The Fulcum, the Late Roman and Byzantine Testudo: the Germanization of Roman Infantry Tactics?

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The origin and development of Roman and Byzantine military terms have been the subject of numerous monographs, though the absence of an up-to-date comprehensive lexical work leaves many obscurities in this field. This study examines the fulcum or φοιλκόν, both as a significant Roman tactical development of intrinsic interest and as an exemplum of the historical and linguistic problems posed by Greek, Roman, and Byzantine military vocabulary. The word φοιλκόν is first attested in the sixth-century Strategicon of the Emperor Maurice to designate a compact, well-shielded infantry formation reminiscent of both the testudo of earlier Roman warfare and the hoplite phalanx of classical Greece. Maurice’s technical description of the fulcum permits its identification in contemporary historical narratives as the standard battle formation of


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the period; this in turn leads to a consideration of its terminological origins and historical antecedents. Maurice’s use of a term drawn from military slang previously unattested in Roman sources, together with the superficial resemblance of the fulcum to the “shield-walls” conventionally associated with “Germanic” warfare, has accentuated its apparent novelty and “un-Romanness.” The essentially cosmetic factors of idiom and terminology, however, frequently distort historical perceptions. Clarification of the precise form and purpose of the fulcum reveals that this tactical deployment can be discerned in earlier Roman sources dating back to at least the second century, though framed in different terminology or alternative, “classicized” guises. This will elucidate the relationship between the military ideals expressed in tactical handbooks and the military practices described in historical narratives, and also shed new light on the roles and capabilities of late Roman infantry, demonstrating a greater degree of continuity in Roman military practices into late Antiquity than scholarship often allows. 2 Finally, the different meanings of φόλκον in middle Byzantine texts, and in particular in the tenth-century military corpus, prompts consideration of mimesis within the tactical genre, and changing usage in Byzantine technical vocabulary.

The φόλκον in the sixth century

The term φόλκον first appears in Maurice’s Strategicon, whose character and purpose require some clarification. 3 Writing in the 590s, the author (hereafter “Maurice”) of this comprehensive military treatise combined in deliberately simple Greek earlier written material with a thorough knowledge of the organisation, training, tactics, and everyday routines of the

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2 In the latter sense, this paper seeks in part to continue the study of E. L. Wheeler, “The Legion as Phalanx,” Chiron 9 (1979) 303–318, from its late fourth-century conclusion.

3 I am preparing a new translation with commentary, The Roman Art of War in Late Antiquity: The Strategicon of the Emperor Maurice (Birmingham Byzantine and Ottoman Monographs [forthcoming 2005]).
contemporary Roman army. Doubts persist regarding the imperial ascription, largely on account of misunderstandings concerning the manuscript transmission, but the Strategicon was undoubtedly an official ordinance sponsored by central government rather than the personal and/or amateur reflections which in large part characterise this broad genre. Much of the “Byzantine” character and apparent novelty of this treatise, including the misconception that it represents the theoretical component of a contemporaneous “army reform,” derive from its unprecedented vernacular idiom and uniquely technical content. Although Maurice prescribes principles of cavalry deployment and tactics modelled on the Avar armies of the period, the Strategicon is on the whole a “codification” or restatement of existing regulations, commands, and procedures in the form of an official “handbook” for officers.4

Two features of Strategicon are crucial for understanding the character and development of the φολκον. First, Maurice chose to write in a plain vernacular, sacrificing stylistic concerns to practical utility, “to which end, we have also frequently employed Latin and other terms which have been in common military use” (ὁθὲν καὶ Ἄρωμαίναίς πολλάκις καὶ ἄλλας ἐν στρατιωτικῇ συνθείᾳ τετριμμέναις χρήμεθα λέξεσι), rather than the Greek terminological translations or periphrases favoured by earlier authors.5 Authorial humility for stylistic deficiencies is a topos of both ancient technical writing and late antique literature, but the Strategicon’s exceptional vernacular idiom replete with the technical jargon of the day not only preserves many Latin terms that would otherwise be lost, but also tends to obscure underlying conceptual parallels with other Roman tactica and narrative histories, both earlier and contemporary, the majority of which were written in a classicizing

4Maurice’s prefatory complaint concerning the parlous state of military science (Strat. pr.10–19; repeated 12.B.pr.) is a topos of the genre, cf. Veg. Epit. 1.28; Urbicius Epitided. 2; Syrianus De strat. 15 (on which text see n.27 infra).

This essentially cosmetic difference is partly responsible for the status of the *Strategicon* as a “Byzantine” rather than a “late Roman” text. The distinction is more than a semantic nicety; it governs our perceptions of the value of the treatise for understanding warfare in the late Roman period and our sense of continuity between “Roman” and “Byzantine” military institutions and practices.

Equally significant is the nature of Maurice’s source materials. In this “rather modest elementary guide or introduction” (μετριάν τινά στοιχείωσιν ἦτοι εἰσαγωγήν) Maurice sets out to treat “the rudiments” (τὰ πρόχειρα) of training, drill, deployment, and tactics, in short precisely those “essential preliminaries” (τὰ ἀναγκαῖα καὶ συστατικά) conventionally overlooked by the more literary compositions of the genre as too trivial or technical. Far from being an abstract discussion of “strategy,” the *Strategicon* is primarily concerned with day-to-day routines and often mundane technicalities, and is aimed at the middle-ranking field officers of the East Roman army, whose literacy is assumed throughout. The important difference between the *Strategicon* and other Roman *tactica* is that Maurice’s treatise is in large part a practical compendium of essentially documentary and reportorial materials, rather than a literary composition drawing on other literary sources. In compiling the *Strategicon* Maurice appears to have utilised official ordinances, disciplinary regulations, “campaign diaries,” and “drill books,” possibly

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6 Authorial humility for style is a topos in various genres of technical literature, *cf.* Galen VIII 581–588 K.; similar remarks at VI 633.4, XIV 624.17; Veg. *Epit.* 1.pr., 1.8; Palladius *De re rust.* 1.1.1. See generally in late antiquity: Ps.-Josh. *Chron.* 1; Agath. *Hist.* pr.12–13; Men. fr.2; 6.2.3–11; Theoph. Sim. pr.16.

7 *Strat.* pr.14–27; *cf.* Aelian Tact. 1.2, 6, for a similar distinction between an elementary εἰσαγωγή and an earlier “classic.”

8 At *Strat.* pr.24 the intended readership is “those who aspire to be a general” (τοῖς εἰς τὸ στρατηγεῖν ἐπιθυμοῦν), though it is more general at 11.4.226–227. Much of the low-level, technical material in the *Strategicon* can only have been of interest or relevance to regimental officers. For written orders and general ordinances addressed to officers see, *e.g.*, to tribunes: 1.6.5; 7.A.4.6; 12.B.pr.7, B.24.30; and assumed at 7.B.17.41; to merarchs and moirarchs: 3.5.123, 11.4; 7.B.16.41.
translated from Latin into Greek for the first time, together with the informal writings produced by and for the officer corps of the Roman army. As such it presents historians with a late Roman “archive” of just the sort of non-literary material that rarely survives outside papyrological texts. The Strategicon therefore contains a great deal of traditional material, still current at the date of composition, and invaluable for elucidating earlier Roman practices. An important consequence is that some manuscripts of the Strategicon preserve, often uniquely, the original Latin commands for Roman tactical manoeuvres and drills, Latin remaining the official Heeressprache up to the 630s. It is important to bear in mind the character and composition of the Strategicon when assessing its precepts.

The precise nature of the φόνταξων described in the Strategicon is currently obscured by errors in both the modern critical edition and the sole English translation, which will be noted below where appropriate. As φόνταξων designates an infantry formation in this period, the term appears only in Maurice’s treatment of infantry training, deployment, and tactics in Book

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10 E.g. Strat. 3.5; 12.B.14–16, 24. The Latin commands are generally best preserved in Mediceo-Laurentianus 55.4 (M), and to varying degrees in Vat.gr. 1164 (V), Neapol.gr. 284 (III c 26) (N), and Paris.gr. 2442 (P). Amb.gr. B 119 sup. (139) (A) gives a tenth-century Greek paraphrase of the commands possibly corresponding to contemporary Byzantine usage.

12 of his treatise. In a list of the various manoeuvres (κινήσεις) essential to train infantry (12.B.14.9), Maurice includes φούλκρο περιπατεῖν, “advancing in a φούλκρον” (this information is recapitulated at the end of Book 12 with minor alterations and the useful addition of the appropriate Latin commands, although editorial error has jumbled these in modern editions).

The character of Book 12 as an appended “afterthought” has been exaggerated. For the traditional argument that Book 12 was grafted on to the Strategicon after its completion, and that its core section (12.B) represents an earlier, perhaps “Justinianic,” treatise on infantry, see K. E. Zachariä von Lingenthal, “Wissenschaft und Recht für das Heer vom 6. bis zum Anfang des 10. Jahrhunderts,” BZ 3 (1894) 437–457, at 440; R. Vári, “Zur Überlieferung mittelgriechischer Taktiker,” BZ 15 (1906) 47–87, at 71–72; A. Dain, Nau-machica (Paris 1943) 39; “Les Stratégestes byzantins,” TravMém 2 (1967) 317–392, at 345; and “Urbicius ou Mauricius?” REB 26 (1968) 123–136, at 130, 132, 134–135; Dennis, ed. 28–29. While accepting that the contents of Book 12 are somewhat miscellaneous, and certain sections (most clearly 12.A.7 and D) had a previous separate existence, the present author is inclined to view 12.B rather as Maurice’s own composition utilising the same type of technical, non-literary and official documentary materials employed in compiling the rest of the work. Furthermore, Book 12 as a whole is thoroughly integrated into the main text; not only is it framed in substantially the same idiom and terminology, but it contains cross-references to corresponding sections in earlier books of the Strategicon. More significantly, there are forward-looking cross-references to “the book on infantry” from the beginning of and throughout the treatise, see e.g. 1.9.16–17, 2.2.7–8, 11.2.87–89. For detailed discussion see Rance (supra n.3).

In Dennis, ed. 484, the text at 12.B.24.12–14 reads καὶ παραγγέλλει iunge fulco. περιπατεῖν. καὶ παραγγέλλει ami fulco. There are two problems here. First, the wording of the command ami fulco is manifestly corrupt; the correct reading ad fulco, attested elsewhere in the treatise, is explained below (n.17 infra). Second, Dennis’ text is distorted by incorrect punctuation, which is replicated in Gamillscheg’s parallel Ger. translation and Dennis, transl. 163. There is no such command as “iunge fulco.” The word iunge is the last word of the previous clause, and is the standard command “close ranks” (cf. the command iunge at 3.4.5, 5.26; 12.B.16.22). The word fulco (or more correctly φούλκρο) is the first word of a new clause and goes with the following περιπατεῖν, meaning “to advance in a fulcum” (for the same phrase φούλκρο περιπατεῖν cf. 12.B.14.9), after which there should be no fullstop since the relevant command is then explained. The complete passage should read πυκνοῦσθαι ἢτοι φιλτρεῖσθαι κατὰ βάθος καὶ μῆκος, καὶ παραγγέλλει iunge. φούλκρο περιπατεῖν, καὶ παραγγέλλει ad fulco, meaning “To close up or close ranks, he orders, iunge. To advance in a fulcum, he orders ad fulco.” Similarly, the tenth-century Greek paraphrase ἔνσηκαν φούλκρο in MS. Α, as cited in Dennis’ apparatus, should be divided and punctuated in the same way, ἔνσηκαν equating here to iunge. Mihăescu ed. 364–366 has the same error. It appears to arise from codex Μ, where fulco (actually MS. folco) in Latin characters superficially appears to relate to the preceding Latin word iunge. This is not a problem in the other codices. Scheffer 362 in fact had all this correctly in the editio princeps.
Maurice subsequently outlines in more detail what φούλκῳ περιπατεῖν involves (12.B.16.20–38). Before close-quarters contact with the enemy, about two or three bowshots from the enemy battle line, upon the order "iunge," the infantry were to close in from both the flanks and rear, a manoeuvre Maurice calls πύκνωσις or σφίγξις. Traditionally πύκνωσις meant reducing the space allotted to each man in a rank to two cubits (three feet), creating a dense formation in which each man was still able to manoeuvre and employ his weaponry; this conventional "close order" appears to correspond to what Maurice describes.14 During this manoeuvre "the men deployed at the front come together side-by-side until they are shield-boss to shield-boss with one another" (οἱ μὲν ἐμπροσθεν τεταγμένοι ἐκ πλαγίου εἰς τὰ βούκουλα ἀλλήλοις ἐγγίζουσιν), while those in the ranks behind stand "almost glued to one another" (ἀλλήλοις σχεδὸν κεκόλληται).15 Maurice remarks that the rearguards (τοὺς οὐραγοὺς) should shove from behind, if necessary, pushing nervous recruits into formation and maintaining a straight battle line.16

Thereafter, just outside the range of enemy missiles, the infantry formed a φούλκον (12.B.16.30–38):

φούλκῳ περιπατούσιν, ὅταν, ἐγγίζουσιν τῶν παρατάξεων, τῆς τε ἡμετέρας καὶ τῶν ἐναντίων, μέλλῃ ἀρχεσθαι ἢ τοξεία γίνεσθαι


15 Dennis, transl. 146, misunderstands εἰς τὰ βούκουλα ἀλλήλοις ἐγγίζουσιν, for which see n.18 infra. For the same manoeuvre in cavalry see Strat. 3.5.18–19, "and they all close up, coming together side-by-side" (καὶ σφίγγονται πάντες πλευρὰν πρὸς πλευρὰν ἐγγίζοντες).

16 Strat. 12.B.16.27–29. Dennis, transl. 146, has incorrectly the rearguards "should order those in the rear to close in forcefully"; the rearguards are in fact themselves those to whom "orders must be given to push from behind those in front of them" (χρή τοὺς οὐραγοὺς παρατάξεως ἀρχεσθησθαι ἐκ τῶν ὀπίσθεν ὀθέν ἐμπροσθεν) to ensure that the line is straight. For the role of the rearguards see also 12.B.17.40–44.
They advance in a fulcum, whenever, as the battle lines are coming close together, both ours and the enemy’s, the archery is about to commence, and those arrayed in the front line are not wearing mail coats or greaves. He [the herald] orders, “ad fulco.” And those arrayed right at the very front mass their shields together until they come shield-boss to shield-boss, completely covering their stomachs almost to their shins. The men standing just behind them, raising their shields and resting them on the shield-bosses of those in front, cover their chests and faces, and in this way they engage.

In operations against enemy infantry, therefore, the foëlkon was a compact formation in which the front two ranks formed a “shield-wall.” Maurice characterises this shield wall as “shield-
boss to shield-boss” (εἰς τὰ βούκουλα ἀλλήλοις ἐγγίζουσιν, 12.B.16.24; μέχρι τοῦ ἐγγίζειν τοῖς βούκουλοις, 34–35), which should be understood as a colloquial expression rather than a literal description. 18 Although Maurice does not define specific measurements, he nowhere implies that the transition to a φούλκον involved reducing still further the intervals between the files, which after πύκνωσις were already “shield-boss to shield-boss” at the front and “almost glued together” at the rear. This would in any case have fatally restricted the unit’s ability to manoeuvre and fight, and rendered impossible much of Maurice’s subsequent account of how the attack should develop. Each man continued to operate in the traditional “close-order” allotment of roughly three feet, so that the edges of his shield just overlapped those of the men to either side, but he retained sufficient space to advance, throw missiles, and slash to his front with a spatha.19

It appears that “advancing in a φούλκον” entailed simply an additional defensive measure by the front two ranks, the pur-

18 Literally, the infantry close together “until they are close at the shield-bosses” (μέχρι κτλ.), that is, until the rim of a man’s shield nearly touches the shield-boss of his neighbour. Cf. the same phrase in the preceding description of “closing ranks”: οἱ μὲν ἐμπροσθὲν τεταγμένοι ἐκ πλατίου εἰς τὰ βούκουλα ἀλλήλοις ἐγγίζουσιν (12.B.16.23–24). Dennis, transl. 146, is confused here, as he believes σκουτάρια and βούκουλα to refer to the same items, the shields. βούκουλα (Lat. buccula) actually refers to the bosses of the shields, an understanding which makes much greater sense of this passage, and especially how the shields of the second rank “rest upon the shield-bosses” (ἀναπαύοντες εἰς τὰ βούκουλα) of the first rank. Gamillscheg in fact appreciated the distinction in his parallel Ger. transl.; see “auf den Buckeln” in Dennis, ed. 443. The references to βούκουλον are collected by Kolias, Waffen 98–102.

