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EVERETT L. WHEELER

The Legion as Phalanx*

The famous manuscript of the Greek tacticians, *Laurentianus Gr.* LV 4, preserves a fragment of Arrian's lost «Alanica», commonly known as the «Acies contra Alanos.» The fragment records a portion of Arrian's contingency plans when, as governor of Cappadocia in 135, he moved to counter the threat of an invasion by the Sarmatian Alani.¹ Arrian provides us with the most detailed descriptions of a Roman Imperial *agmen* and *acies* extant. To resist the mass charge of the Alan cataphracts, Arrian planned to deploy his legions as a phalanx, situated between two hillocks topped by auxilia, and supported in the rear by artillery and mounted archers. Arrian hoped to break the Alan charge through superior firepower, and then to pursue with his auxilia, while the legions followed slowly, maintaining their phalangic formation and prepared to resume their function as a defensive bulwark, *προβολή*, a tactical base from which the auxilia could advance or seek refuge in retreat.

For the student of Roman military history accustomed to conceive Roman tactics in terms of Caesar's *triplex acies*, and of Livy's manipular *quincunx* formation, which is colored by Caesarian concepts and terminology, Arrian's legionary phalanx must come as a shock. Indeed, several scholars have denied the evidence of Arrian's «Acies» that in the second century the legion deployed as a phalanx. They claim that Arrian's formation reflects unusual circumstances,² or that it was «totally

* The following abbreviations are used in the footnotes: BOSWORTH = A. B. BOSWORTH, Arrian and the Alani, HSPH 81, 1977, 217–55; DELBRÜCK = H. DELBRÜCK, History of the Art of War within the Framework of Political History, trans. W. J. RENFROE, JR., Westport/Conn. 1975, I; KROMAYER-VEITH = J. KROMAYER and G. VEITH, Heerwesen und Kriegführung der Griechen und Römer, Munich 1928; LAMMERT = F. LAMMERT, Die römische Taktik zu Beginn der Kaiserzeit und die Geschichtsschreibung, Philologus Suppl. 23, 2, Leipzig 1931; PRITCHETT = W. K. PRITCHETT, Ancient Greek Military Practices, Pt. I, CPCS 7, Berkeley 1971; SCHNEIDER = R. SCHNEIDER, Legion und Phalanx, Berlin 1893.

¹ The fragment may be found in: Flavii Arriani Quae extant omnia II: Scripta Minora et Fragmenta, ed. A. G. ROOS with additions by G. WIRTH, Leipzig 1967, 177–85. I have argued at length elsewhere that the «Acies» must derive from a literary composition which can only be the «Alanica». See my: Flavius Arrianus: A Political and Military Biography, Diss., Duke University 1977, 260–76. A full discussion of Arrian's Cappadocian command, the Alan invasion, and a detailed treatment of the «Acies» will be found in the same work.

² K. HARTMANN, Flavius Arrianus und Kaiser Hadrian, Progr. Augsburg, 1907, 29;

unprecedented.»³ We must concede that it cannot be proven that the legion acted as a phalanx every time it deployed in the Imperial period. The Romans modified their formations and tactics according to circumstances, opponents, and terrain. MARSDEN, however, is absolutely correct to characterize Arrian's tactical disposition as one of the stock Roman battle plans of the second and third centuries.⁴ Arrian's use of a phalanx against the Alani does not reflect his caprice or a desire to imitate Alexander the Great. The Roman phalanx had its roots deep in the Etruscan period, and it is questionable to what extent the Romans ever really liberated themselves from its basic concept.

The military trends of the Early Empire favored a phalangic formation. First, the legions composed of Rome's best fighting men became precious as well as difficult to replace, when problems of quality and quantity of manpower began to beset the Empire. The phalanx permitted true economy of force.⁵ Second, Rome's opponents no longer consisted of heavy infantry. If the brunt of the fighting were assigned to the auxilia, while the legionary phalanx stood in reserve, Roman tactics using lighter-armed and more mobile troops would be more effective.⁶ Third, the phalanx was the best defensive formation against the hostile cavalry which the Romans faced, particularly on the Eastern frontier. Even Strabo, 7, 3, 17, strongly recommended use of the phalanx against barbarians. Finally, with few exceptions Roman strategy after Augustus switched from the offensive to the defensive. Roman strategy no longer required the sacrifice of citizens in attack. Employment of the phalanx, nearly always a defensive formation in Roman practice, can be seen as a direct consequence of this change in strategic thinking. Although a detailed discussion of the tactical development of the Roman army would exceed the limits of this study, we must briefly trace the concept of the phalanx in Roman practice to show more convincingly the significance of Arrian's <Acies> for Roman military history.

B. W. HENDERSON, *The Life and Principate of the Emperor Hadrian*, London 1923, 173; E. LAMMERT and F. LAMMERT, *RE* 2 A 1 (1921) 492.

