fixed rules, which impoverish his mind and paralyse it at the hour of action"¹. One might suspect that the contemporary treatises, especially the Strategikon in the context of cavalry, were symptomatic of this condition. Certainly the Strategikon did propose tactics for use on and off battlefields, in a seemingly rigid manner. However, it is reassuring that in the

epilogue to the first eleven books, the author observed that it was not possible to predict in writing all the vicissitudes of combat. Commanders were instructed to approach unforeseen events in the light of their own experience, common sense and the fundamental precepts which underlay the prescriptions in the Strategikon. With these they were to formulate appropriate responses for themselves. It is the fundamental precepts of cavalry tactics which are significant in this study.

All-Cavalry Detachments

Notwithstanding that cavalry did not fulfil strategic undertakings without support from infantry, the author of the Strategikon mostly excluded mention of infantry from the first eleven books of his treatise. One of the battle formations that was described and illustrated was to comprise in excess of 15,000 horsemen and seemingly no infantry (Fig 4)². The author addressed primarily the operational practice and tactics of all-cavalry detachments, without explaining systematically the contributions which these could have made to campaigns. One context in which he did explain the contributions which detached cavalry could make, was during Roman offensives across the Danube against Slavs, Antes and the like³. Infantry was to play a major part in this theatre, due to the close terrain, numerous water-courses and the fortified strongholds of the natives. Nevertheless, a detachment of one or two thousand cavalry was to remain south of the river to act as a reserve. This was to prevent enemy forces from concentrating against the invaders, by threatening a further incursion in any direction. The tactics that were adopted in

practice by Roman forces in the Danubian theatre are discussed in Appendix 1, in connection with an incursion which was launched from Viminacium in AD 599⁴. There were significant differences between the record of this incursion by Theophylact and the prescriptions in the Strategikon, but it indicates that the author of the Strategikon did appreciate the nature of Danubian warfare.

Various other missions were proposed in the first eleven books of the Strategikon. These included surprise attacks against enemies on the march and in camp, incursions into hostile territory, resisting incursions into Roman territory, laying siege to strongholds, withstanding sieges and building strongholds in frontier regions⁵. Sometimes during these tasks the tactical mobility of a cavalry detachment might have been beneficial, by enabling it to evade interception or to engage an enemy suddenly at an opportune moment. It was pointed out in the Strategikon that, if cavalry were to attack an infantry camp at night, it would be free to withdraw without serious injury because it could not be pursued by foot-soldiers⁶. The inability of infantry to pursue retreating cavalry is confirmed by Goldsworthy with reference to evidence from the earlier empire⁷. At other times, however, cavalry must have been less suitable and, therefore, it seems surprising that some of these missions were discussed in the first eleven books. The besieging, defending and building of strongholds were stationary operations, during which redundant horses would only have consumed supplies and presented vulnerable targets to enemies⁸. Perhaps the author was forestalling situations in which cavalry was compelled to undertake such missions without the assistance of infantry. Goldsworthy points out occasions during the earlier empire when dismounted Roman cavalrymen did take

part in siege operations⁹. Such situations may have arisen again later, but the best advice for cavalry commanders would then have been to seek the assistance of infantry if possible. Alternatively, perhaps in these sections of the Strategikon the author had drifted away from the all-cavalry perspective, in order to address matters which concerned commanders in general. Indeed, most of the prescriptions in books VIII, IX and X would have been equally applicable to infantry and there was some mention of infantry in those books¹⁰.

Cavalry might have been active in the vicinity of a stronghold whilst infantry fulfilled the stationary tasks of siege-warfare, either in attack or defence. In the Strategikon it was suggested that fine looking cavalry was arrayed in front of besieged fortifications in order to demoralize defenders¹¹. The plausibility of this proposal was demonstrated in 1806, when the French general Murat was able by this means to persuade Prussian soldiers, who were surrounded in the town of Erfurt, to capitulate¹². It seems that this ploy was used by the Persian king Sapor II, when he arrived with his army to besiege the Mesopotamian city of Amida in AD 359. This was witnessed by Ammianus, who twice described the breathtaking spectacle of the Persian armoured cavalry seen from the walls of the city¹³. In this case, his dramatic style of writing may well have reflected the effect which Sapor wished to have upon the defenders.

Julian put cavalry to a more directly practical use during the Roman siege of the Persian town of Maiozamalcha¹⁴. The wall were assailed by infantry, but cavalry was sent to gather plunder, quite possibly including supplies for the infantry. During the Sixth Century, when the Romans laid siege to the town of Onoguris, a detachment of at most 600 cavalry was despatched in response to the approach of a Persian

relief force (App 1.31)¹⁵. Agathias claimed that its objective was to delay the relief force, but due to its very small number it was quickly defeated. In view of its small size it may be that its actual intended purpose was reconnaissance. At Satala, a detachment of Roman cavalry was able to disrupt Persian plans to blockade the city (App 1.35)¹⁶. Procopius did not record many details of this engagement, but it may have resembled that described by Agathias at Phasis, in which a detachment led by Justin was able to throw besieging Persians into chaos (App 1.32)¹⁷.

According to Captain Loire, the prime function of cavalry was as an agent of reconnaissance:

"The essential function of cavalry is 'Exploration'. That is to say, the search for information concerning the strength and activities of the enemy."

Loire (1916) pl

The importance of reconnaissance was recognized in the Strategikon. As an army advanced, reconnoiters were to be sent out continually to observe an enemy's movements, strength and organization¹⁸. If an enemy were not familiar to the Romans, small bands of selected soldiers were to launch surprise attacks, in order to gauge its prowess¹⁹. On the morning of a battle, the number of reconnoiters was to be doubled and a radius of two or three miles around a battlefield was to be surveyed from the early hours²⁰. Some reconnoiters were to approach within a couple of hundred yards of an enemy's deployment, in order to detect any concealed trenches or soldiers hidden in ambush. A few hundred soldiers were to be positioned a mile or two in front of a Roman

deployment, so as to prevent reconnaissance by an enemy²¹.

The author of the Strategikon, Syrianus and Vegetius all accepted the value of cavalry as an agent of reconnaissance, even in the presence of infantry. Vegetius believed that ingenious scouts on very reliable horses should operate on all sides of an army when it was marching close to an enemy²². He also pointed out that the capture of scouts would betray an army and he observed that they worked more safely by night. The capture of scouts probably would have jeopardized the security of an army, but it is surprising that Vegetius advocated the operation of mounted scouts by night. Besides the need for information during the day as well, the darkness would have limited observations of an enemy and restricted the mobility of horsemen, upon which their security depended. Syrianus did not mention night operations, but he did observe that scouts were less likely to be captured and could report their findings more quickly if they were mounted²³. In the twelfth book of the Strategikon, it was stated that infantry marching near to an enemy was to be protected by patrols of cavalry, both in front and behind²⁴.

The author of the Strategikon prescribed in some detail the procedure for reconnaissance to be adopted by an army²⁵. This was to incorporate three elements. First there were to be spies, who were to be bold men who were willing to move amongst an enemy, even into its camps. Second there were to be scouts, who were to be intelligent and skilled observers, lightly armed and mounted on fast horses. Even just to judge the number of an enemy was stated not to be easy, because it could readily be disguised by arranging the soldiers in a deceptive formation. Julian demonstrated this technique in Persia, when he extended the spacing of men and horses

so that the Roman column stretched for ten miles, in order to overawe the enemy²⁶. A narrow defile through which an enemy had to pass, was believed by the author of the Strategikon to provide a good opportunity to estimate its number, as did the interrogation of prisoners or deserters. Good scouts could estimate numbers from the extent of camps, trampled ground, tracks or droppings. The third element of reconnaissance operations in the Strategikon was to be patrols, which were to comprise men of fine appearance so as to impress an enemy. Patrols were to be commanded by officers of more than average ability; cunning was of greater importance than boldness for this duty.

When an enemy was distant, according to the Strategikon, scouts were to be deployed by themselves. They were to observe the movements of an enemy, the nature of roads and any fortified strongholds in the vicinity. Closer to an enemy, patrols were to be deployed as well. These were to be guided by scouts, who were to observe from concealed positions. Patrols were to take prisoners for interrogation and to capture any Roman deserters. As a situation became more hazardous, so the number of patrols was to be increased. These were to be continually on the move and to make use of the landscape, presumably for concealment. Frequent inspections were to be made of patrols, because the safety of an army depended upon them. Only if an army were in a well fortified camp, were patrols to be reduced in order to rest the horses.

The qualities required of reconnoiters in the Strategikon, were confirmed by Captain Loire²⁷. He stipulated that they were to be lightly equipped, so that they could move briskly and make use of slight cover, in order to see without being seen. Both men and horses were to be in top physical condition, which was necessary

to endure the arduous nature of reconnaissance work. The men were to be bold, yet also cunning and 'smart'. Boldness was often required to witness events close to an enemy, but this had to be achieved without being seen and reconnoiters had to be calm and collected, in order to make accurate observations.

Captain Loire also outlined a procedure for reconnaissance which may have demonstrated what the author of the Strategikon had in mind²⁸. The captain's reconnaissance operations comprised cavalry detachments and so-called 'Officer's Reconnaissances'. A detachment was to be quite large, possibly numbering several hundred and its roles were often belligerent. Apart from reconnaissance, it might destroy enemy installations, seize important locations or prevent reconnaissance by an enemy. The reconnaissance functions of a detachment included, like the patrols in the Strategikon, the capture of prisoners for interrogation. Moreover, a detachment was powerful enough forcibly to gain access to an area dominated by an enemy, in which it could then deploy 'Officer's Reconnaissances', which would actually observe an enemy. An 'Officer's Reconnaissance' was to comprise perhaps a dozen or so cavalymen. Their observations were brought back to a detachment, which provided a communications link with the senior command of an army. Conceivably, the patrols prescribed in the Strategikon resembled the detachments of Captain Loire and the scouts envisaged in that treatise very possibly worked in groups, which resembled 'Officers' Reconnaissances'.

Several operations by detachments of Roman cavalry, the objectives of which included reconnaissance, were recorded in practice²⁹. Early in the period, during the Mesopotamian campaign of the general Ursicinus in AD 359, Ammianus recorded an incident which, contrary to

Vegetius, alluded to the problems experienced by mounted scouts at night³⁰. Around 700 Roman cavalry had been detailed to observe roads, in order to forewarn of the approach of an invading Persian army. At night, however, they dreaded an attack and therefore withdrew from the roads. This enabled 20,000 Persians to pass unseen and then to surprise the army with Ursicinus in the vicinity of Amida. According to both Ammianus and Zosimus, a detachment of 1,500 cavalry reconnoitred for Julian's army in Persia and launched diversionary attacks against the enemy³¹.

Towards the end of the period, Theophylact mentioned operations by detached Roman cavalry in the Danubian theatre. During the campaign against the Slavic invasion of AD 588, the general Priscus detached 1,000 cavalry and had them occupy passes in the Haemus mountains³². Theophylact claimed that this cavalry delayed the invaders for some time, with defensive actions fought against a far greater number, before returning to Priscus with the main army in Thrace. It is surprising, however, if this detachment really did perform such a role, because cavalry was not adept at defensive tactics, which were normally stationary. In this case it also suffered a numerical disadvantage coupled with the inaptitude of horses on mountainous terrain. Perhaps in truth this detachment fulfilled only a reconnaissance function, by forewarning Priscus of the approach of the invaders. One recalls the advice in the Strategikon that narrow defiles, possibly such as passes in the Haemus mountains, provided good opportunities to estimate the strength of an enemy. The general Peter, during his campaign against the Slavs in AD 594, detached 1,000 soldiers from an army at Marcianople (App 1.20)³³. This was not specified as an all-cavalry force, but no Roman infantry was mentioned in the engagement which it fought with 600 Slavs, who

were escorting plunder and captives. Having defeated the Slavs, the detachment returned and informed the general.

The most informative descriptions of operations by detachments of Roman cavalry, in particular how these served the purposes of the armies from which they originated, were included in the accounts by Procopius of the wars against the Vandals and the Goths. Early during the Vandalic War, as the Roman army commanded by Belisarius marched from Caputvada to Carthage, it was preceded by 300 soldiers led by John 'the Armenian'³⁴. These were instructed to remain at least a couple of miles in front, so that the Romans would not have to enter battle without preparation. The 300 were not stated to have been cavalry, but in view of the subsequent use of cavalry detachments by the Romans during this campaign, it seems likely that they were. On the left flank, allied Hunnic soldiers maintained a similar separation from the army. The right flank was protected by the sea.

The Vandals advanced in three columns, with the intention of ambushing the Romans in a narrow passage at a place called Decimum (App 1.13)³⁵. The soldiers with John and the Hunnic flank-guard each defeated one of these columns in the vicinity of Decimum, to which victories Procopius accredited the survival of the entire Roman army³⁶. It does not appear, however, that the Roman detachments completed the reconnaissance role by informing Belisarius of the presence of the Vandals. The general was not aware of the events near Decimum when he stationed the infantry in a fortified camp and advanced at the head of the cavalry. In doing so he may have demonstrated the sort of major cavalry engagement which was envisaged in the Strategikon, in which Roman cavalry would leave a camp under the guard of infantry and

advance against an enemy³⁷. His objective was one of forcible reconnaissance:

"For it did not seem to him advantageous for the present to risk an engagement with the whole army, but it seemed wise to skirmish first with the horsemen and make trial of the enemy's strength, and finally to fight a decisive battle with the whole army."

Procopius Wars. III.19.12

Smaller detachments were separated from the Roman cavalry. The so-called 'Federates' were sent in front and 800 guardsmen, led by Uliaris, were also separated. The Federates discovered the debris of the fight which had involved John and then sighted the third column of the Vandal army. This information was despatched to Belisarius before a contest arose to seize some high ground in which the Vandals were successful and the Federates fled. It was hoped that the detachment with Uliaris would support them, but it too joined the flight. Both returned at high speed to the cavalry with Belisarius.

Having learned of the Vandal force, the general led all the cavalry against it. The Vandals, who had not pursued the Federates and were in disorder, were routed with heavy losses. The Roman cavalry encamped at Decimum, to be joined at dusk by the 300 with John and the Hunnic detachment. On the following day, the infantry arrived at Decimum and the army proceeded to Carthage.

An incident which occurred after the Romans had taken possession of Carthage demonstrates one of the hazards which cavalry faced when on a reconnaissance mission³⁸. 22 Roman cavalymen, led by Diogenes and detailed to observe the Vandals, had arrived at a place two days'

distant from Carthage. Under the impression that none of the enemy was nearby, they requisitioned a house in which they and their horses could spend the night. Local farmers betrayed their presence and during the night the house was surrounded by 300 Vandal cavalry. The Romans were fortunate that, having heard the voices and weapons of the Vandals, they were able to saddle their horses and make a sudden exit, escaping with the loss of only two men. This incident was very similar to one recounted by Captain Loire, in which German mounted scouts had stopped to spend the night in an inn³⁹. They too were betrayed by locals and a unit of French cavalry succeeded in capturing most of them. So as to avoid this fate Captain Loire believed that small numbers of scouts, unlike large bodies of cavalry, were better off in open bivouacs, rather than in comfortable billets. In the former they would be close to their horses and could prepare for action at a moment's notice, whereas in the latter preparation tended to be a lengthy business. The vulnerability of cavalry patrols in hostile territory at night is also noted by Austin & Rankov⁴⁰.

Three months after the Romans had entered Carthage, Belisarius decided that the time for a decisive battle had come (App 1.39)⁴¹. It is significant that this was to involve Roman infantry as well as cavalry. All but 500 cavalry was detached and sent from Carthage, led by John 'the Armenian', on the day before Belisarius was due to leave with the rest of the army⁴². Procopius recorded that the objective for the detached cavalry was "to skirmish only if the opportunity should arise", but this was a vague statement⁴³. One imagines that the objective was in fact similar to that when Belisarius had led the cavalry to Decimum, namely one of forcible reconnaissance. This time, however, in addition to locating and testing the Vandals, the intention was

probably to confine them, especially their cavalry, until the Roman infantry had arrived.

The Vandal camp, which included women and children, was located around 15 miles from Carthage at Tricamarum. One presumes that this information was despatched to Belisarius. The Roman cavalry bivouacked, but made no attempt to assault the camp although it was not strongly fortified⁴⁴. This accorded with the inaptitude of cavalry at the stationary task of assaulting a defended site. On the following day, the Vandals offered battle in which the Roman cavalry was victorious, but the Vandal camp was still not assaulted⁴⁵. Only when the Vandal king Gelimer became aware of the approach of Roman infantry did he take fright and flee, shortly to be followed by his subjects⁴⁶.

The campaign led by Belisarius in Libya demonstrates how detachments of cavalry operated around and especially in advance of infantry, in a manner similar to that which was envisaged in the Strategikon. A major function of these detachments was reconnaissance, sometimes solely by observation, at other times involving varying degrees of force. In the extreme, cavalry was sent ahead in large numbers either to chase the opposition from the field, or to locate and to confine it. Having done so it was joined by infantry, the presence of which was necessary for completing a strategic task. It is tempting to liken some of the large detachments described in this campaign to the patrols prescribed in the Strategikon. Procopius did not mention the operation of scouts in conjunction with these detachments, but this may have been his omission. Perhaps the 22 cavalymen led by Diogenes were examples of such scouts, although there is no indication that they had separated from a larger detachment. Unfortunately, the author of the Strategikon did not specify the size of the patrols or of the groups

in which scouts were to operate. This makes it difficult to correlate his proposals for reconnaissance tactics with operations described in practice.

The course of the siege of Rome in AD 537 by the Gothic king Vittigis, also provided several demonstrations of the use of Roman cavalry detachments. Before the Gothic army had arrived, Belisarius decided to station soldiers near the Milvian Bridge which spanned the Tiber, in order to hinder its crossing of this river (App 1.23)⁴⁷. When choosing the best location at which to encamp further soldiers near this bridge, Belisarius himself came to the bridge wishing to survey the ground⁴⁸. Although he had not been informed that the Goths were near, he was accompanied by a detachment of 1,000 cavalry, which presumably indicated that he feared opposition. This proved to be a wise precaution, because he arrived to find that the Roman garrison had deserted and that Gothic soldiers were already across the bridge. A battle ensued between the Roman detachment and Gothic cavalry and infantry, at the end of which the detachment escaped to the city.

After the arrival of the Goths, Belisarius faced the difficulty of defending a city wall of twelve miles in length, with a force too small to man its full extent. This difficulty was noted by Procopius, who added also that being distant from the sea Rome was hard to supply and that the surrounding terrain offered no protection⁴⁹. Early during the siege, Belisarius received a report that the Goths had forced entry into that part of the city which lay west of the Tiber⁵⁰. In response, he despatched cavalry to that region, who returned to say that the report was false. Unfortunately, Procopius did not indicate the size of this detachment. It may have been merely a number of scouts, alternatively it could

have been a combatant force, intended to respond quickly to any attacker who overcame the wall.

Somewhat later, the garrison within Rome was reinforced by the arrival of the commanders Martin and Valerian, bringing with them 1,600 cavalry⁵¹. This enabled Belisarius to be more adventurous, therefore he no longer retained the cavalry within the city walls. On three occasions several hundred horse archers sallied from the city. These drew Gothic soldiers from their siege camps, engaged them only with bows and, when their quivers were exhausted, withdrew to the city under the cover of artillery on the walls. According to Procopius the tactic was effective and 4,000 of the besiegers were disposed of under a hail of arrows. Subsequently Vittigis twice attempted a similar tactic, by sending detachments of horseman close to the walls in order to draw the defenders out, but with much less success⁵². Procopius stated that both Gothic arms and skill were inadequate to repeat the Roman performance, in particular that they lacked the ability of the Romans and their Hunnic allies at mounted archery. Not only did they suffer at the hands of Roman mounted archers, but they were also out-numbered in close quarter cavalry combats and suffered heavy casualties. The tactic of engaging an enemy with missiles and then evading the uncertainties of hand-to-hand combat was a demonstration of how the mobility of cavalry could be exploited, successfully by the Romans but less so by the Goths.

The good sense behind the use of detached cavalry by Belisarius became apparent when he offered pitched battle involving infantry (App 1.33)⁵³. Procopius claimed that Belisarius had been reluctant to fight a pitched battle, but was overcome by the enthusiasm of his soldiers and the Roman people⁵⁴. Having agreed to fight, he was allegedly still reluctant to involve infantry because he

was not confident of its fighting ability and preferred that it remained near the city. He was overcome again, however, this time by the enthusiasm of some infantry commanders⁵⁵. The Battle of Rome began much like the earlier sallies, with many Goths falling to the arrows of mounted archers. Having reached the Gothic camps, Procopius reported that the cavalry wished to retire to the city, but offered no explanation of why this was not done. Eventually, it was overcome by the weight of Gothic numbers and was routed.

The claim that Belisarius, as an experienced senior commander, allowed his judgement to be influenced by the clamouring of the masses may be surprising. It was probably the case that Roman soldiers and, more so, their mercenary allies were keen for the booty of a victory in battle. Procopius made a similar claim that Belisarius was reluctant to fight at Callinicum, but was persuaded by junior commanders⁵⁶. Ammianus claimed that Julian was urged by his soldiers to fight at Argentorate and Theophylact recorded that Romanus was reluctant to fight at the Araxes, but that he too was persuaded by the enthusiasm of his subordinates⁵⁷. Perhaps, however, the attempt by Procopius to pass the initial responsibility for the Battle of Rome away from Belisarius was a ploy to shield him from blame for the defeat. The further claim that Belisarius was reluctant to involve infantry may imply that its presence was contributory to that defeat. The deployment of infantry in close formation so as to defend a rallying point behind cavalry was a common tactic. In this case, however, with the city walls to provide a safe haven for the cavalry, it was perhaps not necessary. The infantry does seem to have delayed the Gothic advance, which allowed the cavalry to escape, but its inclusion may have restricted the tactical freedom of cavalymen who were reluctant to abandon their

comrades on foot. This may have been the reason why they did not withdraw after the initial success of the mounted archery. Perhaps, Belisarius having unwisely offered battle and pitched infantry against an enemy which it could neither withstand nor flee from, Procopius wished to gloss over this double misjudgement by his favoured commander.

That the presence of infantry restricted the tactical freedom of cavalry may also have been the case at Callinicum, the account of which by Procopius also included anomalies which may indicate that he attempted to shield Belisarius from criticism (App 1.8). Allegedly, Belisarius cited the presence of infantry in the Roman army at Callinicum as a reason not to fight, before abuse from his subordinates and soldiers changed his mind⁵⁸.

After the Battle of Rome, Belisarius resorted to sallies⁵⁹. Infantry sometimes now accompanied cavalry, but in open order rather than close formation, which must have facilitated a speedy withdrawal if required. Cavalry sallies distracted the besiegers in order to facilitate the entry into Rome of Euthalius, an imperial courier bearing pay for the soldiers⁶⁰. Unlike the earlier sallies, these came to close quarters and both sides suffered losses. Nonetheless, the objective was achieved and Euthalius entered the city with the money.

Emboldened by the success of the sallies, Belisarius decided to station cavalry in stockades and forts outside Rome⁶¹. These launched attacks upon the Gothic siege camps and supply trains. As a result, the Goths fell prey to supply difficulties and famine, which would otherwise only have affected the Romans.

As the siege progressed, Rome continued to receive reinforcements including cavalry⁶². The commander Zeno

and 300 horsemen marched to Rome from the south. Shortly afterwards, John 'the nephew of Vitalian' arrived by sea in South East Italy with 800 cavalry, accompanied by 1,000 more under other commanders. These proceeded by land towards Rome and as they approached, Belisarius became fearful that the besiegers might block their entry into the city. Therefore, hoping to weaken their resolve, he launched another sally against the Gothic camps with a detachment of 1,000 cavalry. This drew a large number of Goths into an ambush near the Flaminian Gate resulting in heavy casualties (App 1.15).

This blow to the Goths was too much for a morale already weakened by the repeated sallies, coupled with a pestilence which had set in. Therefore they sought an armistice and, during the negotiations, John arrived with the reinforcements⁶³. The armistice was agreed and bonded with hostages. Belisarius posted many horsemen in places distant from Rome, amongst whom was John with 2,000 cavalry⁶⁴. He was sent to the region of Picenum where the Goths had deposited many of their valuables, wives and children. John was instructed that, should the armistice be breached, he was to overrun all the districts of Picenum, reaching each before the news of his approach. He was to enslave the Goths whom he captured and plunder their property, the booty subsequently to be divided amongst the army. If he encountered defended strongholds he was to reduce these before moving on, otherwise he was likely to be harassed by the garrisons.

In some ways John's proposed mission in Picenum appears to have been the type of rapid, tactical operation in hostile territory, which would have suited an all-cavalry force. On the other hand, one wonders how such a force would have coped with the reduction of strongholds and the carriage of baggage and plunder.

Perhaps in truth John's detachment did not include only cavalry. It may have been that, as he did when apportioning credit for the defeat of the Vandals, Procopius only mentioned the cavalry because it fulfilled the most glamorous and combative role⁶⁵. He may have ignored a pedestrian element, that was essential but performed less glamorous activities. Alternatively, contrary to Procopius' assertion that John was instructed to reduce any strongholds that he encountered, perhaps in truth his objective was only to destroy defenceless targets. That this was the case is implied by the fact that, when John commenced his task after the collapse of the armistice, he did not choose to reduce strongholds⁶⁶. Instead, having defeated a Gothic force in the field, he ignored several garrisoned towns. He did so in order to hasten towards Ariminum, which was easily entered because the Gothic garrison had deserted due to its distrust of the inhabitants. Ariminum was only around 30 miles from the Gothic capital at Ravenna. Alarmed by the news that a Roman force had moved so close to the Gothic capital, Vittigis immediately marched his forces to its defence, so lifting the siege of Rome.

The defence of Rome demonstrates how detachments of Roman cavalry could harry an enemy with small-scale attacks. Although these operations were tactical, their cumulative effect could influence a strategic situation. Whether or not the detachment led into Picenum by John was wholly cavalry, it is apparent that the mobility of all-cavalry detachments was used for grasping the tactical initiative, in order to break out of a defensive situation. The lifting of the siege enabled Belisarius to extend his military power from Southern Italy, which he had dominated quite soon after arriving, into the Gothic domain of the north. That is not to say that he could not have done so without cavalry, but when

defending a city which could both provision cavalry and was surrounded by terrain suitable for its use, its mobility granted him tactical alternatives beyond those that he would have had with infantry alone.

The evidence reviewed so far in this chapter demonstrates that all-cavalry detachments did operate throughout the period. Cavalry detachments fulfilled a variety of tactical objectives for the benefit of armies. Amongst these reconnaissance was often important, although this was frequently combined with more combative tasks. All the contemporary treatises accepted the aptitude of cavalry as an agent of reconnaissance, but it was the author of the Strategikon who provided the most comprehensive prescriptions for reconnaissance and combative missions by detached cavalry. Several of these prescriptions did reflect operations which were described in practice.

The Successive Phases of Battle

The contemporary narratives of military events are dominated by accounts of battles. Some of these had very significant effects upon the course of history, but the attention paid to them was probably as much to do with the desire to entertain non-military readers. These readers quite possibly had little interest in the mundane necessities of warfare, such as reconnaissance, preferring instead bloody accounts of combat. For the purpose of this study the contemporary descriptions of 43 battles are considered. These are summarized in Appendix 1, with special regard to the implications that they had for the study of cavalry. There was no such thing as a typical battle of the period. A glance at Appendix 1

shows how diverse tactics in different battles were, as a result of different circumstances and armies. This should be remembered when an attempt is made, as is done below, to make a systematic analysis of the tactics of cavalry using evidence drawn from many battles. Such an analysis should only attempt to identify fundamental precepts and should not attempt to impose a common structure on battles. Goldsworthy rightly criticizes scholars who analyse battles in accordance with common structures which exist only in their imaginations⁶⁷.

Sometimes Roman cavalry fought hostile cavalry and there is no indication that foot-soldiers were present on either side. Procopius averred that the Battle of Satala involved only Roman and Persian horsemen, although perhaps in truth there were foot-soldiers nearby who did not become involved in the fighting⁶⁸. Some engagements fought by Roman detachments in Libya, including at Decimum, and also in Italy quite possibly only involved cavalry. However, those battles which had decisive effects upon strategic situations normally involved foot-soldiers. Examples included the battles at Argentorate, Adrianople, Myrsa, Dara, Tricamarum, Taginae and Capua, all of which greatly affected the outcome of campaigns.

Captain Loire emphasized that the tactics of cavalry and infantry in battle required to be considered in conjunction with each other⁶⁹. The co-operation of the two arms is equally apparent in the battles considered here. In a case such as that at Capua, the co-operation was very active. Elsewhere, notably at Dara, Roman infantry did not become actively engaged in combat. Nonetheless, its presence must still have been significant, because it maintained a safe haven in which cavalry could rally if routed.

Cavalry fulfilled different roles in different phases of battles. Being the arm with the greatest mobility,

one would expect cavalry normally to have been the first to engage. Often this would have resulted in an opening fight of cavalry against cavalry, which was the expectation of Captain Loire. He believed that the first objective of cavalry in battle was to eliminate that of its enemy⁷⁰. The same was not stated quite so plainly in the theoretical treatises for the period of the present study, although in the twelfth book of the Strategikon deployments were proposed in which cavalry was to fight first (Fig 6)⁷¹. This was to be done if Roman cavalry matched that of an enemy and was stated to be useful if an enemy were reluctant to fight Roman infantry. Several battles did begin with a cavalry fight, which infantry witnessed but did not enter until later or not at all. The battles of Argentorate, Callinicum, Dara, Rome and the River Hippis, were all commenced by cavalry on both sides.

The action of cavalry against infantry was not much discussed in the contemporary theoretical treatises, which accorded with its lack of aptitude against disciplined foot-soldiers. Even without the benefit of fortifications, if foot-soldiers maintained a close formation they could impose stationary tactics in which horses were vulnerable. As Goldsworthy observes, both before and after the period of this study infantry would often adopt a rectangular formation when faced by cavalry that prevented its more mobile opponent from turning its flank⁷². In the Strategikon, defensive tactics were proposed for foot-soldiers in the 'Convex Formation' (fig 8)⁷³. These entailed the soldiers of the front three ranks leaning into and overlapping their shields, the butts of their spears being driven into the ground and the points lowered. Those in the fourth rank were to thrust or throw their spears and soldiers behind were to use bows. This arrangement was not specified as being

effective against cavalry in particular, but a battle of the Second Century AD demonstrates that it would have been so. In this battle, in Cappadocia, the Roman general Arrian used a very similar tactic with success against heavy Alan cavalry⁷⁴. The later example of pikemen in the Middle Ages also demonstrates that the tactic would have been effective against horsemen⁷⁵. Mounted knights on mediaeval battlefields regarded formations of such soldiers, on foot with the sharpened butts of their lowered pikes driven into the soil, as formidable obstacles.

On many occasions Roman foot-soldiers in close formation were able to baulk hostile cavalry, including at Argentorate, Callinicum, Rome, the River Hippis, Taginae and Solachon. Often this was achieved with a combination of spears, shields and archery. Procopius criticized the decision of the Gothic king Totila at the Battle of Taginae, to send his cavalry against the Roman formation using no weapons other than lances⁷⁶. In fairness to Totila, however, this may have been necessary in the face of the large number of dismounted Roman archers present, which compelled the Goths to bring the battle to close quarters as quickly as possible. If an archery exchange had developed, the Goths would probably have suffered from inferior accuracy due to being on horseback, not to mention the vulnerability of their horses to arrows. Goldsworthy notes that, despite these problems, the speed of cavalry over the ground enabled it to engage with hand-to-hand weapons before foot-archers had loosed many arrows⁷⁷. For this reason, he believes that foot-archers were seldom able to defend their own frontage against cavalry, without the protection of a line of foot-soldiers in close order and armed for hand-to-hand combat.

The precise nature of close quarter combat between cavalry and infantry must have depended greatly upon the types of weapons used by each side. At close quarters, the effect of foot-soldiers in close order against cavalry was sometimes increased by clashing shields together, the noise of which frightened horses. This was mentioned at Callinicum, the River Hippis and in the preliminary engagement at Taginae⁷⁸. A detail of the Battle of Solachon is indicative of another difficulty experienced by cavalry when fighting at close quarters against foot-soldiers. At Solachon, Romans on foot were able to overcome Persian cavalry by striking at its horses. Theophylact attributed this tactic to divine inspiration, but it was probably the case in any battle that a cavalryman's mount was vulnerable when fighting a soldier on foot⁷⁹. The significance of the relative reach of weapons used by cavalry and infantry in mutual combat is noted by Goldsworthy⁸⁰. It is very possible that it was the vulnerability of cavalymen's horses that made this relative reach so crucial. Roman cavalry commanded by Belisarius was baulked by Gothic infantry at the Milvian Bridge, but Procopius did not state clearly the tactics adopted by the Goths⁸¹.

Incidents were also recorded in which cavalry was resisted by infantrymen in open order. One might be sceptical of the veracity of these stories, because an open order would not have imposed the stationary tactics that were the fundamental countermeasure against cavalry. During the preliminary engagement at Taginae, Procopius described how two Roman infantrymen leapt ahead of their formation and resisted Gothic cavalry by themselves, at one stage with bare hands⁸². Certainly in this case one suspects that Procopius exaggerated the heroism of these individuals and that by leaving the formation they may in fact have jeopardized the survival of their comrades⁸³.