19 Prima facie, it is tempting to see a φούλκον as a further “closing in” of the files, equating to what the classical Tacticians called συναπτισμός, the traditional one-cubit (one-and-half-feet) space per soldier in a rank. Those ancient authors who use this term in a technical sense, however (rather than the generic “battle pieces” of classicizing historians), are clear that συναπτισμός is strictly a stationary, defensive formation; e.g. Asclepiod. 4.1–3; Ael. Tact. 11.2–5; Arr. Tact. 11.3–4, Ext. 15, 26. The phrase μέχρι τοῦ ἐγγίζειν τοῖς βούκουλοις, with which Maurice describes the infantry forming a φούλκον, seems to be simply a repetition of εἰς τὰ βούκουλα ἀλλήλοις ἐγγίζουσιν which he uses for the earlier “closing ranks” or πύκνωσις, rather than a further “closing in.” As noted, the subsequent combat manoeuvres of the infantry unit are impossible to envisage with only a cubit’s breadth per man.
pose of which was to protect the front of the formation against missiles as it advanced. This would have been particularly the case when fighting the Persians, whose archery remained a tactical problem throughout the late Roman period. The internal structure of late Roman infantry units ensured that men in the front ranks would know what to do. The less-experienced troops were positioned in the centre of the formation, sandwiched between the junior officers; the “reaguards” (οὐραγοί) prevented flight and literally shoved men into formation, while the “file-leaders” (λοχαγοί, πρωτοστάται, or δεκάρχαι) were regularly issued with additional defensive equipment commensurate with their more exposed position, which in this period might include basic items like corselets, as well as greaves and stronger shields, although Maurice notes that even the file-leaders might lack armour. In this solution to the problem of arranging troops of varied quality, success depended less on individual weapons training, and more on unit cohesion, discipline, and stamina.

Within one bowshot of the enemy line, the Roman light infantry began shooting arrows from the rear at a high trajectory. If the heavy infantry were armed with the lead-weighted darts commonly called martiobarbuli (μαρτιοβαμβολία) or other missiles, the formation halted, while the front ranks (οἱ εἰς τὸ μέτωπον τεταγμένοι), fixing their spears into the ground, showered the enemy with these projectiles. Late Roman close-order infantry employed an impressive number and variety of missiles, which allowed them to generate...
casualties and disruption as the battle lines closed, and gave
them some of the capabilities traditionally assigned to light
infantry.\textsuperscript{22} Maurice’s description lacks some details a modern
reader would require, but which might have been obvious to a
contemporary; presumably the men in the first rank forming the
lower tier of the “shield-wall” did not participate in this missile
exchange. If such projectiles were unavailable, then closing with
the enemy, those at the front hurled their spears like javelins
and drew their \textit{spathae} to fight hand-to-hand, while “those
standing behind them, covering their own heads with their
shields” (οἱ δὲ ὀπίθεν αὐτῶν ἐστῶτες, τὰς ἑαυτῶν κεφαλὰς
σκέπνετε μετὰ τῶν σκουταρίων αὐτῶν, 49–50), assisted by
throwing their spears overhead. This last remark does not mean
that the whole formation was covered over in the manner of the
classical, shed-like \textit{testudo}, merely that the rear ranks should
take care to shield themselves from enemy missiles falling from
a higher trajectory.\textsuperscript{23} This expedient relates to the changed
dynamics of the fighting after closing with the enemy line. It is
probable that at close-quarters with enemy infantry the Roman
shield-wall was dismantled, having served its primary function
as a protective screen against missiles. Maurice suggests that
there was greater danger of casualties among the front ranks
during the period of approach than in the subsequent hand-to-
hand fighting, when they would no longer be a target for enemy
projectiles, but those to the rear remained exposed to con-
tinuous fire from overhead.\textsuperscript{24} The φοῦλξον was difficult to

\textsuperscript{22}For \textit{martiobarbuli}: Veg. \textit{Epit.} 1.17, 20; 2.15; Maur. \textit{Strat.} 12.B.2, 4–5,
1989]) 247–253; T. Völling, “\textit{Plumbata-mattiobarbulus-marttobãrboulon.}

\textsuperscript{23}For similar actions and phraseology in cavalry formations immediately
before closing with the enemy, cf. 3.5.30–31, “and covering their own heads and
part of their horses necks with their shields” (καὶ σκεπόντων τὰς ἑαυτῶν κε-
φαλὰς καὶ μέρος τῶν τραχῆλων τῶν ἵππων μετὰ τῶν σκουταρίων αὐτῶν).

\textsuperscript{24}This characteristic of close-quarters fighting is noted by Amm. Marc.
24.6.11. Maurice 12.B.16.81–86 outlines an identical procedure whenever an
manoeuvre, but afforded protection during the last and most dangerous stage of the advance, while from behind the shield-wall the other ranks of close-order infantry and the light infantry to their rear could maintain a constant shower of projectiles (12.B.16.43–47). There would have been a concomitant reduction in the momentum in the attack, which perhaps exposed the infantry formation to a longer barrage, but as with the cavalry tactics Maurice describes elsewhere, speed of attack was sacrificed to the essential consideration of tactical cohesion.

Maurice also describes Roman infantry forming a φούλκον when confronting an enemy cavalry charge, though these different tactical circumstances required certain modifications (12.A.7.49–60):

If the enemy [cavalry], coming within a bow shot, attempts to break or dislodge the phalanx, which is hazardous for them, then the infantry close up in the regular manner. And the first, second, and third man in each file are to form themselves into a

infantry formation “deploys double-fronted” (φιλάττονται ἀμφιστῶμος), that is, when the rear ranks of a unit already engaged to its front are compelled to about-face to confront simultaneously a sudden enemy attack to the rear. In these circumstances, while the front and rear ranks actively engage the enemy to either side, “those standing in the middle” (οἱ δὲ ἐν τῷ μέσῳ ἑστῶτες), caught between two fires, “uniformly cover their heads using their shields” (τὰς κεφαλὰς αὐτῶν ᾧς σκέπουσι διὰ τῶν σκουτάριων).
φούλκον, that is, one shield upon another, and having thrust their spears straight forward beyond their shields, fix them firmly in the ground, so that those who dare to come close to them will readily be impaled. They also lean their shoulders and put their weight against their shields so that they might easily endure the pressure from those outside. The third man, standing more upright, and the fourth, holding their spears like javelins either stab those coming close or hurl them and draw their swords. And the light infantry with the cavalry [stationed to the rear] shoot arrows.

These orders clearly describe a variation suited to cavalry combat, with advice on how to convert the shield-wall into a physical barrier against horsemen. It is important to clarify here that this chapter of the Strategicon (12.A.7)—with its isolated position within the work’s internal structure, its eccentric use of terminology, and tactical precepts slightly inconsistent with the rest of the treatise—undoubtedly existed as a separate tract before its incorporation into Book 12. Furthermore, close conceptual parallels, and in a few instances verbal correspondence, point to a relationship with an earlier Roman work. In this chapter Maurice provides a contemporary reworking of Arrian’s Deployment against the Alans (‘Εκτάξεις κατὰ Ἀλάνων or Acies contra Alanos), composed ca 135. Given the sharp differences between Maurice’s plain vernacular and Arrian’s classicizing idiom, it is unclear whether this “version” of Arrian’s Ectaxis was produced by “Maurice” (the compiler of the Strategicon) or an earlier editor, though its existence does at least indicate that Arrian’s opusculum was read by later military writers and was less of a textual cul-de-sac than has been assumed. The two texts are intermittently sufficiently close to allow textual improvement to the single corrupt and lacunose manuscript of

25 Dennis, transl. 134, gives “will quickly experience them,” and similarly Gamillscheg in Dennis, ed. 411, has “erfahrh,” both apparently confusing ἐμπειρεῖ, “to impale” (constructed with the dative), with ἐμπειρέω, “to be experienced in” (constructed with the genitive). The text in Dennis, ed., 12.A.7.55 thus has ἐμπειρῶνται when ἐμπειρεῖνται seems far more appropriate in both sense and grammar.
Arrian’s work and to elucidate several long-standing textual and interpretive ambiguities. It is not necessary to rehearse the arguments here, and I shall return below to the significance of Arrian’s “legionary phalanx” for our understanding of the origins and development of the φόλκον. It suffices to note that Maurice’s use of Arrian’s Ectaxis was in no way derivative, but critically reworked Arrian’s text only where applicable to late sixth-century tactics and with an overriding concern for contemporary practical utility.

Maurice’s description of a φόλκον as an anti-cavalry measure differs in detail from the formation he describes operating against enemy infantry, and again not every aspect of the deployment is immediately clear to the modern reader. Whenever Roman infantry oppose cavalry, Maurice requires the front three ranks “to form themselves into a φόλκον, that is one shield upon another” (εἰς φόλκον καθίστασθαι, τοντέστιν ἐν ἑπτ' ἐν σκουτάριν), or a “shield-wall.” It is probable, though nowhere explicitly stated, that in this stationary and strictly defensive tactical context the men were positioned more closely than in the manoeuvrable φόλκον deployed against infantry, perhaps equating to the traditional one cubit (one and a half feet) spacing the classical Tacticians called συνασπισμός (cf. n.19). Such dense, well-shielded formations were essential in generating the collective morale required to stand in the face of charging horsemen. Maurice explains that the front three ranks should “fix their spears firmly in the ground” (ἀντερεῖδειν γενναῖος τῇ γῇ), projecting towards the enemy, though the men of the third rank are later required to thrust or throw their weapons. A clue to how these three ranks were positioned is

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26 I plan to examine this relationship in detail elsewhere.

offered by Maurice’s incidental remark that the men of the third rank are “standing higher” or “more upright” (ὡς ὑψηλότερον ἑστῶτα). The clear implication is that the first and second ranks are lower, probably kneeling and stooping respectively. Maurice nowhere explicitly states this, but, as previously noted, he makes assumptions about the reader’s knowledge, and it will be demonstrated below that this arrangement is attested in earlier periods. We can therefore envisage that the first rank knelt, while the second rank crouched, resting the rims of their shields on the shield-bosses of the first rank, and both ranks thrust forward their spears, fixing their spear-butts into the ground. The men of the third rank, “standing more upright,” in turn rested the rims of their shields on the shield-bosses of the second rank, and more actively engaged any enemy horsemen who approached. Assuming even large infantry shields of around a metre in diameter, a sloping “shield-wall” constructed by the front three ranks would reach a height of just over two metres, this additional height being necessary to counter the more elevated position of a mounted enemy.28 Maurice writes that the men of the third rank “holding their spears like javelins either stab those coming close or hurl them,” meaning they wield their spears overarm and projecting above the shield-wall, ready to thrust or throw them as opportunities arose. This

28 Insofar as the meagre evidence allows conclusions, later Roman shields tended on average to be slightly smaller than a metre: see P. Southern and K. R. Dixon, The Late Roman Army (London 1996) 99–103.
arrangement of the first three ranks explains how the men of the third rank, with spears of about two metres in length, were expected to stab the enemy horsemen—in effect the front three ranks were so close together as to operate as a single fighting line. The men of the fourth rank, at a greater remove and unable to stab the enemy with their spears, participated by throwing their weapons over the heads of the first three ranks whenever a target presented itself, and presumably replaced casualties in the battle line.

The term φοῖλκον is unattested before Maurice and he is the only late antique author to use it. It is worthwhile reiterating that Maurice’s unique use of an unadorned vernacular containing contemporary, Latin-derived technical jargon creates cosmetic differences between the Strategicon and earlier texts written in a more polished style and employing a largely hellenistic vocabulary. Maurice’s detailed and technical description of the φοῖλκον facilitates its recognition in contemporary chronicles and histories, despite the brevity of the former and conventionally classicizing idiom of the latter. Indeed, the φοῖλκον appears to have been the standard battlefield deployment for infantry, or at least whenever the sources record infantry operating effectively it is in this formation. 29 When confronted by mounted opponents, sixth-century Roman infantry regularly arrayed in a compact defensive “phalanx” fronted by a “shield-wall” bristling with spears. The Syriac Chronicle of pseudo-Joshua Stylites reports that near Constantina in 502 some Roman infantry units, abandoned by their own cavalry and facing large numbers of Persian horsemen, “drew up in battle array, forming what is called a ‘chelone’ or ‘tortoise’, and fought

for a long time,” though ultimately unsuccessfully.\textsuperscript{30} The word the chronicler uses is a Syriac transliteration of χελάωνη, the standard Greek equivalent to Latin testudo; I shall return below to the relationship between φούλκον and testudo. A clearer and more successful example is the battle of Callinicum in 531. After the defeat and flight of the Roman cavalry, a small force of infantry and dismounted cavalry covered the Roman retreat in a manner strikingly reminiscent of Maurice’s φούλκον:

the infantry, and few of them indeed, were fighting against the whole Persian cavalry. Nevertheless, the enemy could neither rout them nor otherwise overpower them. For constantly massed together shoulder-to-shoulder into a small space, and forming with their shields a very strong barrier, they shot at the Persians more conveniently than they were shot at by them. Frequently withdrawing, the Persians would advance against them so as to break up and destroy their line, but retired again unsuccessful.\textsuperscript{31}

Holding firm in the face of charging cavalry was one of the most psychologically demanding tasks for infantry; not only was late Roman infantry capable of standing up to cavalry attacks but deterring cavalry was actually one of its primary functions. On the sixth-century battlefield infantry retained an important, albeit more passive role, serving principally as a firm bulwark,

\textsuperscript{30}Ps.-Joshua Stylites Chron. 51; transl. with comm. F. R. Trombley and J. W. Watt, \textit{The Chronicle of Pseudo-Joshua the Stylite} (Liverpool 2000) 57. The infantry units involved in this action were most probably locally-based \textit{limitanei}.

\textsuperscript{31}Procop. 1.18.45–8, πεζοῇ τε γὰρ καὶ λίαν ἄλφαν πρὸς ξύμπασαν ἐμάχεσθεν τὴν Περσῶν ὦπο. οὐ μέντοι αὐτοίς οἱ πολέμιοι οὐτε τρέπεσθαι οὐτε ἄλλως βιαζεσθαι εἴχον. ἐν χρῷ τε γὰρ ἀλλήλοις ἐς ὄλγον ἀκῦ παραγόμενοι καὶ ὡς ἰσχυράτατα ταῖς ὀστίσι φραζάμενοι ἑβαλλον μᾶλλον ἐς τοὺς Πέρσας ἐπιτηδεῖος ὃ αὐτοὶ πρὸς ἐκεῖνων ἐβάλλοντο. πολλάκις τε ἀπεπάντησεν οἱ βάρβαροι ἐπ’ αὐτοῦς ἠλαυνόν, ὡς ξυνταράζοντες τε καὶ διαλύοντες τὴν παραταξίν, ἀλλ’ ἄπαντοι ἐνθένδε ὡπίσω αὐθίς ἀπῆλαυνον. Setting aside the narrative differences between Procopius’ account and that of John Malalas, the latter also specifically notes this action (Chron. 389 43–47), “staying behind with the remaining forces and dismounting they fought a battle on foot, and by conducting themselves tactically they slew many of the Persians. They did not allow them to pursue the fugitives” (ἐπιμείναντες μετὰ τοῦ περιπεθέντος στρατοῦ ἀποβάντας τὸν ἅπαν πεζικῆν μάχην ἐμάχοντο γενναίως, καὶ τακτικῶς χρησάμενοι πολλοὺς ἀπόλεσαν ἐκ τῶν Περσῶν. οὐ συνεχόρησαν δὲ αὐτοῖς καταδίδει τοὺς φεύγοντας).
behind which Roman cavalry, employing highly fluid tactics, could withdraw and regroup if pushed back.\textsuperscript{32} Given sufficient training and morale, infantry possessed the potential for greater cohesion and more accurate firepower than cavalry, and when combined with archers and slingers the effects on enemy horsemen could be devastating. Narses’ deployment against the Ostrogoths at Taginae in 552 offers the most conspicuous example, but for the present purposes the preliminaries to the battle are of greater interest than the main engagement. These centred on a strategic hillock to the left of the Roman line, of which both sides sought control. Narses committed to its defence just fifty regular Roman infantry (\textit{ē katalóghou πεζοῦς}), who positioned themselves along a watercourse running at its base.\textsuperscript{33} There they defied the repeated attempts of increasingly larger numbers of Ostrogothic cavalry to dislodge them. Procopius’ description is worth quoting at length, since although the word \textit{φόλκον} was alien to his classicising vocabulary this is again clearly what he describes:

the fifty took up their position, standing shoulder to shoulder and deployed in the form of a phalanx as well as the limited space permitted … The horsemen accordingly charged upon them with great tumult and shouting, intending to capture them at the first cry, but the Romans deployed together into a small space and forming a barrier with their shields and thrusting forward their spears, held their ground … By shoving with their shields and by the protection of their spears, which were dense but nowhere tangled, they defended themselves as steadfastly as possible against their assailants; and they purposely made a din

\textsuperscript{32} For late Roman cavalry withdrawing to the protection of infantry see e.g. Amm. Marc. 16.12.37–39; Procop. 1.18.41–48, 5.28.22–29; (probably) Theoph. Sim. 6.9.15. See also Maurice’s warning on the limitations of cavalry against infantry formations, 12.B.23.14–20, and 12.A.7.68–77 for the need for a cavalry screen in front of the infantry phalanx to lure enemy cavalry into launching an attack it might not otherwise make; cf. Syrianus \textit{De strat.} 36.9–14 for the same ruse.