³ BOSWORTH 238. BOSWORTH 249 claims Arrian was the first Greek to use the word *φάλαγξ* for legion. Josephus, *BJ* 3, 95, refutes this view, and perhaps passages from earlier Greek authors can be found. In *Tact.* 2, 3; 20, 1; 28, 1 Arrian uses *φάλαγξ* and *στρατόπεδον*, another common Greek equivalent for legion, interchangeably.

⁴ E. W. MARSDEN, *Greek and Roman Artillery: Historical Development*, Oxford 1969, 190.

⁵ For Roman economy of force from a different perspective see E. N. LUTTWAK, *The Grand Strategy of the Roman Empire*, Baltimore 1976, 2-3.

⁶ LAMMERT 23; H. M. D. PARKER, *The Roman Legions*, Oxford 1928 (repr. New York 1958), 259-60; J. MARQUARDT, *Römische Staatsverwaltung*², Leipzig 1884, II, 495; 596. LAMMERT 1-2 draws a clear picture of the Roman tactical dilemma. Cf. LUTTWAK (above n. 5) 40-46.

I

The legion, as most scholars agree, was originally a hoplite phalanx borrowed from the Etruscans. In fact our oldest account of the Roman army, the Servian constitution, describes a phalanx.⁷ Sometime before Pyrrhus' invasion of Italy the Romans abandoned the phalanx and subdivided the legion into three lines of ten maniples each, the *hastati*, the *principes*, and the *triarii*. Each maniple of *hastati* and *principes* consisted of two centuries of sixty men each, while the maniples of the *triarii* had probably two half-centuries of thirty men each.⁸ Although the evidence is scanty and unclear, many scholars believe that each maniple of *hastati* and *principes* deployed twenty men wide and six deep, and that the maniples of the *triarii* were twenty wide and three deep.⁹ The senior centurion of each maniple commanded the century holding the right side (Polyb. 6, 24, 8). Thus the total depth of the legion was fifteen men, nearly twice that of the old Doric phalanx of eight and only one rank less than the Hellenistic phalanx of sixteen.¹⁰ The real difference between the two formations, apart from armament, was the Roman use of the third line as a reserve.¹¹

Livy, 8, 8, 9–13, provides our most detailed description of how the manipular legion functioned. The maniples of the *hastati* stood apart from each other at intervals equal to the width of a maniple, while the maniples of the *principes*, the second line, covered the intervals of the *hastati*. In turn the maniples of the *triarii* faced the intervals of the *principes*. Thus the whole formation resembled a checkerboard, for which modern scholars use the term *quincunx*.¹² The *hastati* began the battle. If they were unsuccessful, they retreated in closed ranks into the manipular intervals of the *principes*, who probably advanced simultaneously to assume the role of the first line supported by the *hastati*, now the second line. If the *principes* likewise failed, both the *hastati* and the *principes* retreated into the intervals of the *triarii*,

⁷ Livy 1, 43, 8, 3; Diod. 5, 40, 1, 23, 2; Ath. 6, 273 e–f = Poseidonius, FGrHist 87 F 59; Ined. Vat. 3 (Hermes 27, 1892, 118). References to modern literature in ELIZABETH RAWSEN, *The Literary Sources for the Pre-Marian Army*, PBSR 39, 1971, 28 n. 57.

⁸ The major sources are Livy 8, 8, 3–18 and Polyb. 6, 22, 24. We cannot discuss in detail all the problems arising from Livy's account. RAWSEN (above n. 7) 30–31 offers the most recent critique of this passage. I am not convinced by her new interpretation of the *hastati* and the *principes*.

⁹ DELBRÜCK I 273; F. E. ADCOCK, *The Roman Art of War*, Cambridge/Mass. 1940 (repr. 1960), 8; and especially KROMAYER–VEITH 287; 429.

¹⁰ DELBRÜCK I 277–78; KROMAYER–VEITH 290. Cf. PRITCHETT 134–39. I cannot agree with PRITCHETT's argument that the basic depth of the Hellenistic phalanx after Alexander was eight.

¹¹ KROMAYER–VEITH 290. The *hastati* and the *principes* of course threw their pila before closing with the enemy to attack with the gladius, while the phalangites relied chiefly upon their sarissae. For the phalangites' use of daggers see J. K. ANDERSON, *Shields of Eight Palms' Width*, CSCA 9, 1976, 2; 4; 6 n. 18.

¹² There is no *locus classicus* for use of *quincunx* to mean the legionary order of battle.

and in a single, closely ordered line (*compressis ordinibus velut claudebant vias unoque continenti agmine*) they renewed the attack for the third and final time.