That said, these men also destroyed riders and horses with arrows until their quivers were empty. Perhaps with suitable weapons individual infantrymen could exploit the vulnerability of cavalry horses. This possibility was noted by Ammianus, with respect to the Battle of Argentorate. At this battle the Alamanni purposely intermingled light infantrymen amongst their cavalry⁸⁴. These were to sneak up upon Roman armoured cavalry in a melee, when cavalrymen were distracted by other foes, and then to stab the horses. German warriors used a tactic similar to this as early as the First Century BC⁸⁵. When the Persians attacked Edessa in AD 503, Joshua explained that the defenders used slings⁸⁶. The Persian cavalry, armed with bows, maces and lances, advanced at speed and became intermingled with the defenders, but was not able to defeat them because its horses and riders fell to stones from the slings.

If cavalry were to be effective against infantry it required special circumstances. Goldsworthy cites incidents during the earlier empire when cavalry resorted to missiles in order to loosen dense formations of foot-soldiers, which could then be attacked and destroyed at close quarters⁸⁷. However, the problems of mounted archery are mentioned above, with respect to the Battle of Taginae, and similar difficulties probably afflicted mounted javelin-men and other missile armed cavalrymen⁸⁸. It may have been due to these difficulties that few if any incidents were recorded during the period of the current study in which cavalry by itself broke infantry formations only with missiles. At Ariminum, for instance, the force of Roman cavalry decided against coming to close quarters with the compact formation of Franks, which included infantry. Its attack with missiles was not effective, because these were deflected with shields and perhaps also because the vulnerability

of the Roman horses to the Frankish missiles kept it at a safe distance. Narses then induced the Franks to abandon their stationary stand by means of a feigned withdrawal. When the tactics had been made mobile and the Frankish infantry was in a loose order, he was able to launch a counter-attack in which it was crushed. If mobility could not be introduced by a ruse such as this, then cavalry required the assistance of infantry in order to defeat infantry. Agathias recorded an example of this at Capua. In this instance, mounted archers were able to shoot Frankish infantry from behind, because it could not protect itself due to being locked in combat with Roman foot-soldiers.

An important task in battle was pursuit. Short pursuits were required throughout battles, whenever hostile soldiers were dislodged from their positions. This sort of pursuit was envisaged as a task for cavalry in the twelfth book of the Strategikon, where it was prescribed that cavalry in a 'Convex Formation' was to move ahead of infantry in order to pursue fugitives, but for no more than a few hundred yards⁸⁹. Syrianus also envisaged cavalry moving ahead of infantry, for short pursuits across battlefields⁹⁰.

In the Strategikon, it was emphasized that after victory a longer pursuit was required, in order finally to crush a vanquished enemy. Some previous commanders were criticized for having been too cautious in pursuits after victory and having failed to ensure that enemies were thoroughly destroyed. However, the need for caution during pursuits was accepted when they passed over ground suitable for ambushes⁹¹. On several occasions in practice commanders were cautious in pursuit, because they feared that an enemy might rally. Belisarius and Hermogenes curtailed the Roman pursuit at Dara after not long, through fear that the Persians might launch a

counter-attack⁹². At Tricamarum, Belisarius was concerned that the Vandals might return after their flight⁹³. The Persians at Anglon did not pursue beyond the rough ground, because they feared that the routed Romans might then be able to launch a counter-attack⁹⁴. Unfortunately, neither in the Strategikon nor in the descriptions of these battles was the nature of the co-operation between cavalry and infantry after victory made clear.

Captain Loire believed that cavalry was of special value during a pursuit because its mobility enabled it to catch up with, or even to overtake and surround, soldiers who were fleeing for their lives⁹⁵. It seems likely that Roman cavalry was used in the same way after victory. Procopius described a mythical battle between the Angili and the Varni, in which the Varni were defeated but were only pursued for a short distance, "as was customary for infantry"⁹⁶. Although this event was fictional, it is likely that Procopius made a valid observation of military practice. In his description of the Balkan campaign commanded by Peter in AD 594, Theophylact described the Romans forcing a river crossing against the Slavs⁹⁷. Having done so, the Romans could not pursue the fugitives far due to a lack of cavalry. According to Captain Loire, however, infantry was also necessary in pursuit. It was to follow not too far behind cavalry in case fugitives rallied and balked cavalry with a defensive stand.

In short, often the first role of Roman cavalry on a battlefield was to contain enemy cavalry. Thereafter, it might have taken part in the fight against infantry, but if this remained in a compact formation it could not have been defeated without the assistance of Roman foot-soldiers. Finally, cavalry was useful in the pursuit of fugitives, but again ideally with the support of foot-

soldiers.

Tactics for All-Cavalry Fights⁹⁸

The first eleven books of the Strategikon constituted the most comprehensive, contemporary discussion of the finer points of cavalry tactics in battle to have remained extant. Even so, most attention was paid to the fight of cavalry against cavalry and, in view of the importance of co-operation between cavalry and infantry on battlefields, it is unfortunate that the latter was not much discussed in these books. However, because cavalry often fought cavalry even when infantry was present on a battlefield, potentially these books had much relevance to battles which involved both arms. The co-operation of cavalry and infantry was dealt with in the twelfth book, but not in great detail.

The battle tactics prescribed in the Strategikon were illustrated with diagrams, which showed soldiers arrayed symmetrically in neat rectangles and straight lines, the dimensions of which were specified in 'bowshots' (Figs 1-8). Presumably a 'bowshot' was the range to which a bow was deemed to be effective against an enemy. There are various estimates of this range and it seems likely to have been between 100 and 200 yards⁹⁹. These diagrams and dimensions do give an impression of 'Regulationitis', that is to say of tactics governed by geometry and unaffected by extraneous factors, such as terrain or interference by an enemy. However, one should remember that the author accepted that the events of battle could not be predicted¹⁰⁰. Therefore, one should not presume that the diagrams were intended to portray real battles. Instead, they were schematic representations of a number

of fundamental precepts. It is these precepts and how they reflected those practised in reality, that are significant in this study.

In the first eleven books, the author of the Strategikon criticized commanders who had deployed for fights of cavalry against cavalry in a single line¹⁰¹. He believed that such a line was difficult to command due to its length, easily became disordered and was vulnerable to counter-attacks. Goldsworthy cites a similar opinion expressed by Hirtius, a general of the First Century BC, who believed that it was a common but dangerous error to deploy cavalry in a single mass¹⁰². According to the Strategikon, commanders were instead to deploy about one third of a force of cavalry in a second line, as illustrated (fig 4)¹⁰³. A front line was to comprise three distinct divisions, each of which comprised smaller units (fig 3)¹⁰⁴. These divisions and units could manoeuvre independently in order to assist each other if need be. A second line was to be split into a number of segments according to the size of an army. As a battlefield was approached, a second line was to follow about one mile behind, so as not to be observed by an enemy. In battle, the separation was to be three or four 'bowshots' and a second line was to act as a reserve. As such it fulfilled several functions¹⁰⁵. Desertion from a front line would be deterred by its presence, because absconders would be observed from behind. Attacks against the flanks and rear of a front line could be intercepted by a reserve. If a front line were driven back, a reserve could provide a protected haven in which it could rally and then renew a fight. A cavalry fight was likened to the ebb and flow of water, being a succession of advances and withdrawals¹⁰⁶. If a front line were utterly routed and could not fight on,

then its soldiers could take refuge behind a reserve, which could itself continue an engagement.

The cavalry fights discussed by Captain Loire were of a different appearance to that envisaged in the Strategikon, as one would expect in view of the invention of firearms, not to mention other changes in warfare. Nonetheless, the overall form of a cavalry fight as envisaged in the Strategikon accorded with two characteristics which the captain believed were fundamental to such fights. First, he believed that main bodies in cavalry fights would always meet in frontal engagements, because one would turn to meet the other head-on¹⁰⁷. Second, he believed that a reserve was of vital importance during an attack by cavalry¹⁰⁸. Unlike the author of the Strategikon, he did not anticipate the desertion of cavalymen from his armies. He did consider that a reserve was necessary in order to respond to unforeseen events and, like the author of the Strategikon, he suggested that a reserve might be required to parry a counter-attack or to provide a rallying point. A reserve could also consolidate the success of an attack, whereas the initial attackers would be too confused and exhausted to do so. Goldsworthy shows that the value of reserves had been accepted by earlier Roman commanders¹⁰⁹.

That the general nature of a cavalry fight as envisaged in the Strategikon was in accord with the views of Captain Loire, reassures one that its author had at least some military understanding. Whether or not that understanding was adjusted to the battlefields of his day, can only be determined by examining the descriptions of those battles. It is difficult to cite a battle which resembled exactly the diagrams in the Strategikon, but this did not necessarily detract from the treatise. As

mentioned above, it was the fundamental precepts represented in the diagrams which were important.

Theophylact provided the descriptions of battles which were most nearly contemporary with the composition of the Strategikon. Unfortunately, these descriptions were woolly and he often failed to distinguish between cavalry and foot-soldiers. Nevertheless, in several battles Roman armies did deploy in three divisions. This was so at the battles of the Nymphius II, the Araxes, Lake Urmiah, the Blarathos and during the Viminacium offensive. The Battle of Solachon received the most detailed treatment by Theophylact. He only mentioned cavalry on either side, both of which arrayed in three divisions and appear to have met squarely. It is apparent that the divisions enjoyed considerable autonomy. On the Persian side, a benefit of this freedom was that the hard pressed left wing was able to take refuge behind the centre. Theophylact did not mention cavalry waiting in reserve, but this was as likely to have been his omission as an indication that reserves were not deployed.

The battles described by Procopius are mostly more readily visualized than are those described by Theophylact. In particular, Procopius normally distinguished more clearly between cavalry and foot-soldiers. The main cavalry fights in the battles which he described appear to have been frontal, but the dispositions of Roman cavalry in different battles varied greatly. A front line divided into three was mentioned by Procopius at Anglon and at Tricamarum, although not often elsewhere¹¹⁰. At Dara he described how mutual support was provided by bodies of cavalry that were able to manoeuvre around each other (Fig 9) He specially pointed out the ebb and flow of the fighting at Satala and explained that this was because both sides included

only cavalry¹¹¹. Similarly, in the opening cavalry fight at the River Hippis much time was consumed with retreats, pursuits and changes of front¹¹².

At the River Hippis it may be apparent that a reserve line was deployed. As the Roman and allied Lazican cavalry advanced, the Lazi preceded the Romans by a considerable distance¹¹³. According to Procopius this was because the Lazi initially disdained to fight alongside the Romans, but as soon as they encountered the Persian vanguard they immediately fled back to them. Perhaps, however, it was Procopius who treated the Lazican soldiers with disdain. One could interpret the deployment as having been one of a front line with a reserve, in which the Lazi simply sought the assistance of a reserve line, as prescribed in the Strategikon.

In addition to a reserve line, commanders in the Strategikon were advised to keep a body of soldiers at their own disposal, which they could send to support any units which were under pressure¹¹⁴. Julian retained such a body at the Battle of Argentorate, albeit that much of that battle was fought by infantry. He rode about the field at Argentorate with an escort of 200 horsemen¹¹⁵. These may have been primarily a guard for the Caesar, but one assumes that had Julian seen Romans in difficulty he would have brought these horsemen to their assistance. Similarly at Ctesiphon, Julian rushed about the field with the 'light-armed auxiliaries', which may well have been cavalry, bringing assistance to Roman soldiers in difficulty¹¹⁶. At Taginae, Narses detailed 500 cavalry on the left wing to be ready to rush to the assistance of any foot-soldiers who happened to be driven back¹¹⁷. At Dara the Persian general Peroz retained a unit of cavalry known as the 'Immortals' under his personal command¹¹⁸. Rather than using the 'Immortals' in a defensive fashion, as prescribed in the Strategikon, he moved them during

the battle in order to strengthen an attack upon the right wing of the Roman deployment.

Each division of the formations prescribed in the Strategikon comprised smaller units¹¹⁹. Divisions comprised moirai, which in turn comprised tagmata which were alternatively known as banda. In battle, the units in both lines were to conform to the movements of those in the centre, where the senior commanders were located¹²⁰. Tagmata, which comprised between 300 and 400 soldiers, formed the basis of the tactics prescribed in the treatise (Fig 2)¹²¹. Both lines of a formation were to comprise tagmata arranged side by side. Armament prescribed in the Strategikon is discussed in Chapter 3; what is important at the moment is the way in which different types of weapon were distributed in a tagma. There is some contradiction between the text and the diagram in this respect, probably as a result of scribal errors since the composition of the treatise¹²². It is fairly clear that the front two ranks were to wield lances and shields, whereas most of those behind were to use bows. Presumably, cavalymen were to carry swords for use in a melee at close quarters. A selection of weapons carried together would have given them flexibility in the face of unforeseen events. Both Procopius and Agathias described cavalymen who carried all the offensive armament mentioned in the Strategikon at the same time, namely sword, lance, shield and bow¹²³. At the Battle of Taginae, Procopius implied that Roman cavalymen were free to choose between bow, lance or sword as required¹²⁴.

Tagmata were to approach a battlefield arrayed as shown in the diagram, with intervals between horses sufficient for each to turn¹²⁵. When about a mile from an enemy, files were to be closed together¹²⁶. At a distance of three or four 'bowshots', ranks were to be

closed¹²⁷. How close horses were to be is not clear. Elsewhere in the Strategikon, in the context of estimating the number of a hostile force of cavalry, a formation of 600 by 500 was considered in which each horse occupied a space of three feet by eight feet¹²⁸. The size of this formation must have been fanciful, because even if 300,000 horses were ever gathered in one place, to have arranged them in a neat rectangle would have been impossible. Moreover, even within a smaller group a spacing of three feet by eight would have been tight on a parade ground, let alone amidst the confusion of battle. Apart from the likelihood of horses injuring each other with hooves and teeth, such a formation could not have been manoeuvred. For lancers a close lateral spacing was necessary, but archers required more room in which to use their bows. Agathias recalled that the Cotrigur cavalry which fought at Constantinople, having been compacted into a narrow column, was unable to manoeuvre or to use its bows¹²⁹. Goldsworthy suggests that closely spaced ranks would have prevented physically those in front from turning tail in the face of an enemy¹³⁰. This may have been so, but it would also have been difficult to follow the ebb and flow of a fight in an ordered fashion, especially if a front rank met a sudden reverse. Cavalry commanders were still divided in recent times over the benefits or otherwise of deploying for attacks in multiple, close ranks.

When an engagement commenced, according to the Strategikon the front two ranks were to ride forwards, with the cavalrymen's heads and the horses' necks protected with shields and lances held at shoulder height¹³¹. The author did not attempt to predict the aftermath of an advance, presumably because it depended upon factors which could not have been foreseen and the situation would often have been chaotic. Recent

parallels cited by Captain Nolan and by Goldsworthy imply that opposing forces of cavalry probably seldom collided head-on at speed¹³². Instead the aftermath often took one of three forms: one force might simply turn and flee; both forces might grind to a standstill before moving together for hand-to-hand combat; forces might even pass through each other with surprisingly little bloodshed. From behind the front two ranks, the Strategikon prescribed that archers were to maintain a barrage against an enemy. Care would have been required to cease this barrage shortly before the front ranks came to close quarters with an enemy. The role of the archers when the front ranks had come to close quarters was not stated. The distance at which they were to follow must have been significant. On the one hand, they would not wish to have been too far back, which would have placed the front ranks at risk from their arrows. On the other, when fighting came to close quarters they would have required time before becoming involved, in order to place bows in cases and to draw weapons suitable for hand-to-hand combat. If an enemy fled, cavalrymen were to pursue either in close order or at speed. They were to be ready to fall back if need be, rally and then renew an attack, or to redirect an attack to either side.

The author of the Strategikon distinguished between 'Assault Troops' and 'Defenders' within each division of a front line¹³³. One third were to be 'Assault Troops', preferably archers, who were to be placed on the flanks of each division in open order. The remainder were to be 'Defenders', who were to occupy the centre in closed order. This disposition was illustrated in the diagram showing the formation of a division (Fig 3). 'Assault Troops' were to lead an attack and 'Defenders' were to follow at an unspecified distance, in order to provide a rallying point. This was to be practised in some

training drills which were prescribed¹³⁴. Such a disposition is not difficult to visualize, but it is not clear how it was compatible with other tactics prescribed in the Strategikon. It seems to imply that, in addition to the reserve provided by a second line, two thirds of a front line were also to be held in reserve. This indicated that only a small fraction of a total force was to be involved in an initial attack. Moreover, there appears to have been a contradiction between the procedure cited above, which envisaged an attack by lancers, and the fact that 'Assault Troops' were to be archers.

Captain Loire greatly emphasized the psychological aspect of cavalry tactics; he deemed a fight of cavalry against cavalry to be an "encounter of two moral forces"¹³⁵. In order to win such an encounter, he believed that cavalymen required confidence in their training, equipment, horses and commanders. Cavalry also required to be presented to an enemy in such a way as to intimidate it. The need for self-confidence and to intimidate an enemy was implicit in the Strategikon. Before a battle, each tagma was to receive an encouraging address from its herald, who was to remind cavalymen of their previous victories¹³⁶. The decoration of armour and saddlery with tassels and streamers, was felt not only to boost the self-esteem of cavalymen, but also to overawe enemies¹³⁷. A similar observation was made by Vegetius¹³⁸. One might think that a rousing battle-cry and trumpets would also have intimidated enemies, but in the Strategikon it was warned that noise prevented orders from being heard and did much to unnerve Roman soldiers¹³⁹. Instead, cavalry was to advance as quietly as possible and a reserve was to start shouting and cheering only after fighting had begun¹⁴⁰.

The demise of senior commanders in battle was felt by the author of the Strategikon to be most damaging to the self-confidence of cavalrymen¹⁴¹. Therefore, having led from the front to a battle-field, a general's deputy and the other commanders in the front line were to move behind their guards when battle commenced. A general himself was to retire to the centre of the second line, where his own tagma would form a landmark about which other units could manoeuvre. That the author was correct to be concerned about the location of commanders is demonstrated by a criticism of some British cavalry officers during the Nineteenth Century¹⁴². It was the custom of these officers to lead charges by several horse lengths. This was intended to inspire the men, but it was a very hazardous undertaking which was liable to denude a unit of its commander at a critical moment. Furthermore, he was in a position from which he could not control his unit in the chaos that ensued after an attack. The benefits and penalties of various locations occupied by commanders are discussed by Goldsworthy¹⁴³. Until the present day, commanders of all arms have faced the same dilemma concerning their location. Namely, whether to inspire soldiers by setting an example before them, or to direct from behind, which was not only safer but also allowed a more comprehensive view of an overall situation. Those who have taken the one alternative have been criticized as hot-heads governed by bravado rather than the sound principles of warfare. Those who have taken the other have been dismissed as donkeys who nonchalantly despatched soldiers to face the realities of battle from which they remained detached.

The psychological impact of cavalry was much greater if its formation remained cohesive. For this reason, Captain Loire explained that a line of cavalry advancing knee-to-knee at the trot, could repel opponents in a

disordered gallop¹⁴⁴. The experience of British cavalry demonstrated that cohesion was especially important for the effective use of lances¹⁴⁵. This weapon required to be driven into an enemy by the momentum of horses and was not suitable in a melee. The need for cohesion was appreciated in the Strategikon. Before battle, heralds were to urge cavalrymen to remain with the standards of their tagmata, they were neither to dart ahead nor to fall back from the standards¹⁴⁶. During an attack the front ranks were to restrict their pace to a trot, in order to maintain good order. After an attack there was a temptation for cavalrymen to gather spoil, which would break cohesion and render them vulnerable to a counter-attack. Both the dangers which arose if soldiers began to plunder during battle and the regulations against doing so were emphasized in the Strategikon¹⁴⁷. In order to remove this temptation, eight to ten of the less skilled soldiers in each tagma were to ride behind it¹⁴⁸. Their first duty was to assist any who fell or were wounded, but they were also to collect booty, most of which was to be handed over to the file leaders after a battle.

Captain Loire made clear that the rally was a manoeuvre of great significance. A rally was required after not only a set-back, but also after a successful attack. In either case, cavalry would be in disorder and would need to reform before it could attack again or meet a counter-attack. The same fact is noted by Goldsworthy in the battles of the earlier empire¹⁴⁹. Between each ebb and flow of a cavalry fight as envisaged in the Strategikon a rally would have been required. It is mentioned above that the provision of a rallying point was one of the functions of a reserve line and that, during an advance, cavalrymen were to be prepared to retreat and then to rally. Training drills were proposed

in which cavalry fell back from a simulated attack, rallied in the intervals left in a reserve line and then renewed an attack¹⁵⁰.

Few if any descriptions of actual cavalry fights in the period of this study include sufficient detail for comparison with the finer tactics prescribed in the Strategikon, such as the arrangement of units within lines, the use of different types of weapons or 'assault troops' and 'defenders'. Nevertheless, on several occasions a progression from an archery exchange to hand-to-hand combat in a cavalry fight was recorded. These included at the battles of Argentorate, Dara, Callinicum and Rome. In the context of the Gothic War, Procopius commented that Roman and allied Hunnic cavalry was highly adept at mounted archery¹⁵¹. Often it was not made clear what types of weapons were used in hand-to-hand struggles after archery exchanges. At Dara, the battle came to close quarters with lances. As mentioned above, however, lances were probably not of great value in a confused melee. Therefore, more agile weapons such as swords, maces or axes, must often have been used instead.

The psychological aspect of cavalry tactics was apparent in practice. When 600 Roman cavalry met 3,000 Persian cavalry near Onoguris, the Persians were taken by surprise and fled¹⁵². This was an 'encounter of moral forces' which the Persians lost, despite their numerical advantage, due to having been taken by surprise. When they had realized the small number of their opponents, they rallied and launched a counter-attack which routed the Romans. The desirability of silence in a battle formation was noted by Theophylact in his account of the battle of Lake Urmiah¹⁵³. During this battle, whereas the Roman soldiers were disciplined and silent, the Roman general was aggrieved that an allied Persian contingent was restless and noisy. That the welfare of commanders

was important for the morale of cavalrymen, was confirmed at several battles including at Argentorate (Cf App 1.12,17,35,38). Ammianus reported that the rout of the Roman cavalry at that battle was due to the sight of its commander being slightly wounded and the horse of another collapsing under the weight of armour¹⁵⁴. Elsewhere, the need for commanders to adopt safe positions in battle was demonstrated. When Belisarius fought at the Milvian Bridge, he did so in the front ranks rather than in the "general's post"¹⁵⁵. As a result, he became a focus for Gothic attacks and Procopius wrote that this put the Roman cause into jeopardy. In the pitched battle later fought just outside Rome, Procopius noted that both Belisarius and the Gothic king Vittigis took positions at the rear of their deployments¹⁵⁶. At the Battle of Solachon, the general Philippicus was entreated by commanders of the front ranks to move to a position in the rear¹⁵⁷. This was not because they feared that Roman morale would be dented if he fell, but because he would attract the aggression of the Persians and endanger those fighting near him, as was the case with Belisarius at the Milvian Bridge.

At several battles it was reported that formations of cavalry lacked cohesion. During the preliminary engagement at Taginae and at Ariminum the failure of Gothic and Frankish cavalry respectively, was partly due to a loss of cohesion as a result of high speed advances¹⁵⁸. Broken terrain and hasty deployment by the Romans resulted in some disorder in their formation at Anglon¹⁵⁹. Procopius mentioned several occasions when individual cavalrymen ventured between opposing armies, so as to partake in one-to-one combats and small skirmishes. This happened at Dara, Callinicum, the Milvian Bridge, Rome, the River Hippis and Taginae¹⁶⁰. The valour of these feats was praised by Procopius and

Goldsworthy suggests that individual daring was a necessary associate of discipline in order to bring about victory in battle¹⁶¹. However, the words of warning by the heralds in the Strategikon indicate that such bravado, which left gaps in the ranks, could have had catastrophic consequences for the carefully calculated tactics of a commander. After their victory at Tricamarum the Roman soldiers were lured by plunder, which they searched for in small groups rather than remaining in a well ordered formation¹⁶². Belisarius feared that this rendered them vulnerable to a counter-attack and appealed to them to restore discipline. Soldiers on the right wing of the Roman deployment at Solachon were lured by the same temptation, even whilst the battle was still in progress¹⁶³. The general Philippicus was dismayed and sent one of his guards to admonish the soldiers, after which they returned to the fight. Perhaps the presence of booty-gatherers as recommended in the Strategikon might have prevented their departure in the first place.

The need for cavalry to rally promptly after defeat or victory, was apparent at Decimum¹⁶⁴. Having been routed in a cavalry fight, the 'Federates' returned to the main body of Roman cavalry with Belisarius, where they rallied. Belisarius then led the cavalry back against the Vandals. Unlike the Romans, these had not restored their formation after their initial success and, therefore, they were quickly turned to flight. Similarly at the Milvian Bridge, having been chased back to the walls of Rome, Belisarius was able to rally his cavalry¹⁶⁵. The pursuing Goths were in great disorder and when faced with a counter-attack they fled in panic.

To sum up this section concerning tactics for all-cavalry fights, the prescriptions included in the Strategikon for such fights are a prominent feature of

that treatise. From a theoretical perspective, comparison primarily with the treatise of Captain Loire demonstrates that the author understood the fundamental characteristics of a cavalry fight, namely the need for cohesion, for reserves, for an ability to rally and the psychological aspect. From an historical perspective, the descriptions of contemporary battles seldom provide the technical details required to examine the dispositions and armament of individual and small groups of cavalymen, as prescribed in the Strategikon. One would be surprised if a battle had resembled exactly the dispositions illustrated and explained in the treatise, because its author was concerned with fundamental precepts and did not pretend to predict the vicissitudes of combat. Nonetheless, descriptions of actual battles are rarely contrary to prescriptions in the Strategikon and on several occasions there are marked similarities. These similarities are not only with respect to fundamental characteristics of cavalry fights, but also with respect to the practical aspects of dispositions and the use of weapons.

Tactics of Manoeuvre and Stratagems

The author of the Strategikon accepted that tactics needed to be adapted according to the nature of an enemy and of a theatre of operations. The effects upon Roman tactics of different hostile peoples, their modes of warfare and the theatres in which they might be met, were discussed in Book Eleven. When fighting against Persian cavalry, Roman cavalry was to come to close quarters with its lances as quickly as possible, because Persians were adept archers but were not well versed at hand-to-hand

combat¹⁶⁶. Their rate of shooting was observed to be rapid, yet lacking in power. Procopius made the same observation at the battles of Callinicum and the River Hippis, where he noted that, although numerous, Persian arrows failed to penetrate Roman armour and shields¹⁶⁷. The Roman rate of shooting was slower, but more penetrating and many Persians fell to it. The 'Scythians' as they were termed in the Strategikon, which included the Avars and the Hunnic peoples, were observed to favour tactics of ambush, surprise and envelopment¹⁶⁸. Therefore, Roman cavalry was to seek a position for battle against these peoples in which its rear was protected by water.

Against the Persians, 'Scythians' and other enemies, it was accepted in the Strategikon that a frontal attack by a regular formation was not sufficient by itself. A main cavalry fight was essentially frontal, but Captain Loire did believe that small bodies of horsemen could exploit the distraction of an enemy by a main attack, in order to assail its flanks¹⁶⁹. The author of the Strategikon was of a similar opinion. Concealed behind the right wing of a regular formation, two tagmata were to be positioned as 'out-flankers'¹⁷⁰. As an enemy's line was approached, at the last moment 'out-flankers' were to emerge from concealment and to launch a surprise attack upon its flank. In order to counter any attempt by an enemy to do the same, a few tagmata were to be stationed by the left wing as 'flank-guards'¹⁷¹. Other bodies of cavalry were to manoeuvre to either side of a regular formation, in order to assault the flanks and rear of an enemy's disposition¹⁷².

The use of autonomous bodies of cavalry to launch surprise attacks in battle was the topic of the fourth book of the Strategikon. For these tasks cavalry was to be arrayed in irregular formations, which were most

appropriate for the rapid manoeuvres required¹⁷³. Allied soldiers, who were not accustomed to regular Roman formations, were thought to be suited to launching surprise attacks¹⁷⁴. It was stated that these manoeuvres were best learned through experience, but a few guidelines and possible ruses were suggested. Cavalry assigned to launch a surprise attack was to move out on one or both flanks, making use of the landscape to conceal its presence¹⁷⁵. It was to time its attack so as to coincide with or fractionally precede the main attack by a regular formation. In this way, a regular formation would benefit from the confusion in an enemy's ranks caused by a surprise attack. If a regular formation were repulsed, then autonomous bodies could harry the rear of an enemy as it pursued. In a similar fashion, Syrianus suggested that a body of cavalry concealed in the landscape could ambush a pursuer¹⁷⁶.

Some more complicated stratagems were also suggested in the Strategikon. One involved a trap, such as a concealed trench, a marsh, an assemblage of spiked pits or an area strewn with caltrops¹⁷⁷. A Roman force was to retreat along secret pathways across such a trap. When an enemy pursued and fell into that trap, further soldiers were to emerge from concealment and to attack it.

The so-called 'Scythian Ambush' involved a feigned withdrawal by some soldiers, which drew an enemy into an ambush¹⁷⁸. No indication was given of the likely scale of such a deception, but parallel examples during the Crusades demonstrate that it could have been a very large operation¹⁷⁹. Turkish horsemen sometimes feigned withdrawals for several days, which drew Christian armies a long way from supplies and allies, before an ambush was sprung.

Surprise attacks during battles by bodies of Roman cavalry against both hostile cavalry and infantry, were recorded in practice on several occasions. At Dara and Satala bodies of cavalry were detailed to launch surprise attacks against the flanks and rear of hostile cavalry. The Roman deployment at Dara comprised several autonomous bodies of cavalry, which could assist each other and out-flank the Persians (Fig 9). The actions of 300 Herul allies led by Pharas in particular, resembled the flank attacks prescribed in the Strategikon¹⁸⁰. As suggested in that treatise, these made use of the landscape to provide concealment and the fact that they were allies was also in keeping with the treatise. At Taginae and Capua, Roman cavalry was prepared to surprise hostile infantry¹⁸¹. This might seem strange in view of the poor ability of cavalry against disciplined foot-soldiers, but these foot-soldiers may have lacked the discipline to remain in close formation, especially if taken by surprise. Furthermore, at both Taginae and Capua Roman foot-soldiers were present to assist the cavalry. Procopius alleged that the separation of allied Hunnic cavalry from the main force at Tricamarum was due to its wavering loyalty, but perhaps it too was detailed to surprise the enemy from a different direction¹⁸².

There is not much historical evidence for Roman armies having drawn enemies into traps. At Dara, before the arrival of the Persians, the Romans cut a trench across the battlefield which was traversed by many causeways and at Rome, Procopius mentioned caltrops scattered in front of gates¹⁸³. In both cases, however, the objective of the obstacles appears to have been purely defensive, rather than to constitute concealed traps. More often, Roman forces were recorded falling foul of such traps. Gregory of Tours recorded that some Roman cavalry led by Quintinus during AD 388, was lured

into a marsh near the Rhine by invading Franks¹⁸⁴. At Minduous, according to Zachariah, Roman infantry fell into concealed trenches dug by the Persians, whereas cavalry led by Belisarius was able to flee to Dara¹⁸⁵. It seems surprising that cavalry escaped but infantry did not, because one would expect that the speed and lack of agility of horses, not to mention the tendency of cavalry to engage first, would have rendered it more vulnerable to traps. Procopius also mentioned the battle at Minduous, but he did not provide many details of its tactics. Other instances of the use of traps did not involve Romans at all. Gregory also recorded that Thuringian warriors once excavated ditches in a battle-field, into which some Frankish cavalry plunged¹⁸⁶. The author of the Strategikon and Procopius recalled a concealed trench dug by Huns across the battle-field at Gorgo, in which Procopius claimed that a massive force of Persian cavalry, including the king Peroz, was destroyed in AD 484¹⁸⁷.

Feigned withdrawals were recorded on several occasions in practice. Some of these were tactical ploys on battlefields. For instance, Malalas claimed that a feigned withdrawal was attempted without success by the Persians at Callinicum, but Procopius did not confirm this¹⁸⁸. Malalas also reported that the Romans used the stratagem shortly afterwards and with more effect, at the first Battle of the River Nymphius¹⁸⁹. During the siege of Rome, Belisarius used a feigned withdrawal by 1,000 cavalry to draw Goths from their camps, into an ambush by soldiers hidden behind the Flaminian Gate¹⁹⁰. Narses staged a withdrawal with a cavalry force at Ariminum, in order to introduce mobility into the fight with the Frankish formation which included infantry. It had the effect of removing the Franks from a wood which had protected their rear and enabled a very much smaller

Roman force to be victorious. Agathias mentioned that the stratagem of feigned withdrawals was common to the Huns, which accorded with the 'Scythian' title given to it in the Strategikon¹⁹¹. At Adrianople in AD 587, Theophylact mentioned the success of a feigned withdrawal in a battle against Avar invaders¹⁹².