\textsuperscript{33} Procop. 8.29.11–21, 32.5–10, esp. 29.11–15 (\textit{τις χειμάρρους τοῦ γεγελόμενου ἐπηρεάσθην, περί μὲν τὴν ἀγριπόν}). This watercourse has swollen in some of the secondary literature to become a “ravine” or “gully.”
with their shields, terrifying the horses, on the one hand, and the men on the other, with the points of their spears. And the horses became excited, because they were greatly troubled by the rough ground and the din of the shields, and also because they could not get through anywhere, while the men at the same time were gradually worn down, fighting as they were with men packed so tightly together and not giving an inch of ground.34

Comparable shield-walls feature in other sixth-century battle narratives, though these are usually framed in the conventional vocabulary of the classicizing historian. The “battle pieces” of Procopius’ continuator Agathias possess a particularly artificial quality not least because the historian sought to display his erudition by citing (sometimes ineptly) the arcane technical terminology of the classical “Tacticians,” which he attempted to apply to what he understood to be the corresponding practices of his own day. It is often doubtful whether Agathias had access to firsthand information and his accounts of battles are for the most part literary constructs, though, as a more positive assessment, his descriptions of infantry combat do not actually contradict other sixth-century sources: “(the men in the front rank) formed a wall of shields; the others pressed themselves together in successive ranks, so that the serried muster continued as far as the rearguards” (τὸν συνασσισμὸν ἐπεποίηντο· ἐξ ὑπὸ ὅι ἀλλοι ἐς βάθος ἀλλήλοις ἐνέκειντο, ἐς ὃς ἐς τούς οὐραγοὺς ὃ χυλοσχισμὸς ἐτελεύτα), or similarly, “then all closing ranks together into a single phalanx and protecting their front with their shields as steadfastly as possible, they fall

34 Procop. 8.29.15–21, ὃ πεντήκοντα ἐστησαν, ἐν χρῷ μὲν ἔξω ἁπαλοῖς ὀλλήλοις, ἐς φαλάγγα δὲ ὡς ἐν στενοχωρίᾳ ... ὃ βέλων ὁπελύμω τοῦ πολλῶ καὶ κραυγῆ ἐπ’ αὐτοῦς ἐντο, ὅς ἄντιμοι ἐξαιρήσοντες, ὃ δὲ εἰς ὅλον ἡντεταχμένους καὶ ταῖς μὲν ἅπεσε φραζόμενοι, τὰ δὲ δοράτα ἐπανατεi-

νάμενοι ἐστήσαν ... τὸν τοῦ αὐτοῦ τὸ ὀδημό καὶ τῶν δορατίων τῇ ἐπιβολῇ πυκνοτῆτι ὑπῆρ καὶ ὕδαμὶ ἔξω
cysthhμήν ὡς καρτέρωτα τοὺς ἑπίτοντας ἠμοῦντο, ἐξεπιθήδες τῇ πάσαν τοῖς ἅπεσαν ἐποίουν, ταῦτα μὲν τοὺς ἱπποὺς ἅετ δεδησόμενοι, τοὺς δὲ ἀνδρας ταῖς τῶν δορατίων ῥημαῖς, καὶ οὗ τὰ ἱππο ἀνεχωμένον τῇ τῇ δυσχωρίᾳ καὶ τῶν ἅπεσαν τῷ πατάρῳ λίσαν ἁμοῦνοι καὶ διέζον ὕδαμὴ ἔχοντες, οἳ τὰ ἁνδρεῖς ἀπεκαίνιστο, ἀνθρώποις τῇ ὅτι ἐξμερακαμένος μαχόμενοι καὶ τρόπῳ ὑδαν δυσκούς.
upon the still disordered enemy” (τότε δὴ ἄπαντες ἐς μίαν τινὰ φάλαινα συσπειραθέντες καὶ τὸ μέτωπον ὡς καρτερώτατα ταῖς ἁπάσι φραζόμενοι ἐμπότουσι ἐνεγκεκριμένοι ἔτι τοῖς πολέμοις). Less still can be made of the rhetorical remarks on Roman infantry that Jordanes puts in the mouth of Attila at the battle of Châlons, noting that “they come together in formation and form a battle line with locked shields” (Get. 39, dum in ordine coeunt et acies testudineque conectunt). At best this shows that Jordanes, a mid sixth-century author, could characterise, or even caricature, Roman deployment as compact formations fronted by “shield linkage.”

Finally, it is to be noted that even late Roman cavalry, in moments of crisis or simply wherever tactically beneficial, transformed themselves into infantry and also arrayed in a folkon. A minor action in Lazica in 550 is instructive, where Roman and allied cavalry, finding themselves suddenly outnumbered by Persian horseman, dismounted and

arrayed themselves on foot in a phalanx as deep as possible, and all stood forming a close front against the enemy and thrusting out their spears against them. And the Persians did not know what to do, for they were unable to charge their opponents, now

35 Agath. 2.8.4, 3.27.6. Here Agathias employs technical vocabulary drawn from the terminology of the tactical genre: ζυλλογίσμος (cf. Asclepiod. 2.5, Ael. 6.1–2, Arr. Tact. 7.1–2) and συνασπισμός (Asclepiod. 3.6, 4.3, Ael. 11.4, Arr. 11.4). Elsewhere he explicitly refers to the genre: “making the phalanx ‘at a forward angle’, as the Tacticians might call it,” ἐπικάμπτειν ἐμπροσθιάν (ὡς ὁ δὲ τοῖς τακτικοῖς οὐσχάσθει) τὴν φάλαινα καταστάσεις (2.9.2). For the ἐπικάμπτειν see Asclepiod. 11.1, ἐπικάμπτεις εἰς τούπισθο ἢ καὶ πρόσω. Neither the “authentic recension” of Aelian’s Tactica Theoria nor Arrian’s Ars Tactica explicitly refers to ἐπικάμπτεις τάξις, but describe instead the seemingly identical formation ὑπότεξις: Ael. 31.4, ἐὰν τῇς ψυχῆς ὑπὸ τὸ πέρατα τῆς φάλαινος ὑποτάσσῃ ἐπικάμπτως τάξις ἔχοντας, ὥστε τὸ ὅλον σχῆμα τρισυπλοικεῖται εἰσι. Arr. 26.7 has the slight variation ὑπότασσεν ὃς ἐπειδὴ τοῖς ψυχῆς ύπὸ τὸ πέρατα τῆς φάλαινος ὑποτάσσῃ τῆς ψυχῆς ὡς ἐς ἐπικάμπτως. The ἐπικάμπτεις ἐμπροσθία and ἐπικάμπτος ὑποθεῖα at Ael. 45.3–46.1 appear only in the “interpolated recension,” dating to the tenth century, in which Byzantine scholiasts sought to elucidate the authentic material, in part using now lost classical material; for these chapters see A. Dain, L’Histoire du texte d’Élien le Tacticien (Paris 1946) 92–100, 155–157, esp. frr. I.3 and K.1 (97–98); A. M. Devine, “Aelian’s Manual of Hellenistic Military Tactics,” Ancient World 19 (1989) 31–64, at 59, 62.
that they were on foot, nor could they break up the phalanx, because the horses reared up, annoyed by the spear points and the clashing of shields.\footnote{Procop. 8.8.30–34, ἀπὸ τῶν ἵππων ἀποθορόντες ... ἐξ φάλαγγά τε ὡς βάθυτάτην ταξιάμενοι πεζοὶ μετοπηδόν ἀντίοι τοῖς πολεμίοις ἐστήσαν ἄπαντες, τὰ δόρατα ἑπανατινύμενοι σφίσαι, οἱ δὲ βάρβαροι οὐκ ἔχοντες ὅ τι γένονται (οὔτε γὰρ ἐπιδραμεῖν πεζοῖς γιὰ σύσι τοῖς ἑναντίοις ἐθύμοντο οὔτε αὐτῶν ξυντραπέτιν τὴν φάλαγγα οἷοί τε ἦσαν) ἐπὶ αὐτοῖς οἱ ἤπνοι ταῖς τε τῶν δοράτων ἀιχμαῖς καὶ τῷ τῶν ἀσπίδων πατάγῳ αἰχμάλωτοι ἀνεχόμενοι.}

There are numerous other late Roman examples of this tactical expedient and it is expressly what the \textit{Strategicon} enjoins cavalry to do in these circumstances.\footnote{Jul. Or. 1.36d, 2.60a; Joh. Mal. 389.43–51; Procop. 1.18.41–8; 8.35.20; Theoph. Sim. 2.4.5–9; Strat. 12.A.7.83–87, B.13.19–20, cf. 7.B.11.45–52; 11.64–67, 3.7–9. On this practice in earlier Roman history see M. Gichon, “Aspects of a Roman Army in War according to the \textit{Bellum Judaicum} of Josephus,” in P. Freeman and D. Kennedy, edd., \textit{The Defence of the Roman and Byzantine East} \textit{(BAR Int.Ser.} 297 \textit{(Oxford} 1986\textit{)}) 287–310, at 297–298; J. B. McCall, \textit{The Cavalry of the Roman Republic: Cavalry Combat and Elite Reputations in the Middle and Late Republic} (London/New York 2002) 69–72.}

Clearly these descriptions, written in the half century before the compilation of the \textit{Strategicon}, and corresponding closely in detail if not in idiom, describe infantry, and often dismounted cavalry, arrayed in what Maurice calls a φοῖλκον. Indeed, it would not be an exaggeration to say that the φοῖλκον was the archetypal deployment of late Roman infantry. A more complex issue is the extent to which it is possible to identify the φοῖλκον in Roman technical and narrative sources of an earlier date.

\textit{Etymology and antecedents}

The date and circumstances of the adoption of the term φοῖλκον remain a matter of speculation, but certain points may be clarified. Given the compilatory character of the \textit{Strategicon}, and in particular Maurice’s use of earlier documentary material, the first appearance of φοῖλκον in the \textit{Strategicon} is not evidence for the use of terminology that was new at the time of writing, but is instead indicative of the unprecedented vernacular idiom of the treatise and its often unique preservation of Latin technical vocabulary, together with a corresponding
absence of earlier texts likely to have preserved such a technical neologism. Furthermore, those manuscripts of the Strategicon which preserve the Latin commands still in use at the time of writing indicate, despite varying degrees of textual corruption, that φούλκον is merely a Greek transliteration of the Latin *fulcum. Although *fulcum is nowhere attested, the word must have already enjoyed an “institutionalised” usage and, it may be assumed, was part of standard late Roman military vocabulary. At no point does Maurice appear to have deemed it necessary to explain this term or to contextualise it with introductory or epexegetical phrases such as τὸ λεγόμενον or τὸ καλούμενον which might ordinarily indicate its foreign origin or anticipated unfamiliarity to the reader. As Mihăescu remarks, Byzantine literature contains Greek transliterations of numerous evidently late Latin terms which are nowhere directly attested in earlier Latin sources, literary, papyrological, or epigraphic. It follows that there is no reason to assume an especially “eastern” or “Byzantine” scenario for the origin of the term fulcum simply on the basis of its initial appearance, transliterated into Greek, in a late sixth-century East Roman treatise, but rather a broader chronological and geographical setting within late Roman warfare.

There is no modern consensus concerning the etymology of fulcum. In some measure this results from its frequent appearance in tenth-century Byzantine military literature with a quite different meaning from that understood by Maurice, designating rather a body of support troops, usually cavalry, acting as a protective escort to foraging parties. This later development will be discussed below, though it should be noted here that in the Byzantine usage of an originally Latin term it is not necessary to assume that its original etymology or meaning

was understood or preserved. McGeer recently noted that two derivations are current in modern scholarship.  

First, Dagron and Mihăescu derived *φούλκον* from the Latin *furca*, which was for McGeer (citing *Strat.* 12.B.14.9 = Leo 7.66) “certainly the image created by its first meaning of a densely formed body of infantry advancing with spears and shields close together.” The second possible derivation relates *fulcum* to the modern German *Volk*, which, according to McGeer, “matches the sense of the term in the tenth-century treatises where it designates a company of men (usually cavalry) following in support of scattered raiding or foraging parties”; though it is unclear what later “German” contacts McGeer envisages as the inspiration for this tenth-century usage.

To take the etymology based on *furca* first; Dagron’s derivation from *furca* appears to draw on the lexical entry of E. Sophocles, “*φούλκον*: *furca*, wedge, a body of troops drawn up in wedge.” This etymology was accepted in a number of older studies, but Sophocles’ definitions of military terminology are frequently unreliable. Not only is the *φούλκον*/*furca* equation etymologically dubious, but there is no evidence whatsoever that the term *furca* entered Roman military vocabulary, official or vernacular, of any period, either to designate a tactical formation or in any other sense. More to the point, the Latin *furca* simply does not mean a “wedge,” but always a “fork,” literally a two-pronged instrument or artefact; the word is not even attested in the sense of “fork-shaped.”

Mihăescu himself

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43 H. Zilliacus, *Zum Kampf der Weltsprachen im Oströmischen Reich* (Helsinki 1935) 144–145, while believing *φούλκον* to be a “wedge-shaped attack
earlier refuted the equation between φούλκον and furca, noting that the transliterated φούρκα is attested in Byzantine literature only in the literal sense of a “fork” used as an instrument of torture, with the cognate verb φούρκιζειν having the orthographic variant φούλκιζειν.\textsuperscript{44} The derivation from furca is therefore without validity.

We are left with the alternative, Germanic derivation, and it has much to recommend it. The connection between φούλκον and the modern German Volk was first noted by Scheffer in his annotations to the editio princeps of the Strategicon, and this derivation has gained some acceptance.\textsuperscript{45} The earliest attested form is Old High German folc, which conveyed different spheres of meaning equating to “people” or “crowd,” “army” or “host,” “warband” or an army’s constituent formations in battle. The military application is obviously of the greatest interest here. It is attested in every Germanic language except Gothic, including the Old English folc (“host, army”; cf. gefylce “troop, division”), Old Saxon folc (“troop, division”), and Old Norse fólk (“people, host, troop”) with its derivative noun fylki (“array, formation”)


and verb fylkia ("to array warriors in battle formation"). Its early influence on Old Slavonic is evidenced in plūkū (*pulku = “group, band”), which later supplied the standard word for “regiment” or “military unit” in modern Slavic languages. Although folc possessed multiple semantic functions, the earliest linguistic evidence points to this word rarely meaning “army” (a sense usually supplied by heri and its cognates) and most frequently designating the smaller military units, contingents, warbands, or fighting formations comprising an army, and folc and its cognates are variously registered as glosses for the Latin words cohors, manipulus, cuneus, caterva, and legio. The absence from Gothic of a cognate to folc points to a West Germanic linguistic sphere. It is tempting to see the fourth or early fifth century as the most likely period for the adoption of the term folc/fulcum, when numerous units of auxilia were recruited from peoples living east of the Rhine. Their cultural presence in the Roman army in Gaul in the fourth century is signalled by other customs of Germanic origin, such as the barritus, the crescendoing war-cry of the western Germani, and the Schilderhebung, the elevation of new rulers on a shield, though the degree to which these practices denote a broader “Germanization” is


47 From OSlav plūgū (*pulku) e.g. Polish pulk, Russian and Bulgarian polk, Czech and Slovak pluk, Serbian puk.

48 Herold (supra n.46) 184–188; Green (supra n.46) 90–92. Herold and Green perhaps underestimate the currency of the sense “army” (equating to Lat. exercitus). In addition to the testimony they cite for this usage in Old High German (OHG version of Isid. Sev. De fide 4.11, where celestis exercitus is translated himilisca folc), the Old English translation of Orosius sometimes uses folc to render exercitus. The evidence of the Hildebrandslied for OHG usage also strikes the present writer as wholly inconclusive. Nevertheless, the testimony of Old Saxon and Old Norse, the two most conservative Germanic languages, is compelling.
disputed. For the present, it seems probable that writing in the 590s Maurice used a word that had gained a broad currency through popular use in the late Roman army, in effect “military slang.”

It would be easy to conclude that the appearance of the *fulcum*/*φολκόν* is indicative of the “Germanization” of late Roman tactics, but such developments are by no means straightforward. While several recent studies have concluded that generalized notions of “barbarization” of late Roman military institutions and practices can no longer be considered an accurate characterisation, this nevertheless remains one of the most deeply-rooted preconceptions about the period, and one which fails to appreciate the long-term focus of army recruitment upon the least Romanized peoples living both within and beyond the imperial frontier throughout the Principate. It is therefore necessary to question a number of assumptions, including whether the “shield-wall” was characteristic of “Germanic” warfare; whether the Roman infantry *fulcum* described by Maurice was a genuinely new style of fighting unattested in earlier centuries; and how accurate is the direct equation between the meanings of *folc* and *fulcum* in the broader context of Germanic loanwords.