Debate over interpretation of Livy's account has been hot and often bitter. Some argue that Livy described a drill rather than a battle formation, and that the *principes* filled the intervals of the *hastati* before the Roman line clashed with the enemy.¹³ Others believe that Livy is perfectly correct, and that the Romans fought with huge gaps in their battleline.¹⁴ In the current state of our evidence a real solution to the problem is impossible. The best military minds of the sixteenth, seventeenth, and eighteenth centuries tried in vain to imitate the *quincunx* formation without finding the key to its execution.¹⁵ Nevertheless, we should note that if DELBRÜCK's view is correct and the Roman army fought with intervals filled, then little difference between the legion and the phalanx can be discerned in terms of formation alone. In fact, if Livy 8, 8, 12–13 is taken at face value, the final Roman attack of *hastati*, *principes*, and *triarii* combined occurred in a single, massed formation without intervals, certainly a phalanx. The Romans still had not forgotten the phalangic deployment of the legions in the Second Punic War. At Cannae Varro abandoned the manipular formation for the phalanx.¹⁶

By the first century B. C. the Roman army had experienced another reorganization, in which the cohort consisting of three maniples became the chief tactical unit. The precise deployment of the cohort is obscure, although some evidence suggests that the maniples of a cohort stood beside one another in battle.¹⁷ At the end of its development the cohort consisted of one maniple each of *hastati*, *principes*, and *triarii*, deployed six deep but with triple the front of a single maniple. In other words, the cohort stood sixty men wide and six deep.¹⁸

¹³ DELBRÜCK I 273; 293; 409; 427; SCHNEIDER 135–38.

¹⁴ ADCOCK (above n. 9) 8–11; KROMAYER–VEITH 359–61; 366. LAMMERT refused to take sides in the controversy: RE 2 A (1921) 484–85 and Suppl. 4 (1924) 1083–86. Asclepiodotus, Tact. 11, 7, seems to describe the *quincunx* formation, calling the units parallelograms, but this proves nothing more than Livy's account.

¹⁵ See the survey of this problem from Machiavelli to Delbrück in SCHNEIDER 100–135. VEITH had the final word in the debate with DELBRÜCK, but his arguments do not solve the problem, although most scholars today follow his views. See n. 14 above and F. W. WALBANK, A Historical Commentary on Polybius, Oxford 1967, II, 588–90. VEITH's interpretation of legion vs. phalanx is conceivable, but his views for legion vs. Gauls and legion vs. legion (KROMAYER–VEITH 430–31) are cursory and inadequate.

¹⁶ Polyb. 3, 113, 3; Livy 22, 47, 5; KROMAYER–VEITH 291.

¹⁷ LAMMERT–LAMMERT, RE 2 A (1921) 488, citing older literature, believe that Livy 30, 33, 1 indicates this disposition, which does not fit Scipio's army at Zama, and probably reveals Livy's conception of the tactical situation in terms of the Caesarian cohort. The crucial phrase seems to be: *Non confertas autem cohortes ante sua quamque signa instruebat sed manipulos aliquantum inter se distantes*, good Caesarian terminology.

¹⁸ M. J. V. BELL, Tactical Reform in the Roman Republican Army, Historia 14, 1965, 404–22, attempts to trace the evolution of the cohort in the second century B. C. without much success. Cf. RAWSEN (above n. 7) 19. T. RICE HOLMES, Caesar's Conquest of Gaul²,

Despite the wealth of military information from the *Corpus Caesarianum*, technical terms are rarely defined, and the precise functioning of the cohortal legion is no clearer than that of the manipular. The question of the *quincunx* and of possible cohortal intervals in the line again arises.¹⁹ Although definitions of Caesar's *duplex* and *triplex acies* escape us, the principle of the second or third line respectively used as a reserve is certain. The first or the first two lines did the fighting, which again could show a phalangic tendency, if and when a union of cohorts or a combination of the two lines occurred.²⁰

The phalanx, however, began to rear its head in another way by the first century B. C., in part necessitated by Rome's new opponents and a change in tactical needs. As early as Polybius (28, 11, 1–2), and probably much earlier, the Romans employed a formation in siege operations called the *testudo*, a closely packed arrangement of soldiers in the exterior ranks covering themselves with their shields, while the interior ranks raised their shields above their heads for protection against missiles. In the Middle Republic a *testudo* could include as many as three maniples, the size of a cohort.²¹ We should note, however, that by the time of Caesar *testudo* had come to mean not only the closely packed formation for assault on city walls, but also a tightly massed defensive disposition. Arrian, *Tact.* 11, 4–5, associates the *testudo* with συνασπισμός, the closest defensive formation of the Hellenistic phalanx,²² and Livy, 32, 17, 13, also calls the closely ordered Macedonian phalanx a *testudo*. It seems that *testudo* became the Latin equivalent of συνασπισμός. Battle descriptions provide further proof that the Caesarian legion could deploy as a phalanx.²³

At Carrhae Crassus deployed his army in a rectangular formation facing all sides which resembles the διφαλαγγία ἀμφίστομος of the Greek tacticians.²⁴ Deployment

Oxford 1911, 588, believes the second century of each manipule stood behind the first with the total depth of a manipule equaling eight. The evidence is slight and other views should receive consideration, but VEITH's arguments (KROMAYER–VEITH 428–30, cf. 287) seem more compelling.

¹⁹ HOLMES (above n. 18) 588–93; 596, reviews the literature on the cohortal *quincunx* and believes that intervals existed, but varied according to circumstances. BELL (above n. 18) 409–10 conceives the cohortal legion as a more closed formation than the manipular. He does not go into further detail. See the works cited in nn. 13–15 above for other views.