According to Julian, Constantius II feigned a withdrawal on a very much larger scale, when he drew Magnentius out of the mountains of North Italy and into the plains of Pannonia¹⁹³. In this way he brought the pretender to Myrsa, where he felt that the terrain was better suited for the use of his own cavalry. In AD 589, the Persian general Baram withdrew his army from the River Araxes, towards the Persian interior¹⁹⁴. The commander Romanus suspected that this too was a large scale deception, therefore he declined to allow the Roman soldiers to follow.

It can be seen from the examples cited above, that in practice cavalry tactics were much more complicated than the diagrams of regular formations in the Strategikon. That surprise attacks and stratagems were discussed in the treatise, as were the implications for Roman armies of different theatres and enemies, indicated that the author accepted that real battles would be irregular. He stated that stratagems were best learned from experience and it can be seen in the descriptions of real battles that commanders did react according to circumstances. Nevertheless, some real stratagems were similar to the suggestions made in the fourth book of the Strategikon.

Co-operation with Foot-Soldiers

The most fundamental adaptation of cavalry tactics was the involvement of foot-soldiers. Tactics to be adopted by foot-soldiers were discussed in Book Twelve of the Strategikon, but the possibility of their presence on battlefields was mentioned in the previous books as well. One situation in which the author of the treatise accepted the need for foot-soldiers, was when fighting on rugged ground¹⁹⁵. He recognized that in order to be effective in battle cavalry required fairly smooth going¹⁹⁶. This was so in any case, but lance-armed cavalry in particular required a level field in order to maintain the cohesion which was essential to its success. Vegetius also noted the necessity of a level battlefield for cavalry and the need for infantry if it were not so¹⁹⁷.

According to the Strategikon, Persian cavalry made extensive use of bows rather than lances, which would have made it less susceptible to rough ground than was lance-armed Roman cavalry¹⁹⁸. The author observed that when Persian cavalry was faced by Roman lancers, it would seek a rough field upon which to offer battle. Roman commanders were advised not to grant this benefit to Persians if possible, but if it were necessary to fight Persians on rough ground, it was recommended that a regular formation of mounted lancers be replaced with a formation partly on foot. This had the additional benefit that Persians were not adept at fighting disciplined foot-soldiers, presumably due to their reliance upon horses in battle. Disciplined foot-soldiers in close formation were also felt to be effective against 'Scythians', because this people only fought on horseback¹⁹⁹. In the Danubian, theatre against Slavs and others, the need to overcome defended sites and

to fight upon close and wet countryside, according to the Strategikon necessitated substantial contingents of infantry²⁰⁰. That the author of the treatise probably appreciated the nature of Danubian warfare, was confirmed by Theophylact's description of an incursion which was launched from Viminacium in AD 599, which is discussed in Appendix 1.

In the twelfth book of the Strategikon, formations were proposed for combined forces of cavalry and foot-soldiers in battle (Figs 5,6,7,8)²⁰¹. Unfortunately, the tactics to be adopted by these formations and the co-operation of the two arms were not clearly explained. Even the explanation of tactics for the 'Convex Formation', which was the most thorough in Book Twelve, did not include a systematic and detailed treatment such as provided in the first eleven (Fig 8)²⁰². Nevertheless, it is apparent that the roles envisaged for cavalry in the twelfth book were to include the fight against hostile cavalry and the pursuit of fugitives. A major role of foot-soldiers was to provide a defended rallying point, to which cavalry could retreat if it met with a reverse.

As is the case concerning the formations prescribed in the earlier books of the Strategikon, it is difficult to find descriptions of actual deployments which resembled precisely those in the twelfth. Nonetheless, most of the battles described did involve some form of co-operation between cavalry and foot-soldiers.

At Argentorate, Taginae and probably Ctesiphon bodies of Roman cavalry were prepared to rush to the assistance of foot-soldiers in difficulty²⁰³. When conditions favoured its mobility, a mobile tactical reserve of cavalry must have been able to respond to crises and opportunities on battlefields more promptly than could

infantry. However, more often recorded was the assistance rendered to cavalry by foot-soldiers.

On a number of occasions foot-soldiers were required to baulk hostile cavalry, often to provide rallying points for cavalry which had been routed. Infantry appears to have saved the day after the rout of the Roman cavalry at Argentorate, although the precise events of this infantry fight are not clear²⁰⁴. Both in the preliminary engagement and the main battle at Taginae, from the outset Narses relied upon the ability of foot-soldiers to baulk cavalry. Procopius commented that it would have been usual for the Gothic cavalry at Taginae to have sought the protection of infantry after its rout²⁰⁵. It could then have rallied and renewed the fight. In the event, it withdrew in such disorder and at such speed that the Gothic infantry was swept away with it. Roman infantry was more fortunate at Callinicum and did present a stolid defence after Roman cavalry had been routed by Persians²⁰⁶. Despite Belisarius' alleged lack of faith in the Roman infantry at the Battle of Rome, it delayed the Gothic cavalry after the Roman cavalry had fled²⁰⁷. At the River Hippis, it was decided that the main force of Persian cavalry was too numerous to be met by the Roman cavalry contingent, therefore the main battle was fought by Roman soldiers on foot²⁰⁸.

Even when foot-soldiers were not called upon to baulk hostile cavalry, their presence on a battlefield could still have been significant. For example, throughout the Battle of Dara Roman infantry defended a rallying point which was never seriously challenged. Its very existence, however, must have reassured the Roman cavalrymen and allowed them to attack with greater freedom, because a safe haven would have been available if they were repulsed.

Roman foot-soldiers were not only significant in defence against cavalry. At Capua, they were essential against a pedestrian force of Franks and the Roman cavalry would probably have had little effect without them. The need for foot-soldiers to fight foot-soldiers also may have been a reason why the Romans did not use their horses at Mount Lactarius, although the use of horses in this battle may have been prevented by steep terrain.

The Alamannic practice of interspersing infantry amongst cavalry is mentioned above, with respect to the difficulties which could be experienced by cavalry when fighting foot-soldiers²⁰⁹. Procopius recorded what may have been a similar tactic, although not necessarily only directed against horsemen, adopted by the Romans in their sallies against the Goths after the Battle of Rome²¹⁰. Unfortunately, Procopius did not make clear precisely what the objective of the infantry was. Indeed, one might think that its presence would have been contrary to the mobile tactics which previously had favoured only cavalry in these sallies. Furthermore, although the infantry accompanied the horsemen in open order, it is not clear that the two were actually intermingled. The validity of claims made during the First Century BC that intermingled German cavalry and infantry actually advanced together, are doubted by Goldsworthy because the infantrymen would have had difficulty keeping up and would have inhibited the manoeuvres of the cavalry²¹¹. Instead, he believes that German, Roman and other infantry did fight amongst cavalry, but in dense knots which lent stability to the very fluid nature of cavalry tactics by means of providing static and protected rallying points.

Sometimes foot-soldiers were required against fortifications. After the Roman cavalry had been

victorious at Tricamarum for example, the Vandals retired to their camp. The cavalry did not feel able to assault this camp, although its fortifications were not strong. Presumably, the Roman infantry would have fought over the rampart when it arrived, had the Vandals not deserted beforehand. Later in Libya, at the Battle of Mammes, Moors used a ring of camels as a fortification within which they took refuge. The Roman cavalry horses were disturbed by the sight and sound of camels and its attack faltered, until the general Solomon instructed it to continue on foot²¹². When a detachment of Roman cavalry intercepted a Slavic raiding party near Marcianople, the Slavs took refuge within a ring of wagons²¹³. The Romans dared not approach the wagons too closely, because they feared that their horses would be struck by javelins. This problem also was overcome when they attacked on foot.

Contemporary historians did not always distinguish clearly between those foot-soldiers that were true infantry and those that were dismounted cavalry. This distinction was often not made clear by the author of the Strategikon either. He advised that commanders should keep cavalry in their armies in the majority²¹⁴. The reason stated for this was that, whereas infantry was only adept at stationary close combat, cavalry could execute mobile tactics on horseback and could then dismount for a stationary fight. The implication of this recommendation was that the ability of dismounted cavalry at stationary tactics was equivalent to that of true infantry. However, it is shown in the previous chapter that cavalry by no means always and perhaps seldom exceeded infantry in Roman armies. Moreover, it is likely that the ability of dismounted cavalry at stationary tactics on a battlefield was not equivalent to that of true infantry.

Captain Loire discussed the dismounted action of cavalry²¹⁵. The objective was that cavalymen would still enjoy the mobility of their horses as they moved around a battlefield, but that this was combined with some of the ability of infantry at stationary tactics. The captain pointed out, however, that cavalymen lacked the training, experience and suitable equipment to fight as well on foot as did infantry. It may have been that soldiers in Roman armies were more versatile than were those which he commanded. With respect to the opposite of dismounted cavalry, namely mounted infantry, Procopius reported that Roman infantrymen were not only able to capture and ride Gothic horses, but that they could ride them in combat²¹⁶. This versatility contrasted with the observation by Captain Loire that, although mounted infantry combined mobility with an aptitude at stationary tactics, it suffered the disadvantage of not being competent to fight on horseback²¹⁷. Concerning the ability of Roman cavalymen to fight on foot, there were several instances that are mentioned shortly below when they voluntarily did so and met with success. However, it may be significant that at Tricamarum Roman cavalry awaited instead the arrival of true infantry.

Another problem which Captain Loire observed with the dismounted action of cavalry was the vulnerability of riderless horses, which presented an inviting target to an enemy. This required that manpower was diverted from a main fight, in order to control and protect horses. It is reasonable to assume that Roman horses were equally vulnerable when without cavalymen and that measures were required to look after them. The author of the Strategikon prescribed that cavalry should dismount if it were forced to adopt defensive tactics against hostile cavalry²¹⁸. In such a situation, superfluous equipment and poorer horses were to be abandoned. Except for a

small force which was to remain mounted, cavalrymen were to form a rectangular formation on foot, within which were to be the remaining horses and equipment. In Book Twelve, cavalry on the defensive or on rough ground was to dismount in part, in order to create a 'Convex Formation'²¹⁹. The whereabouts of the horses in this case was not specified. It is unfortunate that the descriptions of battles in which Roman cavalry did fight on foot seldom reveal the fate of the horses.

In spite of the difficulties which Roman cavalry must have experienced when fighting on foot, there were several occasions when it did do so. Sometimes the reason was that Roman cavalry had been forced on to the defensive by hostile cavalry. This was the case at Callinicum, when the cavalry with Belisarius dismounted and joined the infantry²²⁰. Cavalry of the Roman centre at Solachon was also under pressure from Persian cavalry when it chose to dismount²²¹. Roman cavalry at the River Hippis, although it had been victorious in the initial mounted fight, did not wish to cross swords with the full force of Persian horsemen and instead joined the infantry on foot²²².

Allied cavalry at Taginae had not just been worsted in combat, nor is there reason to believe that it was at a numerical disadvantage when Narses ordered it to dismount. According to Procopius, he did so because he feared that it would desert if it remained mounted²²³. However, this does not seem in keeping with the praise which Procopius gave to both the allied and Roman soldiers for their conduct when the battle started²²⁴. Perhaps instead Narses anticipated that the Goths would adopt aggressive tactics with their cavalry and he felt that to meet it on foot was a safer proposition than to face the uncertain consequences of a mounted fight.

The reason why the Goths dismounted before engaging at Mount Lactarius may have been that the mountainous terrain did not suit the movement of horses. On the other hand, perhaps like Narses at Taginae they felt safer facing hostile cavalry on foot. Procopius claimed that it was the example of the Goths dismounting that encouraged the Romans to do so also²²⁵. This implies that the terrain was not the significant factor and that the reason for the Roman dismount was the need for foot-soldiers to combat foot-soldiers.

Sometimes Roman cavalry dismounted in offensive situations when the presence of horses would have been an impediment. Examples of this included occasions when cavalry encountered enemies within fortifications. This was the case at Mammes and at the defeat of the Slavic raiders near Marcianople. At Tricamarum, however, Roman cavalrymen chose not to attack the Vandals' camp and to await the arrival of true infantry instead²²⁶.

In short, it was accepted in the Strategikon and confirmed in practice, that foot-soldiers were necessary in order to adopt stationary tactics. These were inevitable on rugged countryside. Stationary tactics were required in order to baulk hostile cavalry and when fighting against disciplined foot-soldiers. The need was all the greater if an enemy used fortifications of some description. Even so, the author of the Strategikon did not address infantry tactics or the nature of its co-operation with cavalry in great detail, even in Book Twelve. Dismounted action was a means by which cavalry could undertake stationary tactics. It was, moreover, a means by which the tactical mobility of cavalry could be combined with at least some ability at such tactics. Roman cavalrymen appear to have been quite able foot-soldiers, but, despite the impression given in the Strategikon, one should not imagine that dismounted

cavalry and infantry were of equal abilities at stationary tactics. Therefore, when foot-soldiers were required there must have been significant advantages with the use of true infantry.

Conclusion

The evidence surveyed in this chapter reveals that Roman cavalry fulfilled a variety of tactical tasks. Some of these involved combat with hostile soldiers, some attacks against loosely defended targets and others were non-combative. In practice, a body of cavalry might have fulfilled a combination of different tasks in close succession, or even simultaneously. Detachments of cavalry sometimes operated in isolation from infantry. An important role which was often performed by detached cavalry was reconnaissance, which was sometimes combined with more violent enterprises. However, the presence of infantry was often required for tactical reasons. Usually the two arms co-operated closely when decisive engagements were fought. In battles, the primary role of cavalry was often to combat hostile cavalry, although it did partake in fights against infantry as well.

Operations conducted by cavalry varied greatly in appearance, according to objectives, tactical circumstances, topography and other factors. Nonetheless, whatever role was fulfilled by cavalry and however it did so, its key quality was its mobility at the tactical level. Of particular significance was its mobility advantage over infantry, which granted tactical initiative to cavalry.

Whether detached or operating on battlefields with infantry, the tactical initiative of cavalry allowed it to choose the time and place of engagements, or to avoid engagements altogether. This enabled it to serve not only its own interests, but also those of the armies with which it was associated. By deploying cavalry, a general could respond promptly to initiatives by enemies and could carry a fight to enemies at opportune moments.

The mobile nature of cavalry actions was, however, a handicap in circumstances in which mobile tactics were not appropriate. Such was the case on rough ground, in defence, or when assailing stationary objectives including disciplined infantry. Dismounted tactics could only partly overcome this handicap. This was the main tactical reason why cavalry required infantry to be not too far distant during operations, in addition to the factors discussed in the previous chapter which affected strategic manoeuvres.

The Strategikon included a synopsis of some fundamental tactical precepts. Comparison with more recent parallels, especially the treatise of Captain Loire, demonstrates that these precepts had a sound theoretical basis. The most prominent feature of the Strategikon was the tactics which were proposed for fights of cavalry against cavalry. It is difficult to cite any one actual fight which included all these tactics, but this was not to be expected and did not detract from the treatise. Tactical precepts similar to those that underlay the proposals in the Strategikon are apparent in descriptions of several actual engagements. The author did accept the frequent need for foot-soldiers. In Book Twelve he seems to have envisaged that cavalry would fight its own kind and pursue fugitives, whereas foot-soldiers would defend a rallying point. He did not, however, choose to address in great detail the

consequences for cavalry of the presence of foot-soldiers, although they were normally significant, especially in battles. Nonetheless, even in the presence of infantry the tactics discussed in the Strategikon for cavalry fights were relevant, because cavalry often fought its own kind.

CONCLUSIONS

Having reviewed the evidence for Roman cavalry at the strategic and tactical levels during the Fourth, Fifth and Sixth centuries AD, the objectives of this study can be accomplished.

1/ What were the reasons for the inclusion of cavalry in Roman field-armies during the Fourth, Fifth and Sixth centuries AD; how significant and extensive was it as a component of those armies?

Cavalry could not have relied upon a mobility advantage over infantry at the strategic level. Indeed, its presence must often have impeded the strategic movements of armies. Furthermore, it did not have attributes which enabled it to operate as a strategic weapon completely in its own right. During many of the tasks which were required in the course of strategic operations horses would have been redundant and a nuisance.

Quite often cavalry required the assistance of infantry at the tactical level as well, whenever stationary tactics were called for. For this reason infantry was seldom far distant when a decisive action took place. Even when detachments of cavalry did operate in isolation it was normally to serve the interests of armies which included infantry.

At the tactical level cavalry fulfilled services for armies by virtue of its tactical mobility, which was in the main faster than that of infantry. This fast

mobility granted to commanders the initiative to act against enemies or to respond promptly to actions by enemies. Throughout the period of this study Roman cavalry was used in this way.

It is difficult to make objective statements concerning the significance of cavalry as a component of Roman field-armies, or concerning its extent in those armies. The significance of cavalry in any situation would have depended much upon tactical circumstances. Insofar as it might have been possible to make generalizations, one is hampered by the uneven distribution of evidence across the empire and during the period. A comparison of literary evidence for Roman cavalry during the Fourth Century with that for cavalry during the Sixth implies that its significance increased. Nevertheless, even at the end of the period infantry was an essential component of major undertakings by Roman field-armies and very probably constituted the majority in many of those armies.

2/ Did the author of the Strategikon have expertise with respect to the attributes and utilization of cavalry and to what extent did his proposals reflect contemporary practice as opposed to his own ideals?

The author of the Strategikon chose to confine his prescriptions largely to the tactical level and he paid most attention to tactics for use in all-cavalry fights. Within the confines of his proposals, it appears that he did have a sound theoretical appreciation of the attributes and utilization of cavalry. Furthermore, a number of actual operations and engagements by Roman cavalry displayed similarities to some of the more

fundamental prescriptions included in the treatise. Therefore, it seems that the author's proposals were at least to a certain extent a reflection of contemporary practice.

It might seem peculiar that some actual military operations with which prescriptions in the Strategikon are compared in this study, took place nearly three centuries before the probable date of its composition. Even in those cases, it is still possible to cite some similarities between practice and the prescriptions. In fact this is not surprising, because the author demonstrated an awareness of fundamental principles of mounted warfare which applied quite possibly in any era. Indeed, the immutability of several fundamental tactical principles is revealed by the similarities between some proposals in the Strategikon and some made by tacticians during the Nineteenth and Twentieth centuries.

Notwithstanding the similarities with actual operations, it is still the case that the Strategikon represented an ideal. It was indicated in the prologue that a significant number of commanders did not practice that ideal. Moreover, it was necessary that the proposals in the treatise were adapted according to specific circumstances. Consequently, one should not attempt to reconstruct specific but poorly recorded military events by direct reference to the treatise, even when there appears to have been some similarity with prescriptions in it. With the exception of a few historical anecdotes which it includes, the Strategikon does not constitute a source of evidence for specific historical episodes. On the contrary, one is reliant upon contemporary records of historical episodes in order to validate its pertinence to actual cavalry. The historical significance of the Strategikon is as an exposition of fundamental tactical precepts which were

sometimes practised by commanders. From a military historian's perspective it is unfortunate, however, that it did not address cavalry at the strategic level or its co-operation with infantry more closely.

Appendix 1

CATALOGUE OF BATTLES

This appendix is not an exhaustive catalogue of battles fought during the Fourth, Fifth and Sixth centuries. Instead, it includes commentaries upon selected battles, arranged in chronological order, that were demonstrative of the principles that governed operations by Roman cavalry on battlefields during that period. The first section of each commentary presents a synopsis of the antique record of a battle. Often this is merely a summary of an account by one author, although for some battles it is possible to compare versions by different authors. The second section presents an analysis of tactics, with particular regard to the involvement of cavalry and any specially notable features.

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33	Capua	554	p274
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43 Viminacium	599	p292

1 Turin AD 312

Romans v Romans

Latin Panegyrics IV(Nazarius).22.2-24.5, XII.6.2-5

SYNOPSIS - This battle was the first major engagement during the civil war between Constantine I and the pretender Maxentius, which ended at the first Battle of the Milvian Bridge (2). The two accounts included in the Latin Panegyrics were the only records of it to have remained extant. Each account presented the tactics differently, but it is fairly straightforward to reconcile them.

Constantine was on the offensive, leading soldiers from Gaul into Italy. According to the 12th panegyrist, Maxentius arrayed his army with its wings drawn back on a downward slope. In response to this, Constantine deployed his wings in advance, so as to check those of his adversary and to flush out any hidden ambushes. Nazarius recorded that armoured cavalymen and horses formed a strong contingent in Maxentius' line, the appearance of which added greatly to the terror inspired by his army. It seems likely that this contingent constituted the advanced central section of Maxentius' line, which was mentioned in the 12th panegyric. No armoured cavalry was mentioned in Constantine's army.

Constantine took personal command of the fight against the armoured cavalry. The overall tactic of this cavalry was, according to Nazarius, to launch a frontal assault in order to break the opposing line. However, when it advanced the centre of Constantine's line purposely withdrew. The armoured cavalry was then enveloped and a melee ensued in which it was encumbered

by its armour. Armoured cavalymen were vulnerable to blows from iron maces, the concussion of which set them reeling in their saddles and falling to earth. Their horses were vulnerable in areas not covered by armour and threw the cavalymen when pierced in those places.

Eventually the armoured cavalry gave way and Maxentius' line was routed. Constantine's soldiers gave chase and inflicted great slaughter. Nazarius claimed that all Maxentius' armoured cavalry was lost, but that it had not seriously harmed Constantine's soldiers.

ANALYSIS - One wonders why Maxentius chose to deploy his army facing uphill, which would normally have been a disadvantage. Perhaps he had been surprised by the arrival of Constantine's army. Alternatively, there may have been features of the landscape which were not mentioned by the panegyrists, but which favoured such a deployment.

The most significant aspect of this battle from the perspective of the current study was the effectiveness of heavily armoured cavalry (Cf 4). There may well have been similar cavalry in Constantine's army, which Nazarius chose not to mention in order to heighten the dramatic effect of his panegyric. The overall tactic which he ascribed to this cavalry may have been similar to that explained in the third book of the Strategikon, but one should not presume for certain that this was the case. Nazarius emphasized that during an attack the appearance of armour had a significant psychological impact upon an enemy. However, this battle demonstrated that if an enemy were not moved by this and withstood or evaded the initial shock of an attack, then armour was of much less value in a melee. One suspects that Nazarius exaggerated the ineffectiveness of the armoured cavalry,

but he may well have indicated correctly that its protection did not render it invincible and brought some tactical disadvantages.

2 Milvian Bridge I AD 312

Romans v Romans

Zosimus II.15-16; Latin Panegyrics IV(Nazarius).28.1-30.2, XII.16.3-17.2

SYNOPSIS - This battle ended the campaign which had begun at the Battle of Turin (1). It was the cause of great celebration in antiquity, because it was the decisive victory of Constantine I over the pretender Maxentius and, allegedly, was the cause of Constantine's conversion to become the first Christian emperor. As a result several authors produced accounts of this battle. However, they tended to be mainly interested in its religious significance. Furthermore, it is not always possible to reconcile the tactics reported by each. Consequently, this battle has few implications for the current study.

Of some slight interest was the version by Zosimus, who recorded that fighting began when Constantine's cavalry attacked that of Maxentius. The infantry on each side then engaged and the struggle continued until Maxentius' foot-soldiers followed his cavalry in flight. Many, including Maxentius, were drowned in the Tiber.

ANALYSIS - That fighting was begun by cavalry on both sides was probably typical of many battles, because of the rapid mobility and tactical initiative of that arm.

3 Myrsa AD 353

Romans v Romans

Julian Orations I.35D-37A, II.57B-60C; Zosimus II.45-53

SYNOPSIS - Julian provided two sketchy but similar accounts of this battle, as parts of panegyric orations in favour of Constantius II. The pretender Magnentius was campaigning in mountainous country between Italy and Pannonia. By means of a feigned withdrawal, Constantius drew the pretender and his army out of the mountains onto the plains of Pannonia. On open ground by the River Drava, near Myrsa, both armies arrayed for battle. Infantry formed Constantius' centre with cavalry on both wings, the right wing positioned adjacent to the river. The front ranks of the cavalry comprised armoured horsemen, with lances and no shields. Behind these were cavalrymen with less armour, some protected by shields and some with bows. In a similar fashion, the front ranks of the infantry were heavily armed for hand-to-hand combat, whereas those behind were armed with slings or bows. The opposing formation also comprised infantry in the centre with cavalry on the wings. Julian claimed that Magnentius had deployed it poorly and that it was out-flanked by the left wing of the emperor's army.

When battle commenced, the pretender's army was quickly turned. The emperor's cavalry made a strong attack and Magnentius fled the field, but despite the departure of their leader his soldiers regrouped and struggled hard. Fighting continued hand-to-hand with neither side gaining the advantage. When the horses of cavalrymen were killed they continued on foot. A barrage from Constantius' mounted archers and frequent attacks by his other cavalry inflicted great losses upon the pretender's force. At nightfall it took to flight, some

soldiers escaped across the plain but many drowned in the river.

The account by Zosimus was also sketchy, but was largely compatible with that by Julian. Zosimus stated that it was for the benefit of his cavalry, in which his army was superior, that Constantius wished to draw the pretender's force onto the level ground near Myrsa.

ANALYSIS - It is unfortunate that the recorded details of this battle are vague, because it appears that cavalry made a significant contribution to it, but it is not clear how it did so. Apparent in the desire of Constantius to bring the pretender's army onto level ground was the need for a flat field in order to fight with cavalry. The stratagem of a feigned withdrawal which, according to Julian, made this possible was advocated in the Strategikon (Cf 11,15,16,24,31,38)¹. The arrangement of the emperor's cavalry in this battle also bore some resemblance to that prescribed in the Strategikon, insofar as mounted archers followed armoured cavalry with lances². Although it was not emphasized, the presence of the Drava probably greatly affected tactics from the outset. Very possibly Constantius' plan was to trap the opposing army between the river and his left wing, which allowed his mounted archers to wear down Magentius' soldiers at their leisure.

4 Argentorate AD 357

Romans v Alamanni

Ammianus Marcellinus XVI.12; Zosimus III.3; Libanius Orations XVIII.53-62

Austin (1973) pp333-335, (1979) pp152-154; Crump (1975) pp85-89; Matthews (1989) pp296-301; Elton (1996) pp255-256 fig 23

SYNOPSIS - Ammianus was not present at this battle, but related it at some length in his typically flowery prose. The accounts by Libanius and Zosimus contained less detail, but nevertheless provided information of some significance. That by Libanius is believed to have been derived from Julian's own report of the battle³. Zosimus may have been familiar with the earlier accounts, but he did include additional details.

Ammianus claimed that the battle was fought near the Rhine by 13,000 Roman soldiers and 35,000 Alamanni. The Roman army was commanded by the Caesar Julian, the Alamanni by their kings Chonodomarius and Serapio. On the morning of the battle the Roman infantry marched out of its camp with cavalry, including some armoured horsemen and mounted archers, on its flank. Ammianus alleged that Julian halted the army at noon and explained his desire not to fight until the following day. This was due to the fatigue of the soldiers after a hot march and the waterless countryside which lay ahead of them. Nonetheless, the soldiers and their officers clamoured for battle, pointing out that the Alamanni might disperse if not engaged immediately and that the frustration of this lost opportunity might drive the soldiers to mutiny. Their enthusiasm was such that Julian consented to offer battle and the march resumed.

Three mounted scouts warned the Alamanni of the approach of the Romans. An Alamannic infantryman, who was with these scouts, was captured and he revealed that the Alamanni had been crossing the Rhine for three days and nights. When first sighted by the commanders of the Roman vanguard, the Alamanni were creating a wedge shaped formation. The Roman vanguard formed a solid line with cavalry on the right wing. In response, the strongest Alamannic cavalry was placed opposite the Roman cavalry. However, Ammianus observed that the light Alamannic cavalrymen, armed with shields and lances, were no match in combat against armoured Roman opponents. Therefore, light-armed Alamannic foot-soldiers were intermingled amongst them. When the Roman cavalrymen were locked in combat, these were to creep up and stab their horses in the belly. The right wing of the Alamannic deployment was provided with soldiers hidden in trenches, who were to cause confusion by launching a surprise attack against the Roman flank. The term used by Ammianus for these trenches, namely 'fossas', generally implied an artificial creation⁴.

The Roman army appears to have faced its antagonists squarely. Its left wing, commanded by Severus, advanced but halted short of the trenches because he suspected an ambush. Julian rode about the field with 200 horsemen and encouraged the soldiers. A missile exchange marked the opening of battle. The Alamanni then advanced against the Roman cavalry, presumably with their own cavalry and the light-armed foot-soldiers. This attack was resisted with shields, swords and darts; the Roman infantry protected the flanks of the massed cavalry with overlapping shields. Hand-to-hand fighting between the infantries ensued and those with Severus succeeded in pushing the Alamanni back. As they did so, however, the Roman cavalry was suddenly routed. This was brought

about by the sight of the commander of the armoured cavalry being slightly wounded and the horse of another collapsing under the weight of armour. Confusion was prevented by the firm stand of the infantry. The flight of the cavalry was halted by the admonishments of Julian, who appeared in front of them brandishing a conspicuous standard that resembled a dragon. Taking shelter with the infantry, the cavalry rallied in order to renew the fight.

Whilst the Roman cavalry was regrouping, the Alamanni pressed their attack on the infantry and even succeeded in penetrating the Roman deployment. Despite this, the Roman infantry resisted stolidly with linked shields and the Alamanni began to lose heart due to their continual losses. Eventually they turned to flight and many were cut down by pursuing Romans, or were drowned trying to cross the Rhine. Shortly later Chonodomarius was captured. Ammianus claimed that whereas the Romans lost 243 soldiers plus four officers, the Alamanni lost 6,000 on the battle-field and many more in the river.

The account of this battle by Libanius was largely compatible with that by Ammianus. According to Libanius, Julian could have ordered an attack when only the Alamannic vanguard had crossed the Rhine. He felt, however, that this would not have a decisive effect upon the Alamanni. On the other hand, he did not wish to risk an engagement with the entire Alamannic force and when 30,000 had crossed he commanded the Romans to advance. At the battlefield the Romans arrayed with infantry in the centre and cavalry on either flank. The pick of the Roman cavalry and infantry was deployed on the right under the direct command of Julian. Opposite this the Alamanni placed the best of their soldiers. Opposite the Roman left the Alamanni arranged an ambush hidden by reeds in a stream.

When battle commenced the Roman left spotted the ambush, dislodged it and half of the Alamannic formation was disordered in panic. The Roman right, however, was hard-pressed and began to give way. Julian successfully rallied it and launched a counter-attack which overcame the Alamanni. The Romans pursued and were even joined by the guards of the Roman baggage-train. 8,000 Alamanni were killed and more drowned in the Rhine.

Zosimus provided the interesting detail that Julian had great faith in a body of 600 cavalry, which was exceedingly well trained. Nonetheless, in this battle it fled. Julian with a small group rode up and attempted to halt the rout, but the cavalry refused to return to the fight. The Alamanni were still defeated and Zosimus recorded an incredible figure of over 60,000 Alamannic casualties.

ANALYSIS - As usual with accounts of military operations, the figures provided for the numbers of soldiers and casualties at Argentorate are questionable. The size of the Alamannic force has been estimated to have been as few as 6,000, but Austin accepts a figure in the region of 20-25,000. The figure provided by Zosimus for the number of Alamannic dead was inconceivable. Even the figure claimed by Ammianus was high and the disparity between it and the number of Roman dead which he recorded is hard to credit. However, Elton accepts that the disparity may have been large not only because the Alamanni lost. He points out that whereas the Alamanni were driven off the field into the Rhine, the Romans were able to occupy the field, where they could tend their own wounded and finish off those of the Alamanni.

The claim by Ammianus that Julian had been reluctant to fight, but was overborne by the clamour of his

soldiers, is also questionable. It seems probable that Roman soldiers were eager for the spoils of victory, but they would have been as likely to suffer the ravages of defeat if commanders allowed battles to proceed in unfavourable circumstances. One suspects that Ammianus was attempting to protect his favoured Caesar from the charge of undue personal ambition and, ultimately, pretensions upon the throne of Constantius II. In doing so, he made a claim which was almost the mirror image of the claim made by Procopius concerning Belisarius at Callinicum (15) and Rome (23), whereby Procopius probably attempted to absolve Belisarius of responsibility for defeats⁵. Nevertheless, the reason which Ammianus cited for offering battle immediately at Argentorate, namely the likelihood that the Alamanni would shortly disperse, may well have been valid. A major difficulty with crushing invaders such as the Alamanni very possibly was that they would evade large Roman forces by means of dividing into small groups⁶.

It is clear that the battle was fought predominantly by infantry on both sides. The tactics which infantry used against infantry at Argentorate are analysed by Austin. In brief, he concludes that it was necessary for forces such as the Alamanni to crush a Roman line with a few rushes. If these failed, they were not able to sustain a prolonged struggle against disciplined soldiers in close order.

Insofar as cavalry was significant in this battle, it did demonstrate several aspects of cavalry tactics and co-operation between cavalry and infantry. The role and aptitude of cavalry before battle as an agent of reconnaissance, which probably continued during battle, was demonstrated by the three Alamannic scouts. One wonders why an infantryman was associated with these scouts, but his misfortune demonstrated one of the

reasons why cavalry was often better suited to reconnaissance duties. No such scouts were mentioned on the Roman side, but it is almost inevitable that they were deployed.