First, does the *fulcum* correspond to an especially Germanic style of fighting? The evidence for the deployment of “shield-walls” by ancient Germanic armies is tenuous, especially before the sixth century.

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51 Before the sixth century, the only possible instance is Caesar’s account of his victory over Ariovistus in 58 B.C., in which he implies some form of shield-
Agathias’ account of a minor action near Rimini in late 553 between Narses’ mounted retinue and some marauding Franks. Faced with the Roman horsemen, the Franks

all massed themselves together, both infantry and cavalry, and deployed in a compact formation, which though not very deep ... was nevertheless made strong by linking shields and drawing in the flanks in good order ... Perfectly protected by their shields, they stood immovable and unshaken, at no point breaking the cohesion of their formation.

All attempts by the Roman cavalry to shoot down the Franks were unsuccessful and they resorted to a feigned flight to lure them into breaking formation.52 The wording of Agathias’ description reflects the conventional phraseology of classicizing historiography, and perhaps also his own stylistic concerns for prose rhythm and rhyme (e.g., καρτεράν δὲ ὁμος τῷ συνασπισμῷ καὶ τῷ τὰ κέρα ἐν κόσμῳ ξυννευκήναι ... ἐκεῖνοι ταῖς ἀσπίσιν ἀριστα περιπεφραγμένοι ἰσταντο ἀστεμφεῖς καὶ ἀδόνητοι, οὕδαμοι τὸ συνεχῆς τῆς τάξεως διασπώντες.

52 Agath. 1.21–22 for the whole episode, quoting 6–8.

wall fronting the “customary” Germanic “phalanxes” (BG 1.52); this is at least how Cass. Dio 38.49 interpreted the passage in the early third century.

52 Agath. 1.21–22 for the whole episode, quoting 6–8.
ing shield-walls is not explicitly attested in antiquity.\textsuperscript{53} The bulk of the evidence relates to the mediaeval period, and then only to certain peoples, notably the ninth- and tenth-century Anglo-Saxons, and even these reports nowhere suggest an arrangement as sophisticated as the Roman fulcum with its multiple tiers of shields.\textsuperscript{54}

At the core of this problem lies the degree of discipline and tactical control in ancient Germanic armies. The Germani were undoubtedly capable of arraying in close-order formations and classical sources routinely describe them drawn up \textit{in cuneos} or \textit{cuneatim}, though how literally “wedge-like” these deployments were remains uncertain. That Roman authors conventionally characterized Germanic (and other barbarian) armies in this way in part merely indicates the absence, from a Roman perspective, of a formal battle line composed of ranks and files, and \textit{cunei} probably has no more specific a meaning than separate “bands” or compact “groupings” determined by kinship or tribal filiation. Both military and societal factors, however, would in reality have required the more experienced and better-equipped warriors—nobles with their personal retinues or warbands (Lat. \textit{comites}, OHG \textit{truht})—to be at the front of these battle formations, and these warriors, relatively few in number, probably provided a tactical spearhead or “point” for the majority of the host levied for the occasion from outside this “professional” group.\textsuperscript{55} In certain circumstances,
these warriors may have linked their shields together to create a compact and cohesive front—this in itself required little if any formal training—but if so this was never a sufficiently regular or distinctive practice for Roman observers to deem it noteworthy or characteristic of Germanic deployment.

The *fulcum* described by Maurice, furthermore, is an altogether more elaborate arrangement, requiring training in specific weapons skills, cooperation in disciplined and well-ordered files, and a considerable degree of command and control, especially if employed during a slow and uniform progress under fire towards the enemy line. If the “shield-wall” of the Frankish “wedge” at Casilinum was anything like the contemporary Roman *fulcum*, it is difficult to square this with the Franks’ advancing “not at a steady pace, nor well-ordered, but, excited by the news they had received, they were gripped by tumult and recklessness” (οὐ μὴν ἰσομερὸι οὐδὲ κατὰ κόσμον, ἀλλὰ τόις ἁγγέλμασιν ἄνεπτερωμένοι θορύβῳ εἶχοντο καὶ προπετείᾳ, Agath. 2.8.7). Even with an appreciation of the ethnographic stereotyping inherent in Roman accounts, all the evidence—written and archaeological—points to Germanic forces relying on the shock tactics of unexpected, massed charges by compact warbands which sought to overwhelm the enemy battle line, or isolated and unprepared detachments, by their speed, suddenness, and psychological impact, rather than the formal, steady advance and sustained mêlée that are the context of Maurice’s *fulcum*. Throughout antiquity the limitations of their defensive equipment and offensive weaponry made Germanic forces ill-suited to the style of fighting Maurice describes; in direct confrontations requiring prolonged hand-to-

hand combat with Roman infantry Germanic warriors were at a
disadvantage in almost every respect—training, armour, weap-
onry, missiles, and cohesion—even after the acquisition of
Roman equipment or imitation of Roman models from the late
second century. Furthermore, Roman sources, partly confirmed
by archaeology, indicate that Germani in the later period tended
to avoid close-quarter engagements or pitched battles al-
together, at least when fighting the Romans, in preference for
irregular tactics on obstructed or uneven terrain. 56 Maurice’s
own analysis of the fighting methods of contemporary Germanic
peoples not only omits all mention of shield-walls but character-
ises their attacks as hasty and undisciplined assaults. 57 In these
circumstances, the *fulcum*, a systematic and tightly-controlled

56 On Germanic weapons and tactics generally see Gundel (supra n.55)
passim; E. A. Thompson, The Early Germans (Oxford 1965) 111–115; Golds-
worthy (supra n.14) 42–53. The conclusions from archaeological evidence are
usefully summarised by M. Todd, The Northern Barbarians (Oxford 1987)
140–162, esp. 149–152, 155–161; with additions by N. Ziebing, Studien zu
germanischen Schilden der Spätlatène- und der römischen Kaiserzeit im freien
Germanien [BAR Int.Ser. 505 [Oxford 1989]]; W. Adler, Studien zur germani-
schen Bewaffnung, Waffenmitgabe und Kampfesweise im Niederbegebund
im übrigen Freien Germanien um Christi Geburt (Bonn 1993); for the later
period specifically see Elton (supra n.50) 60–72, 80–82.

57 Strat. 11.3.3–23, “They favour infantry combat and headlong assaults. They
deploy in combat, either on foot or on horseback, not to any set measure-
ment or in formation, either in brigades or divisions, but according to tribe or
by shared kinship or allegiance … Either on foot or on horseback, the attacks
they make are fierce and uncontrollable … they have contempt for order”
(χαίροντες δὲ τῇ πεζομαχίᾳ καὶ τοῖς μετ’ ἔλασσας ἐμπέσοις, τάσσονται δὲ ἐν
tαῖς μάχαις εἰτε πεζῇ, εἰτε ἐπὶ τῶν ἱππῶν, οὐ μέτρου τινὶ ὀρισμένῳ καὶ τάξιι,
ἢ ἐν μναίας, ἢ ἐν μέρεσιν, ἀλλὰ κατὰ φυλὰς καὶ τῇ πρὸς ἄλληλοις συγγενεῖα
tε καὶ προσπαθείει … τάς δὲ συμβολάς, εἰτε ἐπὶ τῶν ἱππῶν, εἰτε πεζῇ,
σφοδράς καὶ ἀκατασχέτως ποιούσιν … τάξεως περιμενόντας). Too much should
not be made of Maurice’s comment that “they make the front of their battle line
even and dense” (ἔσον δὲ τὸ μέταπον τῆς παρατάξεως ἀυτῶν καὶ πυκνῶν ἐν
tαῖς μάχαις ποιούσιν, 16–17); he makes precisely the same comment about the
very different battle deployments of both Persians and Avar armies: 11.1.27,
καὶ τὸ μέταπον τῆς τάξεως ἑσον καὶ πεπυκνωμένον ἐχειν; 11.2.51, καὶ ἑσον
ποιοῦσι καὶ πυκνῶν τὸ μέταπον. By this phrase Maurice merely means that these
were peoples who deployed in some sort of close-order, as oppose to the Slavs,
for example, who always fought in loose array; contra Delbrück (supra n.55)
42–43, 50, 55, who found here an explicit vindication of his conception of the
Germanic *cuneus*; followed by I. Lebedynsky, Armes et guerriers barbares au
linkage of shields by two or three successive ranks to form a substantial, multi-tiered “shield-wall,” is far more reminiscent of traditional Roman tactical procedures like the testudo, still attested as a siege technique in the fourth century, than any practice recognisable among their Germanic enemies. Indeed, given the late date of explicit evidence for Germanic shield-walls, the development of close-order tactics among Germanic peoples following Roman models is arguably a more likely long-term pattern in the exchange of military techniques than Roman imitation of Germanic warfare.\textsuperscript{58}

In light of these considerations, it is important to establish whether Maurice describes a new Roman practice or whether what he terms a φούλκον can in fact be identified in earlier Roman military history, and especially in a period when modern historians less readily explain changes in practice and terminology in terms of “barbarization” of Roman military institutions, techniques, and personnel. Recognition of the φούλκον or its antecedents in earlier Roman tactica is obfuscated by certain characteristics of the genre, including its classicizing vocabulary and attachment to ancient literary models, but primarily because of the relatively narrow concerns of the surviving works, which tend to be primarily poliorcetica, collections of stratagems or antiquarian treatments of the classical-hellenistic phalanx. In particular, detailed discussions of how Roman infantry should deploy against mounted opponents, which might provide parallels with Maurice’s anti-cavalry φούλκον, are rare indeed. The only other “technical” treatment of this subject is Arrian’s Ectaxis, a version of which, as previously noted, was undoubtedly available to Maurice when he

\textsuperscript{58}The subject requires further study. For example, Tacitus (Ann. 2.45) remarks that some Germani (apparently the Cheruci) had learned close-order tactics and deployment in their wars with the Romans. Similarly, he also implies (Germ. 30) that the Chatti had begun to imitate certain features of the Roman army, even entrenching their encampments. Both the Cheruci and the Chatti were primary targets of Roman campaigns in the first half of the first century A.D.
composed chapter 12.A.7. Written in the context of Arrian’s success in repelling an Alan incursion into Cappadocia in A.D. 135, this opusculum outlines a battle plan for the provincial forces available to him. Whether or not this engagement was ever fought, the Ectaxis provides the most detailed account of the deployment of imperial Roman troops in order to repel a frontal attack by a large force of cavalry. Ideally, Arrian hoped to deter the Alans by missiles and archery alone, thus avoiding close-quarters combat altogether (25–26), but should this fail the legionaries, drawn up eight deep in close order, were to form a physical barrier and resort to countermeasures very similar to those in the Strategicon:

\[
ei\text{ ςη ρελάζωτεν, ἐχρίμψαντας ταῖς ἀσπίσι καὶ τοῖς ὁμοίς ἀντερείσαντες δέχεσθαι τὴν προσβολήν ὡς καρτερώτατα καὶ τῇ συγκλείσει πυκνότατη τάς πρώτας τρεῖς τάξεις ἐξερειδούσας σφίσιν ὡς βιαίοτατον ὀνόν τε· τὴν τετάρτην δὲ ὑπερακοντίζειν τάς λόγχες· καὶ τὴν τρίτην παῖειν ἡ ἀκοντίζειν τοῖς κοντοῖς ἀφειδῶς ἐς τε ἵππους καὶ συνὼς·
\]

If [the enemy cavalry] do approach, the first three ranks, closing their shields together and exerting pressure with their shoulders, should receive the attack as steadfastly as possible and locking together very closely, pressing themselves together as firmly as they are able. The fourth rank should throw javelins overhead, while the third rank should strike with their spears or throw them like javelins unstintingly at both horses and riders.60


60 The Greek text, based on the single corrupt and lacunose MS., is that of Roos/Wirth (Leipzig 1968), which is sufficient for the present purpose. The phrase “the fourth rank should throw javelins overhead” (τὴν τετάρτην δὲ ὑπερακοντίζειν τὰς λόγχες) has prompted much debate and often extensive emendation, since earlier (16–18) Arrian makes clear that the front four ranks were in fact armed with κοντοί (= pilae), while ranks five to eight were λογχοφόροι (= lancearii). I shall argue elsewhere the case for the the small emendation τὴν τετάρτην δὲ ὑπερακοντίζειν τὰς λοπάς (τάξεις), that is to say, “the fourth rank should shoot over the heads of the other (ranks).” In the normal usage of ὑπερακοντίζειν the projectile would actually be in the dative, while the ac-
To illustrate the close parallels between the texts it is worth repeating Maurice’s regulations (12.A.7.49–60, Greek *supra* 276):

If the enemy [cavalry], coming within a bow shot, attempts to break or dislodge the phalanx ... then the infantry close up in the regular manner. And the first, second and third man in each file are to form themselves into a *fulcum*, that is, one shield upon another, and having thrust their spears straight forward beyond their shields, fix them firmly in the ground ... They also lean their shoulders and put their weight against their shields so that they might easily endure the pressure from those outside. The third man, standing more upright, and the fourth, holding their spears like javelins either stab those coming close or hurl them and draw their swords.

In Arrian’s deployment the four ranks to the rear were λογχοφόροι (*lancearii*) armed with javelins (λόγχες = *lanceae*), which, as in the *Strategicon*, they hurl over the heads of the first four ranks; while stationed at the rear, again as in Maurice’s description, the light infantry and cavalry bring their archery to bear at a higher trajectory (*Ect.* 15–21, 26).

Arrian’s bald series of instructions leaves many aspects of his *Ectaxis* ambiguous; indeed his failure to explain in detail how these instructions played out on the ground may imply an assumption on his part of the reader’s familiarity with the basic procedures he describes. In particular, no modern commentator has successfully explained how the front three ranks “close their shields together and exert pressure with their shoulders” in order to fight as a single battle line. It is very tempting to re-read Arrian’s text in light of Maurice’s description of an anti-cavalry *φολκόν* of his own period. This would suggest that Arrian’s first and second ranks similarly knelt and stooped respectively,

cusative applies to the object or person the projectile overshoots, in this case the other three ranks mentioned in the preceding clause. In addition, I can find absolutely no justification for Mommsen’s suggestion that τὴν τρίτην must be τὴν πρῶτην, as accepted by Roos. Bosworth (*supra* n.59) 240 n.94 rightly argues that this emendation actually creates far more inconsistencies within the description than it resolves; indeed comparison with the text of the *Strategicon* strongly supports the MS. reading τρίτην.
thrusting forward their *pila* and securing the butt-ends into the
ground, while the third rank stood upright. The front three ranks
of legionaries would therefore form a “shield-wall” of three tiers
of *scuta*, with each successive rank resting the rims of their
shields on the shield-bosses of the rank in front, and thus
constructing a sloping bulwark *ca* 2 to 2.5 metres in height.\(^{61}\)

That this proposition is at least feasible is indicated by
another account of Roman infantry deploying in the face of a
powerful cavalry force. Plutarch describes the deployment of
Mark Antony’s legionaries against Parthian cavalry in 36 B.C.:

\[\thetaυρεοφόροι \ συνέκλεισαν \ εἰς τῶν ὀπλῶν τούς \ ψιλούς, \ αὐτοὶ \ δὲ \ χαθέντες \ εἰς \ γόνυ \ προὐβάλλοντο \ τοὺς \ θυρεούς· \ οἳ \ δὲ \ ὀπίσθεν \ ύπερέσχον \ αὐτῶν \ τὰ \ ὀπλά, \ κάκεινου \ ὑμοίως \ ἔτεροι. \ τὸ \ δὲ \ σχῆμα \ παραστάλισιον \ ἐρέψει \ γινόμενον \ ...\]

the legionaries locked the light infantry within their ranks;
some [legionaries], dropping down on one knee, positioned their
*scuta* in front of them, while those behind [i.e. the second rank]
covered them with their shields, and others [the third rank]
likewise covered them. The appearance closely resembled a
sloping roof ...

From behind this “shield-wall,” Antony’s legionaries “struck
with their *pila* at close quarters” (τοῖς \ ύποθεῖς \ παῖοντες \ ἐκ \ χειρῶς) the foremost Parthian cavalry.\(^{62}\) Accepting the different
idiom and purpose of each author, and the arms and equipment
particular to each period, Plutarch’s narrative broadly cor-
responds to both Arrian’s *Ectaxis* and Maurice’s *φούλκον*.

The foregoing comparison suggests that Maurice’s late sixth-
century *φούλκον*, the contemporary utility and historicity of
which is demonstrated by contemporary historical narratives,
differed little, *mutatis mutandis*, from the early second-century

\(^{61}\) Surviving examples of legionary *scuta* of the Principate range in height be-
tween about 100 cm. and 125 cm. See the helpful survey of Goldsworthy (*supra*
n.14) 209–212.