²⁰ KROMAYER–VEITH 368; 430–33; SCHNEIDER 141–46.

²¹ Polyb. 28, 11, 1–2; Livy 34, 39, 6; 44, 9, 8.

²² BOSWORTH 243 n. 111 accepts Arrian's statement, but denies any real connection between the two formations.

²³ Cf. *Corp. Gloss. Lat.* 4, 184, 573; 5, 157: *Testudo coniunctio scutorum*, and 4, 291; 5, 527, 581: *Testudo densitas ramorum* [sic] (*armorum?*) *et coniunctio scutorum*. A phalanx could also be called a wedge: Arr. *Tact.* 11, 2 (ἐμβολον); Livy 32, 17, 1 (*cuneus*). Cf. Procop. *De Bel.* 1, 18, 46. *Cuneus* could also be used for a different formation: Veg. 3, 18, cf. Gell. *NA* 10, 9, 1. Also see F. LAMMERT, *Der Keil in der Taktik des Altertums*, *Gymnasium* 51, 1940, 28 f.

²⁴ Plut. *Crass.* 23, 3, cf. Onasander 21; Ael. *Tact.* 37, 1; Asclep. *Tact.* 11, 2–3; 10, 22;

on a double or quadruple front is of course possible using a *quincunx*, but Plutarch, Crass. 24, 3, and Dio, 40, 22, 2, explicitly state that the Romans formed *συνασπισμός* against the Parthians, just as Arrian intended to do against the Alani (Acies 26). Under similar circumstances Antony in his retreat from Media Atropatene employed a massive *testudo* against attacks by Parthian archers.²⁵

So far the argument is based almost exclusively upon Greek sources. It might be objected that the Romans were not really using the legion as a phalanx, but that the Greek authors have colored their descriptions in Hellenistic terms. A glance at Caesar's skirmish at Ruspina will answer this objection. LAMMERT has already noted the similarity between Caesar's formation at Ruspina and Crassus' at Carrhae.²⁶ We can add another similarity. The author of the *De bello Africo* states in 15, 3: *Ita puncto temporis omnibus legionariis ab hostium equitatu circumventis Caesaris-que copiis in orbem compulsis intra cancellos omnes coniecti pugnare cogebantur. In orbem* need not be taken literally, but nevertheless a *testudo* can be round (Arr. Tact. 11, 4). More significant is the phrase, *intra cancellos omnes coniecti*. Here the word *cancellos*, which can denote an enclosure of wood, a railing, or simply a barrier, is curious. The skirmish occurs in the north African plains, miles from any architectural feature. It seems likely, however, that the *incertus auctor* means *cancelli scutorum*, the barrier or structure produced by the arrangement of shields in *συνασπισμός*. Not only the similarity of formations at Carrhae and Ruspina supports this view, but also analogous statements by Ammianus, which we shall discuss later.²⁷

As we have seen, Roman use of the phalanx does not depend upon solution of the *quincunx* problem. We find the Roman phalanx employed in defensive situations under the terms *testudo* and *συνασπισμός*. Before continuing this survey into the Early Empire, we must meet an objection concerning the nature of *συνασπισμός*.

The Greek tacticians distinguish three possible intervals between the files of a phalanx: the natural interval of four cubits (6 ft.), *πύκνωσις* of two cubits for attack (3 ft.), and *συνασπισμός* of one cubit for defense (1½ ft.).²⁸ PRITCHETT has argued that *συνασπισμός* and *πύκνωσις* are synonymous terms and that an interval of 1½ ft. was never used. His views rest upon his interpretation of the archaeological evidence for the width of the Macedonian shield, and alleged equation of *πύκνωσις* and *συνασπισμός* in Polybius. PRITCHETT concludes from a thorough investigation of the archaeological finds that the Macedonian shield measured

LAMMERT 13-18. LAMMERT's attempt to conceive this formation in terms of a *triplex acies* seems questionable.

²⁵ Plut. Ant. 45, 2-3; Dio Cass. 49, 29, 2-30, a detailed description of the formation.

²⁶ BAfr. 17; above n. 24; LAMMERT 12; 15. Cf. Corp. Gloss. Lat. 5, 486: *Testudo ordo militum in modum coronae interius terga habentes vel duritia glarea*.

²⁷ See below p. 315 f.

²⁸ Asclep. Tact. 4, 1-3; Ael. Tact. 11, 2-5; Arr. Tact. 11, 3-4.