Of particular interest with respect to Roman cavalry during battle were the benefits and problems of heavy armour (Cf 1). Austin feels that the remarks made by Ammianus concerning the fighting effectiveness of Roman armoured cavalry, in particular against unarmoured opponents, were inconsistent with the poor performance of that cavalry in the battle. In fairness this was not the case, because Ammianus outlined both the strengths and weaknesses of armoured cavalry. Ammianus explained that heavy armour protected cavalrymen and perhaps horses against lances, but that horses were still vulnerable, especially to men on foot. In the fighting it was apparent that even armoured cavalrymen were not invulnerable and that horses were encumbered by armour.

The 200 cavalry with Julian was probably not just a bodyguard, but also constituted a mobile reserve (Cf 5,25,29). Unfortunately, the dispositions and manoeuvres at Argentorate were not recorded in sufficient detail to examine how this reserve performed. It might have acted in a defensive manner by relieving any hard-pressed Roman units, which it may have done, for instance, when Julian rushed up to meet the routed cavalry. It could also have acted in an offensive manner by launching sudden attacks upon weak points which developed in the Alamannic deployment. In either case it would have benefited from the high speed mobility of cavalry, which would have enabled it to react quickly to situations as they arose. That commanders retained a body of horsemen at their own disposal, with which to support hard pressed units, was recommended in the Strategikon⁷.

Unlike the figure which he claimed for the number of Alamannic dead, the small figure of only 600 stated by Zosimus as the number of the main body of Roman cavalry was quite plausible. It emphasized that this was primarily an infantry battle. Roman cavalry does not appear to have assisted the infantry greatly, but the infantry did assist the cavalry. It is not possible to examine this assistance in much detail, but it was by means of making stationary, defensive stands in order to protect cavalry. In the early stages of the battle, one imagines that the infantry with its shields prevented the regular formation of Roman cavalry from being disrupted by Alamannic horsemen attacking from the flank. After the rout of the Roman cavalry, it was infantry which defended its rallying point.

5 Ctesiphon AD 363

Romans v Persians

Ammianus Marcellinus XXIV.6

SYNOPSIS - Having crossed the Tigris on the way to Ctesiphon, Julian's army was challenged by the Persians. This comprised a front line of armoured cavalry in close order. Behind this stood infantry carrying oblong shields and at the rear were elephants. Julian arrayed his infantry in two lines, front and rear, placing the weaker foot-soldiers in between. He feared that these would desert if they were in the rear, or if in the van they might be routed and confuse the rest of the army.

The battle was opened by Roman javelins, then the Romans advanced quickly to close quarters in order to reduce the effect of Persian arrows and fought hand-to-

hand with spears and swords. Julian moved about the battlefield with 'light-armed auxiliaries', assisting Roman soldiers under pressure and inspiring those who flagged. Eventually, the Persian front line wavered and then began a hasty withdrawal to Ctesiphon. The Romans pursued but stopped short of entering the city. Ammianus claimed that the Persians lost 2,500 slain in this battle, whereas the Romans lost only 70. The same armies met not long afterwards at Maranga (6).

ANALYSIS - The presence of Roman cavalry in this battle was small. It is quite possible that the 'light-armed auxiliaries' with Julian were mounted, because the mobility of cavalry would have been useful to respond quickly to developments. At Argentorate (4) Julian did ride about the field with a body of cavalry (Cf 25,29). The desire of the Roman soldiers to come to close quarters quickly in order to avoid arrows, accorded with tactics later proposed in the Strategikon for use against Persians⁸. The tactic of placing infantry behind cavalry was employed by Roman, Persian and other commanders, so as to provide cavalry with a defended rallying point should it have been routed (Cf 13,23,28,29). The failure of Roman infantry to secure a rallying point at Ctesiphon and later at Dara (13) may have had significant implications for the steadiness of Persian infantry as a battle-field arm.

6 Maranga AD 363

Romans v Persians

Ammianus Marcellinus XXV.1.11-19

SYNOPSIS - The brief description of this battle by Ammianus can be seen in conjunction with that of the earlier battle in Julian's Persian campaign at Ctesiphon (5). In the district of Maranga, during the retreat from Ctesiphon, the Romans were challenged by a Persian army. In the front line of this army the soldiers were fully armoured and wielded lances or bows. They were not specified as cavalry, but that had been the case at Ctesiphon. There were elephants behind the front line, also after the fashion at Ctesiphon. The noise, odour and appearance of these elephants alarmed the Roman horses. Julian arranged the Roman line with its wings thrust forward towards the enemy. As at Ctesiphon, the Romans advanced quickly to close quarters in order to lessen the effect of Persian archery. Ammianus observed that the Persians were accustomed to fighting at long range with their bows and were practised at shooting backwards at a pursuing enemy. At close range, however, they were not adept and in this battle they suffered heavier casualties than did the Romans and were driven back.

ANALYSIS - Unfortunately, it is not clear how Roman cavalry and infantry co-operated in this battle. As with the camels at the Battle of Mammes (19), there was no reason why Roman horses should have been alarmed by elephants in particular. They would, however, have been disturbed by experiences with which they were not familiar. Whereas the Persian horses were accustomed to

these beasts, Roman horses will have had little contact with elephants.

The battle predicted some of the comments in the Strategikon concerning Persians⁹. The observation that Persians were skilled archers but were not able in hand-to-hand combat was repeated in that treatise. So was the tactic of coming to close quarters as quickly as possible, in order to evade arrows and to exploit the Persians' weakness in a close fight. That some Persians at Maranga were using lances, was contrary to the observation in the Strategikon that Persians did not use that weapon.

7 Salices AD 376

Romans v Goths

Ammianus Marcellinus XXXI.7

Austin (1979) pp157-158

SYNOPSIS - Ammianus included few factual details in his account of this battle. Roman generals elected to offer pitched battle against Goths rampaging in Thrace. According to Ammianus this was not a wise decision, because it would have been better to wear the enemy down first by means of guerilla tactics. The Roman army encamped near the town of Salices. A much larger body of Goths had arranged a wagon circle not far distant and had recalled raiding parties. The dispositions of the armies when battle commenced was not clearly recorded, other than that as the Goths attempted to seize high ground the Romans hastened to deploy. After skirmishes and a missile exchange, the infantries fought hand-to-hand with linked shields. The Goths with their clubs and swords

were able to break the left of the Roman formation, which was only saved by the assistance of a reserve. Fugitives on both sides were pursued by cavalry and infantry. Eventually nightfall brought an end to the battle, in which both sides had suffered heavy casualties.

ANALYSIS - This battle should be seen in relation to those at Dibaltum (8) and Adrianople (9), which were fought later in the same campaign. Ammianus did not distinguish between the tasks of cavalry and infantry at Salices. It is apparent that infantry made a major contribution on both sides. Both at Salices and Adrianople it was apparent that wagon circles had significant implications for tactics, by providing mobile defensive rings from within which offensive operations could be launched. The importance of soldiers held in reserve was demonstrated by the fate of the Roman left wing at Salices.

8 Dibaltum AD 377

Romans v Goths

Ammianus Marcellinus XXXI.8.9-10

SYNOPSIS - This was a very small engagement described almost in passing by Ammianus. A few Roman infantry commanded by Barzimeres were attacked by many Goths, whilst pitching camp near the town of Dibaltum. Having made a disciplined stand and resisted well to begin with, the Romans collapsed after being surrounded by cavalry.

ANALYSIS - Had it not been part of the campaign which culminated at Adrianople (9), this engagement would hardly have been worthy of mention, especially in view of the absence of Roman cavalry. However, the fact that the credit for the victory was given to Gothic cavalry, may have indicated the increasing importance of that arm in Gothic armies. Previously during the same campaign, at the Battle of Salices (7), Ammianus gave the impression that infantry was the significant element of the Gothic force. The rise of Gothic cavalry may well have had implications for the tactics of both sides at Adrianople. That cavalry at Dibaltum defeated disciplined infantry is somewhat unusual, because often well-ordered foot-soldiers showed a good ability at the protracted resistance of cavalry (Cf 15,22,23,28,37,38). The explanation may have been simply that the weight of numbers was too much in favour of the Goths.

9 Adrianople I AD 378

Romans v Goths

Ammianus Marcellinus XXXI.12-13

Burns (1973) pp336-345; Austin (1975) pp155-156; Crump (1975) pp91-96; Matthews (1989) pp296-301; Austin & Rankov (1995) pp 241-243

SYNOPSIS - Ammianus was not present at this battle and the recollections of the bewildered survivors of the Roman army must have been difficult to interpret. It is not surprising, therefore, that his account of it lacked clear information. Nevertheless, the scale of the disaster facilitated a fine exposition of his sensational

style of writing, from which the following details can be extracted.

Having been falsely informed by scouts that a Gothic horde numbered only 10,000, the emperor Valens decided to offer battle near the city of Adrianople. Without waiting for the assistance of the western emperor Gratian and his army, on August 9 soldiers with Valens marched on the Goths. After a hot march across rough country, they sighted the Gothic wagon circle in the early afternoon and arrayed for battle. The Roman cavalry on the right wing was pushed forward, most of the infantry remained in the rear. Cavalry which was to form on the left wing arrived late. The disposition of the Gothic forces at this point is not clear, quite possibly they were still mostly within the defensive ring of the wagons. Fritigern, the Gothic leader, entered specious negotiations to delay battle partly in order to exhaust the Romans, who were suffering in the heat, worsened by fires lit by the Goths, and from hunger. Moreover, the arrival of the Gothic cavalry led by Alatheus and Saphrax was still awaited.

Negotiations were brought to a sudden end by an unauthorized attack by some Roman soldiers, which commenced the battle. At this opportune moment, the Gothic cavalry arrived and crashed into the Romans causing great confusion. Ammianus reported that the two battle lines dashed together and pushed each other back and forth. Roman soldiers on the left succeeded in reaching the Gothic wagons, but were deserted by cavalry and were therefore crushed by the vast number of Goths. With the collapse of the left wing, the Roman infantry was exposed and crowded by the Goths who were pouring forth in huge numbers, to the extent that it could not wield its swords freely. Nevertheless, it continued to resist stoutly, heavy casualties being suffered on both

sides with many falling to arrows. Finally the Roman line broke and most of the survivors fled, leaving Valens and a small number of soldiers. An attempt was made to bring a body of soldiers held in reserve to their assistance, but it was found to have deserted. The carnage was ended by a moonless night, into which barely a third of the Roman army escaped. The exact fate of the emperor was never established.

ANALYSIS - Burns believes that the reference by Ammianus to the battle lines dashing together was only for literary effect, the Goths in fact not having deployed a line. He supports this by pointing out that negotiations were still in progress when the fighting started and that the Roman left was quickly able to reach the Gothic wagons. Instead, he suggests that Goths were continually emerging from the wagon circle during the fighting, as Ammianus did imply by stating that they were pouring forth in huge numbers. He also suggests that a gap developed in the rear of the Roman line, between the infantry and the cavalry of the left wing. This was in part due to the line curving around the wagon circle. A natural tendency for infantry to shuffle towards the right in combat, which was recorded with respect to Greek hoplites of the Fifth Century BC, may have increased the gap¹⁰. The late arrival of the cavalry on the Roman left wing may also have prevented its proper deployment next to the infantry. The gap constituted a vulnerable target in the Roman rear, which the Gothic cavalry was able to attack. It attacked with surprise, possibly having emerged from concealment in nearby ravines. After the collapse of the Roman left, the drift of the infantry to the right increased until it could not fight properly and its dense mass presented an ideal target to Gothic archers. Earlier during the same war, at the Battle of

Salices (7), the collapse of Roman soldiers had been saved by a reserve, but when the same was attempted at Adrianople the reserve had departed.

This reconstruction by Burns is plausible, albeit that it requires some speculation. If correct, it shows that cavalry made important contributions to Gothic tactics, as implied previously at the Battle of Dibaltum (8). Launching a surprise attack from concealment upon the rear of an enemy line, was a function assigned to Roman cavalry on a number of occasions and was prescribed in the Strategikon (Cf 13,14,33)¹¹. The reconstruction also shows the important contribution made to Gothic tactics by wagon circles, as at Salices. These provided mobile strongholds, which were difficult to attack and from within which Goths could temporize until a favourable opportunity arose.

Unfortunately, Ammianus did not make clear the nature of the co-operation between Roman cavalry and infantry. According to Austin, Ammianus regarded the failure of the cavalry on the Roman left to support the infantry near the wagons as the crucial event which led, in turn, to the baulking of the Roman attack, the crowding of the Roman infantry and its ultimate defeat. Co-operation between cavalry and infantry in battle certainly was vital, but in view of the poor ability of cavalry at stationary tactics it probably could not have become closely involved in the assault upon the wagons, or in fending off the mass of Goths which crushed the Roman infantry. A more appropriate task for it would have been to contain the Gothic cavalry, but this appears to have arrived too suddenly to be stopped. After the collapse of the Roman line this battle, like that at Salices, demonstrated the importance of a reserve, this time by showing the effect of its absence.

10 Chalons AD 451

Romans and Goths V Huns

Jordanes 36-40

Creasy (1877) pp137-150; Thompson (1996) pp148-156

SYNOPSIS - The precise location of this battle has not been established with any certainty but it probably took place somewhere in the modern region of Champagne. On both sides the armies were very heterogeneous. The Huns, led by Attila, were supported by contingents from several of the numerous tribes under Hunnic subjugation. In addition to Romans and Goths, the Romano-Gothic force included a contingent of Alans, the loyalty of which was doubted. The Roman contingent itself consisted of soldiers from many allied peoples. In overall command of the Romano-Gothic force was the Roman general Aetius.

The battlefield comprised a plain rising by a steep slope to a ridge. A section of the ridge was seized by each side at the outset. On this field the Romans and Goths formed for battle in three divisions. Aetius led the Romans on the left wing, the Gothic king Theodorid led his people on the right and the Alans, with their king Sangiban, occupied the centre. According to Jordanes this arrangement was intended to prevent the desertion of the Alans. On the Hunnic side Attila took his position in the centre with the best Hunnic soldiers. Subject tribesmen formed the wings of his deployment.

Jordanes explained that on the basis of omens Attila believed that Aetius would fall in the battle, which he greatly desired, but that in other respects the Huns would fare badly. Consequently he postponed battle until late afternoon in order that darkness might facilitate the escape of his army. Action commenced with a dash by

both sides to gain the summit of the high ground. In this the Romans and Goths were quickest and were then able to exploit the advantage of height in order to repel the Huns. The Huns fell back in confusion but were rallied by Attila. At this point Jordanes attributed to the Hunnic leader a speech delivered to his soldiers. Amongst jingoistic rhetoric that was typical of speeches attributed to commanders on fields of battle, Attila scoffed at the ethnic divisions within the opposing army and alleged that its eagerness to reach high ground stemmed from a fear of doing battle on the open plain. Moreover, he despised in particular the Roman contingent and its tactic of standing in close order with locked shields. He urged his men to give little attention to the Romans and instead to concentrate on the fight against the Alans and the Goths.

Having been rallied the Huns resumed combat and prolonged and bloody hand-to-hand fighting ensued. Amongst the casualties was Theodorid, but the Goths were still able to press home an attack on the Huns that nearly eliminated Attila. Thereupon Attila withdrew with his soldiers to the Hunnic camp which lay within a wagon circle. As night was falling and the Romans and the Goths were becoming disorientated they chose not to continue the offensive.

On the morning following the battle the Huns remained in their wagon circle although they sounded trumpets and clashed weapons in a belligerent manner. Rather than to storm the Hunnic camp, the Romans and Goths decided to lay siege to it using Roman archers to prevent sallies by the defenders. During the course of the siege the Goths became aware of the demise of Theodorid which inflamed a desire for vengeance, especially on the part of the king's son and successor Thorismud. However, Aetius feared that the complete annihilation of the Hunnic army

would upset the power balance within Gaul and make it impossible for the Romans to hold the Goths in check. Therefore, he contrived to persuade Thorismud to return with his army to the Gothic region of Gaul and so facilitated the escape of Attila and the Huns.

ANALYSIS - The value of Jordanes' account to the present study is greatly reduced by his failure to distinguish between cavalry and infantry and by the vagueness surrounding the lie of the land, the deployments and the manoeuvres. Both Creasy and Thompson believe that the open terrain of the region favoured the cavalry that formed an important element of the Hunnic army. The words attributed to Attila, in particular his disparaging comments about the static tactics of the Roman contingent and the eagerness of the Romano-Gothic army to abandon the plain, might indicate that it comprised a significant portion of infantry. One can be almost certain that the words were fictional, because Attila would hardly have been in a position to make a lengthy speech to his soldiers at such a critical moment. They may, nevertheless, have been indicative of the actual situation, but one cannot say that only infantry would have sought high ground because the benefits of height also applied to cavalry.

Another point raised in Attila's speech was the ethnic diversity of the Romano-Gothic army. Ethnic diversity was a feature of nearly all the armies examined in the present study, including that of Attila himself. It seems almost inevitable that a multiplicity of languages, tactical traditions and loyalties was often disadvantageous in battle. This was not the only case in which the questionable loyalty of allied soldiers was mentioned (Cf 15,18,29). However, in the case of the Alans one might wonder to what extent their position on

the battlefield really was indicative of their potential treachery. After all, a deployment in three divisions was in keeping with the later advice in the Strategikon (Cf 18,36,37,39,40,41,43)¹². Furthermore, if their loyalty were doubted it might not have been wise to position them in the centre of the Romano-Gothic deployment, where their desertion would have caused the greatest confusion.

11 Gorgo AD484

Hephthalitae Huns v Persians

Procopius History of the Wars I.3-4.14; Agathias IV.27.4; Zachariah VII.3; Strategikon IV.2

SYNOPSIS - Not long before this battle Persians had invaded Hunnic territory. During this earlier incursion, a detachment of Huns had feigned a withdrawal into mountainous and forested terrain, in which was concealed a larger force. The Persians were lured into this area and their line of retreat was blocked. In order to extricate his army, the king Peroz was compelled to swear oaths which pledged peace with the Huns.

Disregarding his oaths, Peroz invaded shortly afterwards by the way of Gorgo, the major city of the Hephthalitae. On this occasion a trench was cut by the Huns across a suitable plain, leaving a causeway wide enough for ten horsemen in the centre and concealed with reeds and earth. Again a small detachment feigned a withdrawal and crossed the hidden trench by the causeway. The Persian cavalry gave chase at speed with lances and fell into the trench. It suffered heavy losses, including Peroz.

ANALYSIS - Despite the absence of Romans, this battle and its precursor are of interest as demonstrations of stratagems which involved feigned withdrawals and, at Gorgo, a trap (Cf 3,12,15,16,24,31,38). At Dara (13) the Romans dug a trench across the battlefield, but it does not seem that this was intended as a trap. Such stratagems were prescribed in the Strategikon¹³. That the Persian cavalry at Gorgo was recorded with lances, was contrary to the observation in that treatise¹⁴.

12 Mindouos AD 528

Romans v Persians

Procopius History of the Wars I.13.1-8; Zachariah IX.2; Malalas XVIII.26

SYNOPSIS - Procopius did not devote much attention to this engagement, perhaps because Belisarius was not successful¹⁵. The account by Zachariah, who referred to the site as Thannuris, was more interesting.

A fortification was being built on the frontier close to Nisibis, against the wishes of the Persians. When the latter despatched an army to prevent its construction, it was opposed by soldiers commanded by Belisarius. Procopius only recorded that a fierce battle took place in which the Romans were defeated. Zachariah recorded that many Roman soldiers fell into pits, which had been covered with wooden stakes. The cavalry led by Belisarius was able to flee to Dara, but much of the infantry was captured or killed.

ANALYSIS - It is interesting that it was cavalry rather than infantry which escaped from Mindouos, because one would imagine that fast moving horses would have been more vulnerable to concealed ditches. In other cases when such traps were used, notably by the Huns at Gorgo (11), cavalry was the victim¹⁶.

The procedure for building border fortifications against the wishes of an enemy, was prescribed in the Strategikon¹⁷.

13 Dara AD 530 (Fig 9)

Romans v Persians

Procopius History of the Wars I.13.9-14.55; Zachariah IX.3; Malalas XVIII.50

Bury (1889) pp373-376; Greatrix (1998) pp169-185

SYNOPSIS - The account by Procopius of this great victory, won by Belisarius and Hermogenes over a Persian army led by the general Peroz, was the most detailed description which he provided of any battle. In comparison, the versions by Zachariah and Malalas were brief.

Intelligence reached the Roman generals at Dara that a Persian army intended to seize the city. The Persians encamped at Ammodios, which was roughly two miles from Dara and advanced against the city at dawn. Procopius claimed that this Persian army comprised 40,000 foot and horse, whereas according to Malalas it numbered 70,000. However, it included 'infantry' which, in words attributed by Procopius to the Roman generals, was dismissed as merely labourers and servants who were armed

only with enormous shields. Against this challenge a Roman army, stated by Procopius to have numbered 25,000 foot and horse, prepared to defend Dara. It arrayed largely as shown in Figure 9. Pharas and the Heruli, however, were only detached from the left wing and concealed behind the hill during the main battle, which took place two days later. Zachariah indicated that the Persian intention was to lay siege to the city, but that the presence of a Roman army outside necessitated a pitched battle.

The Roman deployment was arranged around a trench, which was about one 'stone's throw' from a gate in the city wall and was crossed by many causeways. Most of those in front of the trench seem to have been cavalry. The soldiers led by Bouzes, Sunicas and Aigan, Simmas and Ascan, John, Cyril and Marcellus were specified as such. It seems probable that the 300 Heruli led by Pharas were mounted as well. However, Procopius did state that the soldiers in front of the trench comprised both cavalry and infantry. He explained that the purpose of the deployment was that if either wing were driven back the two groups of 600 horsemen led by Sunicas, Aigan, Simmas and Ascan, could assail the attackers from the rear. The soldiers with the generals behind the trench quite possibly included most of the infantry.

The Persians formed a deep formation which faced the Romans for a long time without fighting. Late in the afternoon a detachment of horsemen from the right of the Persian formation attacked the soldiers led by Bouzes and Pharas, who retired to the rear. The Persians did not pursue and Procopius supposed that they feared an attack from the flank. The retreating soldiers then rallied and repulsed the attackers, who withdrew to the Persian line. Subsequently, one Persian rode forward and offered single combat, which was accepted by Andreas. Andreas was not a

regular soldier, but rather a trainer in a wrestling school and an attendant of Bouzes. He defeated the challenger having felled him from his horse with a lance and then, contrary to the wishes of Hermogenes, defeated another in a joust with lances. After this the Persian army retired to Ammodios and the Romans to Dara.

On the following day 10,000 reinforcements arrived for the Persians and on the day after that, in a speech which Procopius attributed to Peroz, he tried to encourage his army. He pointed out that the well ordered formation of the Romans on the previous day had been unusual for them and that he did not expect it to endure the confusion of battle. The Persians then marched back to Dara. Belisarius and Hermogenes similarly addressed the Roman army. They emphasized the importance of a well ordered formation and of regard for the instructions of commanders. The large size of the Persian army was dismissed by pointing out the inaptitude in combat of the Persian 'infantry'.

The Romans deployed as before, except that Pharas and the Heruli were hidden behind a hill near the left wing. These were to be ready to assail the Persians from behind during the fight. Half of the Persian cavalry arrayed in a reserve line, in order to fight in rotation with those in the front line. Peroz was at the head of the central division of the Persian front line, with Baresmanas and Pityaxes at the heads of the left and right divisions respectively. The corps known as the 'Immortals' was positioned separately and instructed not to act until Peroz himself had given the signal. The location of the Persian infantry was not stated, but presumably it formed a line behind the cavalry.

The Persians initiated the action at midday because, whereas they were accustomed to eat late in the afternoon, the Romans did so before noon. Therefore,

they hoped that the Romans would be hungry at that time of day and so not able to fight well. The battle began with an archery exchange. More arrows were loosed by the Persians due to the rotation of fresh soldiers. The Romans did not, however, have the worst of it because a steady wind blew against the Persian arrows. When quivers were empty, the battle closed with lances. The Roman left was again routed, but Pharas and the Heruli assailed the pursuers from behind and Sunicas and Aigan led an attack from the side. The attackers were repelled having lost 3,000 and the Roman left was restored. Peroz then reinforced the Persian left with the 'Immortals' and others. In response, the cavalry with Sunicas and Aigan were sent to aid the cavalry with Simmas and Ascan. Behind these were placed many soldiers moved forwards from behind the trench. The Persian left then attacked, led by Baresmanas, and the Roman right was routed. However, Sunicas, Aigan, Simmas and Ascan bisected the pursuers and the right wing rallied and launched a counter-attack. When Baresmanas was killed, the pursuers panicked and fled, but 5,000 were encircled and cut down. This precipitated the retreat of the entire Persian army, with the Romans in pursuit. At this stage the Persian infantry was overwhelmed and slaughtered. Belisarius and Hermogenes prevented a lengthy pursuit, being satisfied with having repelled the Persians from Dara and fearing that they might rally and organize a counter-attack.

ANALYSIS - Bury offers a slightly different interpretation of Procopius' description of the Roman deployment, but this does not greatly affect its purpose. It is unfortunate that the dimensions of the trench, the Roman formation and the numbers of most of the bodies of Roman soldiers were not recorded, because these had considerable implications for an analysis of tactics.

Notwithstanding that the Romans had no desire to endure a siege, it is apparent that their stance was very defensive. This is indicated by their restraint in offering battle on both days and the constrained pursuit after their victory. Moreover, there was the trench which, as a fixed structure, can only have been defensive. The trench was close in front of a gate in the wall, probably with infantry in between. Its actual function was not stated, but Procopius' account of the Battle of Rome (23) may have provided a hint. At Rome, until he was persuaded otherwise, Belisarius desired the infantry to remain close to the wall, in order to block the advance of the enemy if the cavalry were routed¹⁸. Presumably this was to facilitate the escape of the cavalry into the city. Perhaps Belisarius hoped to provide a similar safeguard at Dara, with the additional effectiveness of the trench.

At first glance this battle, especially the Roman deployment, seems to have been very different from the tactics for pitched battles prescribed in the Strategikon. However, on close examination one can see that the cavalry at Dara demonstrated some fundamental tactical principles that were recognized in the treatise.

Battle lines in the Strategikon were to comprise distinct divisions and benefits bestowed by the ability to manoeuvre bodies of horsemen independently were apparent at Dara¹⁹. Zachariah recognized the importance in particular of the soldiers with Sunicas and those with Simuth, the latter probably a corruption of Simmas²⁰. He observed that these passed boldly from one part of the field to another and it can be seen how they helped to parry attacks on each wing. Pharas and the Heruli enacted the words of the Strategikon by exploiting terrain in order to assist in relieving the left wing (Cf 9,14,33)²¹. Even the Persian tactic of assigning the

'Immortals' to the personal command of Peroz was recommended in the Strategikon. In the treatise, however, it was seen as a defensive tactic, whereas Peroz use the 'Immortals' to strengthen an attack²².

Other aspects of cavalry tactics discussed in the Strategikon were demonstrated at Dara. Commanders were advised in the treatise to form for battle upwind of enemies²³. The effect of this upon archery which was apparent at Dara, although not actually mentioned in the treatise, was probably a good reason for doing so (Cf 15,20,43). Both sides saw the need for reserves and rallying points²⁴. The need for a disciplined and cohesive formation of cavalry was expounded by the generals of the Romans and the Persians²⁵. The sort of individual bravado which could break down discipline and cohesion was apparent in the single combats entered by Andreas. It is significant that Hermogenes had forbidden his second venture (Cf 23,28,29). No matter how thorough the preparations, cavalry would sometimes have been routed and the ability to rally and renew the fight was necessary for both wings of the Roman formation²⁶. The importance of psychology in a cavalry fight and the detrimental effect upon morale which the death of a commander could have, was demonstrated by the retreat of the Persian left after the demise of Baresmanas (Cf 14,28,29, PW VIII.28.10-12)

In pursuit, it was important to recognize that fugitives might rally or a separate force might lie in wait, as Belisarius and Hermogenes feared at the end of the battle. However, the Persians failed to anticipate this possibility when pursuing both wings of the Roman formation. The failure of the Persian infantrymen to secure a rallying point in which the routed Persian cavalry could regroup, may have corroborated the claim

that they were labourers with little ability in combat (Cf 5).

14 Satala AD 530

Romans v Persians

Procopius History of the Wars I.15.9-17

Greatrix (1998) pp185-189

SYNOPSIS - The Persian general Mermeroes, leading an army of 30,000, had encamped roughly six miles from Satala. The Roman generals Sittas and Dorotheus, present in Satala with 15,000 soldiers, expected the Persians to arrive but feared that their numerical advantage would be too great in a pitched battle. Therefore, Sittas led 1,000 out of the city and concealed them behind a nearby hill. Dorotheus stayed within the walls with the remainder. On the following day, the Persians arrived to blockade the city. Whilst they were preparing to do so, the detachment with Sittas emerged. Due to a thick cloud of dust, the Persians over-estimated the size of the detachment and abandoned the blockade in panic, in order to array in a small area. As they did so, the detachment attacked in two divisions and those within the city came out to engage. The battle came to close quarters and was fierce; Procopius commented that both sides kept advancing and retiring quickly because they were wholly cavalry. Eventually, a body of cavalry led by Florentius succeeded in forcing down Mermeroes' standard. This threw the Persians into panic and confusion, they then fled to their camp having lost many men. On the next day they returned to Persia.

ANALYSIS - Despite the cursory account of this battle, it revealed some notable features. It included a rare example of an explicit comment upon the see-saw nature of a cavalry fight. According to the Strategikon, the quick succession of advances and withdrawals was a typical characteristic of cavalry fights (Cf 28)²⁷. Surprise attack, making use of terrain to provide concealment, was a means to out-flank an enemy in an all-cavalry fight. The timing of the attack by Sittas at Satala complied fairly well with the advice in the Strategikon (Cf 9,13,33)²⁸. It can be seen how the confusion which it caused facilitated the sally by the remaining Roman cavalry (Cf 24,32,34). The effect upon the Persian army of the fall of its commander's standard also accorded with the importance which was attached to commanders' welfare in the Strategikon, insofar as it affected the morale of soldiers (Cf 13,28,29, PW VIII.28.10-12)²⁹.

15 Callinicum AD 531

Romans v Persians

Procopius History of the Wars I.17.1-3, 18; Zachariah IX.4; Malalas XVIII.60.

Bury (1889) pp377-379; Greatrix (1998) pp193-207

SYNOPSIS - Procopius provided a long account of the events leading to the Battle of Callinicum and of the battle itself. Malalas and Zachariah described the same campaign much more briefly. Differences between these three accounts may have been significant.

After the defeat of Persian arms at Dara (13), Procopius reported that king Kavad became reluctant to offer pitched battle against a Roman army³⁰. Alternative

tactics were suggested to the king by the pro-Persian Saracen leader Alamoundaras. He proposed that, instead of an incursion into Roman Mesopotamia, a raiding force might cross the Euphrates further south in order to ravage Roman territory west of that river. Whereas in Roman Mesopotamia there were several fortified cities, such as Dara, which were manned by powerful garrisons, the cities west of the Euphrates were said to be immensely wealthy and yet without soldiers. Therefore, Alamoundaras believed that a force could ravage that region and then return to Persia, without being intercepted by a Roman army. He offered to lead such an incursion himself on behalf of Kavad.

In the version by Procopius, Kavad attached 15,000 Persian cavalry to the Saracen force of Alamoundaras and commissioned him to lead an incursion into Roman territory. This crossed the Euphrates directly from Persian Assyria, which was the first occasion known to Procopius when a Persian force had done so. When informed of the incursion, Belisarius mobilized the Roman soldiers in Mesopotamia and led these across the Euphrates, leaving only garrisons to defend the cities. The force led by Belisarius amounted to 20,000 cavalry and infantry. It reached the city of Chalcis when the invaders were near Gabboulon, which was roughly 11 miles distant. In accord with the desire to avoid pitched battle, the invaders withdrew towards the south. Procopius claimed that the Romans followed at a distance of one day's march, because Belisarius did not wish to fight but merely to expel the enemy. In view of this, it is not clear why the opposing armies came together near Callinicum, on the eve of Easter, as the invaders were about to cross the Euphrates and then to leave Roman territory. Even then, according to Procopius, Belisarius was reluctant to fight. Besides the futility of fighting

when the invaders were about to depart, the general's hesitation was due to the facts that many of the Romans were on foot, not all of them had yet arrived and they were hungry as a result of the Easter fast. However, the Roman soldiers and some of the junior commanders reacted angrily to the cautious attitude of their general. The vehemence of these men was such that Belisarius was overcome by their enthusiasm and agreed to offer battle.