\(^{62}\) Plut. *Ant*. 45; cf. also 49, “but the soldiers, again covering one another with
their shields in the same manner, withstood their assailants who did not dare
to come to close quarters” (οἳ \ ὀπίσθεν \ ὑπέρέσχον \ τοὺς \ βάλλοντας, \ ἔτεροι \ ὑπό \ τολμώντας \ συνελθέν).
deployment described by Arrian, and even earlier practices dating to the late Republic. Indeed the similarity was such that Maurice was able to adapt Arrian’s text to contemporary circumstances and terminology, and given the intervening period and markedly dissimilar idiom Maurice’s text retains significant conceptual features of Arrian’s original and even traces of verbal influence. 63 The deployment Arrian describes in the Ectaxis is often characterised as “a one-off stratagem” or “a regional variation,” rather than the standard Roman tactical response to a powerful force of cavalry. 64 Maurice’s sixth-century reprise of Arrian’s text, combined with the appearance of very similar formations in late Roman narratives, implies a continuous Roman tradition in approaching this particular tactical problem, rather than an occasional aberration from “regular” deployment.

Arrian nowhere names the deployment he outlines in the Ectaxis, though his phrase “a very close locking together” (τὴν συγκλειστὴν πυκνοτάτην) may be instructive. In his other tactical treatise, the Ars Tactica, he employs σύγκλεισις to mean specifically the locking together of shields or συνασπισμός involved in forming a χελώνη or testudo, which he categorizes as one type of “compact phalanx” (φάλαγξ πυκνότερα). 65 Even

63 E.g., Maurice’s remark that the front ranks are to “fix [their spears] firmly into the ground” (ἀντερείδειν γενναίος τῇ γῇ). His use of ἀντερείδειν here, and nowhere else in the Strategicon, even when he later describes precisely the same action of the front ranks fixing their spear-butts into the ground (12.B.16.45–46), is inspired by the participial ἀντερείςαστες and then ζωγρεῖος in quick succession in the corresponding passage in Arrian (Ect 26).

64 C. M. Gilliver, The Roman Art of War (Stroud 1999) 114–117, who nevertheless sets this “one-off stratagem” in the context of regular variation and “unorthodoxy” in Roman tactics. Wheeler (supra n.2) does much to contextualise the apparent oddity of Arrian’s deployment. See also J. B. Campbell, “Teach Yourself How to be a General,” JRS 77 (1987) 13–29, at 24–27; Goldsworthy (supra n.14) 17–18, 135.

65 Arr. Tact. 11.6 for τὴν συγκλεισιν. His description of the testudo at 11.4–5: “the men stationed around the edge position their scuta in front of them, while the men stationed behind them position theirs above their heads, each man raising his above another man” (οἱ μὲν ἐν κύκλῳ ... ἑστηκότες τοὺς θυρεούς προβλέπουσι πρὸ σφῶν, οἱ δ’ ἐφεστηκότες σωτοῖς ὑπὲρ τῶν κεφαλῶν ἄλλος ὑπὲρ τοῦ ἄλλον ὑπεραυφήσας προβάλλεται). This passage does not appear in the corresponding section of Aelian’s Tactica Theoria and must therefore be
though Plutarch never uses the term, a *testudo* is certainly what he describes operating against Parthian cavalry in 36 B.C., as later authors recognised.\(^{66}\) The usage of the term *testudo* was more flexible than is often supposed; as early as the first century A.D. *testudo* and *χελώνη* might be broadly applied to any compact, well-shielded formation in the field, outside the sphere of siegecraft traditionally associated with these terms.\(^{67}\) The more frequent occurrence of battlefield deployments that explicitly resemble a *testudo* from the early third century reflects gradual changes in the deployment and tactics of Roman infantry. A fragment of the near-contemporary Cassius Dio provides a report of the battle of Issus in 194 between the forces of the imperial rivals Septimius Severus and Pescennius Niger: “when they came to close quarters, the Severan forces held forth their shields, some of them in front of them and some of them above them, in the manner of a *testudo*, and thus they came to close quarters with their opponents” (ἐπεὶ δὲ ἐξ χείρας ἤσσαν, τῶν Σεουρείων τὰς ἀσπίδας τὰς μὲν προβαλομένων τὰς δὲ ἐπι- βαλομένων ἐξ χελώνης τρόπον, καὶ οὐτω πλησιασάντων τοῖς

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\(^{66}\) Cass. Dio 49.29.4, closely following Plut. *Ant.* 45, identifies this formation as a *χελώνη*, though his subsequent explanation of the function and operation of the *testudo* at 49.30.1–4 betrays confusion. Dio appears to have misunderstood certain aspects, claiming that all the troops knelt down with the purpose of springing up and confounding their opponents. Interestingly, Livy 44.8, describing the application of the *testudo* to siege warfare, reports that it was sloped to allow men to climb up it. He notes that the ranks decreased in height towards the rear, successively crouching lower and finally kneeling down, and that they managed to manoeuvre even in this manner (stantibus primis, secundis summissoribus, tertis magis et quartis, postremis etiam genu nixis, fastigatam, sicut tecta aedificiorum sunt, testudinem faciebant). Cf. the very similar description by Amm. Marc. 26.8.9. This at least indicates that legionaries were trained to position themselves and manoeuvre in such difficult postures.

\(^{67}\) E.g., Livy 32.17.13 describes the Macedonian phalanx as a *testudo*. The term *testudo* often meant “shield-linkage” in the broadest sense, equating to *συνασπομόν*, see Wheeler (*supra* n.2) 307–309.
The offensive application of an apparently "testudo-like" formation in the field on this occasion possibly reflects the circumstances of a civil war, which pitted troops with identical weaponry, training, and tactics against one another, but also the difficult tactical circumstances for the Severan forces. Niger’s army, particularly strong in missile troops, deployed on steep and narrow terrain within the Cilician Gates. The purpose of the testudo was to approach this well-defended position under enemy heavy fire, while providing cover for the Severan light troops to the rear of the testudo as they shot overhead at the enemy.

Very similar circumstances feature in another likely instance of this deployment by Roman infantry in 272, a report of which is preserved by Zosimus, apparently drawing on contemporary notices of Aurelian’s campaign against Palmyra. After Aurelian defeated the Palmyrene army at Immae and occupied Antioch, the Palmyrene rearguard occupied a prominent hill overlooking the suburb of Daphne, blocking further Roman progress by this commanding position (τῷ ὑπερδεξίῳ τοῦ τόπου). Accordingly, “the command was given to the soldiers to link their shields together and in a dense phalanx make a direct ascent and with the density of their phalanx deflect the missiles and boulders, if (the enemy) should happen to discharge these” (ταῖς στρατιώταις ἐνεκελεύσατο συνασπισσαμένοις καὶ πυκνὴ τῇ φάλαγγι τὴν πρῶς τὸ ὄρθιον ἀνάβασιν ποιουμένοις τὰ τὲ βέλη καὶ τῶν ὀλοιτρόχους, εἰ καὶ τούτων τυχόν ἐπαφείν, τῇ πυκνότητι τῆς φάλαγγος ἀποσείσασθαι). Making the ascent “according to their orders” (κατὰ τὸ προσταχθὲν), the Roman infantry succeeded in driving their opponents from the summit.

68 Cass. Dio 75.7.5.
69 Zos. 1.52.1. SHA Aurel. 25.1 appears to confuse this action with the battle of Immae. See notes in F. Paschoud, Zosime, Histoire Nouvelle² (Paris 2000) I 170–171. The source(s) of this section of Zosimus are uncertain; Dexippus’ historical narrative went up to 268 and his later work on Aurelian related only to the emperor’s “Scythian” wars. The account of the Palmyrene war contains much incidental detail characteristic of a contemporary source, which
The more abundant evidence for fourth-century warfare suggests that by this date Roman infantry routinely deployed in a manner similar to Maurice’s “text-book” description of how a φωλικον should operate on the battlefield. In Ammianus’ vivid depiction of the Roman line at Strasbourg in 357, Julian’s infantry, armed and equipped in substantially the same manner as Maurice’s, first “-fashioned a front with their bucklers joined fast together” (frontem artissimis consenens parmis), then “covering their heads with barriers of shields” engaged at close quarters the Alamanni, who “by incessant sword blows broke asunder the tightly-bound structure of shields, which protected our men like a testudo” (scutorum obicibus vertice tegens ... nexamque scutorum compagem, quae nostros in modum testudinis tuebatur, scindebant ictibus gladiorum assiduis). Similarly, against Moorish tribes in North Africa in 373, the Roman infantry “pressed side to side in close order and with their shields closely held together in the form of a testudo, stood fast and resisted” (densetis lateribus, scutisque in testudinis formam cohaerenter aptatis, resiterunt gradibus fixis, 29.5.48); while against the Goths in 376, “the shields were fixed side to side in the form of a testudo, and they stood toe to toe” (et scutis in testudinum formam coagmentationis, pes cum pede collatus est, 31.7.12). Ammianus’ references to the testudo do not denote the shed-like formation more attested in siege warfare; he is careful to convey that this battlefield deployment possessed “the form of a testudo” (in modum testudinis, in testudinis formam), and in this his wording is identical to Cassius Dio’s (ες χαλωνης τρόπον). Rather Am-
mianus fashions this classicizing periphrasis to describe the contemporary “shield-wall” that fronted the Roman battle line, or as Galletier and Fontaine comment, “une tortue verticale, où les boucliers forment comme une muraille de métal devant le rang des combattants.”72 To some extent the language of these passages reflects Ammianus’ literary interests and stylistic models, but there is no reason to believe that the battle descriptions of this experienced army officer were actually inconsistent with contemporary reality. Accepting the rhetorical contrast between controlled Roman immobility and uncontrollable barbarian onslaught, throughout his historical narrative Ammianus presents this style of fighting, which may already be discerned in the third-century, as characteristic of and unique to Roman troops (regardless of their ethnicity), and distinct from the attacks of their less disciplined adversaries, be they Alamanni, Goths, or Moors.73 The more frequent appearance of these tactics in later Roman warfare possibly relates to increased contact with mounted opponents, especially in the eastern provinces, against whom a more defensive deployment was traditional, but it is also reflective of broader changes in the roles, equipment, and practices of Roman infantry from the early third century, whereby the offensive “shock and charge” of the late Republic and Principate gradually gave way to less aggressive tactics in which compact and less manoeuvrable formations checked enemy attacks while showering their opponents with a sustained barrage of missiles, though the stages

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modum testudinis contextorum). By contrast, 20.11.8, 24.4.15 report the actual testudo formation in action in the context of a siege.


of this transformation are imperfectly attested in the sources.\textsuperscript{74} These changes may in turn mirror the essentially defensive strategy and low-intensity warfare of the period, in which the dangers of defeat in a large-scale action on home territory far outweighed the benefits of victory.

Finally, it is worth noting that terms other than \textit{testudo} or \textit{fulcum} may have been used in the late Roman period to describe similar tactical procedures. Appended to Book 12 of the \textit{Strategicon} is a short treatise on large-scale hunting as a useful adjunct to tactical training (12.D). This was originally a separate tract, though undoubtedly close in date to the \textit{Strategicon}.\textsuperscript{75} In the process of its incorporation into the \textit{Strategicon} the compiler made some stylistic and conceptual revisions so that the piece more closely corresponded with the rest of the treatise, but still terminological and idiomatic eccentricities remain which mark its earlier independence. One of these is the word \textit{sōskouτoν}, which appears nowhere else in the \textit{Strategicon}. The author writes that in order to prevent smaller animals escaping from the ever-decreasing circle of mounted archers, infantry should “stand with their shields linked together” (\textit{ιστῶν σύσκουτα}).\textsuperscript{76} This term for “shield-linkage” is clearly a hybrid formed from the preposition \textit{σῶν} and \textit{σκούτον}, a Greek transliteration of \textit{scutum}, presumably formulated by analogy with \textit{συνασπισμός} (\textit{σῶν + ἄσπις}). This is all the more interesting, given that a later Byzantine text explicitly states that \textit{sύσκουτον} was a contemporary popular synonym for \textit{testudo}; the author of the mid tenth-century \textit{Sylloge}

\textsuperscript{74}For these tactical developments see Wheeler (\textit{supra} n.2) 314–318; Nicasie (\textit{supra} n.49) 207–214; Haldon (\textit{supra} n.29) 192–193, 205–208; A. R. Menéndez Argüín, “Evolución del Armamento del Legionario Romano durante el s. III d.C. y su Reflejo en las Tácticas,” \textit{Habis} 31 (2000) 327–344; Rance (\textit{supra} n.50).

\textsuperscript{75}\textit{Strat.} 12 D, Περὶ κυνηγίων. πάς δὲι ἁγριὰ κυνηγεῖν βλάβης καὶ συμπτώματος καὶ συντρίβῆς χαρῆς. This piece is usually, and wrongly, attributed to Urbicius, the early sixth-century \textit{stratégiste en chambre}, an ascription which derives from the mistaken manuscript tradition that the \textit{Strategicon} itself is by that author. For comment see Rance, “\textit{Simulacra}” (\textit{supra} n.9) 254–258.

\textsuperscript{76}\textit{Strat.} 12.D.80–84. See Mihăescu, “éléments” I.492–493. In this phrase \textit{sύσκουτα} appears to be adverbial.
Tacticorum refers to troops deployed “in a single battle formation that is called a ‘tortoise’, which popular parlance now also designates σύσκουτον” (ἐν μόνη δὲ ἀρα τῇ τῆς χελώνης καλομέγη παρατάζει ὁ δὴ καὶ σύσκουτον ἢ δημόδης ὀνομάζει φωνή). The term was also used by several other Byzantine authors and compilers in the sense of “shield-linkage.” The meaning of σύσκουτον in 12.D appears to be distinct from φοῦλκον in being merely a simple barrier of shields, but the Sylloge Tacticorum at least points to a potentially greater diversity in terminology, at different literary registers, than the extant texts imply.

In the foregoing survey it has been argued that Maurice’s Strategicon indicates the late Roman adoption of the Germanic word folc as a popular designation for a close-order battle formation. Earlier Roman sources suggest that this “testudo”-like deployment was not an innovation of the late Roman period, but may be identified, in particular tactical circumstances, from the early second century A.D., and probably even in the late Republic, albeit then just one element in a more extensive tactical repertoire. The indications of a pre-existing Roman tradition, together with broader military and cultural differences between Roman and Germanic armies, make a Germanic inspiration for the late Roman fulcum at best unlikely. This conclusion, however, leaves the application of a Germanic loanword to an apparently Roman formation unexplained. Certainty on this point is elusive; Maurice, our only contemporary witness to late Roman usage, wrote in the 590s,

77 Sylloge Tacticorum quae olim “Inedita Leonis Tactica” dicebatur, ed. A. Dain (Paris 1938) 43.7.
78 Du Cange 1494 “scutorum conjunctio” is an unhelpful entry; Sophocles omits the term. Cf. Leo Tactica 18.122 (PG 107.976), 19.14 (996) (cf. variants in so-called Leo De navali praelio 15, and Nicephorus Uranus Tactica 54.13, both edited in A. Dain, Naumachica [Paris 1943] 22, 75). The word also appears in some of the various Byzantine abridgements and paraphrases of Polyænus’ Strategemata: Excerpta Polyænii 49.2, in Polyænii Strategemata, ed. E. Wölfflin and I. Melber (Leipzig 1887); from which derive both Strategemata Ambrosiana 47.1, ed. in J.-A. de Foucault, Strategemata (Paris 1949) 60, and Farecbolae 36 (de Foucault 107).
when this word already enjoyed an institutionalised currency, and so is of only indirect value in determining the circumstances in which it was first adopted, while the Germanic linguistic evidence derives from a still later period. Nevertheless, it is clear that for Maurice at least the defining characteristic of the *fulcum* was the shield-wall, not merely close-order deployment.\(^{79}\) In contrast, a shield-wall was never an intrinsic component of the Germanic *folc*, which was a generic designation for a battle formation or a division within a larger host. Even when shield-walls are attested in the much later vernacular literature, *folc* and its cognates do not acquire this sense; a range of more explicitly descriptive terms developed for this phenomenon, such as the Old English *scildweall*, *scyldburh*, or *bordweall* (“shield-wall”), or *bordhaga* (“shield-hedge”) or *wihaga* (“battle-hedge”).\(^{80}\) This is not to deny the linguistic connection between *folc* and *fulcum*—etymological borrowings are often founded upon the partial comprehension or misunderstanding of the original sense of the loanword—but the difference in meaning tends to confirm that this is not a clear-cut case of simultaneous tactical and etymological borrowing.