.80 m., which he believes is too large for phalangites to use their sarissae in *συνασπισμός* at 1½ ft.²⁹

Since the Greek tacticians are not explicit about whether the sarissa projected above, below, or to the side of the shield in *συνασπισμός*, and no pictorial representations of a phalanx in action have been preserved, this point remains an unsolved problem. Nevertheless, the archaeological material is not decisive and the size of the Macedonian shield is still debated.³⁰ Too few shields have been found to permit any broad generalization to carry great weight, just as stylizing and heroizing preclude obtaining precise data of shield sizes from paintings and monuments. Modern experiments have shown that a phalanx can function at less than two-foot intervals. Moreover, the interval of Swiss pikemen in the fifteenth and sixteenth centuries was 1½ ft., a fact which PRITCHETT notes, but does not sufficiently consider.³¹

Finally, Polybius, 18, 29, 1–2, 30, 3 speaks of *πύκνωσις* as a three-foot interval, while in 12, 21, 3, 7, he mentions *συνασπισμός*. In the latter passage Polybius attempts to show Callisthenes' incompetence as a military historian in describing Alexander's battle at Issus. Polybius himself does not equate *συνασπισμός* with an interval of three feet. This alleged Polybian equation results from WALBANK's interpretation of the general figures for men and space which Polybius mentions. PRITCHETT wants to interpret Polybius too literally and to understand *συνασπισμός* very narrowly only in its technical sense.³² Polybius' purpose is to demonstrate the absurdity of Callisthenes' account. In 12, 21, 3 he uses *συνήσπισαν* with a quotation from Homer as an *exaggeration*. The same can be said for 12, 21, 7, where Polybius employs *συνήσπικτότας* as a general rather than a technical term. Polybius in 18, 29, 1–2, 30, 3 is perfectly consistent with statements of the Greek tacticians for *πύκνωσις*. Arrian's distinction of *πύκνωσις* from *συνασπισμός* in *Acies* 15 and 26 is further proof of their independence.³³

²⁹ PRITCHETT 144–50; 154. VEITH, in: KROMAYER–VEITH 324, says the scutum of the manipular legion was nearly 1 m. wide, while P. COUISSIN, *Les armes romaines*, Paris 1926, 323, estimates the breadth of the Imperial scutum from stela of the second century at .60 m. The most recent work on Roman armor, H. R. ROBINSON, *The Armour of Imperial Rome*, New York 1975, does not discuss shields and weapons. I have not seen G. ULBERT, *Römische Waffen des 1. Jahrhunderts n. Chr.*, Stuttgart 1968.

³⁰ With some minor reservations I agree with the views of J. K. ANDERSON (above n. 11) 1–6 in preference to M. M. MARKLE III, *The Macedonian Sarissa, Spear, and Related Armor*, *AJA* 81, 1977, 323–39.

³¹ DELBRÜCK I 404; SCHNEIDER 70; PRITCHETT 153.

³² WALBANK (above n. 15) II 374–75; cf. 586; PRITCHETT 153.

³³ See WHEELER (above n. 1) 292 with n. 96; 295 with n. 105.

II

We have now seen the phalangic principle operating intermittently in Roman tactics from the Etruscan period to the Late Republic. To repeat, no claim is made here that the Romans used the legion as a phalanx exclusively, but at times, particularly in defensive situations, the phalanx appeared. From the period of Augustus to Hadrian the sources practically desert us for technical military questions. Nonetheless, the Late Republican trends toward a greater use of cavalry, missile weapons, and auxilia, combined with declining tactical use of the legions, continued.

The basic order of battle seen in Arrian's <Acies>, i. e., legions in the center and auxilia on the flanks, is quite frequent in the first century: Idistaviso in 16 (Tac. ann. 2, 16, 3), against Tacfarinas in 18 (Tac. ann. 2, 52, 4), against Tiridates in 58 (Tac. ann. 13, 38, 4), against Boudicca in 61 (Tac. ann. 14, 34), and Second Bedriacum (Tac. hist. 3, 21, 2).³⁴ It cannot be argued that in each of these cases the legions deployed as phalanges, and none of the references listed by LAMMERT will prove use of the phalanx in the first century.³⁵ Still the outlook for our case is not dim.

Believers in a first-century phalanx have made much of Suetonius Paulinus' battle with Boudicca.³⁶ Certainly Dio, 62, 8, 2-3, is suggestive but not conclusive. Tacitus' account, ann. 14, 34, offers a few parallels with Arrian's <Acies>. Like Arrian, Paulinus draws up his army in a narrow place and deploys with *legionarius frequens ordinibus*. Tacitus' vagueness leaves open the question of a phalangic formation. We might compare Paulinus' disposition with Tacitus' *altis ordinibus* of hist. 2, 24, 3 and his *densis ordinibus* of hist. 3, 17, 2. In the former passage the deployment resulted from topographical circumstances and in the latter Tacitus' obscurity precludes any argument for a phalanx.

The best case for a legionary phalanx in the first century is Agricola's battle at Mons Graupius (Tac. Agr. 35, 1-2), which can possibly be seen as a prototype of Arrian's disposition. Eight thousand auxiliary infantry form the center of the Roman line with 3,000 auxiliary cavalry on the flanks. Tacitus defines the role of the legions as follows: *legiones pro vallo steterē, ingens victoriae decus citra Romanum sanguinem bellandi, et auxilium si [auxilia] pellerentur*. Clearly the legions

³⁴ G. L. CHEESMAN, *The Auxilia of the Roman Army*, Oxford 1914 (repr. Chicago 1975), 103. I have not seen the discussion of Roman tactics in K. WELLESLEY, *The Long Year A. D. 69*, 1975.