The other authors did not record the preliminaries of this battle in great detail, but certain features of their descriptions should be noted. Zachariah confirmed that the Persian decision to avoid Roman Mesopotamia was a result of the Battle of Dara. Malalas reported that Belisarius was unwilling to engage the invaders near Gabboulon, but that his subordinate Sunicas made an unauthorized attack and destroyed a detachment of the invaders. The dispute which arose between Belisarius and Sunicas as a result, was settled by the arrival of the general Hermogenes. Hermogenes urged further attacks and more detachments were destroyed. The invaders breached the walls of Gabboulon and other places with siege engines and took captives. Then the Roman generals prepared for battle and the invaders withdrew with the Romans in pursuit. On the arrival of the Romans at Callinicum, Zachariah recorded that the Persians were reluctant to fight and appealed to the Romans to respect the feast of Easter. Belisarius was willing to agree, but he was overcome by the enthusiasm for battle of his subordinates, much as was claimed by Procopius. Malalas, however, did not record any reluctance to fight on the part of Belisarius.

In Procopius' account of the actual battle, the Roman army deployed with infantry on the left wing by the Euphrates. Pro-Roman Saracens led by Arethas were on the right where the ground rose. Belisarius placed himself

in the centre at the head of cavalry. The pro-Persian Saracens were arrayed on the invader's left and the Persians on the right. Fighting began with an archery exchange, during which some from both sides skirmished between the lines. The Persian archers shot more quickly, but their bows lacked the power to penetrate armour or shields. The Roman archers were slower, but a greater number fell to their stronger bows. Two thirds of the day passed in this way, after which the Persian army advanced against Arethas and his Saracens. These did not even await the arrival of the Persians, but withdrew immediately and hence betrayed the Romans. In this way the Persians were able to turn the Roman cavalry, much of which fled to islands in the river. Some with Belisarius resisted valiantly before being forced to fall back to the infantry. At that stage the cavalymen joined the infantrymen and dismounted, in close formation with their backs protected by the river. They formed a barricade of their shields, from behind which they could shoot at the enemy more easily than be shot. Many attempts were made to break this barricade, but the attacking horses were annoyed by the clashing of the shields and were always repelled. At nightfall the invaders withdrew and Belisarius and the survivors crossed to an island in the river. On the following day, the Roman army was ferried to Callinicum and the invaders, after despoiling the Roman dead, departed homeward. The number of the invaders killed was no less than that of the Romans

The account of the fighting by Malalas differed in several respects to that by Procopius. Malalas explained that the Roman army was deployed opposite the invaders, with its rear to the river and that Belisarius stationed boats along the banks. In order to dislodge them from the river bank the Persians feigned a withdrawal, but

this ploy seems not to have succeeded. The Persians then attacked with their Saracen allies and many fell on both sides. Allied Phrygians were the first to desert the Romans, following the death of their leader. Some of the pro-Roman Saracens joined the flight but, contrary to Procopius, others with Arethas continued the battle. Amongst those who did flee were Belisarius and his soldiers, who crossed the river to Callinicum. The soldiers of the subordinate commanders Sunicas and Simmas remained, dismounted and continued on foot. These overcame the invaders and pursued them for two miles. At nightfall they returned to Callinicum, having destroyed many Persians. In this version, on the following day it was the soldiers of Sunicas and Simmas and the inhabitants of Callinicum who despoiled the Persian dead.

The account by Zachariah was much briefer even than that of Malalas. He recorded that the Romans faced the Persians with the wind against them. They were feeble and fled before the Persians, many were killed and others drowned in the Euphrates.

The effect of the battle on the subsequent career of Belisarius as recorded by Procopius, Malalas and Zachariah, complied with their differing reports of his conduct before and during the battle. According to Procopius, Belisarius was relieved of the overall command of the Roman East shortly afterwards, but only so that he could lead the campaign against the Vandals³¹. By contrast, according to Malalas, when Justinian learned of the battle he removed Belisarius from that command as a direct result³². Zachariah recorded that Belisarius was deemed culpable not only for Roman losses at Callinicum but also for those at Mindouos (12) and that therefore he was dismissed³³.

ANALYSIS - Bury attempts to amalgamate the accounts of this battle by Procopius and Malalas. However, he has difficulty reconciling the accounts of these authors with respect to the actions of Belisarius, Sunicas and Simmas. He feels that the account by Malalas seems more credible, but accepts that whereas Procopius tended to flatter Belisarius, Malalas appears to have drawn from a source who wished to incriminate the general.

Procopius stated that the Roman force at Callinicum comprised both cavalry and infantry, unfortunately he did not record in what proportions. The composition of the invading force is even less clear. He explained that, prior to this battle, Alamoundaras had acquired fifty years' of experience at the head of plundering incursions into Roman territory, from Egypt to Mesopotamia³⁴. The hallmark of these had been a rapidity which ordinarily prevented interception, or otherwise facilitated the defeat of Roman forces by means of surprise attacks. As such, one might imagine that Alamoundaras led all-cavalry forces, the tactical mobility of which gave him the initiative to choose whether or not to fight. Horses very probably were involved and so too were camels (see Appendix 3). However, these incursions carried away plunder and prisoners which would have necessitated baggage-trains and, most likely, would have removed the mobility advantage of all-mounted forces. Therefore, foot-soldiers may well have been present in order to handle and defend baggage, perhaps also for any laborious tasks required to reduce locations that were stubbornly defended. During the incursion of AD 531, although only cavalry was mentioned, the same was probably the case. The prime motivation of Alamoundaras seems to have been booty, which would have required a baggage-train. Siege warfare complete with engines, as mentioned by Malalas, hardly would have been compatible with the mobile nature

of an all-mounted force either. That Procopius only mentioned cavalry in the invading force, may have been because cavalry was the main combative arm, especially on the field of battle.

Despite the uncertainty concerning the compositions of the armies, the Battle of Callinicum included a number of interesting features some of which were discussed in the Strategikon. The comment by Zachariah that the Romans faced the wind, corroborated advice in the Strategikon to deploy soldiers with their backs to the sun, wind and dust³⁵. In the treatise, this was so as to inhibit an enemy's vision and breathing. The battles of Dara (13) and Membresa (20) demonstrated that facing the wind also diminished the effect of missiles against an enemy, whereas it increased that of those from an enemy (Cf 43). Procopius did not mention the effect of wind upon archery at Callinicum, but the observation which he did make, that Persian archers could shoot at a rapid rate but lacked force, also corroborated the Strategikon (Cf 13,28)³⁶.

In the account by Malalas, the attempt to draw the Romans away from the protection provided by the Euphrates, by means of a feigned withdrawal, matched the so-called 'Scythian Ambush' prescribed in the Strategikon³⁷. The situation at Callinicum was similar to that at Ariminum (31), in which Roman cavalry drew a Frankish force away from the protection of a wood by the same means (Cf 3,11,16,24,38).

Probably the most significant feature of the Battle of Callinicum was the combination of mounted and pedestrian tactics. Procopius recorded that the Roman infantry provided a safe haven for the cavalry with Belisarius, where it rallied on foot. The infantry and the dismounted cavalry then demonstrated the ability of foot-soldiers to baulk mounted cavalry (Cf

22,23,28,29,37). The fact that there was no record of Persian infantry even at this point in the battle may indicate that, although it was quite conceivably present, it comprised artisans who were not able to perform offensive tasks on battlefields (Cf 13). Malalas also noted the effectiveness of Roman dismounted cavalry at Callinicum, but neither he nor Procopius indicated the fate of the rider-less horses. Perhaps the horses were abandoned, alternatively a few cavalrymen may have led them to safety.

The account of the battle by Procopius included striking anomalies. One wonders why the opposing armies did meet at Callinicum, despite the alleged intent of Belisarius to remain one day behind. The armies having come together, there was the claim that Belisarius, an experienced officer and commander-in-chief of the Roman east, allowed his judgement to be swayed by an emotional outburst from his subordinates. It may have been that some of his soldiers did have a mercenary desire for battle. Zachariah also stated that Belisarius was persuaded by the soldiers. A similar enthusiasm for battle amongst soldiers was recorded by Procopius at Rome (23) and by authors elsewhere (Cf 4,39)³⁸. Alternatively, perhaps the meeting of the armies at Callinicum and the subsequent battle can be explained in another way.

Procopius recorded that on previous occasions Roman armies in pursuit of Alamoundaras and his Saracen raiders had been caught in surprise attacks and defeated³⁹. A time when a Roman army was hungry from fasting and was not yet all present would have given Alamoundaras an opportunity to stage an ambush. Procopius also included the contingent of infantry in the Roman army as a reason against fighting. Infantry was often able to baulk cavalry, as it did at Callinicum, but its presence might

also have rendered an army more vulnerable to surprise attacks, because infantry could not have fled from cavalry. This was demonstrated in a sketchy account by Joshua of another Persian and Saracen incursion during the Sixth Century, which was intercepted by Roman cavalry and infantry⁴⁰. On seeing the superior number of the intruders the Roman cavalry fled, but the infantry could not and was crushed. If his favoured commander had suffered the same fate as some predecessors, Procopius may have wished to disguise this fact and therefore created a fictional reason for the battle. This would have been especially so if it had been an error by Belisarius, such as failing to ensure adequate reconnaissance, which had resulted in a Roman army falling into an ambush.

The hypothesis of a surprise attack requires a fair amount of speculation. An alternative explanation for the peculiarities in the account by Procopius would be to suggest that Belisarius had in truth been eager for battle. That he delayed it until the invaders were on the point of leaving the empire, would have accorded with advice included in the Strategikon⁴¹. This urged that defending forces should not offer battle until then, because invaders would be less likely to put up stubborn resistance if they could escape to their own land. Perhaps after the defeat Procopius tried to transfer responsibility for it onto the shoulders of his commander's subordinates. He may also have distorted the contribution made by Belisarius during the battle, to give the impression that the general made a valiant effort to avert the consequences of the recklessness of others. In this respect it might be significant that not only did Malalas record Sunicas and Simmas fighting on after the general had fled, but also that he recorded Arethas remaining on the field. Cameron suggests that

Procopius used Arethas as a scapegoat in his defence of Belisarius⁴². It may also have been an instance of this author's xenophobic feelings towards non-Romans, even when they were allied to the Roman cause (Cf 18,29). Finally, Procopius may have misrepresented the reasons for the departure of Belisarius from the eastern theatre.

The account by Procopius may well have reflected the version disseminated by Belisarius himself. If so, Zachariah repeated the first part of this 'official' version, insofar as he showed Belisarius being reluctant to fight. Zachariah was not, however, deceived concerning the ultimate reasons for the cessation of Belisarius' command in the east. Malalas did not make any attempt to shield Belisarius from the initial responsibility for the battle, to disguise his flight from the field or to pretend that he left his command for any other reason. Cameron accepts that the account by Malalas contained an anti-Belisarius bias, but distrusts the reason given by Procopius for the general's departure from the east, because nearly a year elapsed between this battle and the voyage against the Vandals⁴³. On the other hand, even though she maintains that the offensive against the Vandals was hastily conceived, such a large operation must have taken a fair while to prepare. Large numbers of soldiers, supplies and horses were to be concentrated and, probably most difficult of all, a substantial fleet including many ships modified for the carriage of horses was required.

16 Nymphius I AD 531

Romans v Persians

Malalas XVIII.65

SYNOPSIS - With the objective of capturing the city of Matyropolis, a Persian army of 6,000 invaded Roman territory. A first attempt to resist the Persians failed. In a second battle the Romans feigned a withdrawal, which the Persians pursued and in doing so disordered their formation. A counter-attack by the Romans cut down 2,000 and took a number of prisoners. Others were pursued and drowned attempting to cross the River Nymphius. The Romans then despoiled the Persian dead.

ANALYSIS - There was no evidence of cavalry in this battle, although it was most probably present. Its relevance to the current study was only as an example of the use of a feigned withdrawal in order to break up the formation of an enemy, as recommended in the Strategikon (Cf 3,11,15,24,31,38)⁴⁴.

17 Decimum AD 533

Romans v Vandals

Procopius History of the Wars III.17-20.1

SYNOPSIS - As Belisarius led the Roman army from Caputvada to Carthage, the Vandal king Gelimer formulated a plan to lay an ambush in a narrow valley near Decimum, which was about ten miles from the city. To this end the

Vandal force was split into three detachments, which were to converge upon Decimum at the same time. Gelimer commanded the central detachment, his brother Ammatas advanced by way of Carthage and his nephew Gibamundus was to attack the left flank of the Romans. The Roman army was preceded by 300 guardsmen of Belisarius, who were led by John 'the Armenian' and were to warn of the presence of the enemy. A detachment of allied Huns guarded the left flank. At a distance of three or four miles from Decimum, the Roman army constructed a fortified camp. In this were left the infantry, spare weapons and provisions. Belisarius himself proceeded with the cavalry, wishing to try the enemy's strength before offering a decisive battle with the entire army. He sent in advance the so-called 'Federates' as a vanguard.

When Ammatas reached Carthage, he led a small body of soldiers ahead and instructed the remainder to proceed to Decimum as quickly as possible. Ammatas arrived at Decimum several hours before the arranged rendezvous, where he encountered the 300 guardsmen with John. In the ensuing fight, Ammatas was killed and those with him fled towards Carthage with the guardsmen in pursuit. The remainder of this Vandal detachment was advancing from there, but instead of maintaining a cohesive formation it comprised disordered bands of 20 or 30 men. When these saw their comrades fleeing towards them, they too turned and joined the flight. They were pursued as far as the gates of Carthage and suffered heavy losses. The detachment with Gibamundus fared little better when it met the Huns on the Roman left, at Pedion Halon which was about four miles from Decimum. It did not withstand the Hunnic assault and was destroyed.

The 'Federates' arrived at Decimum after the defeat of Ammatas, saw the corpses and learned of the engagement from local inhabitants. While they were debating their

next action, the third Vandal detachment, comprising horsemen led by Gelimer, was seen approaching. This information was despatched to Belisarius and both sides manoeuvred in a contest to gain possession of some high ground. When the Vandals had succeeded in doing so, the 'Federates' fled. Less than a mile away they came upon 800 more guardsmen of Belisarius led by Uliaris. It was hoped that these would support the 'Federates' in a counter-attack, but instead they too fled at speed. Only when they had reached the bulk of the cavalry with Belisarius, did they stop their flight.

According to Procopius, had Gelimer immediately taken up the pursuit of the 'Federates', the weight of Vandal numbers was such that both these and the cavalry with Belisarius would have been destroyed. Alternatively, he could have turned for Carthage and destroyed the soldiers with John, who were by then wandering around in small groups looking for plunder. Instead, he lost these opportunities whilst lamenting his brother's fate and organizing a burial. This enabled Belisarius to regroup the routed cavalry and, having learned of the location and nature of Gelimer's detachment, to lead a counter-attack. The Vandal cavalry was no longer in battle formation and it fled in front of the fresh onslaught by the Romans. At around dusk, the soldiers with John and the allied Huns returned and all encamped at Decimum. On the following day they were joined by the infantrymen and were free to proceed to Carthage.

ANALYSIS - The fighting at and around Decimum was so disjointed that it can hardly be classed as a pitched battle. A large proportion of it, indeed very possibly all of it, was conducted by cavalry. Therefore, it was demonstrative of the nature of combat between cavalry detachments. The Huns, the guardsmen led by John and the

'Federates' conducted the sort of armed reconnaissance mission which must have been a task often assigned to cavalry. Procopius criticized Ammatas for leaving most of his force behind and for arriving at Decimum ahead of schedule, but he too may have been taking the precaution of making a reconnaissance. The main engagement fought by Gelimer against the Federates and then Belisarius, demonstrated the mobile nature and spontaneity of a cavalry fight and also the importance of terrain, cohesion and the rally.

In many ways, the battle of Decimum may well have been the sort of cavalry engagement that was envisaged in the first eleven books of the Strategikon⁴⁵. The author of that treatise prescribed that an army should construct a fortified camp in which unnecessary baggage could be left under the guard of infantry. Cavalry would then advance with units deployed on reconnaissance missions, in order to seek out and fight an enemy.

18 Tricamarum AD 533

Romans v Vandals

Procopius History of the Wars IV.1-4

SYNOPSIS - Having consolidated the Roman hold upon Carthage, Belisarius announced his intention to strike a decisive blow against the Vandals. Unlike the earlier success at Decimum (17), which had been achieved by cavalry alone and therefore could only have been transient, he wished this defeat to be inflicted by infantry as well. This was in order that, in addition to overpowering the Vandals on the battlefield, their camp could be captured.

All the cavalry, less 500, was dispatched from Carthage under the command of John 'the Armenian'. On the following day, Belisarius departed at the head of the remaining cavalry and the infantry. At Tricamarum, which was about 15 miles from Carthage, the cavalry with John encountered the Vandals, including women and children, under the leadership of their kings Gelimer and Tzazon. Both sides bivouacked at a fair distance from one another. Procopius observed that the Vandal camp was fortified, but not strongly. On the next day the women, children and valuables were secured in the camp and the Vandal soldiers arrayed for action along one bank of a small stream. They were instructed to use only their swords and no other weapons against the Romans. The Romans arrayed themselves hurriedly on the opposite bank, in three divisions. At this timely moment Belisarius arrived with the 500 cavalry, having left the infantry to proceed at its own pace. Huns allied to the Romans arrayed separately. Procopius stated that this was customary for them, but was also because they were contemplating the betrayal of the Romans if it should have appeared that the Vandals were winning.

Considerable time passed without fighting, after which John led a selected group of cavalymen across the stream against the centre of the Vandal formation. Soldiers with Tzazon repelled them, chased them as far as the stream and they retired to the Roman line. A second similar attempt met with the same fate. A third attack with much shouting and noise was resisted strongly by the Vandals, but many fell including Tzazon. Then the entire Roman army advanced across the stream, the Vandal army was routed and all the Vandals turned to flight. At this point the Huns joined the Romans in pursuit, but not for long because the Vandals took refuge in their camp. The Roman cavalry did not feel able to overcome the

surrounding stockade and, having despoiled the dead, it returned to its own camp. Allegedly the Vandals had lost 800 in this engagement, whereas the Roman dead amounted to less than 50.

In the late afternoon the Roman infantry arrived. When Gelimer realized that the whole Roman army including its infantry was approaching, he and a small retinue quietly fled on horseback. On becoming aware of their king's departure, his subjects also abandoned their possessions and fled. The camp was deserted when the Romans seized it and throughout the night they pursued the fugitives, killing or enslaving all those whom they captured. Belisarius was concerned that the Romans, carried away by the prospect of booty and captives, were wandering around in pairs and as individuals with no thought for good order. He feared that the Vandals might rally, launch a counter-attack and reverse the Roman success. Therefore, at the next daybreak he mounted a convenient hill and admonished as many as could hear, in order to restore discipline.

ANALYSIS - An analysis of the tactics involved in the initial confrontation between the Roman cavalry and the Vandals is difficult, because Procopius omitted several facts. He did not state the presence of cavalry and infantry in the Vandal army. The fact that the Vandal tactics were defensive, waiting behind a stream for three successive Roman attacks and then taking refuge in fortifications, may imply that a significant element of foot-soldiers was present. Why the Vandals chose to rely solely upon swords is not clear. At Taginae (29), the Goth's rejection of bows and their reliance upon lances can be explained in terms of superior Roman archery. A similar explanation cannot be applied to the Vandals at Tricamarum, however, due to their defensive tactics and,

even more so, if they comprised a substantial element of infantry. Furthermore, it is intriguing that Procopius did not mention the effect of Roman archery in this battle. It is not clear what events facilitated the Roman advance across the stream. Perhaps the demise of Tzazon demoralized the soldiers of the Vandal centre to the extent that it collapsed (Cf 13,14,28,29).

There is reason to suspect that Procopius was unjust in his comments concerning the loyalty of the Hunnic allies (Cf 15,29). He did mention that it was customary for them to array separately from the regular Roman formation and this can be explained in purely military terms. In the Strategikon it was suggested that allied non-Roman forces should be deployed separately in battle for the purpose of launching surprise attacks⁴⁶. The positioning of the Huns at Tricamarum may have reflected this. The deployment of the main Roman force may have reflected the three divisions of the the front line that were also stipulated in the treatise (Cf 36,37,39,40,41,43)⁴⁷.

For the current study, the main significance of this battle was as a demonstration of the relationship between Roman cavalry and infantry at the strategic level. Cavalry had won a tactical victory across the stream. To win a strategic decision required that the fortifications protecting the Vandal soldiers, women, children and possessions, were attacked. Even though the fortifications were not strong, men on horseback would not have been well placed to defeat them. They could have dismounted, but as cavalymen they were quite possibly not well practised at attacking ramparts. Therefore, the decisive, strategic blow required the presence of infantry, which the Vandals dared not even oppose. When the Vandals had fled, Belisarius shared the concern of the author of the Strategikon that victory

could easily be undone if victors were distracted by plunder and did not prepare to meet a counter-attack (Cf 37)⁴⁸.

19 Mammes AD 535

Romans v Moors

Procopius History of the Wars IV.11.14-56

SYNOPSIS - By the time of this battle, Belisarius had been superseded as governor of Libya by Solomon. Procopius was still present in Libya, although there is no indication that he witnessed this battle.

In response to a mutiny of the Moors against Roman rule, Solomon encamped an army at Mammes, where a Moorish force was already bivouacked. The Moors arrayed for battle on level ground at the foot of some mountains. They formed a ring of camels about twelve deep, in the centre of which were placed the women and children who customarily acted as servants in Moorish armies. The soldiers stood amongst the camels, each armed with a small shield and a pair of javelins. It was hoped that the sight and sound of the camels would alarm the horses of the Roman cavalry. This tactic had been effective a number of years earlier, when a similar Moorish camel ring defeated Vandalic cavalry⁴⁹. At Mammes, in addition to the camel circle, some Moorish cavalry was stationed in the mountains. For this reason, Solomon placed all the Romans on the side of the circle which was further from the mountains.

The generals of both sides addressed the soldiers. Solomon urged the Romans to observe silence and good order. He reassured them that the camels would be

vulnerable to missiles and would cause confusion for the Moors when struck. He also pointed out that the Moors, who lacked armour, were not adequately equipped to fight Roman soldiers at close quarters. The Moorish commanders emphasized their superiority in numbers and that the Roman horses would refuse to approach the camels. If Roman soldiers chose to attack on foot, they believed that they would lack the agility needed to beat the Moors in combat.

When fighting began, the Roman horses were greatly disturbed by the camels and caused much confusion by rearing and throwing their riders. The situation was worsened when the Moors launched sallies and struck the Romans with their javelins. Solomon realized that little was being achieved, therefore he dismounted his own horse and ordered all the Romans to do the same. He instructed most to stand still, protected by their shields, whilst he led not less than 500 to attack the circle on the same side as the mountains. The Moors in that section fled and about 200 camels were killed with swords. Then the Romans were able to enter the circle and the Moorish soldiers ran in disorder towards the mountains, with the Romans in pursuit. It was said that 10,000 Moors perished and all the women and children were enslaved.

ANALYSIS - The Roman force appears to have been largely cavalry. The appeal by Solomon for the Romans to remain silent and to keep a disciplined order, accorded with advice in the Strategikon⁵⁰. There was no reason why horses should have been fearful of camels in particular, but they would have had an innate wariness of anything unfamiliar. Therefore, as the Roman horses were unlikely to have had much contact with camels, these Moorish tactics against cavalry were effective. A similar revulsion of Roman horses to the sight, sound and smell

of elephants was noted at Maranga (6). It is surprising, however, that the horses were so averse to camels that they would not even approach close enough to allow the Romans to use their missiles, as Solomon had predicted would be possible. As it was, the battle provided a good example of the use of dismounted cavalry for offensive tactics (Cf 30,42). One wonders why the Romans on foot chose to attack with swords rather than missiles, for which the camels would have provided a very vulnerable target. Perhaps, if Solomon's low opinion of the ability of the Moors at hand-to-hand combat was valid, then the Romans felt that it was safer to evade their javelins by coming to close quarters as quickly as possible.

It is intriguing that the Moorish cavalry in the mountains did not become involved in this battle. One might expect it to have launched a surprise attack upon the Romans whilst they were preoccupied with the camel circle, as Gothic cavalry may have done when the Romans attacked the wagon circle at Adrianople (9). Another potential target for the Moorish cavalry would have been the rider-less Roman horses. It was presumably the case that measures were taken to protect these horses, but it is unfortunate that no indication was given of how this was achieved.

20 Membresa AD 536

Romans v Romans

Procopius History of the Wars IV.15

SYNOPSIS - After the defeat of the Vandals and the removal of Gelimer from Libya, a disagreement amongst some Roman soldiers concerning the distribution of spoils

led to a mutiny⁵¹. Stotzas was appointed as leader of the mutineers, who numbered about 8,000 supported by roughly 1,000 Vandals and some rebellious slaves. They were intercepted by Belisarius with approximately 2,000 soldiers at Membresa, which was some 35 miles from Carthage. Both sides made camp and prepared for battle on the following day.

As the two armies arrayed for battle a strong wind blew up in the faces of the mutineers. They feared that this would check the flight of their missiles and assist those coming against them. In order to prevent this, they began to manoeuvre hoping to reverse the effect of the wind. As they did so their formation became disordered and Belisarius took this opportunity to launch an attack. The mutineers were taken by surprise and were unable to resist; although they had not suffered many casualties they fled to Numidia. Belisarius decided against giving chase with his very small army and, having plundered the mutineers' fortified camp, he marched the soldiers back to Carthage.

ANALYSIS - Because this battle was only briefly described and the composition of the armies involved is not known, there is not a great deal which can be gleaned from it. The potential effect of wind upon the flight of missiles, however, is of interest (Cf 13,15,43). In the Strategikon commanders were advised to deploy upwind of enemies, although the effect upon missiles was not mentioned as a reason for doing so⁵².

21 Scalae Veteres AD 536

Romans v Romans

Procopius History of the Wars IV.17

SYNOPSIS - Some time after being defeated at the Battle of Membresa (20), mutineers led by Stotzas were hunted in Numidia by an army of comparable strength, which was commanded by Germanus. The opposing armies met at Scalae Veteres and arrayed for battle. Germanus positioned infantry in front of a long line of wagons, which was intended to protect its rear. He himself commanded the best cavalry, which occupied the left wing. The weaker cavalry was placed on the right wing, in three divisions commanded by John 'the brother of Pappus', Ildiger and Theodorus 'the Cappadocian'. In order to enable his soldiers to distinguish themselves from the mutineers, Germanus specified a password. Opposite this formation the mutineers took their stand in irregular order, which Procopius likened to the practice of barbarians. Not far behind them were many thousands of Moors, who were nominally allied to the mutineers but were of wavering loyalty. In fact they were waiting to observe the course of the battle, before choosing which side to join.

At first Stotzas wished to attack the cavalry with Germanus, but some pointed out the weakness of the cavalry with John. In view of this, Stotzas dispatched some lesser soldiers against Germanus and himself led the best against John. As expected, the cavalry with John was quickly routed and the mutineers gave chase. Some mutineers attacked the loyal infantry which also began to crumble. On the other wing, however, the stronger cavalry with Germanus repelled those opposite and then advanced against Stotzas, reinforced by the horsemen with Ildiger and Theodorus. The mutineers with Stotzas found

themselves between two forces. Soon great confusion arose due to the similarity of the two sides, but the soldiers of Germanus benefited from the password. Stotzas fled with a few men and Germanus led his soldiers against the fortified camp of the mutineers, the garrison of which offered some strong resistance. Eventually the defences were breached and the garrison fled, at which point the Moors joined the Romans in plundering. The victors became so engrossed in this profitable exercise that they paid no heed to the orders of their officers, or to the whereabouts of the enemy. Fearing that the mutineers might regroup and attack, Germanus stationed himself with a few men in the entrance to the camp and demanded discipline amongst the soldiers. Stotzas did attempt a counter-attack, but was decisively repulsed.

ANALYSIS - The composition of the mutinous army was not stated but due to its improvised nature, including rebellious slaves, it is unlikely to have been wholly cavalry. Nonetheless, it seems likely that Stotzas used cavalry to attack and pursue John's cavalry, due to the need for a matching mobility. Furthermore, protecting the rear of the loyal infantry with a line of wagons seems like a measure intended against cavalry, rather than against infantry which could have clambered over or under the wagons. Although the wagons would have helped the loyal infantry in making a defensive stand against the mutinous cavalry, the contribution of that infantry to the battle is not clear. It does not appear to have been in a position to provide a defended rallying point for John's routed cavalry. When the mutineers' camp was attacked, the loyal infantry may well have had a major role in overcoming the defenders, who were probably on foot and had the benefit of fortifications.

22 Milvian Bridge II AD 537

Romans v Goths

Procopius History of the Wars V.18.1-29

SYNOPSIS - This battle was of far less consequence for Roman history than that fought at the same location in AD 312 (2). From the perspective of the current study, however, it was of much greater significance because the involvement of cavalry was recorded more thoroughly.

Belisarius wished to delay the crossing of the Tiber by Gothic forces which were marching against Rome. To this end the Milvian Bridge had been fortified and garrisoned. Early one morning Belisarius led 1,000 cavalry into the area of the bridge in order to survey the ground, in search of a camp site for further soldiers. Unaware that the bridge garrison had deserted on the previous night, he was surprised to encounter Gothic cavalry already across the river. The Romans did not wish to fight, but an all-cavalry engagement ensued. Procopius observed that for some reason Belisarius did not remain in the 'general's post', at the rear of his force, but instead fought in the front ranks. There he became a focus for Gothic aggression with missiles, lances and swords. Many Roman and Gothic soldiers died in the fight around the general. He was saved by his horse, which was experienced in battle, and by his guards, who surrounded him with their shields. For no stated reason, the Goths finally fled and returned to their main army with the Romans in pursuit. On reaching the main army, the Roman cavalry was repelled by Gothic infantry and, when fresh Gothic cavalry arrived, the Romans fled to a hilltop.

A second all-cavalry fight took place when the Goths advanced against the Romans on the hill. One Roman

cavalryman called Valentinus opposed the advancing Goths by himself and so facilitated the escape of his comrades to the fortifications of Rome. The Goths pursued and, when the Romans reached the Salarian Gate, those inside would not let them enter because they feared that the Goths would rush in as well. The fugitives were crowded in a small space, between the moat and the wall, and the Goths intended to cross the moat and to destroy them. With daring Belisarius led a counter-attack against the Goths, who were in disorder due to the pursuit and gathering darkness. Taken by surprise, the Goths assumed that the counter-attack had been reinforced by soldiers from within the city, therefore they panicked and fled. Belisarius did not press the pursuit, but as night fell he led the soldiers back to the city into which they were now admitted.

ANALYSIS - The description of this battle included some notable features of cavalry tactics. The drawbacks of having senior commanders too closely involved in combat, which were appreciated in the Strategikon, were apparent in the struggle which surrounded Belisarius (Cf 23,37)⁵³. Not only might his death have demoralized the Romans, but it must have been very difficult for him to have directed Roman tactics while he was in the centre of a frantic melee. His escape from this melee, unscathed, emphasized that a cavalry horse was more than just a means of transport, it also had an active role to fulfil in combat. By concentrating upon the actions of Belisarius, Procopius omitted to mention the exact events which caused the Gothic cavalry to retire at the end of the first fight. When it did retire, it benefited from the presence of infantry, which baulked the Roman advance and provided it with a secure rallying point. Furthermore, the presence of fresh cavalry in reserve facilitated a

counter-attack. One wonders if this counter-attack really was impeded by the lone Valentinus, or if this was another example of Procopius praising individual bravado, which in truth can have done little to promote overall success. The pursuit by the Goths revealed the vulnerability of pursuers to counter-attacks, especially if they allowed themselves to become disordered, as tended to happen when chasing at speed. Belisarius did not wish to fall into the same trap, probably all the more so after the Gothic counter-attack earlier in the day. Therefore, he did not press the Roman pursuit too far.

23 Rome AD 537

Romans v Goths

Procopius History of the Wars V.28-29

SYNOPSIS - After the success of small cavalry sallies launched from the city, the soldiers and the inhabitants of Rome became eager that the Goths should be met in a large scale engagement. According to Procopius, Belisarius was reluctant to do so, because he feared the great numerical advantage of the Goths. However, he was overborn by the abuse heaped upon him by the soldiers and civilians. He gave way, but he still desired a sudden attack after the fashion of the earlier sallies. Preparations were made for this many times, but were betrayed by deserters so that the Goths were forewarned. Therefore, Belisarius compromised still further and agreed to a pitched battle, for which both sides had an opportunity to prepare. He intended that soldiers on horseback should do most of the fighting for the Romans.

Many of the Roman infantrymen had acquired horses and were now unwilling to fight on foot. Furthermore, it was claimed that the infantry had not been effective in battle against the Goths. Consequently, Belisarius wished to relegate the remaining infantry very much into reserve, keeping them by the city wall ready to provide protection if the cavalry were routed. Yet again his mind was changed, this time by the pleading of Principius and Tarmutus. These were two commanders of infantry who were keen to be closely involved in the battle and Belisarius conceded to array them close to the cavalry.