In this context, it is important to consider the number and character of Germanic loanwords in Roman military terminology (whether attested in Latin or indirectly as loans or transliterations in Greek) with an awareness of the complexities of borrowing practices at the varying levels of official nomenclature, technical terminology, or military slang. There are in fact very few Germanic loanwords in this category and this in itself

\(^{79}\) At *Strat.* 12.A.7.52–53, “the first, second, and third man in each file are to form themselves into a *fulcum*, that is, one shield upon another” (καὶ τῶν μὲν πρῶτον καὶ δεύτερον καὶ τρίτον ἕκαστης ὕκις εἰς φώλακον καθίστασθαι, τούτῳ ἐν ἔν σκούταριν). Similarly at 12.B.16.33–8 the order *ad fulco* causes the front two ranks of an already compact formation to construct a shield-wall; the remaining ranks take no other action.

marks out *folc/fulcum* as an atypical case. This dearth should not surprise; historically there is a tendency for “foreign legions” to acquire a functional proficiency in the *Heeressprache* of their imperial paymasters, rather than increase the currency of their native vocabulary. The greater prestige, complexity, and technological sophistication of the Roman army, and Roman culture generally, also meant that the traffic of loanwords generally flowed in the opposite direction.

The few Germanic loanwords conform in character to one of several types. First, in some instances the introduction into the Roman army of a genuinely new phenomenon entailed the simultaneous adoption of its original foreign name, a case of borrowed nouns for borrowed things—e.g. *tufa* (*τούφα*; dim. *τούφιον*), a type of standard or plume; *barritus*, the war-cry of the western Germani. Second, in contrast to these culturally-specific loanwords, others represent a nominal borrowing only.

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81 Germanic loanwords in Roman military terminology have often been discussed, but no author offers a comprehensive list; see J. Brüch, *Der Einfluss der germanischen Sprachen auf das Vulgärlatein* (Heidelberg 1913) 15–17, 19; E. Gamillscheg, *Romania Germanica: Sprach- und Siedlungsgeschichte der Germanen auf dem Boden des alten Römerreiches* 2 (Berlin 1970) 18–19; T. Kolias, “Tradition und Erneuerung im frühbyzantinischen Reich am Beispiel der mili-

a new word applied to a pre-existing Roman item or practice, though the correspondence may be inexact—e.g. *burgus*, a stronghold; *carrago*/*καραγός*, a baggage train. Third, some words or expressions are less straightforward and may be the product of either process—e.g. *bandum*/*βάνδος*, a standard, *caput porci*(num), an infantry formation. Fourth, other late

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83 *Burgus* appears to apply to any small-scale defensive installation, without an apparent “Germanic” character, see Kempf (supra n.1) 364–365. *Carrago*, a “Gothic” word (Amm. Marc. 31.7.7), has an unclear etymology of which the first element may itself be Latin or Latinised, see Green (supra n.46) 185. Fourth-century Roman authors apply *carrago* only to the wagon laagers of the Goths (SHA Gall. 13.9, Claud. 8.2.5, Aurel. 11.6; Amm. Marc. 31.7.5–7); and apparently described but not named by Zos. 1.45.1 (following Dexippus?) writing of the 250s; though “all barbarians” according to Veg. Epit. 3.10 (cf. Amm. Marc. 31.2.18 for the same practices among the Alans). Two centuries later, Maur. Strat. 12.8.7.10, 18.2, 22.99.122, 23.4; C.2, is the first attested use of *καραγός* in a Roman context, but apparently refers to a traditional Roman baggage train without Germanic features; see Kempf 347, 365; Mihaescu, “éléments” I.498.

84 During the fifth century *bandum*/*βάνδος*, from the Gothic *bandwa* or *bandwo*, or Lombardic *bando*, became the most common term for a military standard (Procop. 4.2.1, 10.4; Theoph. Sim. 3.4.4; Paul. Diac. Hist.Lang. I.20; C.Gloss.Lat. II 28.40, V 505.7; Maur. Strat. passim, see also the otherwise unattested *βανδεφός* [= Lat. *bandifer* in Strat. 3.5.7). Like the former word *vexillum*, *bandum* came by extension to apply also to the body of troops following the standard, though this usage is not attested before the *Strategicon*, throughout which *βάνδος* designates both any type of standard and the smallest tactical unit. Given the later general application of *bandum* to all styles of Roman military standard, it is difficult to determine whether the loan took place in the context of the Roman adoption of a specific type of “Germanic” standard, or was merely a nominal borrowing. Suggestive of the latter is Paul. Diac. I.20, who equates *bandum* with *vexillum*, and Procop. 4.2.1, who possibly refers to the traditional *vexillum praetorium*. On the other hand, the *βάνδα* in the *Strategicon* appear to be a new type of “flag,” in the modern sense, rather than the *vexillum*-style “banner” suspended from a horizontal cross-piece. See Kempf (supra n.1) 348–349, 368–469; G. T. Dennis, “Byzantine Battle Flags,” ByzF 8 (1982) 51–59.

85 Some late fourth-century Roman writers refer to an apparently “wedge-shaped” infantry formation which contemporary soldiers’ slang designated “the pig’s head”—*caput porci,* *caput porcinum* or perhaps simply *porcus* (Amm. Marc. 17.13.9; Veg. Epit. 3.19; possibly Augustine De did. 6). Two centuries later Agath. 2.8.8 describes a giant Frankish-Alamannic “wedge” in similar terms, though the aptness of his usage and the historicity of his whole account are uncertain. Some earlier scholars pointed to the occurrence of the *svín-fylking* or “swine array,” a seemingly sharply-pointed “wedge” of troops mentioned in mediaeval Scandinavian literature, in no case predating the eleventh century. On this basis they assumed the fourth-century Roman *caput porci*(num) to be a Latin translation of a similar term common to earlier Germanic peoples. I plan to examine the validity of these assumptions in a separate study.
Roman military terms have had a Germanic etymology thrust upon them which now seems doubtful or straightforwardly wrong—e.g. τούλδος, later τούλδον, another term for a baggage-train,\textsuperscript{86} ὀελός (ὁρνόγος), a cavalry deployment;\textsuperscript{87} σκούλκα, reconnaissance or sentry duty.\textsuperscript{88}

The evidence for a long-standing Roman tradition of “shield-walls” suggests that the second of these types is the most likely model for the dynamics of the loan \textit{folc/falcum}, especially as the linguistic evidence points to different conceptions among Germanic- and Latin-speakers. On the one hand, the general scarcity of Germanic loanwords suggests that in this rare instance Germani recruited into the Roman army continued to employ a word from their own language precisely because it

\textsuperscript{86}τούλδος is another late term for the army’s baggage-train and the standard terminology in Byzantine treatises (first attested Urbicius \textit{Tacticon} 11, but very likely a later interpolation; Maur. \textit{Strat. passim}, esp. Bk. 5; Theoph. Sim. 2.4.1); see P. Collinet, “Sur l’expression ΟΙ ΤΟΣ ΤΟΥΛΔΟΣ ΑΠΕΡΧΟΜΕΝΩΙ ‘ceux qui partent dans les bagages,’” in \textit{Mélanges Charles Diehl} (Paris 1930) I 49–54; Dain (supra n.44) 161–169.

\textsuperscript{87}Historians of the late Roman army have long assumed a Germanic derivation for ὀελός, a compact, non-linear cavalry deployment suited to irregular operations, but for over a century philologists have almost unanimously granted the Gaulish origin of this word; see Rance (supra n.9).

\textsuperscript{88}Throughout the \textit{Strategicon} σκούλκα, σκούλκετεῖν, and σκούλκατορεῖ are standard terms associated with reconnaissance, scouting, military intelligence (σκούλκα also in Theoph. Sim. 6.9.14; \textit{Chron. Pasch.} 724, 730; and in Syriac, Joh. Eph. HE 6.10). Some MSS. of Cassiod. \textit{Variae} 2.20 refer to σκολκατορία ['sulcatorias', apparently "freight ships." Maurice’s σκολκατορεῖ corresponds clearly to the \textit{exculcatores} in Veg. \textit{Epit.} 2.15, 17; \textit{Not.Dign.Occ.} 5.173 = 7.20, 5.175 = 7.122, 5.207. The verb προσκολκετεῖν (\textit{Strat.} 4.3.101, 9.5.90, cf. Joh. Mal. 253.68–70 προσκολκατορεῖ) implies unattested Latin *prosculcare; cf. Amm. Marc. 17.10.10 for \textit{proculcatores} (J. C. Rolfe [Loeb ed.] is unjustified in emending this hapax to \textit{procuratores}; cf. ed. W. Seyfarth [Stuttgart/Leipzig 1999] II 53). Most philologists have preferred to derive σκούλκα (via Latin *sculca) and cognate terms from a Germanic root (cf. English \textit{skulk}), though the linguistic case is disputed; certainly no novel “Germanic” quality can be recognised in these long-established Roman practices. Furthermore, the regular appearance of \textit{proculcator} in the recently-published ostraca from Bu Njem in Libya (dating A.D. 253–259) pushes this and related terminology back a century and a half, making a late borrowing and the Germanic derivation unlikely: see R. Marichal, \textit{Les Ôstraca de Bu Njem} (\textit{Libya Antiqua} Suppl. 7 [Tripoli 1992]) 68–70, with ostraca nos. 1, 7–11, 15, 19, 20, 22, 25, 27, 29, 132(?).
retained a meaning and significance for them in their new cultural surroundings. That is to say, they applied the Germanic word *folc* to the Roman deployment that most resembled their own way of fighting—a close-order array, fronted by better-equipped and more experienced warriors, designed to engage the enemy in close-quarters combat. The underlying linguistic motivation was therefore recognition and familiarity, not innovation. On the other hand, to judge from Maurice’s usage, Latin-speakers conceived this new word current among Germanic *auxilia* as having a specialist or technical meaning associated with this particular deployment and came to understand the shield-wall or “testudo” as intrinsic to the meaning of *folc-fulcum*. There are too many variable factors to determine whether the “institutionalisation” of the Germanic-derived term *fulcum* necessarily reflects an overwhelming presence of Germanic warriors in late Roman armies (and a current school of thought thinks not), though it does perhaps indicate that ethnically-Germanic infantry units were favoured for and more frequently employed in this style of fighting, just as Roman military recruitment had always targeted different ethnic groups according to their combat specialties.

*Later Byzantine development*

Other than Maurice, the only author to use the term *φολκόν* in a late antique context is Theophanes Confessor (writing *ca* 810–814), in his account of Heraclius’ campaigns against the Persians (622–628), which occurred a generation after the composition of the *Strategicon*. Throughout this section of his *Chronographia* Theophanes is not an original writer but based his narrative for the most part on the contemporary panegyrics of George of Pisidia, and Theophanes’ text can therefore preserve elements of his early seventh-century source. In this particular passage, however, Theophanes’ source is unknown and his usage of *φολκόν* possibly reflects developments of the two centuries up to the time of writing. Theophanes writes that at the battle of Nineveh in 627 the Persian commander Rhazates
“arrayed his forces in three φοάλκα” (παρετάξατο τρισὶ φοάλκοις). Theophanes, who uses the word nowhere else, appears to mean simply a battle line divided into three broad divisions rather than Maurice’s testudo-like infantry formation. Theophanes himself elsewhere reports this tripartite deployment by Persian armies, employing non-technical language to designate the three “divisions” (ἐῖς τρία μέρη), and he notes that the Roman line was similarly divided into three “phalanxes” (ὁμοίως εἰς τρεῖς φάλαγγας); indeed, sixth- and early seventh-century Roman sources indicate that this was a regular practice of Persian armies. Theophanes therefore uses the word φοάλκον differently than does Maurice, as simply a generic term for a large body of troops, whether Roman or foreign.

In this context it is worth noting that in the text of the Strategicon in the mid tenth-century codex Mediceo-Laurentianus gr. 55.4 the command ἀδ φοάλκω attracts the marginal gloss ἐπὶ τὴν παρατάγην, the standard tenth-century terminology for “in battle formation.” This rather unhelpful gloss, similar in sense to Theophanes’ usage, points to the difficulty that one Byzantine reader had with the earlier usage, even when presented with

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90 Theoph. Chron. 305.17–22. Maurice, Strat. 11.1.22–7, 2.40–43, records the same deployment. Theoph. Sim. 3.7.17 records that the Romans and Persians τρισοιؙσις συνήτησαν διεκόμων τῶν πόλεων; at 5.10.5 Vahram Chobin κυττάρισε… τρισιλών. The tripartite division of the Roman and Persian lines is also mentioned at Joh. Mal. Chron. 380.95–96; Procop. 1.14.32, 2.25.16, 4.3.4–5; Theoph. Sim. 1.9.7; 2.3.1–3; 3.7.17, 14.2–8; 4.9.2; 5.9.8; 8.2.10, 3.2, 3.5, 3.9; Georg. Pis. Exp. Pers. 3.186.

91 For another possible instance of Theophanes’ generic usage of a technical military term see Chron. 217.26–27: τούτω τῷ ἔτει ἐκήσησαν αἱ Βουλγάραις δύο ῥήγες μετὰ πλήθους Βουλγάρων καὶ δρούγγου εἰς τὴν Σκύθιαν καὶ Μυσίαν. Λ ῥήγης in this period was the official army nomenclature for a “brigade,” but earlier any unit of infantry or cavalry. The text is uncertain; καὶ δρούγγου is omitted in two MSS. (d and h), though this probably reflects no more than later scribal confusion regarding this word. De Boor’s emendation to the personal names Βουλγάρος καὶ Δρούγγ (i.e., δύο ῥήγες) is unlikely.
Maurice’s explicit description of what a φούλκον was. It is possible that fulcum had always possessed more than one meaning, both Maurice’s close-order deployment of infantry fronted by a shield-wall, and more generally any battle array. Certainly the latter sense corresponds more closely to the original Germanic derivation. Given the limited evidence, and the two-century interval between Maurice and Theophanes, certainty on this point is impossible, but such multiple usage would not be unusual for late Roman and Byzantine military terminology. The late Roman tactical deployments cuneus (κοννίον, ἐμβολον) and drungus (δροƔγγος), for example, not only changed their meanings over several centuries, but even in the same period could apply to different practices and phenomena. In each case, whether used in a vernacular, technical, unofficial, or “institutionalised” context, they respectively retained their core sense of “wedge” and “grouping.”

Theophanes’ broader meaning is consistent with the appearance of the term in the later historical narrative of “Theophanes Continuatus” (writing ca 970). The context is the campaigns of Nicephorus II Phocas against Ali ibn-Hamdun in the late 950s. While the author characterises the Byzantine forces with the rather φούλκον-like description “they all advanced briskly towards the enemy, protecting themselves with their shields and defending themselves with their spears,” in this instance φούλκα is a very general designation for non-Roman military formations, namely “the formations and forces and φούλκα of the godless Hamdun.” The two references in Theophanes and his continuator are the only occurrence of this term in Byzantine

92 See Scheffer 526, citing N. Rigault, Glossarium τακτικῶν μιξοβάρβαρων (Paris 1601): “Ubi paratægʰ haud dubie paráταξις, id est globus, multitudo militum.”

93 For the multiple usage of both terms see Rance, “Drungus” (supra n.9).

94 Theoph. Cont. 6.41 (460.2–7), πάντες τοις ἑχώρων πρὸς τοὺς πολεμίους ταῖς ἀσπίσι περιφραζόμενοι καὶ τοῖς δὸρασιν ἀμυνόμενοι καὶ κατὰ κράτος τοῖς Ἀγαρηνῶς ἀφανίζοντες, καὶ ὃν ἰδεῖν θάμβης καὶ ἐκπλήξαν τοῖς ὀρῶν τὸν νικητὴν Νικηφόρον τὰς παρεταξῖς καὶ δυνάμεις καὶ τὰ φούλκα τοῦ ἀθέου Χαμβαδᾶ συγκοποῦντα καὶ ἀπορραιπίζοντα.
historical narratives, and while it is possible that these civilian annalists were ignorant of the correct usage, or that the continuator merely followed Theophanes’ usage, we shall see below that the meaning of φοῦλκον in technical military literature also varied considerably in the three centuries following the compilation of the Strategicon.