³⁵ Tac. ann. 12, 35; hist. 1, 79; 2, 29; LAMMERT 24. We should note that Nero's phalanx of Alexander the Great (Suet. Nero 19), the later *legio I Italica*, has no bearing on our discussion. Similarly, nothing can be argued from the descriptions of the *testudo* in Onasander 20, 1 and Aristides, *In Rom.* 84.

³⁶ MARQUARDT (above n. 6) II 596 n. 1; M. JÄHNS, *Geschichte der Kriegswissenschaften vornehmlich in Deutschland*, Munich 1889 (repr. Hildesheim 1966), I, 89-90; PARKER (above n. 6) 258.

stood in reserve, and in fact they played no part in the battle, won entirely by the auxilia. At Mons Graupius, of course, the Romans took the offensive, whereas Arrian intended to fight a defensive battle and then to pursue, but the phrase *auxilium, si pellerentur* seems to echo Arrian's command to his legions (Acies 29) after the pursuit by the Cappadocian auxilia has begun. Tacitus implies that the principle of the legions as a defensive bulwark for the auxilia, i. e., *προβολή*, was in effect at Mons Graupius.³⁷ Two other passages of Tacitus, hist. 5, 16, 1 and ann. 4, 73, 2–3, also show the legions strictly in reserve, while the auxilia fight. In both cases the legions eventually enter the battle offensively, but we have no clue to their formation.

It must be conceded that the principle of *προβολή* seen in Arrian and the concept of a reserve need to be the same. We find, however, a plausible reference to *προβολή* in Tac. Agr. 35, 2. As we shall see later, in Late Roman descriptions of the legionary phalanx the topos of the army standing like a wall or tower occurs.³⁸ Tacitus' phrase, *legiones pro vallo*, is another variant of this topos.³⁹ The evidence for the legionary phalanx is not beyond doubt, but the similarity of Agricola's deployment to Arrian's in the 'Acies' is real.

The legionary phalanx stands fully developed in Arrian's 'Acies' – a compact mass deployed eight deep and combining the thrust of the hasta (*κοντός*) with the range of the lancea.⁴⁰ PARKER believes that the phalanx of the 'Acies' indicates a radical change in legionary organization and that the cohortal unit has been abandoned.⁴¹ This view raises an important question for understanding Arrian's

³⁷ For *προβολή* see p. 303 above; Arr. Acies 14; 20; 29; LAMMERT 61–62. It seems quite possible to conceive the role of the *triarii* in the manipular legion, who retained the thrusting spear (hasta) of the old Roman phalanx, as a prototype of the *προβολή* principle. Cf. Livy 8, 8, 10–13: *triarii sub vexillis considebant, sinistro crure porrecto, scuta innixa umeris, hastas suberecta cuspide in terra fixas, haud secus quam vallo septa inhorreret acies, tenentes. Si apud principes quoque haud satis prospere esset pugnatum a prima acie ad triarios redisse, cum laboratur, proverbio increbuit. Triarii consurgentes, ubi in intervalla ordinum suorum principes et hastatos recepissent, extemplo compressis ordinibus velut clauderent vias unoque continenti agmine, iam nulla spe post relicta, in hostem incidebant; id erat formidolosissimum hosti, cum velut victos insecuti novam repente aciem exsurgentem, auctam numero, cernebant.* Cf. 8, 10, 1–7.

³⁸ Cf. Hdn. 6, 5, 10; Amm. 16, 12, 49; Veg. 1, 20, 3, 14. See below p. 315 ff. We have a variant of the topos already in Livy 8, 8, 10, quoted in n. 37.

³⁹ The phrase is usually taken as «the legions stood in front of the camp's palisade.» The strong similarity, however, to the statements of Ammianus and particularly Vegetius (who used Frontinus, Tacitus' contemporary, as a source) seems too compelling to ignore.

⁴⁰ The armament of Arrian's legionaries is equally divided between those carrying the *λόγχη*, i.e. lancea, and the *κοντός*. I have shown elsewhere that Arrian's *κοντός* cannot be the pilum, the contus (which is attested only as a cavalry weapon), or a Roman version of the Macedonian sarissa (cf. BOSWORTH 242), but is probably the traditional Roman hasta. See WHEELER (above n. 1) 297–304.

⁴¹ PARKER (above n. 6) 249; 258.

phalanx as an integral part of Roman tactics. We shall show that the cohort continued to exist, although one of its basic components has been modified.