Belisarius arrayed the main body of the soldiers north of Rome and east of the Tiber. The infantry was situated behind the cavalry, both to prevent the entire army from being disrupted if it fled and to provide a rallying point for any cavalry which was thrown back. Against this Vittigis arrayed the Goths, with infantry in the centre and cavalry on the wings. They were placed close to their own camps, in order to increase the room for pursuit after the hoped for rout of the Roman army. The commanders of both sides took positions at the rear of their armies. On the other side of the Tiber, on the Plain of Nero where many of the Goths were encamped, a Roman detachment was stationed under the command of Valentinus. This was not to attack these Goths too closely, but rather to threaten them by its presence, so preventing them from crossing the river to assist their comrades in the main battle. A number of sailors and servants intermingled with this Roman detachment without permission, in the hope of sharing in the spoils of battle. In addition some Roman civilians took up arms, but these were prevented from joining the soldiers through fear that they would panic in battle and cause confusion. Instead, they were situated separately on the

plain of Nero, further to deter the Goths there from crossing the river.

Fighting began in the early morning with an archery exchange in which the Romans fared well. Earlier Procopius had observed that, unlike the Roman cavalry and its Hunnic allies, all Gothic archers fought on foot and that the Gothic cavalry was only adept at close combat with lances and swords⁵⁴. During this stage of the battle, Procopius commended three men, Athenodorus, Theodiscus and George, for moving ahead of the Roman line and dispatching Goths with lances. By midday, the cavalry had advanced to the Gothic camps and, being satisfied with the number of Gothic casualties which it had inflicted, it desired to return to the city. Why it did not do so was not stated.

Meanwhile on the Plain of Nero, the Goths in their camp were harried by Moorish allies making sallies and hurling their lances. Fear of the Roman populace, whom they believed to be real soldiers, prevented the Goths from launching any offensive. The Romans made a sudden attack and succeeded in routing the enemy, but the non-soldiers amongst them were distracted by the temptation of plunder in the Gothic camp and the initial success was not consolidated by means of a pursuit. Procopius pointed out that they also missed the opportunity to cross the Tiber and to attack the main Gothic force from behind, or to destroy the bridge and so prevent the operation of the Goths on both sides of the river in future. Having rallied, the routed Goths launched a counter-attack and expelled the Romans from the camp.

In the main battle, although the Romans were inflicting more casualties, those suffered by them were more significant because of the much smaller number in the Roman army. Procopius noted that many more Roman horses were killed than men. When the Roman cavalry had

become noticeably thinned, its left wing was routed by the cavalry of the Gothic right. The Roman infantry failed to provide a rallying point and mostly joined the rout itself. Soon the whole Roman force was hastily retreating, except a few infantry with Principius and Tarmutus who made a stand. They succeeded in delaying the Gothic advance, so aiding the escape of their comrades. Principius and 42 with him fell in action, but Tarmutus and others continued until a detachment of cavalry arrived and facilitated their escape. Some of the fugitives were nearly caught outside the walls of Rome, but the Goths abandoned the pursuit when they saw many soldiers and civilians manning the battlements. After this defeat, Procopius reported that the Romans were keen to resort to the tactics of sudden small scale sallies⁵⁵.

ANALYSIS - The description of the Battle of Rome revealed several points of interest. It is intriguing that many of the Roman infantrymen had transformed into cavalymen. That they could have captured the horses to do so is not difficult to believe, but that they could have demonstrated the very specialized combination of skills at horsemanship and combat, which was required of effective cavalymen, is surprising. If they were effective, one must assume that they had previous familiarity with the basic techniques of mounted combat. The deterrent effect of the Roman civilians on the plain of Nero demonstrated that the outcome of battles was not only affected by combat. In the main battle, both the Roman and Gothic generals adhered to the recommendation in the Strategikon to command their armies from behind (Cf 22,37)⁵⁶. Procopius witnessed the effectiveness of Roman mounted archery. It is not clear what purpose the close quarter attacks by Athenodorus, Theodriscus and

George fulfilled. Perhaps these were attacks by small bodies of cavalry led by the named individuals that were coordinated with the main Roman tactics. Alternatively, perhaps Procopius was giving praise for shows of individual bravado, which could have done as much harm to the Romans by breaking their ranks as harm to the Goths (Cf 13,28,29). It is notable that a much larger number of Roman horses were killed than men. The cause of this was not stated, but it seems likely that the Gothic archers on foot, to whom the horses must have presented fairly easy targets, were the culprits. If so, the losses suffered by the Roman cavalry due to the archers and its failure to dislodge them was an example of the inaptitude of cavalry at fighting disciplined infantry. This was demonstrated also when the infantry with Principius and Tarmutus balked the Gothic cavalry whilst the other Romans escaped (Cf 15,22,28,29,37).

As was the case with the description by Procopius of the Battle of Callinicum (15), there may have been significance in the surprising claim that Belisarius, a senior and experienced officer, allowed his professional judgement to be influenced by the clamouring of his subordinates. One can suspect that it was only after the Romans had lost the battle that Procopius attempted to pass the initial responsibility for it away from Belisarius. That he also tried to absolve Belisarius of responsibility for the involvement of infantry, might indicate that its presence was the cause of the failure. Perhaps the cavalymen did not withdraw when they desired to do so due to a loyalty to their comrades on foot, who had not the speed to make a hasty retreat to the city. Even so, the infantry with Principius and Tarmutus did delay the Gothic pursuit and, therefore, may not have deserved the poor opinion which Belisarius allegedly had of it.

24 Flaminian Gate AD537

Romans v Goths

Procopius History of the Wars VI.5

SYNOPSIS - As reinforcements approached for the defence of Rome, Belisarius became concerned lest the besieging Goths would prevent their entry into the city. Previously he had ordered that the Flaminian Gate be walled up for the sake of additional security. This gate was cleared secretly and the majority of the Roman army, including infantry, formed for battle concealed behind it. The commander Trajan was instructed to lead 1,000 cavalry through the Pincian Gate. He was to assail the Gothic camps with missiles and, when the Goths emerged, he was to flee back to the city. Further soldiers were hidden behind the Pincian Gate.

Trajan did as ordered and Goths gathered from all camps to repel his cavalry which turned to flee. The Goths gave chase at which point the Flaminian Gate was opened and the main Roman force made a sortie. A brief attempt was made to capture a nearby Gothic camp, but its fortifications were too strong. Goths still chasing Trajan's cavalry towards the Pincian Gate were then attacked from behind with missiles. Trajan's force had been reinforced with additional horsemen, presumably from behind the Pincian Gate. It was able to wheel about and to launch a counter-attack, which trapped the pursuing Goths between two forces. A great number of Goths were slaughtered and few escaped to the camps. Those that did escape, shut themselves in and dared not come out.

ANALYSIS - This engagement was a good example of the use of a feigned withdrawal in order to draw an enemy

into an ambush, as prescribed in the Strategikon (Cf 3,11,15,16,31,38)⁵⁷. It was a development of the cavalry sallies which had constituted the Roman offensive previously during this siege. However, it demonstrated more clearly how the tactical initiative of cavalry could be used directly to create an opportunity for an entire army.

25 Oenochalakon AD 539

Romans v Armenians

Procopius History of the Wars II.3.19-27

SYNOPSIS - Procopius did not provide a full account of this battle, but rather concentrated upon the activities of the Roman general Sittas. The opposing armies had arrayed on a very broken battlefield, which did not permit regular formations. Instead, each comprised several bodies scattered amongst ridges and ravines.

A small body of Roman horsemen led by Sittas encountered a body of Armenian cavalry, the two being separated by a ravine. The general and a few men crossed the ravine and advanced against the Armenians, who withdrew but then stopped. The Romans also stopped and Sittas planted his lance in the ground. One Roman soldier, who had been pursuing more closely, returned at speed and trampled the general's lance breaking it in half. Sittas was not wearing a helmet and he was recognized by the Armenians, who launched an attack in the hope of felling the Roman general. He drew his sword and with his companions attempted to return across the ravine. An Armenian caught up with him and struck him a glancing blow with a sword, which did not inflict a

mortal wound. Another, however, thrust a lance at him from behind which killed him.

ANALYSIS - This battle demonstrated how tactics were very much subject to the lie of the land. In particular, regular formations such as those illustrated in the Strategikon would often not have been practicable.

It seems unlikely that Roman generals often became involved in small cavalry skirmishes in the midst of battles. However, generals may well have ridden about with a small escort in order to reconnoitre the situation and coordinate the movements of different Roman units (Cf 4,5).

26 Mucellis AD 542

Romans v Goths

Procopius History of the Wars VII.5

SYNOPSIS - Few details of the tactics of this battle were recorded in the sketchy account by Procopius. A Roman force was advancing against a Gothic army at Mucellis, which was about one day's journey from Florentia. Hearing of the approach of the Romans, the Goths abandoned the plain in which they were camped and occupied a high hill. John 'the nephew of Vitalian' was sent with his own soldiers ahead of the main force, in order to make a sudden and unexpected attack upon the enemy. He attacked the hill, but the Goths defended stoutly and many fell on both sides. A javelin felled one of the guards of John and this caused his force to retreat. By then the main force had arrived in the

plain. Procopius believed that it could have provided a rallying point and then joined a counter-attack which would have defeated the Goths. Instead, however, the commanders of the main force were falsely informed that John had been killed and this caused them to retreat at speed towards various forts and strongholds.

ANALYSIS - The failure to specify which soldiers were cavalry in this battle has greatly reduced its significance in this study. It is a fair guess, however, that those led by John were on horseback. Previously during the war against the Goths, this commander had been associated with cavalry⁵⁸. Possibly at Mucellis he was leading a forcible reconnaissance, in order to locate the enemy and try its strength. This would have resembled the tactics adopted by Belisarius before the battle at Decimum (17). Assuming that John was leading a force of cavalry, then the observation by Procopius concerning the failure of the main force attested the need for a reserve behind cavalry in action. In this case, a reserve might have provided a secure rallying point and launched a counter-attack.

27 Anglon AD 543

Romans v Persians

Procopius History of the Wars II.25

SYNOPSIS - This battle in Persian Armenia involved an invading Roman force of 30,000 men. Having been falsely informed by a captured scout that the local Persian commander, Nabedes, had withdrawn, the Romans concentrated upon pillage with little care for good order

or security. With some surprise they discovered a Persian army, which amounted only to 4,000, in the locality of the village of Anglon. This village was surrounded by very mountainous terrain with a fort nearby. Nabedes had the approaches to Anglon blocked with stones and carts. Most of the Persian soldiers were stationed at a trench dug in front of the village and some foot-soldiers were concealed in old cabins. Considering that it would be dishonourable to withdraw, the Roman generals hastily deployed their army in three divisions and advanced. There was some disorder in the Roman formation, due both to its hasty creation and to the broken terrain.

The Persians awaited the attack. Allied Heruli and some Roman soldiers launched an attack at close quarters, routed the Persians before them towards the fort and the entire Roman army pursued. Suddenly, the pursuers were ambushed by those in the cabins, which caused confusion. Nabedes launched a counter-attack and the Persians shot with great effect into the Romans and Heruli, who were crowded in tight ravines. The latter were particularly vulnerable, because they largely lacked armour. When the Romans were routed the Persians gave chase but not beyond the rough ground, because they feared that the Romans might rally on level terrain. Gripped by fear, the Romans fled and Procopius stated that they placed all hope of safety in their horses' feet. Abandoning weapons and armour in their haste to escape, they moved so fast that at the end most of the horses expired. The outcome was disastrous for the Romans, with a great number killed or captured.

ANALYSIS - It is unfortunate that the proportion of cavalry and infantry in both armies was not stated. The reference to horses during the escape from Anglon implied

that the Roman army included a substantial contingent of horsemen, although this did not rule out the presence of infantry as well. The description of the defensive Persian tactics behind fortifications implied that the Persians largely fought on foot. Therefore, this battle may well have demonstrated the poor aptitude of cavalry at attacking a fortified location on broken terrain, defended even by a much smaller body of foot-soldiers.

28 Hippis AD 550

Romans and Lazi v Persians

Procopius History of the Wars VIII.1.3-7, 8

SYNOPSIS - A Persian army commanded by the general Chorienes invaded Lazica and encamped beside the river Hippis, which could be forded easily by cavalry or infantry. The Lazican king Gubaz led an army against them, accompanied by a Roman army commanded by Dagisthaeus. These encamped on the opposite bank of the river. It was decided to advance against the Persians, but Procopius claimed that the Lazi declined to fight alongside the Romans. This was because they feared that the Romans, who were not fighting in defence of their native land, would lack the necessary zeal in battle. Therefore, they wished to engage first and by themselves, so that the Romans would not confuse the Lazican army if they decided to quit during the battle. The Lazican cavalry formed the vanguard, followed at a considerable distance by the Roman cavalry led by Philegagus and John 'the Armenian'. In the rear were the infantries of both armies, intended to provide a rallying point for the cavalry if it were routed. The composition of the

Persian army was not stated, but it does not appear that Persian infantry took a prominent role in the battle.

The Persian army was preceded by a vanguard of 1,000 armoured soldiers. The role of the latter as a vanguard of a Persian army and its tactics in the subsequent fight strongly implied that it was a cavalry force. Procopius denounced the Lazican cavalry for fleeing at the sight of the Persian vanguard and mingling with the Roman cavalry, despite having earlier treated the Romans with disdain. The combined Roman and Lazican cavalry then met the Persian vanguard and a very mobile engagement took place, with advances, retreats and changes of front. During this, Artabanes with two other Roman soldiers rode forwards and engaged in single combats with individual Persians. Artabanes fought a duel on horseback with one of these and despatched him with a lance. When one of the other Romans felled a second Persian, the entire vanguard was unnerved and withdrew to Chorienes.

Shortly later the infantry with Gubaz and Dagisthaeus arrived and the two armies closed. Philegagus and John, fearing that they were too few to meet all the Persian cavalry in a mounted fight and lacking faith in the Lazican cavalry, ordered all the cavalry to dismount. The dismounted cavalry then formed a deep formation, with their lances lowered against the Persian horses. Presumably the infantry adopted similar tactics. The Persians attempted to break the formation, but their horses were balked by the lances and were annoyed by clashing shields. Therefore, they resorted to their bows and an archery exchange took place. Although the Persians shot more rapidly, their arrows generally failed to penetrate the Roman shields. This continued until Chorienes was struck by an arrow and killed. The Persians then turned in a wild rush towards their camp, pursued by the Romans and Lazi. A single Persian archer

prevented the Romans from entering the camp for a while but when he was killed the camp fell. Many Persians were slaughtered and the remainder fled, each for himself to his native land.

ANALYSIS - That the Lazi refused to fight alongside the Romans is possible, but the deployment which resulted could have been explained on purely tactical grounds. The concept of deploying cavalry in two lines, the second as a reserve to the the first, was later expounded in the Strategikon⁵⁹. The fact that at the River Hippis the front line fell back and rallied with the second would have been in keeping with this. Alternatively, it may even have been the case that the Lazican cavalry was only sent ahead to fulfil a reconnaissance role, which it fulfilled by returning when the enemy was first sighted (Cf 17). Perhaps it was Procopius who was guilty of treating the Lazi with disdain.

When the opposing cavalries met, the series of retreats and pursuits mentioned by Procopius would have typified the fast manoeuvres of many cavalry fights and matched the expectations of the author of the Strategikon (Cf 14)⁶⁰. It is hard to imagine that the venture of Artabanes and his two companions during this fight was part of an overall tactical plan. Rather, it would appear to have been more the sort of unrestrained personal bravado which occurred in some battles of this period (Cf 13,23,29). Although Procopius praised such individual daring, it must have posed a threat to the cohesion of Roman formations. It is difficult to credit that the death of two Persians in a fight involving three Romans so terrified a force of 1,000 that it ran away. However, that the death of Chorienes led to the Persian rout was paralleled in other battles and in the Strategikon the demise of a commander was stated to be

very damaging to morale (Cf 13,14,29, PW VIII.28.10-12)⁶¹.

When the main armies met, the inability of mounted cavalry to dislodge soldiers on foot was demonstrated (Cf 15,22,23,29,37). During the attempt to do so, the rapid but weak nature of Persian archery, which was mentioned in the Strategikon, was apparent (Cf 13,15)⁶². An unfortunate omission by Procopius was not to mention the fate of the rider-less Roman and Lazican horses. It appears that the dismount was ordered before a crisis had developed, therefore there was probably an opportunity for some cavalymen to have remained mounted and to have led the horses away. In doing so, however, they would have been most vulnerable to any detachment of Persian cavalry which attacked them.

29 Taginae AD 552

Romans v Goths

Procopius History of the Wars VIII.29-32

SYNOPSIS - Procopius was not involved with the campaign fought by Narses against the Goths. Nevertheless, he presented a long account of this battle which provided fairly detail of at least some phases of it. A Gothic army commanded by Totila had encamped at Taginae. A larger Roman army led by Narses made camp at a site about ten miles distant, which included a level area surrounded by hills. Narses having arranged with Totila for a pitched battle eight days hence, the Goths in fact arrived on the following day. The armies took up positions no more than two 'bowshots' apart.

Before the main forces engaged in battle, the possession of a small hill near to the left of the Roman position required to be settled. Both sides desired this hill as a platform for missiles; furthermore it dominated the only route by which the Roman position could be encircled. Therefore, on the previous night Narses had despatched 50 infantrymen to occupy the hill. These arrayed themselves next to a stream which ran past it. Totila detailed a unit of cavalry to dislodge them and in response the Roman infantrymen tightened their formation, formed a barrier of their shields and lowered their lances. The horsemen advanced in haste, therefore they lost the cohesion of their formation. When they arrived they were troubled by the lances which the Romans were thrusting at them. Their horses were also troubled by rough ground and were terrified by the noise of clashing shields. Several times they repeated the attack, but failed to move the Romans. Fresh units of cavalry were substituted for the task, but did not achieve any more success. Two men, Paul and Ansilas, were specially praised by Procopius for moving away from the formation and fighting the Goths by themselves. At first they destroyed many with their bows, when their quivers were empty they resorted to swords, shields and even bare hands. Allegedly it was the sight of Paul, his sword having been bent double, wrenching the lances from the hands of four of his assailants, which impelled the Goths to abandon their attempt to seize the hill.

After the struggle for the hill, the armies prepared for the main battle. Narses placed allied soldiers in the centre of the Roman formation. He had these dismount because, or so claimed Procopius, he feared that they might too easily desert from battle if on horseback. In a speech attributed to Totila, it was claimed that the mercenary loyalties of the Roman allies would not endure

the dangers of battle. Each wing of the Roman formation included the native Romans and 4,000 dismounted archers. The Roman general positioned himself on the left and on the extremity of this wing 1,500 mounted cavalry were located. 500 of these formed a defensive reserve, which was instructed to rush to the assistance of any part of the formation which was under pressure. The remaining 1,000 were to attack the Gothic infantry from behind at the moment when it engaged. Having created this deployment, Narses toured around it displaying precious jewellery as an incentive for the soldiers; presumably it was to constitute rewards for courage and success. Procopius gave few details of the Gothic deployment, other than the fact that Totila arrayed infantry behind cavalry.

Once deployed, each side awaited the attack of the other. In fact Totila did not wish to begin immediately, because the arrival of a further 2,000 Gothic cavalry was expected. A Goth named Coccas rode out and offered single combat, which was accepted by Anzalas. These met in a mounted duel with lances, in which the Goth fell dead and a tremendous cheer was raised by the Romans. Totila then rode out in ornate armour and performed a lone display of skill at horsemanship and with arms. He wheeled his horse in circles, hurled his lance into the air and caught it, passed it rapidly from hand to hand and performed a gymnastic display in the saddle. To delay battle further, Totila offered to negotiate with the Romans, but this was dismissed by Narses as a bluff.

The 2,000 Gothic cavalry arrived and the Goths broke their formation and retired for their morning meal. Having exchanged his decorated armour for that of an ordinary soldier, in order not to be conspicuous to the Romans, Totila led the Goths out again hoping to catch the Romans unawares. Expecting this ploy, Narses had

kept the soldiers in position whilst they ate. He had also moved the archers on the wings of his formation forwards, so as to create a crescent. Totila instructed the Gothic cavalrymen not to use their bows and to rely upon no weapons other than lances. Procopius accused him of folly in restricting their choice of weapons and sending them out-flanked against the Romans, who could use bows, lances, swords or other weapons according to the needs of the moment. Leaving the infantry behind, the Gothic cavalry advanced to the attack. Exposed on both sides to the Roman archers, it was raked with arrows and lost heavily before finally reaching the Roman and allied ranks. Despite the earlier distrust of the allies attributed to Narses, Procopius praised them and the native Romans for the vigour with which they repelled the Gothic cavalry at this point. Towards evening the Gothic cavalry began to withdraw and the Romans followed. This retreat developed into headlong flight. Procopius was not certain what the cause of this was and commented that it was as if a supernatural or divine force had acted upon the Goths. The Gothic cavalry met the line of Gothic infantrymen with such force that some were destroyed and the rest joined the rout. This appears to have been the first involvement of the Gothic infantry in this battle. In the confusion of the flight some of the fugitives killed each other, others were slain by pursuing Romans. In all 6,000 Goths perished and more were captured.

Amongst those who perished during the flight from Taginae was Totila. However, Procopius mentioned that there was an alternative tale current at the time, according to which the Gothic king was mortally wounded and left the field whilst the battle was still being decided. In this version, this was the event which precipitated the panicked withdrawal of the Goths.

ANALYSIS - The roles which Narses anticipated for the 1,500 horsemen on the Roman left, namely as a mobile defensive reserve and as an instrument of surprise attack, were the sort of functions which small bodies of cavalry could perform on battlefields (Cf 4,5,25). These roles were discussed in the Strategikon⁶³. Unfortunately, Procopius did not mention these horsemen after the battle began. Nonetheless, his description included several features which were pertinent to the current study.

Totila's display between the armies demonstrated the combined equestrian and martial skills which were required of effective cavalymen, whether Gothic or Roman. A similar exercise for trainee cavalymen was specified in the Strategikon⁶⁴. On the Roman side, it is significant that Procopius noted the ability of cavalymen to use a variety of weapons according to circumstances. This would have given them a tactical flexibility which must have been useful in battle and implies that each cavalryman carried a selection of weapons.

The importance of terrain in battle was demonstrated by the hills which surrounded the battlefield. These hills presumably dictated the direction of the main Gothic attack and so enabled Narses to deploy the Romans accordingly. That both sides wanted possession of one hill in particular from which to launch missiles, corresponded with advice in the Strategikon either to occupy high ground or to deploy well away from it due to the threat of archery⁶⁵. The need for smooth terrain for cavalry, which was mentioned in the Strategikon, was apparent as one of the reasons why the Goths failed to seize the hill⁶⁶.

Procopius raised the question of the loyalty of the Roman allies in battle. It was probably the case that

allies often had mercenary objectives, as attested in the speech attributed to Totila and by Narses' display of jewellery. However, the claim that Narses dismounted the allies because they were untrustworthy may not have been fair. After all, when the main battle came to close quarters Procopius praised the performance of both the native Romans and the allies. His earlier claim that the allies were not reliable may have been an example of his tendency to disparage non-Romans, even if they fought on the Roman side (Cf 15,18). There may well have been a sound tactical reason behind the decision to dismount the allies.

The main engagement of this battle bore a marked similarity to one in which the Roman general and author Arrian defeated the Alans in AD 134⁶⁷. In both cases a massed frontal attack by a predominantly mounted force was baulked by foot-soldiers. Moreover, in both cases the foot-soldiers made use of high ground on the flanks to confine the cavalry attack and of missiles to deflect it. Arrian deployed Roman horsemen to guard the flanks and to take up the pursuit.

The Battle of Taginae was one of the best recorded demonstrations during the period of the use of dismounted tactics on a large scale by Roman cavalry (Cf 15,19,28,30,37,42). Faced with a mounted enemy which was in an aggressive frame of mind and on terrain which limited its freedom of manoeuvre, Narses appears to have preferred the solidity of a formation on foot against cavalry, rather than to face the rapid uncertainties of a mounted fight. This may well have been the true reason why he chose to dismount the Roman allies. In doing so he surrendered the tactical initiative to the Goths, which means that he must have been confident that they would be aggressive with their cavalry and yet would not field a superior force of infantry. It would be

interesting to know what measures were taken to protect the rider-less horses, in particular against the Gothic cavalry. Perhaps the horses were taken far away for the sake of safety, alternatively they may have been waiting nearby ready for use in a pursuit or withdrawal.

Both in the struggle for the hill and in the main engagement, the ability of well ordered foot-soldiers to baulk cavalry was demonstrated (Cf 15,22,23,28,37). Procopius' criticism of Totila's decision to allow the Gothic cavalry to fight only at close quarters was probably unjust. Apart from his the earlier observation that the Goths were not practised at mounted archery, when facing archers on foot mounted archers would have suffered the disadvantages of the vulnerability of their horses and the lack of a stable platform from which to shoot (Cf 31,42)⁶⁸. Totila's reasoning at Taginae was probably similar to that of the author of the Strategikon when he recommended that Roman cavalry should come to close quarters against Persian archers as quickly as possible, even though these were mounted⁶⁹.

It was not made clear precisely how the foot-soldiers did resist the Gothic cavalry when it arrived at close quarters in the main engagement. Very probably the same techniques of close formation were adopted as during the fight for the hill. The success of the close formation of 50 Romans in the fight for the hill was not surprising, especially in view of the disordered attack. However, the ability of Paul and Ansilas to survive by themselves, especially when weapons were lost, was more incredible. Indeed, their actions would seem to have been disruptive of the disciplined stand which was vital for the survival of their comrades. Procopius often approved of such displays of individual daring, but one suspects that he exaggerated the beneficial effects in

order to appeal to the uninformed and emotional expectations of his readers⁷⁰.

One wonders why the Gothic withdrawal from the main engagement became such a rout. The alternative version offered by Procopius had the attraction that it included a reason for the withdrawal, in the form of Totila's demise (Cf 13,14,28, PW VIII.28.10-12). In the Strategikon, the devastating effect which the death of a senior commander could have upon the morale of soldiers was mentioned⁷¹. That the withdrawal was so panicked implied that the pursuit was taken up by horsemen, because the dismounted allies would not have been able to follow closely⁷². Even if the rider-less horses were ready to be brought up to the line, a fair time would have been required to mount them and form for action. It seems likely, therefore, that in addition to the 1,500 horsemen which Procopius mentioned, the native Roman soldiers on the wings were mounted.

Procopius noted that it would have been customary for the Gothic cavalry to have retreated to the infantry in an orderly fashion, then to have rallied and rejoined the engagement. In the Strategikon the importance of good order in manoeuvres, including retreats and rallies, was made clear and exercises for cavalry were prescribed to that end⁷³. In the same treatise it was stated that if cavalry were driven back, it was to retreat around the flanks of a line of infantry in order not to break the formation⁷⁴. It appears that the Gothic cavalry at Taginae failed in all these respects.

30 Mount Lactarius AD 553

Romans v Goths

Procopius History of the Wars VIII.35.7-38

SYNOPSIS - Procopius recorded few details of tactics during this battle. A Roman army commanded by Narses and a force of Goths led by Teias, were encamped on opposite sides of the River Dracon at the foot of Mount Vesuvius. After a two month period of stalemate, the Goths retreated to Mount Lactarius. The Romans were unable to pursue them due to the very rough terrain. However, when isolated on this mountain the Goths lacked the means to provision themselves or their horses.

In a bid to extricate themselves the Goths launched a massed surprise attack early one morning. The Romans hastily took up arms but, in the rush, did not have an opportunity to deploy in a regular formation. The Goths chose to dispense with their horses and formed a deep formation facing the Romans on foot. Following their example, the Romans also dismounted and formed a similar deployment. Each army attacked the other with fury. Teias, who was clearly visible at the head of the Goths with a shield and lance, became a focus for Roman aggression. Having fought hard for a third of the day, he was killed by a lance in the chest. Although the Romans raised his head aloft on a pole, the Goths continued to fight and only nightfall separated the armies. Even then the soldiers did not leave the battlefield, but passed the night there. At dawn on the next day both armies arrayed as before and fought again. Throughout the day neither army gave ground and many were slain on both sides. Having battled until dark with little result, the Goths sent envoys to Narses requesting a peace settlement which was agreed.

ANALYSIS - It is unfortunate that the reasons why cavalry did not use its horses in this battle were not stated. Perhaps the mountainous terrain did not favour the mobility of horses. However, the facts that both sides initially deployed on horseback and that it was the example set by the Goths which led the Romans to dismount, may imply that there was another reason. Teias possibly felt that it was safer to meet the Roman cavalry on foot, rather than to face the uncertainties of a mounted fight. If so, his reasoning may have been similar to that of Narses at Taginae (29). The Goths having dismounted at Mount Lactarius, the Romans probably felt compelled to do the same, due to the problems that mounted cavalry often experienced when fighting formations of foot-soldiers (Cf 19,42). Both sides having dispensed with horses, the battle inevitably became stationary and drawn out.

31 Ariminum AD 553

Romans v Franks

Agathias I.21-22

SYNOPSIS - The Roman general Narses was performing some diplomatic and administrative duties at Ariminum, when a force of 2,000 Frankish cavalry and infantry was sighted ravaging farms in the vicinity. He gathered 300 of his retinue, who were experienced in combat, and led them all on horseback against the Franks. When they saw the approaching Romans, the Franks ceased plundering and created a compact formation. The infantry formed a barrier of its shields and was flanked by cavalry on each side. A dense wood protected the rear of the formation.

The Romans decided that it would not be expedient to attack this solid formation at close quarters, therefore they tried to break it up by loosing arrows and javelins at it. However, the Franks were well protected by their shields and hurled their own spears, called 'angones', back at the Romans. Realizing that the Franks were not suffering, Narses decided to stage a feigned withdrawal in order to lure them away from the woods. Accordingly, the Romans galloped away as if terrified and the Franks immediately broke up their formation and gave chase. The Frankish cavalry led the infantry with no sense of discipline or good order. As soon as the Franks were scattered on open ground a long way from the wood, the Roman cavalry wheeled about and met the pursuers head-on. Taken completely by surprise, the Frankish cavalry turned in panic and galloped back towards the wood and then to its camp. The unfortunate infantry could not flee so quickly and was butchered. More than 900 Franks were killed in this action and after this they no longer felt confident to detach small raiding parties from the main body.

ANALYSIS - Despite the small scale of this battle, it was quite instructive of cavalry tactics. Narses recognized the inaptitude of cavalry at close quarters against infantry which had occupied a good defensive position with a well ordered formation. Had the Franks been less well protected, Roman missiles might have broken this formation. It is easy to envisage how Frankish infantry was protected with shields, but one wonders how the Frankish horses were protected. Perhaps the vulnerability of Roman horses to 'angones' kept the Roman cavalry at a safe distance. The design of these weapons and of other armament carried by the Franks, was described by Agathias⁷⁵. Missiles having failed to

disorder the Franks, this battle provided a good example of the potential effect of a feigned withdrawal (Cf 3,11,15,16,24,38). This stratagem was proposed in the Strategikon⁷⁶. The Franks having been deceived, their fate demonstrated the risks inherent in a pursuit, especially if done recklessly. That the cavalry escaped whereas the infantry did not demonstrated the benefit of the tactical mobility of cavalry when fulfilling the functions of a detachment in hostile territory. That is to say, that cavalry was able to evade a hostile force unless circumstances were favourable for an engagement.

32 Phasis AD 553

Romans v Persians

Agathias III.24-28

Bury (1889) pp457-462

SYNOPSIS - The account of this battle included more dramatic reporting and less factual detail than did most by Agathias. Phasis was besieged by a Persian army of 60,000 led by Nachoragan⁷⁷. The Roman commander Martin, in order to boost the morale of the Romans and to strike dismay into the hearts of the Persians, arranged for a fake message to be delivered to him in public. This message purported to be from the emperor and promised a relief force. News of this sham relief force soon reached Nachoragan, who was alarmed and despatched a reconnaissance patrol in order to forewarn of its approach. It would appear that the Persian blockade was not tight, because Justin 'the son of Germanus' leading a force that included 5,000 cavalry was able to leave the town unseen. Agathias explained that he did so in order

to visit a nearby church and ascribed this desire to divine inspiration. During his absence the Persians attacked the walls and the Romans defended them vigorously. On his return, Justin heard the fighting and drew up his cavalry in regular formation ready for battle. With a sudden shout, it attacked one group of Persians, cut down many alongside the walls with lances and swords, and then made a series of attacks. The Persians concluded that this was the anticipated relief force and began a gradual retreat. A series of false perceptions and a general confusion which arose in the Persian army enabled Roman soldiers within the town to make a sortie. Some Persians succeeded in using elephants and cavalry to cause great trouble for armoured Roman infantry, until a wounded elephant in its rage shattered the Persian formation. More Romans then emerged from the town and advanced with a wall of shields, in front of which the remaining Persians fled in disorder. The Romans pursued until stopped by Martin. The Persian siege equipment was then burned and the Persians abandoned their designs upon the town. Agathias claimed that the Persians lost at least 10,000 in this battle, whereas Roman fatalities numbered less than 200.

ANALYSIS - Cameron believes that the account of this battle by Agathias was a fabulous tale, which cannot have born much resemblance to fact⁷⁸. She dismisses as absurd the ruse with which Martin deceived the Persians into expecting a relief force and the motivation which caused Justin to lead a detachment out of the town. She also doubts the ability of Justin's detachment to leave the town without being observed and the series of false perceptions which afflicted the Persians after its surprise return.