The battle formation Maurice calls a φοῦλκον is also described in middle Byzantine tactical treatises. The earliest of these are two works ascribed to the Emperor Leo VI (886–912), the so-called Problemata and Tactica or Tactical Constitutions. The Problemata, the first work Leo composed in this genre, is preserved only in Mediceo-Laurentianus gr. 55.4. It takes the form of a “military catechism,” in which the compiler poses questions which he then answers with excerpta from Maurice’s Strategicon, for the most part near-verbatim and maintaining the original order of the text. This treatise is devoid of originality and its primary value is as a source for establishing the text of the Strategicon distinct from the tradition directly preserved in extant manuscripts. Although the compiler was selective in his choice of extracts, it remains unclear to what extent the contents of the Problemata genuinely reflect late ninth-century practice; continued references to Avars and Persians do not inspire confidence in its contemporary utility. For the present it suffices to note that in answer to the question “How do they advance when the archery is about to commence?” (πῶς περιπατοῦσιν ὥτε ή τοξεία ἄρχεται γίνεσθαι;) the compiler reproduces Maurice’s description of the φοῦλκον operating against enemy infantry with only very minor changes, though he omits his anti-cavalry version.96

Leo VI compiled his Tactica (τῶν ἐν πολέμοις τακτικῶν σύντομος παράδοσις) at the very beginning of the tenth century, ca 908, and consequently in the period between the compositions

95Leonis VI Sapientis Problemata, ed. A. Dain (Paris 1935).
96Leo Problemata 12.29 (pp.82–83). Leo’s excerpt reproduces Maurice 12.B.16.30–51, of which his introductory question paraphrases lines 30–31, φοῦλκον περιπατοῦσιν, ὥτεν ... μέλλῃ ἄρχεσθαι ή τοξεία γίνεσθαι.
of Theophanes and his continuator. It is a systematic exposition on all aspects of warfare in twenty books (διατάξεως).\textsuperscript{97} The \textit{Tactica} has a complex textual history; two recensions are identifiable, the first of which is further subdivided into manuscripts preserving two distinct stages of the text’s early history. These two “stages” of the first recension most probably represent respectively the text as Leo himself left it and the text as edited by or under the direction of his son Constantine VII Porphyrogennitus (913–959) soon after Leo’s death.\textsuperscript{98} The current state of


\textsuperscript{98}For the MS. tradition see R. Vári, ed., \textit{Leonis Imperatoris Tactica} (Budapest 1917–22) I xi–xxxv; Dain (\textit{supra} n.35) 134–147, and “Inventaire raisonné des cents manuscrits des ‘Constitutions tactiques’ de Léon VI le Sage,” \textit{Scriptorium} 1 (1946–47) 33–49 (aug. G. Andrés, \textit{Scriptorium} 11 [1957] 261–263); Dain, \textit{Strat.} (\textit{supra} n.12) 354–357 (note that the schema at 372 is very misleading); Tougher (\textit{supra} n.97) 168–169 appears to confuse “manuscripts” with “recensions.” Dennis, ed. 22–23, 36–39, identifies “three redactions,” but without clarification. Dain identified two recensions of importance for establishing the text of the \textit{Tactica}. The first or “Laurentian” recension comprises two groups of manuscripts reflecting two distinct stages of early textual development. The first stage (Dain’s “premier état”) is represented by the mid tenth-century \textit{Mediceo-Laurentianus gr.} 55.4, which preserves what Dain called “une sorte de prédédition” or “l’état primitif du texte” (= Vári’s text “a”). This is probably the text as Leo himself left it (ca 908). The second stage of the first recension (= Vári’s “a correctus”; Dain’s “second état”) is best represented by \textit{Vindob.phil.gr.} 275 and Paris.gr. 1385, and contains significant changes principally to the internal arrangement of the work, which Dain considered “l’état définitif.” The archetype was probably the text as edited by or under Leo’s son, Constantine VII (913–959). A MS. of this second or “definitive” stage of the first recension was the archetype of the second or “Ambrosian” recension. This archetype was produced no more than fifty years after the \textit{Tactica} was originally compiled, and very probably less than thirty, by an editor who was a contemporary of Constantine VII. MSs. of the second recension contain some modifications in vocabulary and syntax, though not so extensive a revision as to warrant being called a “paraphrase.” Vári identified a “third recension,” which he called \textit{Recensio Constantiniana}, preserved in some MSs., which purports to be a further re-edition of Leo’s \textit{Tactica} by “Constantine son of Romanus,” that is Constantine VIII (1025–28). Dain subsequently proved that this “recension” is in fact a detached section of the \textit{Tactica} written by the general Nicephorus Uranus (ca 950–1011), an extensive and largely derivative military encyclopaedia produced in the first decade of the eleventh century, and now preserved only as separate sections spread across various MSs.; the first part of this compilation (chs. 1–55) is a long paraphrase of Leo’s \textit{Tactica}, almost in its entirety, using a MS. of the second recension. See A. Dain,
publication poses certain problems for this study. The most recent (but incomplete) edition is that of Vári, who throughout preferred the authority of the Mediceo-Laurentianus gr. 55.4 (M), the famous collection of classical and byzantine military treatises produced during the reign of Constantine VII. Although this codex is undoubtedly the earliest witness to Leo’s text, some readings in M are unsatisfactory and variant manuscript readings will be introduced where appropriate.99

Leo nowhere specifies that he made use of the Strategicon, but the core of the Tactica is a reprise of Maurice, whom Leo must have included among “the more recent authors” (οἱ νεότεροι or νέοι), as distinct from the “classical” authors or “ancients” (οἱ ἀρχαῖοι or παλαιοί).100 In many passages Leo makes few if any modifications to Maurice’s text and although there are signs of the avoidance of obvious anachronism, the practical value of Leo’s work is often difficult to gauge; modern scholarship has been generally critical of its idealism and naïvete.101 Perhaps the

99 The edition of Vári (supra n.98) concludes at 14.38, with Book 18 edited in Vári, “Bölcs Leó Hadi Taktikájanak XVIII Fejezete,” in G. Pauler and S. Szilágyi, A Magyar Honfoglalás Kútföi (Budapest 1900) 11–89. The only complete edition is PG 107.669–1120, which reprints the Greek text of Lami (supra n.98) 529–920, itself a re-edition of J. Meursius, ed., Leonis imp. Tactica sive de Re militari liber (Leyden 1612), based on the second or “Ambrosian” recension, which Lami emended with readings from Mediceo-Laurentianus gr. 55.4. I have followed Vári where available; where unavailable or where enumeration differs I have given the PG enumeration in parentheses.

100 Leo Tact. 14.112 contrasts Onasander (28), a genuine “ancient,” with εἰρηνική τε τοῖς νεότεροις, which appears to refer to Maurice 7.8.15. See also Leo Tact. 4.58 (Vári), οἱ νεότεροι μέτρης ἡμῶν; cf. 15.1 (PG 885), ἀπὸ ἑν τω παλαιῶν καὶ νεῶν ἀνθολογήσαμεν; 15.28 (PG 893), οἱ τω παλαιῶν στρατηγοὶ καὶ οἱ πρὸ ἡμῶν.

101 A. Vogt, “La Jeunesse de Léon VI le Sage,” RHist 174 (1934) 389–428, esp. 408, concludes that the Tactica is a study of the army of the past as a model for how the present should be. Dagron and Mihăescu (supra n.41) 145, 152, consider it naïve. J. F. Haldon, “Some Aspects of Byzantine Military Technology,” BMGS 1 (1975) 11–47, at 45, comments that Leo “tended to confuse facts with ideals.” For more favourable views of Leo’s awareness of contemporary developments see P. Karlin-Hayter, “‘When Military Affairs were in Leo’s Hands’: A Note on Byzantine Foreign Policy (886–912),” Traditio 23 (1967) 15–40, esp.
most important role of Leo’s Tactica was the revival of interest in military literature after a hiatus of three centuries. As in the Problemata, Leo omits Maurice’s description (12.A.7) of how a φούλκων should deploy against cavalry. In its treatment of the φούλκων as deployed against other infantry, the Tactica for the most part repeats the corresponding section of the Strategicon.102 The few differences are instructive, however, as they hint at the contemporary reality behind Leo’s ordinances. As would be expected, the Latin commands preserved in some manuscripts of the Strategicon are universally replaced in Leo’s Tactica by contemporary Greek equivalents; iunge becomes ζεύξον, while πύκνωσον supplants ad fulco, though it is unclear whether these are genuine commands current in the army of Leo’s day or merely a Byzantine copyist’s approximate equivalents to the late Roman expressions.103 More significantly, Leo’s alterations suggest that he did not fully understand aspects of Maurice’s text, even though he had earlier reproduced the same passages in his Problemata almost verbatim and without apparent difficulty. For example, Maurice’s instructions for the front rank to close up “so that they are shield-boss to shield-boss” (ίνα οί μὲν ἐμπροσθεν τεταγμένοι ἐκ πλαγίου εἰς τὰ βούκουλα ἀλλήλων ἐγγίζουσιν) becomes “so that they are shield to shield” (ίνα οί μὲν ἐμπροσθεν τεταγμένοι καὶ ἐκ πλαγίου εἰς τὰ ἄρματα ἀλλήλων ἐγγίζουσιν). The word τὰ ἄρματα was derived from

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102 Leo Tact. 7.59, 64–68; see Vári I 179–183.
103 The commands ζεύξον and πύκνωσον are given in codex M; while A, P2, and V render the latter σφύξων. The command πύκνωσον as the equivalent to ad fulco not only loses the reference to φούλκων as a specific formation, but is also intrinsically confusing, as the manoeuvre πύκνωσις (“closing up”) actually corresponds to the command iunge in Maurice’s Strategicon. Furthermore, the tenth-century Greek paraphrase of the Strategicon in codex A, itself produced within at most fifty years of Leo’s Tactica, renders ad fulco (12.B.16.33) by the more literal φούλκων ποίησατε; while iunge is in different places rendered both σφύξατε (12.B.16.22) and ἐγώσων (24.13). See B. Leoni, La Parafraasi Ambrosiana dello Strategicon di Maurizio. L’arte della guerra a Bisanzio (Milan 2003) 367, 411.
the Latin *arma*, literally “weapons,” though from the early Principate employed to designate a “shield.”\(^{104}\) Leo appears not to understand Maurice’s reference to “shield-bosses” (*tâ boûkouλa*), which is almost certainly late Roman terminological usage; the limited evidence suggests that by the tenth century *boûkouλon* had come metonymically to mean “shield” *in toto*. It is possible that Leo’s textual alteration also reflects changes in shield design and construction in the intervening period.\(^{105}\)

In his subsequent description of the φολκον Leo omits the reference to *tâ boûkoula* altogether and exhibits further terminological confusion:

Maurice 12.B.16.33–38
\[\begin{align*}
\text{καὶ τῶν ἐμπροσθὲν κατὰ τὸ μέτωπον τεταγμένου πυκνοῦντων τὰ σκουτάρια αὐτῶν μέχρι τοῦ ἐγγίζειν τοῖς βουκοῦλοις κατασκέποντες προσπεπλασμένως τὰς γαστέρας αὐτῶν μέχρι τῆς κνήμης.}
\end{align*}\]

Leo 7.66 Vâri (= 7.73 PG)
\[\begin{align*}
\text{καὶ τῶν ἐμπροσθὲν κατὰ τὸ μέτωπον τεταγμένου πυκνοῦντων τὰ σκουτάρια αὐτῶν μέχρι τοῦ ἐγγίζειν ἀλλήλοις κατασκέποντες προσπεπλασμένως τὰς γαστέρας αὐτῶν μέχρι τῆς κνήμης ᾄσον τοῦ λεγομένου σκέλους.}
\end{align*}\]

οἱ δὲ παρεστῶτες αὐτοῖς ὑπῆρθον ὑπερανέχοντες τὰ σκουτάρια αὐτῶν καὶ ἀναπαύοντες εἰς τὰ βούκουλα τῶν ἐμπροσθὲν σκέπουσι τὰ στήθη καὶ τὰς ὑψις αὐτῶν καὶ ὑπὸς συμβάλλουσιν.

\(^{104}\) Leo *Tact.* 7.64. Meursius is hopelessly wrong in rendering εἰς τὰ ἄρματα ἀλλήλοις ἐγγίζοντας as “intra currum complexum quasi continentur”; as Scheffer 525 notes, “ineptissime.” For τὰ ἄρματα see Mihăescu, “éléments” I.490–491; Kolias, *Waffen* 100–101. For *arma* as “shield” see e.g. Amm. Marc. 20.7.2.

\(^{105}\) For βοûkouλon as *pars pro toto* “shield” see Kolias, *Waffen* 101–103. Leo describes different types of circular shield at *Tactica* 5.2, 6.25–26, 19.57. The *Sylloge Tacticorum* 38.1, however, describes some infantry armed with shields which were roughly kite-shaped, which would certainly have been more awkward in a *testudo*. Niceph. *Præc.mil.* 1.3 (p.14.28–29), followed verbatim by Niceph. *Ur. Tact.* 56.3 (p.90.32–33), has shields of unspecified shape and at least six *spithamai* (140 cm.), presumably in height and again possibly not circular. For detailed discussion see Kolias, *Waffen* 88–131.
The text here is Vári’s, based primarily on codex M. M gives ἀναπαύοντες εἰς τοὺς ἐμπροσθεν, “resting (their shields) on the men in front”; comparison with Maurice’s original text demonstrates that this is corrupt. The variant readings in A, P¹, and V, rejected by Vári, make much better sense: ἀναπαύοντες (αὐτὰ add. P¹) εἰς τὰ τῶν (τοῦ A) ἐμπροσθεν σκοντάρια, “resting (them) on the shields of the men in front.”¹⁰⁶ Similarly, M later contains a corrupt text of the instruction to the front ranks to fix their spears in the ground in order to throw darts and javelins at the enemy. Maurice wrote εἰ μὲν ἔχουσι μαρτζοβάρβουλα ἢ ῥιπτάρια, ἀναπαύοντες τὰ κοντάρια εἰς τὸ χαμαὶ ῥίπτουσιν ἑκεῖνα (“if they have martiobarbuli or missiles then, fixing their spears into the ground, they throw these”); for Leo’s Tactica Vári preferred the improbable reading in M: εἰ μὲν ἔχουσι ματζούκια ἢ τζικούρια ἢ ῥίπταρια, εἰς τὸ χαμαὶ ῥίπτουσιν αὐτὰ (“if they have matzoukia or tzikouria or missiles, they throw these into the ground”). Why are Leo’s infantry throwing their missiles into the ground?¹⁰⁷ A, P¹, and V contain a clearer text which omits the awkward εἰς τὸ χαμαί. These three codices represent the second or so-called “Ambrosian recension,” whose archetype was produced not more than fifty years after the Tactica’s original compilation ca 908, and probably less than thirty.¹⁰⁸ In both the passages cited it

¹⁰⁶Vári 181. Codices: A = Amb.gr. B 119 suppl. (139); P¹ = Barb.gr. 276 (II 97) [originally one codex with Paris.gr. 2442]; V = Vat.gr. 1164.

¹⁰⁷Vári 182 (PC 7.74). The corresponding passage in Leo’s Problemata (12.29) contains the same error, εἰς μὲν ἔχουσι μαρτζοβάρβουλα ἢ ῥίπταρια εἰς τὸ χαμαὶ ἑκεῖνα. The occurrence of this corrupt reading in two of Leo’s works, both based on Maurice’s Strategicon, means that this error must therefore have been common to MSS. of the “third recension” of the Strategicon, that is, those MSS. used by Leo in the compilation of his tactical works; see Dennis ed. 36–39. It appears to be a straightforward case of the copyist’s error saut du même au même when reading the words ῥίπταρια, ἀναπαύοντες τὰ κοντάρια εἰς τὸ χαμαὶ. In his Tactica Leo updates Maurice’s text with contemporary weaponry: matzoukia and tzikouria were types of throwing mace and throwing axe respectively, for which see Kolias, Waffen 167–169, 176–177.

¹⁰⁸Codex A was formerly dated to the early eleventh century, but C. M. Mazzucchi, “Dagli anni di Basilio Parakimomenos (cod. Ambr. B 119 sup.),” Aevum 52 (1978) 267–316, plausibly argued that it was prepared ca 959 at the
appears that this editor tidied up the text of Leo’s *Tactica* contained in a manuscript belonging to the first or “Laurentian” recension, in the first instance correcting an omission, apparently by reference to Maurice’s original text, in the second instance deleting a garbled clause altogether.

A, P¹, and V also contain an additional sentence not found in the “Laurentian recension,” which appends to the phrase φούλκφρ περιπατείν the following gloss: ἦγουν τοὺς ὀπίσω σκέποντας τὰς τῶν ἐμπροσθέν κεφαλὰς τοῖς σκουταρίοις, καὶ οίοιςέι κεραμοθέντας περιπατείν, “to advance in a fulcum, that is to say, when those to the rear cover the heads of those in front of them with their shields, and advance as if roofed with tiles.”¹⁰⁹ Vári rightly confines this comment to his apparatus as an interpolation, but as this gloss is common to all the manuscripts of the second recension it must date to within a generation of Leo’s death and thus reflects the opinion of a contemporary editor. Indeed, the insertion of this additional remark into a text otherwise drawn almost verbatim from Maurice’s *Strategicon* is entirely consist with Leo’s methodology. There can be no doubt that this gloss, containing the rare verb κεραμοθέντας, “roofed with tiles,” was inspired by the description of the ancient Roman *testudo* in Onasander’s *Strategicus*.¹¹⁰ This first-century text was another important literary model for Leo in the composition of the *Tactica* and he frequently inter-

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¹⁰⁹ Leo Tact. 7.59. The gloss is cited by Rigault (supra n.92) 205–206 s.v. φουλκφρ (*sic*); cited by Scheffer 498.