In antiquity the difficulty of moving an army from column of march into line of battle dictated a certain relationship in the size of both. Josephus, BJ 3, 124, 5, 48, reports that the Flavian legions marched in ranks of six. VEITH, using the rule of thumb that width of column equals depth of battleline, has argued that Josephus' figure offers proof of the depth of the maniple and the cohort. Further evidence comes from the Roman camp at Nobilior in Spain, a site in agreement with Polybius' description of a Roman camp. SCHULTEN notes that the centuries camped in ten *contubernia* which indicates, since the Polybian century numbered sixty men,⁴² that a *contubernium* consisted of six. Thus the size of the *contubernium* equals the width of the marching column, and presumably the depth of the battleline as well.⁴³

Comparison of VEITH's argument with Arrian's 'Acies' reveals that a different legionary organization is in effect. Arrian's legions march four abreast and fight eight deep (Acies 5-6, 15). Ps.-Hyginus Gromaticus, a source now dated to the reign of Marcus Aurelius,⁴⁴ supplies an explanation. Here we find the century composed of eighty men and *contubernium* of eight (Ps.-Hyg. 1). It could be argued that Arrian's legions were organized along lines parallel to the manipular-cohortal arrangement demonstrated by VEITH, where the maniples stood deployed in files of *contubernia*, i. e., six deep. This view will explain Arrian's depth of eight, but not the *agmen* in ranks of four. Besides, Arrian's legions have differentiation of armament, viz., *hastae* (ῥοτοί) in the first four ranks and lanceae in the second four ranks. The individual maniple of the Republic was uniformly armed according to its place in the battleline. Armament might differ between maniples, i. e., between the *hastati* or *principes* and the *triarii*, but not within the maniple itself. Moreover, since the *contubernium* functioned tactically, differentiation of arms within the maniple could be awkward in some situations. Arrian's *agmen* of four abreast and the division of his phalanx into units of four ranks each is better viewed as the half *contubernium*. Roman squads of four men are attested for the Imperial period.⁴⁵

Thus Arrian's phalanx becomes explicable in terms of the regular legionary organization. In an *agmen* the second half *contubernium* of *hastati*, Arrian's ῥοτο-

⁴² G. WEBSTER, *The Roman Imperial Army*, London 1964, 29; 114, claims the Polybian century numbered eighty men, the same as under the Empire. This view cannot be reconciled with the figures given in Polyb. 6, 21, 9. See KROMAYER-VEITH 269. Livy's *vexillum* (8, 8, 8) also contains sixty men.

⁴³ KROMAYER-VEITH 287; 429; A. SCHULTEN, *Ausgrabungen in Numantia*, AA 26, 1911, 38. For more recent work on Roman camps see WEBSTER (above n. 42) 289-94 and A. NEWMANN, *Kl. Pauly* I (1964) 1080-82.

⁴⁴ AE 1956, 124; M. SPEIDEL, *ANRW* II 3, 206; E. BIRLEY, *The Epigraphy of the Roman Army*, *Actes du deuxième congrès international d'épigraphie grecque et latine*, Paris 1953, 234.

⁴⁵ Act. Ap. 12, 4, cf. Polyb. 6, 33, 7.

φόροι, marched behind the first half *contubernium*. The cohorts of the *hastati* (κοντοφόροι) led the legion and those of the *lancearii* (λογχοφόροι) followed with their *contubernia* similarly arranged. For a battleline, deployment by half *contubernia* meant doubling the number of the century's files. Arrian's phalanx had twenty files per century, forty files per manipule, and 120 per cohort. Therefore the frontage of a cohort in Arrian's phalanx doubled that of a Republican cohort, but the total depth of two cohorts combined, i. e., eight, exceeded the depth of the Republican cohort by only two. Arrian's phalanx reflects a modification of organization within the cohortal structure rather than a complete reorganization of the legion, and tactically there is only slight additional depth. We do not argue that the increase in the *contubernium* from six to eight resulted from the use of the phalanx. The organization of Arrian's phalanx is an effect, not a cause of this change.

Since Flavian legions still marched six abreast and Arrian's army uses a different organizational system as well as a modified formation, we can date both these changes to the period 70–135, an epoch of numerous military writers, who were perhaps partially inspired by the tactical ferment of the times.⁴⁶ Trajan and Hadrian are conspicuous as the only emperors to make military reforms in this period. Direct evidence does not link the increase of the *contubernium* to either emperor, but a case can be made to associate Trajan with the phalanx. Trajan's reforms are known only through Vegetius' reference to the *constitutiones* of Trajan (1, 8, cf. 2, 3). Dio, 68, 23, 1, however, is very suggestive. Sandwiched between Trajan's title of *Optimus* voted by the Senate and the capture of Nisibis, Dio inserts a brief digression on Trajan training his army: διεκόσμηι τε αὐτοὺς κατὰ πᾶσαν τὴν πορείαν καὶ διέταπτεν ἄλλοτε ἄλλως ἄγων . . . In the Greek tacticians πορεία means the marching formation of a phalanx.⁴⁷

Could Dio mean that Trajan used the phalanx as one possible means of deployment among others? Certainly in the Parthian War Trajan faced the same basic style of warfare as Arrian foresaw encountering against the Alani, a style for which the phalanx offered the best means to employ the heavy infantry of the legions.⁴⁸ If Trajan took the next major step in developing Roman use of the phalanx and removed the veil of auxiliary infantry seen at Mons Graupius, the change probably occurred before Trajan's campaign in the East began and Dio's obscure reference is out of place. Trajan's association with the phalanx, however, is not limited to this argument from Dio. Aelian dedicated his *Τακτική Θεωρία*, a revision of an old Stoic treatise on the Hellenistic phalanx, to Trajan probably

⁴⁶ For a discussion of Roman military theory in the first and second centuries see WHEELER (above n. 1) 365–75, cf. 338–50.