It does appear that the details recorded by Agathias were a little too simple to have been the entire story, but it was the case in most accounts of battles that the need for brevity prevented authors from including all the details necessary for complete explanations. The staged arrival of a fraudulent message from the emperor might seem too theatrical to have been true, but the passing of bogus information to an enemy must have been then, as now, an accepted method of warfare. Quite possibly Martin did put about a rumour of a relief force, both to unnerve the enemy and to encourage the Romans. How he did so may have been a little more sophisticated than was claimed by Agathias, but it is conceivable that it did involve the leaking of a false message. A recent parallel may have been the actions of the British Naval Attache and Ambassador in Montevideo, during the period in which the German warship Graf Spee was blockaded in that harbour. The objective of these officials was not dissimilar to that of Martin and was achieved with a series of bluffs and double bluffs, which would have been worthy of a comic farce had they not been recorded facts in recent history⁷⁹. Similarly, Agathias' simple statement that Justin's detachment left Phasis without being seen, may well have omitted landscape features or other distractions which facilitated this.

That Justin left a besieged town at the head of many thousands of soldiers in order to attend church does seem incredible. It was perhaps the case that there was a more secular, tactical reason for Justin's actions. The use of a detachment of cavalry in order to launch an offensive against besiegers was preceded by Belisarius' defence of Rome, including his stratagem at the Flaminian Gate (24) and more exactly when Satala (14) was defended by Sittas. At Satala and also at Onoguris (34) it was demonstrated that a cavalry attack from

outside could create an opportunity for besieged defenders to launch a sortie. That Agathias did not understand the tactical explanation and in his ignorance introduced a religious one instead, need not imply that he was wrong to record the departure of a detachment. When this detachment returned, the repeated false perceptions by the Persians which Agathias mentioned, quite possibly represented the confusion which could be inflicted by a surprise attack.

Bury raises no objection to this account by Agathias.

33 Capua AD 554

Romans v Franks

Agathias II.6-9

SYNOPSIS - An army of Franks and other Teutonic tribes led by Butilinus had encamped next to the river Casilinus, near Capua. Narses led an army from Rome and encamped within sight of the Franks. An attack by Roman cavalry upon wagons returning from a foraging expedition also succeeded in destroying a tower which the Franks had built to protect a bridge over the river. Control of this bridge was important for the defence of the Frankish camp⁸⁰. In response, the Franks rushed to arms and Narses ordered the Romans to prepare for battle. Narses led the army towards the battlefield, but the departure of a contingent of allied Heruli was delayed by a disagreement with the general and it followed at some distance behind. At the battlefield Narses arrayed the infantry in the centre in several ranks, with armoured soldiers in the front rank forming a wall of their shields. Light-armed infantry, including slingers and

bowmen, was at the rear. In the centre of this formation a gap was left ready for the arrival of the Heruli. Cavalry was deployed on both wings, armed with bows, short lances, shields, swords and a few with heavier lances. Narses positioned himself on the right wing. Also present on the right wing were those servants and camp followers who were able to bear arms. On the left were the commanders Valerian and Artabanes, who were instructed to secrete their soldiers in a wood and to attack the Franks from behind as they commenced the engagement. The Frankish army, which seems to have been largely infantry, formed a 'V' shaped formation the point of which was to lead the attack. In this formation there was no protection for the backs of the Frankish soldiers.

Butilinus led the Frankish advance, which was a wild rush and not well ordered. It hit the Romans with a violent impact and penetrated the gap left for the Heruli. Some even passed straight through the Roman formation and carried on, heading towards the Roman camp. However, the attack did not cause many casualties and as the Franks came to blows with the Roman infantry they were enveloped by the cavalry on the wings. From the height of their horses, the cavalrymen were easily able to shoot into the backs of the enemy. The Franks were locked in hand-to-hand combat with the Roman infantry and many were unaware of the threat behind them. Their number was rapidly thinned by the mounted archers. Meanwhile, those who had passed through the Roman formation met with the approaching Heruli and were quickly routed. The Heruli then took up their proper position in the formation, which virtually surrounded the Franks who were slaughtered with bows and other weapons. Some finally fled but were pursued into the river. According to Agathias only five Franks escaped. The

Romans suffered only 80 fatalities, these were the men who had met the first shock of the Frankish attack.

ANALYSIS - The validity of the account of this battle is doubted by Cameron⁸¹. She feels that it was vitiated by the self-conscious description of the wedge shaped formation adopted by the Franks and that the numbers of casualties recorded by Agathias must have been fanciful. Furthermore, she is suspicious of the similarity between the tactics attributed to Narses at this battle and those which he adopted at Taginae (29), as recorded by Procopius. She suggests that the account was fabricated by Agathias in order to serve a moralistic end, namely to demonstrate the just deserts suffered by the Franks as a result of their wickedness.

Agathias did attribute the fate suffered by the Franks at Capua to the operation of divine justice, but this need not have affected his account of the tactics⁸². The likely exaggeration of numbers need not have done so either and military statistics in any contemporary literature are nearly always open to question. As with any battle, the record of tactics at Capua was only a summary of the most prominent dispositions and manoeuvres. That the Franks did advance with wings drawn back does not seem implausible. It is not implausible either that the tactics which Narses used with success at Taginae were repeated at Capua by the same general possibly leading many of the same soldiers. Cameron notes that there was little stylistic similarity between the accounts of the two battles to support an allegation that Agathias plagiarized the account by Procopius. Moreover, there was a significant difference between tactics at Taginae and Capua, namely that at Capua the Roman archers remained on horseback.

The account of the Battle of Capua did demonstrate some tactics adopted by cavalry. It seems likely that the soldiers with Valerian and Artabanus constituted a detached body of cavalry, which was to emerge from concealment in order to launch a surprise attack upon the enemy's rear (Cf 9,13,14). Unfortunately, the details of this attack were not recorded, but it may have confused the Frankish ranks at the critical moment of engaging the Roman infantry. Such was the objective of irregular bodies of cavalry which, according to the Strategikon, were to emerge from concealment in order to assail an enemy's flank or rear⁸³. The most notable feature of this battle was the co-operation of Roman cavalry and infantry against Frankish infantry. It can be seen how the Roman infantry, by keeping the Franks locked in hand-to-hand combat, enabled the cavalry to be effective despite its inability at stationary tactics. The extent of Frankish losses cited by Agathias seems to have been optimistic, but it is possible that having been exposed to mounted archers with no protection the Franks did suffer a crushing defeat.

34 Onoguris AD 555

Romans v Persians

Agathias III.6-8.2

Bury (1889) pp456-457

SYNOPSIS - Agathias provided sparse details of this engagement. A Roman army of 50,000 was besieging a Persian garrison in Onoguris. The Roman commanders were informed of the approach of a Persian relief force and despatched a small body to impede its progress.

Meanwhile efforts were made to defeat Onoguris as quickly as possible. 600 cavalymen were sent against the Persian force, which numbered 3,000 cavalry. When these met, the Persians were not expecting opposition and, despite their numerical advantage, they panicked and fled. However, as soon as they had realized the very small number of their opponents, they rallied and counter-attacked with a deafening shout. The Roman force was routed and the Persians pursued hard. By the time that the pursuers and pursued had reached Onoguris, they were mixed together and their sudden arrival caused panic in the main Roman army. The Romans abandoned the siege works and the Persians within Onoguris emerged to join the chase. The Roman cavalry was able to escape, but many infantrymen were lost when they came to a narrow bridge over the River Catharus.

ANALYSIS - In his brief survey of this battle, Bury does not raise any objections to the details provided by Agathias. Cameron, however, dismisses the account by Agathias as a vehicle for his moralizing aims, which demonstrated the consequences for a Roman army of the immorality of its generals⁸⁴. She finds the account to have been implausible, in particular because of the claim that 50,000 Romans were routed by only 3,000 Persians.

Certainly the figures offered by Agathias for this battle were fairly extreme. Not only were 50,000 defeated by 3,000, but the 50,000 only sent a paltry 600 against the relief force, which Agathias himself recognized as folly. However, in historical literature of antiquity figures should often be treated with caution. Furthermore, the basic facts recounted by Agathias, including that the opposing forces were of very unequal numbers, were not implausible. That the detachment of Roman cavalry was so small may imply that

it was assigned a reconnaissance rather than a combative mission. If so, it failed by becoming involved in combat rather than forewarning the main army of the approach of the Persians. The fact that initially it succeeded in routing a larger force was demonstrative of the psychological element of a cavalry fight, which the Romans won by virtue of surprise. When the Persians had gathered their wits they demonstrated another important element, namely the rally, after which they dismissed the smaller Roman force. Surprise was then on the Persian side when it reached Onoguris and it was able to cause confusion in the main Roman army. The numerical advantage of the Romans was reduced by the sally of the Persians from within the defences. There may have been some similarity between events at Onoguris and those at Satala (14) and Phasis (32), where sudden attacks by cavalry also enabled besieged armies to make sorties.

35 Constantinople AD 559

Romans v Cotrigur Huns

Agathias V.14-20

SYNOPSIS - One would expect that the battle of Constantinople might have been that about which Agathias was best informed, because possibly he was present in the city at the time. Even if he were not, presumably he had ready access to witnesses.

A force of Cotrigurs led by Zabergan was ravaging Thrace. In Constantinople the garrison had declined over the years and become fit only for ceremonial duties. Therefore, the emperor called upon the aged Belisarius and 300 veterans of his campaigns to defend the city.

Belisarius led the veterans and a large body of unarmed civilians to the nearby village of Chettus. He addressed his soldiers and pointed out that the Cotrigurs were only accustomed to tactics of ambush and irregular formations. If the Romans remained in good order, he hoped that the invaders could be repelled.

Scouts informed the Romans of the approach of 2,000 Cotrigur horsemen. Belisarius anticipated that they would advance along a narrow valley. In order to crush the flanks of the enemy and so remove the advantage of its greater number, 200 Roman cavalry armed with shields and lances were concealed on either side of the valley. The remaining veterans with Belisarius were positioned across the valley. Behind these he placed the civilians, with orders to shout and to make much noise with pieces of wood during the battle.

As the Huns entered the ambush those with Belisarius advanced against them. At a signal the hidden cavalry emerged and threw their lances at the Huns from either side. This had the desired effect of huddling them together, to the extent that they could not use their bows or manoeuvre their horses. They were overawed by the tremendous noise created by the civilians and thick dust prevented them from perceiving that these were not soldiers. Much of the attacking cavalry was destroyed and the remainder fled in disorder. The Romans followed in an orderly pursuit and slaughtered many. By the time that exhaustion had stopped the Roman horses, the Huns had lost 400. On the Roman side there were, allegedly, no fatalities.

ANALYSIS - Of the accounts of battles by Agathias, this one is called more into doubt than the others, despite his presence in Constantinople. Cameron feels that it is

inconceivable that this battle was the first attempt to intercept the Cotrigurs, as Agathias indicated was the case ⁸⁵. She points out that in the chronicle of Theophanes, which was composed during the Ninth Century, an earlier Roman defeat was recorded. Furthermore, in this version Belisarius repelled the Huns by means of a ruse rather than in battle. One might also be surprised at the size of each force and the numbers of casualties cited by Agathias.

It does seem probable that Agathias exaggerated the statistics of this battle. Perhaps he was repeating Constantinopolitan folklore, which told an exaggerated tale of the defence of the city by its citizens and the great veteran Belisarius. However, it seems unlikely that he would have blatantly misrepresented facts which some of his readers probably could remember. It is also hard to imagine why Agathias would have ignored an earlier defeat, which would have improved the tale and added to the glory of the defenders.

Numbers aside, from a tactical perspective the account of this battle was plausible. That Belisarius might have used civilians on a battlefield in order to deceive an enemy was confirmed in the account by Procopius of the Battle of Rome (23)⁸⁶. Also confirmed by Procopius, in the context of the Battle of Taginae (29), was the effect upon hostile cavalry if it were compelled to advance between missile-armed soldiers on either side. One should not, however, accuse Agathias of having plagiarized Procopius, because at Taginae the Roman soldiers were on foot and used bows rather than lances. It is significant that Agathias noted that the Cotrigurs were impeded by being crowded. This demonstrated the importance of spacing for successful cavalry tactics and that mounted archers required adequate room in order to use their bows.

36 Nymphius II AD 582

Romans v Persians

Theophylact I.9.5-11

SYNOPSIS - A Roman army commanded by John 'Mystacon' and Persian opponents led by Kardarigan, prepared for battle at the confluence of the rivers Nymphius and Tigris. The Romans were marshalled in three divisions. John commanded that in the centre. Curs, who was the second-in-command, led the right wing and Ariulph the left. The Persians drew up in the same way. When the two sides came together, the divisions with John and Ariulph were successful, but the third did not engage because Curs harboured a personal grudge against John. As a result of the inaction of Curs' division, the entire Roman army withdrew towards some steeply sloped high ground. The Persians pursued and the Roman horses became exhausted by the chase up a steep slope. Much of the Roman force was destroyed.

ANALYSIS - The overall composition of the armies in this battle was not recorded; Roman cavalry was the only arm mentioned. The division of the Roman line into three resembled the prescription in the Strategikon for formations of cavalry, but the positioning of the general and the second-in-command differed (Cf 18,37,39,40,41,43)⁸⁷. In this case the autonomy of the divisions appears to have been a problem, because that led by Curs failed to play its part in the battle. The important implications of terrain for cavalry were demonstrated during the flight of the Romans.

37 Solachon AD 586

Romans v Persians

Theophylact II.3-5

SYNOPSIS - The account of this battle is the most detailed and readily visualized of any by Theophylact. Because it took place during the period for which Theophylact does not appear to have had access to a good source, one might be concerned that he invented his description. On the other hand, he provided a number of plausible military details and, in view of the fact that he seems to have had little military understanding himself, this might imply that he did have a good source for this particular episode.

The Persian general Kardarigan had led an army across the arid tract between the rivers Bouron and Arzamon, using camels to transport water. Scouts informed Philippicus, the Roman general, of the approach of the Persians and he deployed the Roman army for battle. The line was marshalled in three divisions, each with its own commander. When the enemy came within view Philippicus undertook a religious preparation of the army, by parading a holy relic through its ranks, and then delivered an encouraging address to the soldiers. The officers assigned to the front ranks entreated the general to remove himself from there and to take a position at the rear. This was because they feared that his presence would attract the attention of the enemy and therefore endanger those who were fighting near him. He acquiesced to this request and changed his station. The Persian line also comprised three divisions, with Kardarigan in the centre.

As the armies engaged, the Roman division of the right wing, led by Vitalian, was initially successful

and, having routed the Persian left, took possession of the Persian baggage. Unfortunately, the temptation of booty distracted these Roman soldiers from the fight. Philippicus was dismayed and, having passed his distinctive helmet to his bodyguard, sent him to beat the plunderers. Deceived by the helmet, these assumed that the general was amongst them and returned to the fighting. The Persian division routed from the left wing took refuge with and reinforced that of the centre, which bore down upon the Roman centre. These Romans were forced to dismount and to resist the Persian horsemen at close quarters. The battle here stagnated, until a supposedly divine voice instructed the Romans to strike at the Persian horses. In this way the Persian centre was overcome. The third Roman division, that on the left, turned those opposing it to flight and they were pursued as far as Dara, which was twelve miles distant. Kardarigan and the survivors of the Persian centre took refuge on a hillock, where they resisted for three or four days before some, including the general, escaped.

ANALYSIS - Despite being Theophylact's best description of a battle, it is clear that many of the finer details, including the composition of both armies, were omitted. However, only cavalry was referred to on both sides and it is possible that infantry, even if it were present, did not take an active part in this battle. In several respects, the Battle of Solachon resembled the prescriptions for all-cavalry fights in the first eleven books of the Strategikon. A religious preparation before battle was prescribed in the treatise⁸⁸. Senior commanders were to occupy safe locations at the rear of armies, but for the slightly different reason that the demise of a commander would demoralize the soldiers (Cf 22,23)⁸⁹. Front lines were to comprise three divisions

(Cf 18,36,39,40,41,43)⁹⁰. How separate divisions within a line could manoeuvre independently, according to circumstances, is apparent in both the Roman and Persian lines at Solachon. Strict regulations were included in the Strategikon to forbid booty gathering by soldiers in the midst of battle⁹¹. In order to remove the temptation of plunder, non-combative booty gatherers were to recover spoil on behalf of the fighters⁹². Theophylact did not mention the presence of booty gatherers who might have prevented Vitalian's soldiers being distracted from the fight (Cf 18). In view of the similarities with prescriptions in the Strategikon, it may be significant that not only did this battle take place during the reign of Maurice, but also that Philippicus was his brother-in-law.

At Solachon the Romans demonstrated the value of dismounted tactics for making a stand when hard-pressed by mounted cavalry (Cf 15,28). The whereabouts of the horses after the Roman cavalry dismounted was not mentioned. The fact that the Persians were finally overcome when the Romans struck at their horses, indicates that the horses of cavalry were often the vulnerable targets in combat. This constituted a disadvantage for cavalry when fighting disciplined foot-soldiers at close quarters (Cf 39).

38 Adrianople II AD 587

Romans v Avars

Theophylact II.17.4-12

SYNOPSIS - An Avar force had laid siege to Adrianople and a Roman army, commanded by John 'Mystacon' with

Drocton as second-in-command, advanced to relieve the city. On reaching it the Romans offered battle. There is little evidence for the tactics of this battle, other than that the wing commanded by Drocton inflicted the decisive stroke against the Avars by means of a feigned withdrawal. When the Avars were in pursuit, the Romans rallied and attacked them from behind. The Avars scattered in various directions, but a cautious John decided against pursuit perhaps having in mind the fate of those who had just pursued Drocton.

ANALYSIS - In the absence of any indication of the presence of cavalry, the significance of this battle to the current study was only as an example of the staging of a feigned withdrawal by Romans (Cf 3,11,15,16,24,31). This stratagem was proposed in the Strategikon⁹³.

39 Araxes AD 589

Romans v Persians

Theophylact III.7.7-19

SYNOPSIS - The Persian general Baram had invaded Roman Armenia and the general Romanus, leaving weaker soldiers to guard the Roman camp, led a force of 10,000 against the invader. A vanguard of 2,000 was sent in advance, which encountered and defeated the Persian vanguard. Romanus did not desire a further battle after this, because he feared the large size of the Persian force, but he was unable to contain the enthusiasm of his subordinates. Both armies encamped on either side of a steep ravine, which extended from the river Araxes. On the third day, the Persians demanded that one side or the

other should cross the ravine and that a battle should take place. The Persians were permitted to cross on the fourth day and attempted some stratagem against the Romans, but this was foiled. Both armies deployed for battle in three divisions on the fifth day. The Persian centre was worsted and Baram reinforced it with soldiers drawn from the left wing. Weakened by this transfer of soldiers, the Persian left was then overcome and the entire army was turned to flight with the Romans in pursuit.

ANALYSIS - With no indication of the presence of cavalry in this battle, its relevance to this study is limited. It did adhere to the prescription in the Strategikon for a front line of cavalry to comprise three divisions (Cf 18,36,37,40,41,43)⁹⁴. The benefit of being able to transfer bodies of soldiers between divisions can be seen when Baram was able to reinforce the Persian centre. The manner in which Romanus took the strongest Roman soldiers to battle leaving a weaker force to guard the camp, also reflected advice in the Strategikon⁹⁵.

40 Urmiah AD 591

Romans and Persians v Persians

Theophylact V.9.3-10.1

SYNOPSIS - This battle was fought by a combined force of Romans and Persians, commanded by Narses and Khosro II, against the army of Baram, who was a pretender to the Persian throne. The allied force numbered 60,000 and that of Baram 40,000. Baram attempted a surprise attack by night, but the approach of his army was hindered by

difficult terrain. At sunrise his army was visible to the allies and a pitched battle ensued. The allied army was arrayed in three divisions, the centre commanded by Narses and Khosro, the left by the Roman commander John and the right by the Persians Bindoes and Sarames. The Roman soldiers were disciplined and silent, but the excitement of the Persian contingent continued to annoy Narses until they were persuaded to be quiet and to form in order. The army of Baram also deployed in three divisions, but with much shouting and clamour.

The allied army was eager to fight, but its opponents were dismayed by its greater number and withdrew to some mountains. Khosro was keen to follow and led the Persian contingent against them, but the more cautious Romans did not move from their well ordered formation. The Persian contingent was routed from the mountains, but the solid formation of the Romans checked the pursuit by Baram's army. As the sun was declining, both armies retired to camp. On the following day, Baram withdrew his army towards steep country which was unsuitable for cavalry. He was finally defeated at the River Blarathos (41).

ANALYSIS - There was little firm indication of the presence of cavalry in this battle. Baram's desire to retreat afterwards to country not suited to cavalry, implies that it was an important component of the allied army. In the subsequent battle at the River Blarathos, which was fought by the same armies, cavalry, infantry and elephants were recorded under Baram's command. The deployment of the armies at Lake Urmiah in three divisions, was as prescribed for cavalry in the Strategikon⁹⁶. Furthermore, the silence of the Roman soldiers also reflected advice in the Strategikon⁹⁷. The saving of the allied cause by the solid Roman formation after the rout of the Persian contingent demonstrated one

of the important benefits of having some forces kept in reserve.

41 Blarathos AD 591

Allied Romans and Persians v Persians

Theophylact V.10.2-11.3

SYNOPSIS - This battle was fought by the armies which had met not long before at Lake Urmiah (40). Although Baram had retired from there towards countryside not suited to cavalry, the two armies met on a plain near the River Blarathos. The allied force was arrayed in three divisions and the soldiers of the Persian contingent were given a password in order to distinguish them from the enemy. The opposing army was also in three divisions, with Baram in command of the centre and separate commanders on either wing. He deployed elephants as a support for cavalry.

After the armies had faced each other for a period, trumpets sounded and they came together. When the fighting had come to close quarters, Baram left the centre of his line and moved to the left wing, presumably taking with him a body of soldiers. After his arrival, the left wing was able to make a sudden thrust and devastated the allied soldiers deployed opposite. These were routed, but Narses stopped their flight by transferring reinforcements to assist them. Baram then concentrated an attack upon the allied centre, which resisted the elephants, launched a counter-attack and disrupted the opposing troops. Baram's army, having suffered losses to its cavalry and infantry, fled with the allies in pursuit inflicting further casualties.

6,000 fugitives took refuge on a hillock, but these were surrounded and overpowered. At the end of the day a number of soldiers on elephants still resisted, hurling missiles and using their bows, but these too were encircled and defeated. As night fell the allies returned to camp and on the next day they despoiled the dead.

ANALYSIS - As was the case at Lake Urmiah, the presence of cavalry in this battle was not clearly indicated. In accord with the cavalry tactics of the Strategikon, the armies deployed in three divisions (Cf 18,36,37,39,40,43)⁹⁸. The benefit of being able to manoeuvre bodies of soldiers separately within a formation was apparent when Narses reinforced the left wing of the allies. Presumably when Baram moved about his line he took soldiers with him, but this was not stated.

The location and purpose of the elephants in Baram's army was also not made clear. Perhaps they formed a line behind the cavalry so as to create a protected rallying point, as was done by the Persians at Ctesiphon in AD363. However, Theophylact seems to have implied that elephants were present on either flank of the cavalry⁹⁹. If this were the case, then they may have formed bulwarks to protect the cavalry from flanking attacks.

42 Marcianople AD 594

Romans v Slavs

Theophylact VII.2.1-10

SYNOPSIS - 1,000 soldiers had been despatched from Marcianople under the command of Alexander. These encountered 600 Slavs with wagons carrying loot and captives. On sighting the Romans, the Slavs formed a barricade of their wagons which they defended with javelins. The Romans dared not draw too close to the wagons, because of the likelihood that the javelins would strike their horses. Therefore, Alexander commanded them to dismount and to attack on foot. Doing so, they approached the wagons and there was an exchange of missiles. Eventually, the Romans succeeded in breaking the barricade and the Slavs were slaughtered. These events were reported to the Roman commander-in-chief of the Balkans at Marcianople on the following day.

ANALYSIS - It is likely that the 1,000 soldiers were an all-cavalry detachment, which was detailed to perform an armed reconnaissance. The engagement revealed the vulnerability of cavalry to missiles, due to the large target presented by horses. When the horses had been removed, the engagement was an example of dismounted cavalry being used for an aggressive purpose (Cf 19,30). The whereabouts of the rider-less horses was not mentioned, but in this case the need for their protection was probably slight, because the enemy was constrained within its barricade of wagons. Even if the Slavs had not been armed with missiles, the Romans would probably still have required to dismount, in order to climb over

or under the wagons and to fight hand-to-hand with stationary defenders.

43 Viminacium AD 599

Romans v Avars

Theophylact VIII.2-4.2

SYNOPSIS - Theophylact described a Roman incursion into Avar territory north of the Danube. Having gathered at Viminacium, a Roman army crossed the Danube against opposition and made camp. Comentiolus, the Roman commander-in-chief of the Balkans, was criticized by Theophylact for procrastinating at Viminacium whilst the army was left without a commander. Eventually, his subordinate Priscus crossed the river to join the army, sent the transport ships back to wait at Viminacium and commenced operations.

During the early days of the incursion, the Avars were eager to fight and they deployed for battle arranged in 15 groups. The Romans formed a square in order to protect their camp, laid aside their bows and fought with lances for many hours until sunset. Roman losses amounted to 300 dead, but the battle was regarded as a success because 4,000 Avars had perished.

On the third day, the Avars were again ready for battle and the Roman army marshalled in three divisions. This time the wings of the Roman formation enveloped the Avars and 9,000 of them were cut down. At sunset the Romans returned to camp.

On the tenth day of the incursion, the Avars offered battle again and advanced in a single block. The Romans

created three divisions and occupied high ground, with the wind in their favour. As before the Avars were overpowered and this time many were driven into a swamp and 15,000 were killed.

On the thirteenth day, an Avar force gathered at the river Tissus. The Roman army encamped there also and a day was arranged for battle. At dawn on that day Priscus arrayed the Roman army. He rotated the usual order of the divisions, placing the left wing on the right and the centre on the left. The Avars deployed 12 groups. The Romans were victorious and many Avars were killed. After this victory Priscus dispatched 4,000 soldiers across the Tissus, who slaughtered 30,000 Avars in three settlements. They returned to Priscus with a large collection of captives.

On the twentieth day, the Avars again assembled near the Tissus and the Roman army returned to that area. The Avars were massively defeated, many drowned in streams and a large number of their Slav allies and other tribesmen also perished. Afterwards 3,000 Avars were captured, along with 8,000 Slavs and 6,200 other tribesmen. These were transported by ships along the Danube on the way to Constantinople.

ANALYSIS - There is no evidence of the contribution made to this incursion by cavalry. Due to the forested countryside and numerous water courses in the Danubian region, infantry may well have played the major role. However, the incursion was of some relevance to this study, because it could be compared to the prescriptions for Danubian campaigns in the Strategikon. Therefore, it helped to demonstrate the pertinence of this treatise to contemporary military situations.

The Strategikon included a discussion of tactics to be adopted when fighting the so-called 'Scythians', which included the Avars¹⁰⁰. The events described by Theophylact near Viminacium, however, resembled more closely the tactics prescribed for use against Slavs¹⁰¹. In view of the fact that Theophylact recorded a substantial contingent of Slavs allied to the Avars, it is conceivable that anti-Slav tactics were adopted by Comentiolus in AD 599. According to the Strategikon, an incursion of Slavic territory was to be conducted by a force which included a sizable proportion of infantry. A detachment of cavalry was to remain south of the Danube under the command of experienced officers. This was to pose the threat of a further incursion in any direction and so to prevent Slavic chiefs from combining their forces. Transport ships were to be anchored at strategic locations. The main objective of an incursion was to pillage and slaughter. In order to achieve this an invading force was to operate in two detachments so that Slavs fleeing from one would fall into the clutches of the other. The larger detachment was to be commanded by the general, the smaller by his second-in-command.

Several features of the incursion of AD 599 did resemble the anti-Slav tactics prescribed in the Strategikon. By sending ships to Viminacium, Priscus may have located them so as to be ready to ferry a reserve force across the river. The fact that the incursion reached the Tissus, which was a good distance from Viminacium, demonstrates that it moved rapidly. At one stage it did so in two detachments. One might not trust the figures presented by Theophylact for the numbers killed or taken captive, but the emphasis that he placed upon them reveals that the objective of the incursion was in keeping with the Strategikon. This objective alluded to the fact that when warring against a people well

versed in guerilla tactics, but lacking a material infrastructure which could be destroyed, an offensive could only be launched against the populace by means of genocide or deportation. Over two centuries earlier, Constantius II campaigned across the Danube against the Sarmatians, Quadi and Limigantes with similar tactics and objectives¹⁰².

Whitby believes that the apparent inactivity of Comentiolus might have been due to the tactics prescribed in the Strategikon¹⁰³. He suggests that Comentiolus may have remained at Viminacium at the head of a reserve force or to fulfil some other necessary functions. Priscus would, therefore, appear to have made the greater contribution and this would have facilitated a misrepresentation by an author hostile to Maurice and his generals, from whom Theophylact drew information. The fact that Comentiolus was appointed commander-in-chief of the Balkans again in AD 600, implies that his performance in AD 599 was unfairly condemned in the account preserved by Theophylact¹⁰⁴. On the other hand, there is not evidence that a reserve force waited with Comentiolus or that he performed any other tasks. Furthermore, in the Strategikon, even though a subordinate commander was sometimes to lead an advanced detachment, a general was to be north of the Danube and fairly close to the action. What is more, the Viminacium incursion is referred to here in order to validate the Strategikon. Therefore, to use the treatise as a basis upon which to surmise additional facts which may have been omitted by Theophylact, is close to circular argument.

It is notable that in his account of the first battle fought during the incursion, Theophylact recorded that the Romans put down their bows and fought with lances. According to the Strategikon, volleys of arrows were effective against Slavs, whereas Avars were best engaged

hand-to-hand. Therefore, in this respect the account by Theophylact complied better with anti-Avar than with anti-Slav tactics. In the subsequent battles, Priscus deployed the Romans in three divisions as prescribed for cavalry in the Strategikon, although the Roman force probably included much infantry¹⁰⁵. It is intriguing that the rotation of the divisions by Priscus was felt to be significant. When defending Iatrus in AD 598, Comentiolus had done the same¹⁰⁶. It implies that there was some distinction between the divisions in terms of training or equipment. Perhaps this was in some way connected with the distinction between 'assault troops' and 'defenders' in the Strategikon¹⁰⁷. The third engagement of the incursion demonstrated the significance of wind direction in battle, which was noted in the treatise (Cf 13,15,20)¹⁰⁸.

In brief, during this incursion Comentiolus did not enact precisely the prescriptions in the Strategikon for Danubian offensives. One should not distort the account by Theophylact in order to match those prescriptions. The most striking contrast between Theophylact's account and the prescriptions in the Strategikon was the transposition of anti-Slav and anti-Avar tactics. Nonetheless, the Viminacium incursion did demonstrate that the author of the Strategikon had an awareness of the nature of Roman offensives in the Danubian theatre.

Appendix 2

LOADS AND PACE OF
ANIMAL TRANSPORT

1/ War Office (1937)

<u>Animal</u>	<u>Load (lb)</u>	<u>Pace (mph)</u>
Pack mule or pony	160	3½
Pack ox	-	2
Pack camel	250-350	2
Pack elephant	1,200	-
Cart with 2 mules or ponies on hill roads	640	3½
Cart with 2 mules or ponies in plains	800	3½
Cart with 2 oxen on hill roads	800	2
Cart with 2 oxen in plains	960	2
Wagon with 4 mules	3,000	3½
Wagon with 16 oxen	5,000	-

2/ Goldsworthy (1998) p293 [Taken from Nineteenth and Twentieth Century sources]

<u>Animal</u>	<u>Load (lb)</u>	<u>Pace (mph)</u>
Pack horse or mule	152	3-3½
Pack ox	100-170	2-2½
Pack camel	300-480	3
Cart with 1 ox	400	2-2½ (not more 60 per week)
Cart with 2 oxen	655-1,000	—————"————
Cart with 4 oxen	1,300-1,600	—————"————

Goldsworthy points out that one should not equate the pulling power of Roman draught horses with that of their modern successors, because Roman harness lacked the draught collar of modern times¹. In the past it has been believed that this inadequacy of Roman draught harness drastically reduced the power of horses, perhaps to as little as one third of that of their modern counterparts. Recently, however, it has been suggested that the penalty may not have been so great.

The Notitia Dignitatum included some Roman camel units that were deployed in the eastern empire¹. These were listed amongst units of cavalry and it is not clear whether they comprised just camels, or camels and horses. It is not clear either what functions they fulfilled. According to Ammianus in around AD 363 Romanus, the commander-in-chief of Roman North Africa, refused to campaign on behalf of the people of Lepcis because they would not provide his army with provisions and 4,000 camels². Vegetius, who did not mention that camels were used in Roman armies, commented that they were able to tolerate sand and thirst but were ineffective in battle³. The fairly recent experience of Bedouin tribesmen confirmed that camels were ill-suited to combat, but that for long range and high speed transport across arid regions of the Middle East they were superior to horses⁴. Procopius mentioned that camels had been used as beasts of burden in the baggage trains of Roman armies and it seems likely that Roman camel units ordinarily fulfilled transport functions⁵. He complained that Justinian had disbanded the camel units, which had caused supply difficulties for Roman armies.