¹¹⁰ Onas. Strat. 20.1, “the front-rankers are to advance in close order, with shields the height of a man … and those who follow and the ones behind them, even to the last man, carrying their shields above their heads, when they come within range; for thus roofed in, so to speak, they will suffer no danger from missiles” (οἱ δὲ μετὰ τῶν τούτων καὶ οἱ κατὰ τῶν τύπων ἀρχι τῶν τελευτάτων ὑπὲρ κεφαλῆς ἀφάνειν τοὺς θυρεοὺς τέως ἑχόντων, ἢρι αὐτὸς γένεσθαι βέλως· αὐτῶς γὰρ, ὡς εἰπεῖν, κεραμοθέντες οὕθεν πείσονται δεινὸν ὤρ τῶν εὐβάλων).
polated brief excerpts from Onasander’s work into corresponding passages of Maurice’s *Strategicon*. The insertion of καὶ οἴονετι κεραμωθέντας περιπατεῖν suggests that a near-contemporary editor, and one seemingly familiar both with Leo’s working methods and the genre as a whole, equated the φούλκον described by Maurice with the shed-like *testudo* described by Onasander, or that he felt it necessary or helpful to elucidate the former by reference to the latter. This supplementary clarification should perhaps be seen in the context of the confusion in some manuscripts of Leo’s *Tactica* regarding just who is covering whose head.

It is difficult to be sure whether Leo and/or his editor(s) fully understood the φούλκον as outlined in the *Strategicon*, or the distinction between it and reports of an ancient shed-like *testudo* they found in earlier Roman texts. This is especially so given Leo’s singularly eccentric use of the term compared to all other middle Byzantine texts: Theophanes and his continuator, writing respectively one hundred years before and sixty years after the *Tactica*, and the technical military treatises produced throughout the second half of the tenth century nowhere use the term in the same sense as Leo. Nor is it clear which troops Leo envisaged for these manoeuvres, whether *themata* or *tagmata*; the narrative sources of the period are insufficient to confirm the contemporary deployment of infantry in a φούλκον, but the overall tenor of the evidence points to infantry being of relatively poor quality in Leo’s day, as a result of long-term changes in the nature of Byzantine warfare and broader

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111 For Leo switching between the texts of Maurice and Onasander when both treat the same topic, see e.g. *Tact.* 7 Περὶ γυμνασίας κυθιάλαρικής καὶ πεζίκης, combining Maurice *Strat.* 12.B.11–16 and Onas. *Strat.* 10.4. See Rance, “*Simulacra,*” (supra n.9) 242–244.

112 At 7.67 *P* and *V* read οἵ δὲ ὄπισθεν αὐτῶν ἑκτώτες, τὰς κεφαλὰς αὐτῶν σκέπασσας μετὰ τῶν σκονταρίων αὑτῶν instead of τὰς κεφαλὰς ἑκτών; that is, the rear ranks are wrongly said to cover the heads of *those in front of them*, rather than, as correctly, *their own* heads.
strategic contexts. In this particular instance it seems more appropriate to concur with the more negative critics of Leo’s *Tactica* as being derivative and retrospective, in character with tenth-century encyclopaedism, rather than a realistic assessment of contemporary practices or an original contribution to the genre.

The various works comprising the rich tenth-century corpus of Byzantine military literature frequently employ the term ϕούλκον but in a way that leaves no doubt that a different deployment is meant. This divergent usage first appears in the treatise on guerrilla warfare Περὶ παραδρομῆς or *De velitatione* ascribed to Nicephorus II Phocas (963–969). The author possessed a detailed knowledge of Leo’s *Tactica* and its tactical precepts. Yet throughout he employs ϕούλκον to designate a body of troops in formation, apparently infantry or cavalry, but more often the latter, sent out to protect smaller parties (collectively τὸ σκόπσισμα) engaged in foraging and pillaging, accompanying them into designated localities in the morning, remaining at hand during the day, and escorting them back to camp in the evening. This sense is clear from the often-repeated formula “α ϕούλκον, whose role is to protect them while they are dispersed for plundering” (ϕούλκον, τὸ εἰς ϕυλακῆν τῶν διασκεπτζομένων πρὸς λείαν ... ύπάρχον). A ϕούλκον might also be stationed outside the camp to protect grazing horses or livestock. The author mentions ϕούλκα only in the context of

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113 Haldon (*supra* n.29) 197–200, 208–215.
114 References are to the edition and Engl. transl. in Dennis (*supra* n.27) 137–239, as “Skirmishing”; see also Dagron and Mihăescu (*supra* n.41). For knowledge of Leo’s *Tactica* cf. *De vel.* 20.11–12, “as described in the book on generalship composed by the celebrated and most wise Emperor Leo” (καθός ἡ συντεθείσα στρατηγικὴ βίβλος παρὰ τοῦ αυτώμου καὶ σοφοτάτου βασιλέως λέοντος διαλογισταί). This refers to Tact. 11.25 and/or 17.83.
115 Quoting ch. 9, p.172.87–88; cf. ch. 14, p.194.108, ϕούλκω ... τῷ εἰς ϕυλακῆν ἐπακολουθοῦντι τῶν ἐξελαυνόντων; ch. 17, p.206.52–53, τῶν ϕούλκων τῶν πολεμίων, τῶν ἑσταμένων εἰς ϕυλακῆν τῶν ἑπετέρων αὐτῶν; ch. 18, p.212.16–17, τὰ ϕούλκα ... τὰ εἰς ϕυλακῆν αὐτῶν ἐξερχόμενα καὶ πάροικο τῷ φοσσάτῳ ἑστάμενα; ch. 19, p.214.8–9, πρὸς ϕυλακῆν δηλαδὴ τῶν ἐξελαυνόντων πολεμίων ἐπακολουθοῦσι; ch. 22, p.228.23–24, εἰκῶς δὲ ἔστι καὶ τὸ
invading Arab forces, and his recommendations for surprise attacks on Arab encampments or dispersed raiding parties are premised on the potential presence of such a φοξλκον coming to the rescue and how Byzantine troops should counter it. These protective escorts were not unique to Arab tactical arrangements nor Arab in origin, however; the author merely uses a Greek term to describe what was a standard feature of both Arab and Byzantine armies.

The term φοξλκον is employed in the same sense in the anonymous treatise on campaigning, usually designated by Vári’s title De re militari, which was composed within a generation of De velitatione, with which it has many obvious parallels and employs a very similar idiom and technical terminology. This is a work of practical utility by an experienced author, who explains the essential procedures for offensive operations of a large imperial army in hostile territory, especially the Balkan theatre, and is addressed to the emperor, perhaps rhetorically and traditionally, though possibly to a young Basil II (reigned 976–1025). The author enjoins the general, “each day let φοξλκα be dispatched to protect the men who go out to collect

λεγόμενον φοξλκον εἰς φυλακὴν αὐτῶν ἵστασθαι. Dennis (supra n.27) 173 n.3 appears to envisage only the involvement of infantry; Dagron (supra n.41) 224 n.18, “Dans le De velitatione et le De re militari, le φοξλκον est toujours un élément de fantassins ou de cavaliers bien groupés et prêts à intervenir pour protéger des fourrageurs ou des pillards dispersés.”


117 The “Muslim” oath, μά φοξλκι τῶν φοξλκόν, preserved in early twelfth-century Euthymius Zigabenus, Panoplia dogmatica 28b (PG 128.1345–46, transl. “Nae per phulcos phulcorum”), and cited by Du Cange s.v. φοξλκον, appears to be a misunderstanding and/or corruption. F. Sylburgius, Saracenica sive Moamethica: in quibus Ismaeliticae seu Moamethicæ sectæ præcipuorum dogmatum Elenchus (Heidelberg 1595) 24, explains that this should be the Greek transliteration φέλξικ, signifying the heavens or celestial spheres, thus in Latin “circulum circulorum.” He must have in mind Arabic falak al-aflak, “sphere of spheres,” “high heavens.”

118 For text and Engl. transl. see Dennis (supra n.27) 241–327, as “Campaign Organization and Tactics.”
forage and to pasture the horses” (ἐκάστη ἡμέρα φοῦλκα εἰς φυλακὴν τῶν τε εἰς συλλογὴν χόρτου ἔξερχομένων καὶ τῶν τούς ἱπποὺς νεμόντων στελλέσθωσαν). 119 Broadly the same usage is found in Praecepta militaria also ascribed to Nicephorus II (written ca 965), and in the reworking of the same material in the Tactica of Nicephorus Uranus (ca 1000). 120 This conceptual continuity is only to be expected, given that De velitatione and Praecepta militaria were both products of Phocas’ efforts to provide a “theoretical, instructional complement” to his practical military measures. In the context of raiding enemy territory, Nicephorus Uranus again specifies that the general must retain a sizeable force “formed as a φοῦλκον in order to protect the men in the pillaging force of the raiding party” (ἐν τάξει φοῦλκου πρὸς τὸ φυλάσσειν τὸν λαὸν εἰς τὸ σκόρπισμα τοῦ κούρσου). 121 In a slightly different sense, but still consistent with contemporary usage, both authors also use the term in relation to the deployment of προκουρσάτορες, light cavalry employed as scouts and skirmishers. The commander of the προκουρσάτορες is required to disperse the majority of his troops to seek out the enemy’s strength and positions and open preliminary skirmishes, but he should retain roughly a third “as a φοῦλκον,” in effect a reserve force in close-order formation able to assist their comrades should they run into trouble.122 In a

119 Ch. 22, p.308.4–5; cf. similarly ch. 23, p.308.5–11, νυκτὸς σὺν τοῖς ἔθθους ἀποστελλομένοις φοῦλκοις καὶ ἔτερον ἱππίκοιν μάχημον στειλάτω.

120 For editions of both texts see McGeer (supra n.40), with 171–180 for a survey of the historical context, relationship, and character of these two works, and their connection with De re militari.

121 Niceph. Ur. Tact. 63.5 (p.144.59–60).

122 For the term προκουρσάτορες see McGeer (supra n.40) 67, 292–293. For their deployment “as a φοῦλκον” cf. Niceph. Praec. mil. 4.2 (p.40.18–21), “if there are five hundred men, their commander ought to keep three banda with him as his own φοῦλκον, that is to say 150 men, and distribute the rest as best he can in order to learn the enemy’s strength. If there are three hundred, he should keep one hundred with himself and use the other two hundred for the same purpose” (δὲ ἐπὶ ἐνακάθεν αὐτῶν, εἰ μὲν εἰσὶ πεντακόσιαι, ὁρεῖται ἔχειν μὲν ἐκ τοῦτοῦ εἰς τὸν ἱππόκοιν βάνδα τρία, ἢ τοὺς ἄνδρας πρ’ τοὺς δὲ λοιποὺς διαμιᾶται, καθὼς δύναται, διαγνώσει τὴν δυνάμιν τῶν ἐχθρῶν. εἰ δ’ εἰσὶ τριακόσιαι,
related context, φούλκα feature in night-time patrols around the perimeter of Byzantine encampments. Similarly, the anonymous author of the tenth-century *De obsidione toleranda* writes, “with respect to enemy attacks, it is necessary to estimate their occasion and hour and to send patrols outside the fort, though the enemy should on no account become aware of this beforehand, lest they dig pits in the ground and hiding men in them ambush and injure our men” (πλὴν κατὰ τὰς τῶν πολεμίων ἐπιθέσεις δὲι καταστοχάζεσθαι τοῦ καιροῦ καὶ τῆς ὀρας καὶ φούλκα προεξάγειν τοῦ κάστρου, μὴπετε προαιθόμενοι τὸτοὺ ὁι πολεμίῳ ύπὸ γῆν ὀρήξωσι βόθρους καὶ ἐπὶ τοῦτοι λαόν κατακρύφαντες ἐνεδρέυσοι καὶ τραυματίσουσι τοὺς ἡμετέρους).124

McGeer correctly notes that in all these texts we see φούλκων “used in meanings unattested in the military treatises before the mid-tenth century.”125 Again it is important to appreciate, however, that new terminology is not necessarily indicative of a new phenomenon. In the late sixth century Maurice clearly describes, and in very similar language, identical protective escorts guarding foraging parties:

When some men go out on a plundering expedition, not all of them are to be occupied in pillaging, but they must be divided into two—those who are engaged in plundering, and the majority

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123 Niceph. Ur. *Tact.* 62.78–82 (p.138), “Give instructions to both the generals and the officers that all through the night pairs of generals will conduct a patrol around the entire entrenchment beyond the infantry. Have one proceed in front and the other behind with their *escorts*” (πρόσταξιν δὲ καὶ τοῖς στρατηγοῖς καὶ τοῖς ἄρχοντες ἴνα ὅλην τὴν νύκτα συνδύω στρατηγοὶ ποίουσι τὸ κέρκητον περιτυρεύοντες ὄλον τὸ φωσάτων ἕξωθην τῶν πεζῶν. περιπετεύοντας δὲ τὸ ἔξω ἔμπροσθέν καὶ ὁ ἄλλας ὅπερ ἄρη μετὰ τοῦ φούλκου αὐτῶν).


125 McGeer (*supra* n.40) 175; *contra* Mihăescu, “termes” 264–265, who appears not to recognise a difference, “avec le même sens technique et précis”; similarly Dennis (*supra* n.27) 173 n.3, who conceives the meaning of φούλκων in the tenth century as being identical to that in the *Strategicon*.
who escort them in close formation (συντεταγμένος) as their guard, whether the attack is against a country, an enemy entrenchment, a herd of beasts, a baggage train, or any other objective. Do this also when the whole army collectively undertakes a plundering expedition, again so that not all the men are occupied in pillaging, but if an opportunity for foraging supplies should arise, some must engage in foraging, others in close formation must escort them, otherwise, if all the available men were occupied in pillaging or foraging, some surprise attack or ambush would be undertaken by the enemy and our soldiers would not be able to rally themselves.126

This type of escort in force, to which Maurice applies no specific terminology, is precisely what mid tenth-century authors designate a φούλκον. In fact this was a standard procedure for Roman armies dating back at least to the early Principate, and the later Byzantine usage merely reflects changes in terminology rather than practice.127 Given the difficulties we have seen in the testimony of Leo’s tactical writings, it is impossible to be certain how and when φούλκον came to mean the mounted escorts or patrols attested in mid tenth-century military literature, distinct from the battle formation for infantry described in Maurice’s Strategicon, and the evidence of the intervening period perhaps points to long–

126 Strat. 9.3.50–61, χρή τούς εἰς πραιδόν ἀπερχομένους μὴ πάντας εἰς διασπα-γὴν ἀγχολείσθαι, ἀλλὰ διακεκριμένους εἶναι· καὶ τοὺς μὲν αὐτῶν πραιδέειν, τοὺς δὲ πλείους αὐτῶν συντεταγμένους εἰς φυλαχήν αὐτῶν παρακολουθεῖν … δεὶ τοὺς μὲν συλλέγειν, τοὺς δὲ συντεταγμένους παρακολουθεῖν κτλ. It is perhaps possible to identify a similar practice observed by Roman forces in Procop. 2.19.11–18, Chron.Pasch. 717, and among the Persians in ps.-Zach. Mytil. HE 9.5.

127 Onas. Strat. 10.7–8, “When (the general) sends out foraging parties, he is to attach to the light troops and unarmed men a combat force of both cavalry and infantry, who shall not involve themselves in the foraging but remain in formation and guard the foragers, so that their return march may be safely accomplished” (αὐτὸς γε μὴν ὅτ’ ἔν ἐπὶ τὴν λείαν ἐκπέσῃ, τοῖς ψυλοῖς καὶ ἀνόπλους συνταττόμενοι μαχημάτως ἱππεῖς καὶ πεζοῖς, οὐ περὶ μὲν τὴν λείαν ώς ἀσχοληθοῦν, μένοντες δὲ ἐν τάξει παραφιλάξουσι τοῖς προνοούσοις, ἵν’ ἐν φιλίαν ἄσφαλῆς ἄποικησίας). How old these procedures were is unclear, though they do not appear to have been observed by Caesar in Britain in 54 B.C. (Caes. BG 4.32)
term multiple usage, though the underlying concept of a compact body of troops arrayed for combat is consistent. As noted previously, the original derivation from the Germanic *folc* need not have any bearing on the meaning of φόλκον in the tenth-century texts, whose authors were likely to be ignorant of its etymology. The study of Roman and Byzantine armies, however, provides other examples of considerable flexibility in terminological usage while nevertheless retaining the core sense specific to each term (*e.g.*, *cuneus*, *drungus*/δρόνγος). The variant meanings of φόλκον over this four-hundred-year period therefore correspond to the broad development of late Roman-Byzantine military vocabulary.

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