Camels were used by Arabian peoples, sometimes at least in conjunction with horses, for incursions into the empire⁶. Therefore, camel-borne raids were one of the threats which might have been encountered by Roman cavalry. Amongst other raids, the Saracen incursion of AD 531, which resulted in the Battle of Callinicum, may well have included some camels. The Bedouins, another Arabian people, continued to use camels for raiding into this century⁷. Their techniques with these beasts may

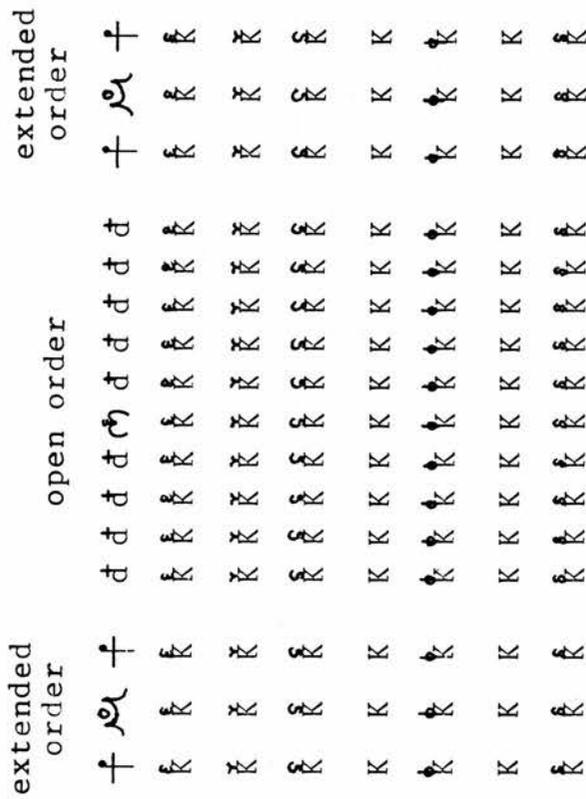
well have resembled those of the Arabians of antiquity. For a raid over a range of up to 100 miles, horses were led behind camels, their riders sitting en croup behind the camel drivers in order to reduce the fatigue of the horses. When within range, the horsemen mounted and led an attack, whilst the camels and their drivers provided support. If the range of a raid were between 100 and 250 or more miles, transport was provided by camels alone.

Key to Symbols in Figure 2

- † The Standard
- X Commanding Officer of the Tagma
- b Trumpeter
- ⚔ Cape bearer
- ⚔ Hekatontarch or Ilarch
- † File leader with lance and shield
- ⚔ Second in file with lance and shield
- ⚔ Third in file with bow but no shield
- ⚔ Fourth in file with bow and shield
- k Fifth in file with bow but no shield
- ⚔ Cavalryman with whatever weapon he can handle

NOTE. The symbols in Figure 2 indicate individual men. Those in subsequent figures, possibly excepting Figure 8, represent ranks in tagmata/banda. Therefore, in those figures each column of symbols represents a complete tagma.

A Division - Strategikon III.6



KEY NB each column in this figure represents a tagma/bandon armed as shown in Fig.2

- † Division commander
- † Front rank of bandon in close order
- ⌘ Commander of moira
- ⌘ Pages when called for
- † Front rank of bandon in extended order

Figure 3

A Formation of Cavalry and Infantry - Strategikon XII. A3

K K K K K K K K K K K
K K K K K K K K K K K
K K K K K K K K K K K
K K K K K K K K K K K
K K K K K K K K K K K
K K K K K K K K K K K
K K K K K K K K K K K
K K K K K K K K K K K

K K K K K K K K K K K
K K K K K K K K K K K
K K K K K K K K K K K
K K K K K K K K K K K
K K K K K K K K K K K
K K K K K K K K K K K
K K K K K K K K K K K
K K K K K K K K K K K

t t t t t t t t t t t
t t t t t t t t t t t
t t t t t t t t t t t
t t t t t t t t t t t
t t t t t t t t t t t
t t t t t t t t t t t
t t t t t t t t t t t
t t t t t t t t t t t
i i i i i i i i i i i

KEY

NB each column in this figure represents a tagma/bandon

K Cavalrymen

t Heavy-armed infantrymen

i Light-armed infantrymen, archers, javelin throwers

Figure 6

A Formation of Cavalry & Infantry - Strategikon XII.A4

```

K K K K K K K   t t t t t t t t t t   K K K K K K K
K K K K K K K   t t t t t t t t t t   K K K K K K K
K K K K K K K   t t t t t t t t t t   K K K K K K K
K K K K K K K   t t t t t t t t t t   K K K K K K K
K K K K K K K   t t t t t t t t t t   K K K K K K K
K K K K K K K   t t t t t t t t t t   K K K K K K K
K K K K K K K   t t t t t t t t t t   K K K K K K K
K K K K K K K   t t t t t t t t t t   K K K K K K K

```

rearguard

rearguard

```

t t t t t t t t t           t t t t t t t t t
t t t t t t t t t           t t t t t t t t t
t t t t t t t t t           t t t t t t t t t
t t t t t t t t t           t t t t t t t t t
t t t t t t t t t           t t t t t t t t t
t t t t t t t t t           t t t t t t t t t
t t t t t t t t t           t t t t t t t t t
t t t t t t t t t           t t t t t t t t t
t t t t t t t t t           t t t t t t t t t
i i i i i i i i i           i i i i i i i i i
i i i i i i i i i           i i i i i i i i i

```

KEY

NB each column in this figure represents a tagma/bandon

K Cavalrymen

t Heavy-armed infantrymen

i Light-armed infantrymen, archers, javelin throwers

Figure 7

The Battle of Dara

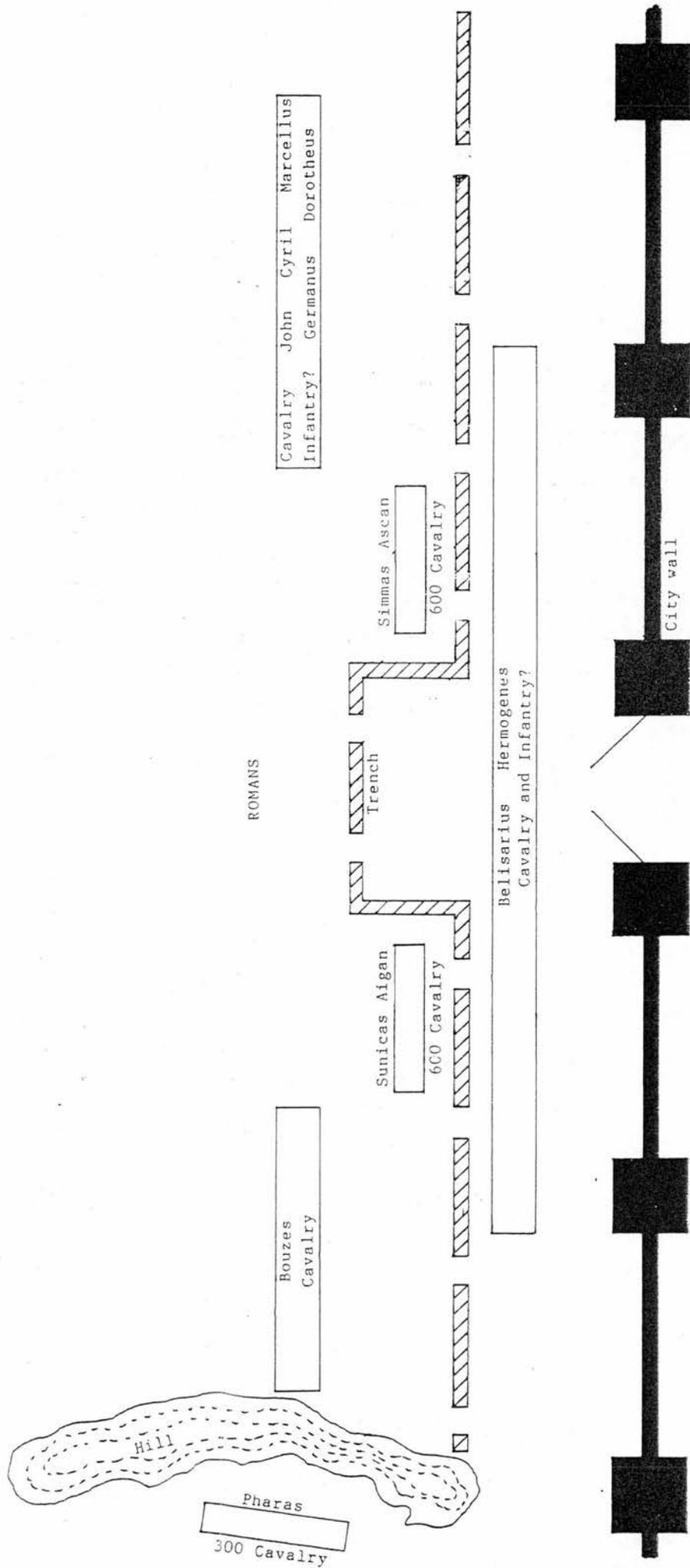
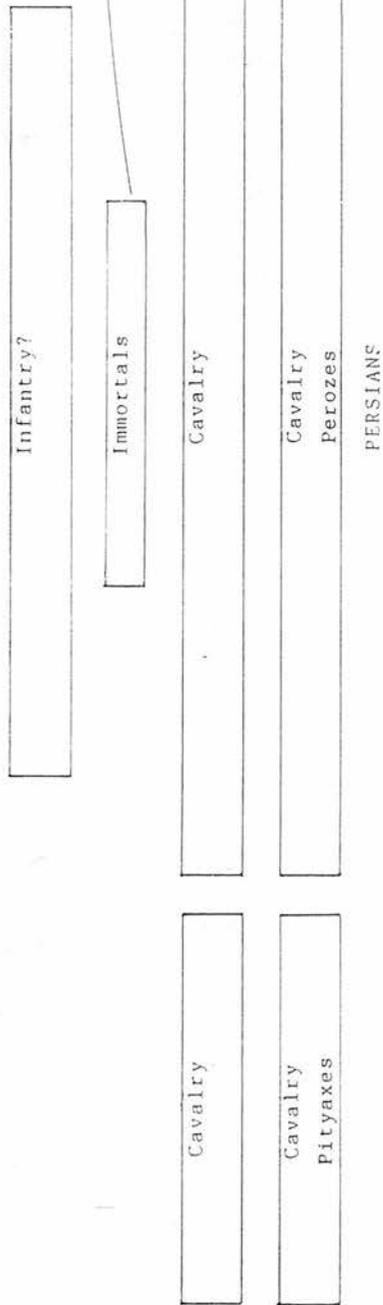
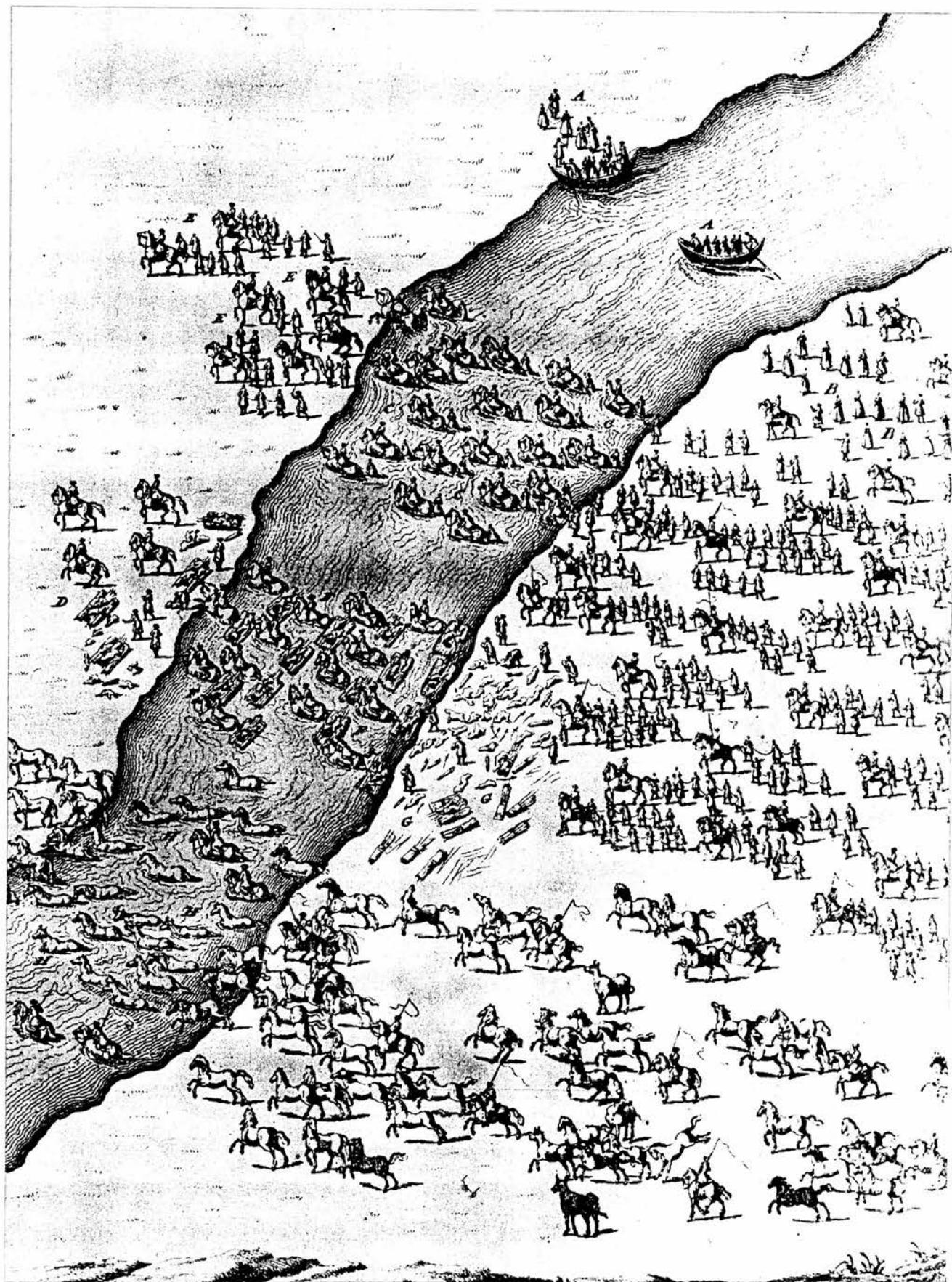


Figure 9

The Tartars Crossing a River



A & B - women captives; C & E - captives tied to tails of horses; D & F - equipment on bundles of reeds; G - extra reeds; H - remounts

Figure 10

REFERENCESAbbreviations for Ancient Authors and Works

- Ag = Agathias
- Amm = Ammianus Marcellinus
- Arr = Arrian Tactical Handbook
- Cor = Corippus
- CO = Anonymous Tenth Century treatise upon Campaign Organization
- EC = Anonymous Easter Chronicle
- Gre = Gregory of Tours
- Hel = Heliodorus
- Jos = Joshua the Stylite
- Jul = Julian Orations
- Lib = Libanius Orations
- LP = Latin Panegyrics
- Mal = Malalas
- Men = Menander 'The Guardsman'
- ND = Notitia Dignitatum
- PSH = Procopius Secret History
- PW = Procopius History of the Wars
- S = 'Maurice' Strategikon
- Syr = Syrianus Magister Treatise upon Strategy
- TC = Theodosian Code
- Th = Theophylact
- Veg = Vegetius Epitome of Military Affairs
- Xen = Xenophon Art of Horsemanship
- Zac = Zachariah of Mitylene
- Zos = Zosimus

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Intoduction

- 1 Distinction between frontier forces and field-armies - Jones (1964) pp608-611, 649-654, 685-686
- 2 Theophylact's place in historiographical tradition - Whitby (1988) pp353-358
- 3 Ethnic diversity in Roman armies - Arr 33; PW VIII.30.17; Jones (1964) pp199-202, 611-613, 619-623; Elton (1996) pp91-94, 96-97, 134-152, Appendix 2; Southern & Dixon (1996) pp46-52
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- 26 Discussions of Vegetius' tactical treatise - translator's intro by Stelten; Elton (1996) p269
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- 30 Rance (1993) pp65-79
- 31 General discussions of the Strategikon - translator's intro by Dennis; Whitby (1988) pp130-132; Rance (1993) pp27-42; Elton (1996) pp270-271

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- 32 Maurice as architect of military reforms - Whitby (1988) pp11-13, 147, 160, 177-180, 268, 286-287
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- 34 General discussion of Latin Panegyrics (numbered according to R.A.B.Mynors - translators' intro by Nixon & Rodgers
- 35 Historical significance of Latin Panegyrics - translators' intro by Nixon & Rodgers pp33-35
- 36 LP translators' intro by Nixon & Rodgers p35
- 37 Discussion of 12th panegyric - translators' intro by Nixon & Rodgers pp288-293
- 38 Discussion of 4th panegyric - translators' intro by Nixon & Rodgers pp334-342
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- 44 Amm XV.1.1; Discussion of nature of Ammianus' evidence - Crump (1975) pp23-30
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- 46 Austin (1979) pp22-116
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- 2 Amm XVI.12.22, XXIV.2.5, 6.8, XXV.1.12
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- 4 ND Or V-VIII, XV, XXXI-XLII but XXVIII
- 5 Focus of Strategikon I-XI stated as cavalry - S II.2
- 6 S VIII.2.85
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- 12 Presence of non-Roman contingents in Roman cavalry -
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- 80 Photograph of Tunisian mosaic - Casey CA p154 fig 16
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- 90 Amm XXIV.4.2,6 XXV.6.5
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- 94 S XI.4, XII.B22,C
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107 S VIII.2.75

108 Syr 26

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110 Belisarius ' army compelled to remain at Croton -
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111 Local supplies used by cavalry and infantry -
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112 Valentinian deterred from campaign against Alamanni -
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114 S VII prol, X.2

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116 Waterless tract a defence against Persian cavalry -
Th II.1.5-6

117 S IX.3

118 S V.4, VII.1.13

119 Veg IV.7

120 PW II.7.12-13

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129 PW III.5.8, 15.9

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134 Cavalry and infantry advanced with provisions in wagons and ships - PW VI.5.3

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136 Persians carry water on camels - Th II.2.4

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Servants in earlier Roman armies - Goldsworthy (1998)
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142 Zos II.15,22

143 Cavalry in Julian's Persian campaign - Amm XXIV.1.2;
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144 Veg III.26

145 Elton (1996) pp105-107

146 Elton (1996) p91

147 ND Or V-VIII,XV,XXXI-XLII but XXVIII

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149 ND Oc V,VI

150 ND Oc VII

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- 154 Emphasis upon cavalry in Strategikon I-XI -
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- 155 S III.8-10
- 156 S IX.3,4, X
- 157 Coulston (1986) pp61,69-70
- 158 Extent of cavalry and infantry in Zeno's army -
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- 159 S IV, IX.1,2,5
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- 163 Operations in which infantry not recorded -
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- 164 Siege-warfare -
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- 165 Effect of plunder upon mobility - Elton (1996) p53
- 166 PW IV.7.20-21
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- 1 Coulston (1986) p60
- 2 Goldsworthy (1998) pp173-174
- 3 State arms factories - ND Or XI.2,18-39,44, Oc IX.2,16-39,43; Tomlin (1989) pp227-228; Southern & Dixon (1996) pp89-91
- 4 Arms production - Elton (1996) pp116-117
- 5 Archery equipment - Coulston (1985)
- 6 Sources of supply of Roman cavalry horses - Amm XXIX.3.5; TC VII.23; Jos 69,75; Zac VII.5, IX.6; Mal XVIII.129; PW II.30.22,42, III.12.6, 16.12, 25.15, V.28.21, VII.18.14; Jones (1964) pp625-626; Ferrill (1986) pp79-81; Hyland (1994) p28; Elton (1996) p116
- 7 Studies of earlier Roman cavalry horses - Ewart (1907) pp558-573; Meek & Grey (1991) p226; Luff (1982) ch3,4,5,6; Davison (1989) pp143-147; Hyland (1990) pp66-70,101-110; Junkelman (1990-2) vol 1 app 'Zur Korpergrosse Romischer Pferde'; Southern & Dixon (1992) pp164-177
- 8 Steadiness of good cavalry mount - Hyland (1994) p27
- 9 Role of warhorse in close combat - Davis (1989) p18
- 10 PW V.18.6
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- 13 Cavalry training grounds - Arr 34; Davies (1969), (1974); Collingwood & Richmond (1969) pp41,45
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- 16 Stallions as warhorses during Middle-Ages - Davis (1989) p18
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- 20 Amm XVII.12.3
- 21 S III.8, V.2 (Fig 4)
- 22 Studies of Roman saddlery - Connolly (1987);
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- 23 Connolly & van Driel Murray (1991) p35
- 24 LP IV(Nazarius).24.4
- 25 Hunnic saddles - Maenchen-Helfen (1973) pp208-209
- 26 Amm XVI.12.22
- 27 Adoption of stirrups by Roman cavalry - Bivar (1972)
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- 37 Standards - Southern & Dixon (1992) pp58-61,
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- 39 PW VI.23.23-29
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- 94 Mounted javelins - Southern & Dixon (1992) p51;
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- 103 Hunnic lassoes - Amm XXXI.2.9; Maenchen-Helfen (1973)
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- 110 Hunnic influence on Roman tactics - Maenchen-Helfen
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- 111 Amm XXXI.2.8-9
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- 113 PW I.1.8-16; Cf Haldon (1975) pp12-13
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152 Composite 'light' and 'heavy' cavalry -
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- 28 Loire (1916) pp1-36
- 29 Tactical reconnaissance and counter-reconnaissance -
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- 37 PW III.19; Cf S V.1-4
- 38 PW III.23.5-18
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- 40 Austin & Rankov (1995) p180
- 41 PW IV.1.21
- 42 Manoeuvres leading to Battle of Tricamarum - PW IV.2
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- 60 Sallies facilitate entry of Euthalius - PW VI.2.1-24
- 61 PW VI.4.5-20
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- 65 Credit for defeat of Vandals only given to cavalry -
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- 67 Goldsworthy (1998) p245
- 68 PW I.15.15
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- 72 Cavalry v infantry during earlier empire -
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- 73 S XII.A7
- 74 Arrian's defeat of Alans - Goldsworthy (1998) p229
- 75 Effect of mediaeval pike-men - Davis (1989) pp27-28
- 76 PW VIII.22.6-7
- 77 Goldsworthy (1998) p188, cf pp66-67,190,232-235
- 78 Foot-soldiers clash shields to frighten horses -
PW I.18.48, VIII.8.32, 29.18
- 79 Th II.4.7
- 80 Goldsworthy (1998) pp231-232
- 81 PW V.18.16

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82 PW VIII.29.22-28

83 By including tales of heroic single combats Procopius may have appealed to the uninformed and emotional expectations of his readers. In his preface he noted that contemporary soldiers were often dismissed as 'bowmen', whereas greater veneration was given to the 'hand-to-hand fighters' of Homeric legend. However, Goldsworthy suggests that individual daring was a necessary associate of discipline in order to bring about victory in battle - PW I.1.8-11; Goldsworthy (1998) pp264-271,273-275,279-282

84 Amm XVI.12.22

85 German tactics of First Century BC - Goldsworthy (1998) pp242-243

86 Jos 62

87 Goldsworthy (1998) pp228,231,232-235

88 Techniques of mounted javelin throwing - Hyland (1993) pp171-173

89 S XII.A7

90 Syr 35

91 S VII.2.12, VIII.1.22

92 Roman pursuit curtailed at Dara - PW I.14.52-53

93 Belisarius feared return of Vandals - PW IV.4.7

94 Persian pursuit curtailed at Anglon - PW II.25.30

95 Loire (1916) pp254-265

96 PW VIII.20.34

97 Th VII.5.5

98 Cf all-cavalry fights during earlier empire - Goldsworthy (1998) pp235-244

99 Range of Roman bows - Bivar (1972) p283; Goldsworthy (1998) p184

100 S XI.epilogue

101 Criticism of single line cavalry deployments - S II.1

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102 Goldsworthy (1998) pp239-240

103 Deployment of cavalry in two lines -
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104 Units of front line divisions - S II.2, III.6

105 Functions of second line - S III.15

106 Ebb and flow of an all-cavalry fight - S III.11,12;
Cf Goldsworthy (1998) pp235,240

107 Loire (1916) p105

108 Loire (1916) pp115,200

109 Goldsworthy (1998) pp239-240

110 PW II.25.16, IV.3.4-5

111 PW I.15.15

112 PW VIII.8.20

113 PW VIII.8.3,14,19

114 S VIII.2.100

115 Amm XVI.12.28

116 Amm XXIV.6.9,12

117 PW VIII.31.6-7

118 PW I.14.31,44

119 Units and sub-units - S I.4

120 Instructions for soldiers in front and second lines -
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121 Formation of a tagma - S III.2

122 Inconsistencies in Strategikon concerning armament -
compare S II.8 & III.2; text by Dennis (1981) Anhang:
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123 PW I.1.12-13; Ag II.8.1

124 PW VIII.32.7

125 Formation of a tagma - S III.2

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126 A tagma approaches a battlefield - S III.3

127 A tagma enters battle - S III.4

128 Spying and reconnaissance - S IX.5

129 Ag V.19.8

130 Goldsworthy (1998) p235

131 Battle-drill of a tagma - S III.5

132 Nolan (1853) pp228-229; Goldsworthy (1998) pp236-237

133 'Assault troops' and 'Defenders' -
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134 Training drills for 'Assault troops' and 'Defenders' -
S VI.2,3

135 Loire (1916) pp90, 91-93

136 S II.19

137 S I.2

138 Veg II.14

139 S II.17,18

140 Goldsworthy addresses psychology primarily with respect to cavalry tactics against infantry, but identifies similar considerations. He notes the value of a silent advance with respect to infantry - Goldsworthy (1998) pp197,202,228,230-231

141 S II.16

142 Recklessness of British commanders - Cooper (1965) p140

143 Goldsworthy (1998) pp15-163

144 Loire (1916) pp90-91

145 Use of lances by British - Paget (1973) pp99-101

146 Battle-drill of the tagma - S III.5

147 S VII.1.14

148 S II.9

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149 Goldsworthy (1998) p239

150 S VI.2,3

151 PW V.27.27

152 Ag III.7.2

153 Th V.9,6-7

154 Amm XVI.12.38

155 PW V.18.4

156 PW V.29.16

157 Th II.3.10-12

158 PW VIII.29.18 Ag I.22.5

159 PW II.25.17

160 PW I.13.29-39, 18.31, V.18.18, 29.20-21, VIII.8.25-27, 31.11-21 cf VII.4.22-29

161 Goldsworthy (1998) pp264-271,273-275,279-282

162 PW IV.4.1-8

163 Th II.4.2-4

164 PW III.19.20-33

165 PW V.18.26-27

166 Dealing with the Persians - S XI.1

167 PW I.18.31-34, VIII.8.34

168 S XI.2

169 Loire (1916) p105

170 Instructions for 'out-flankers' - S III.14 Cf II.4

171 Instructions for 'flank-guards' - S III.13

172 Abushes and instructions for troops assigned to ambush - S II.5, III.16

173 Irregular formations for ambushes - S IV.4,5

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174 S II.6

175 Planning and timing of ambushes - S IV.1,4

176 Syr 38

177 Concealed traps - S IV.3

178 The 'Scythian Ambush' - S IV.2

179 Feigned withdrawals by Turks - Smail (1956) p78

180 Pharas and the Heruli at Dara - PW I.14.33,39-40

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182 PW IV.3.7

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184 Gre II.8

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186 Gre III.7

187 S IV.2; PW I.4.7-8

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192 Th II.17.11-12

193 Jul I.35D, II.57B; Cf Elton on Constantius' campaign
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194 Th III.7.1-3

195 S VIII.2.21

196 S VII.2.12, VIII.2.20

197 Veg II.1, III.2,6,9,13

198 Dealing with the Persians - S XI.1

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199 Dealing with the 'Scythians' - S XI.2

200 Dealing with the Slavs, Antes etc - S XI.4

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203 Mobile battle-field reserves of Roman cavalry -
Amm XVI.12.28, XXIV.6.9,12; PW VIII.31.6-7

204 Amm XVI.12.37

205 PW VIII.32.17

206 PW I.18.42

207 PW V.29.39-40

208 PW VIII.8.30

209 Interspersion of Alamannic cavalry and infantry -
Amm XVI.12.22

210 PW VI.1.2

211 Goldsworthy (1998) pp242-243

212 PW IV.11.47-50

213 Th VII.2.5-6

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215 Loire (1916) pp124-126

216 PW V.28.21, VII.18.15-16

217 Loire (1916) p150

218 S VII.2.11

219 S XII.A7

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221 Dismounted action at Solachon - Th II.4.5

222 Dismounted action at the River Hippis - PW VIII.8.30

223 PW VIII.31.5

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2 S II.8, III.1-6

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4 Amm XVI.12.27

5 Attempts by Ammianus and Procopius to absolve
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6 Difficult to crush invaders which divided into small
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7 S VIII.2.100

8 S XI.1

9 S XI.1

10 Tendency for hoplites to edge right -
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11 S II.5, III.16

12 S II.2

13 S IV.2,3

14 S XI.1

15 Procopius' attempt to protect Belisarius with respect
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16 Concealed traps on battlefields - Gre II.8, III.7

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18 P.W. V.28.22

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- 20 Zachariah translated by Hamilton & Brooks p224 note 4
- 21 S IV.4,5
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- 30 PW I.17.29-39
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- 55 PW VI.1.1
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- 60 S III.5,11,12
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- 63 S IV.4,5, VIII.2.100
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- 65 S VII.2.2
- 66 SVIII.2.20
- 67 Arrian's victory - Goldsworthy (1998) pp135-136
- 68 Goths not good mounted archers - PW V.27.27
Inaccuracy of mounted archery -
Goldsworthy (1998) pp66-67
- 69 S XI.1

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- 70 Individual daring in battle - Cf Chapter 3 note 83
- 71 S II.16
- 72 Inability of infantry to pursue cavalry -
Goldsworthy (1998) p235
- 73 S III.5
- 74 S XII.B23
- 75 Ag II.5.3-9
- 76 S IV.2
- 77 Ag III.17.4
- 78 Cameron (1970) p46
- 79 British counter-intelligence in Montevideo -
Landsborough (1956) pp90-95
- 80 Ag II.4.7
- 81 Cameron (1970) pp44,48
- 82 Ag II.9.12
- 83 S IV.4,5
- 84 Cameron (1970) p45
- 85 Cameron (1970) p49
- 86 PW V.28.18-19
- 87 S II.2,16
- 88 S VII.1.1, VIII.2.1
- 89 S II.16
- 90 S II.2
- 91 S VII.1.14
- 92 S II.9
- 93 S IV.2
- 94 S II.2

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95 S V.1

96 S II.2

97 S II.18

98 S II.2

99 Theophylact translated by Whitby p146 note 49

100 S XI.2

101 S XI.4

102 Constantius' Danubian campaign - Amm XVII.12-13

103 Tactics adopted by Comentiolus AD 599 -
Theophylact translated by Whitby p211 note 9;
Whitby (1988) pp102,164

104 Comentios appointed C-in-C in AD600 - Th VIII.4.8

105 S II.2

106 Th VII.14.2

107 S II.3

108 S VIII.2.39

Appendix 2

1 Goldsworthy (1998) pp110,293-295;
Cf Hyland (1990) pp256-257

Appendix 3

1 ND Or XXXI.48,57, XXXIV.33

2 Amm XXVIII.6.5

3 Veg III.23

4 Use of camels by Bedouins - Dickson (1949) p346

5 PSH XXX.15-16

6 Camel borne raids by Arabs - Amm XIV.4.3;
Mal XVIII.16; Matthews (1989) p347

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7 Bedouin camel borne raids - Dickson (1949) p346

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Modern LiteratureAbbreviations

<u>A</u>	<u>Antiquity</u>
<u>AA</u>	<u>Archaeologia Aeliana</u>
<u>AJ</u>	<u>Antiquaries' Journal</u>
<u>AJA</u>	<u>American Journal of Archaeology</u>
<u>B</u>	<u>Britannia</u>
BAR	British Archaeological Reports international, British and supplementary series
<u>BMGS</u>	<u>Byzantine and Modern Greek Studies</u>
<u>BSRP</u>	<u>British School at Rome - Papers</u>
CL	Collection Latomus
<u>DOP</u>	<u>Dumbarton Oaks Papers</u>
<u>EA</u>	<u>Epigraphica Anatolica</u>
<u>H</u>	<u>Historia: Journal of Ancient History</u>
<u>JRMES</u>	<u>Journal of Roman Military Equipment Studies</u>
<u>JRS</u>	<u>Journal of Roman Studies</u>
<u>JRULMB</u>	<u>John Rylands University Library of Manchester - Bulletin</u>
M	Mnemosyne
<u>MM</u>	<u>Mariner's Mirror</u>
<u>RSEP</u>	<u>Royal Society of Edinburgh - Proceedings section B (Biological sciences)</u>
<u>Sp</u>	<u>Speculum</u>

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