⁴⁷ Asclep. *Tact.* 11; Ael. *Tact.* 36–37; Arr. *Tact.* 28–29.

⁴⁸ BOSWORTH 244–45, has similar views.

after 103.⁴⁹ Perhaps Trajan was already interested in the phalanx at the time of the Dacian Wars. Direct evidence for Trajan's reform is lacking, but the possibility should be carefully considered.

III

Arrian's legionary phalanx evolved from Rome's flirtation with this closed, mass formation throughout her history, and particularly from the trend toward a new style of warfare which began to appear in the Late Republic and eventually produced the heavily armored cavalry of the Middle Ages. The emphasis on cavalry and missiles continued to accelerate. Arrian's use of the phalanx did not result from his own caprice. Just as the phalanx appeared in the Roman army before Arrian, it also is found after him.⁵⁰

Late in the reign of Marcus Aurelius we probably find the phalanx used again. Dio, 71, 8, 2, records a battle with the Quadi in which the Romans were surrounded and resorted to *συναπσιμός*. Caracalla also raised a phalanx and equipped it in the Macedonian fashion – more of his frivolous and extravagant imitation of Alexander the Great. We cannot consider Caracalla's phalanx a regular fighting unit, and no evidence will support a claim that it was.⁵¹

Alexanderism and the phalanx appear again under Severus Alexander. The author of the *Historia Augusta*, Sev. Al. 50, 5, says that Severus formed *argyroaspides* and *chrysoaspides* in addition to a phalanx of 30,000 men from six legions. This phalanx served in his Persian war. It seems that the author of the *Historia Augusta* has confused Severus' parade units with regular legions using a phalangic formation. Herodian, 6, 5, 10, records a Persian victory over the Romans in *συναπσιμός* during Severus' war.⁵² Moreover, according to Zosimus, 1, 52, 1, Aurelian

⁴⁹ WHEELER (above n. 1) 340–42. Cf. F. KIECHLE, *Die <Taktik> des Flavius Arrianus*, BRGK 45, 1965, 108–14. Contra, BOSWORTH 245.

⁵⁰ NISCHER (KROMAYER–VEITH 548; 550; 552) denies any change in Roman tactics during the Imperial period and believes the Caesarian *triplex acies* remained the norm. NISCHER, of course, ignored Arrian's <Acies>.

⁵¹ Dio Cass. 77, 7, 1; Hdn. 4, 9, 4. BOSWORTH 246 states: «The rudimentary phalanx tactics used for defense in Arrian's time could have been the inspiration for the serious reintroduction by Caracalla of the Hellenistic phalanx.» Caracalla's phalanx was a show-piece, nothing more, and serious military reforms under this emperor are totally unattested. BOSWORTH would have the legions from Britain to the Euphrates masquerading as Macedonians.

⁵² Noted by KIECHLE (above n. 49) 110–12. Contra, BOSWORTH 246 without success. C. R. WHITAKER, *Herodian*, LCL, London 1970, II, 115 n. 2, doubts the details of Herodian's account, since it contains many clichés. The phrase, *τῇ τῶν ἀσπίδων προβολῇ*, however, could be a technical expression. We will see again later the topos of men standing like a wall in describing the phalanx. Severus' phalanx may have continued as a unit for several

used *συνασπισμός* offensively to help win the battle of Emesa in 271. These instances from the end of the second and third centuries lend some support to our case, but they are not sufficiently detailed to be conclusive. Better evidence comes from the fourth century, which shows that the legionary phalanx survived the reforms of Diocletian and Constantine.⁵³

Ammianus Marcellinus, a former Roman soldier, provides clear and detailed evidence for use to the phalanx at Julian's battle against the Alamanni at Argentoratus (Strasbourg).⁵⁴ The Roman infantry deployed in *συνασπισμός*, *pedes, frontem artissimis conserens parmis* (16, 12, 37), which Ammianus describes in more detail at a later point (16, 12, 44): *nexamque scutorum conpagem, quae nostros in modum testudinis tuebatur, scindebant [barbari] ictibus gladiatorum adsiduus*. Eventually the Alamanni penetrated the Roman line and reached the Roman reserve likewise deployed as a phalanx in *συνασπισμός* (16, 12, 49–50): *globus [barbarorum] . . . agmina nostrorum inrupit et iter sibi aperiendo ad usque Primanorum legionem pervenit locatam in medio – quae confirmatio castra praetoria dictatur – ubi densior et ordinibus frequens miles instar turrium fixa firmitate consistens proelium . . . repetivit . . . temptabant [barbari] agminis nostri laxere conpagem*. Here Ammianus inserts his version of the phalangic topos – the soldiers stand like towers⁵⁵ – and his use of *conpages scutorum* parallels Caesar's *cancelli scutorum* at Ruspina.⁵⁶ We find *συνασπισμός* employed again in the elder Theodosius' campaign in Africa, and Julian's battle before Ctesiphon also seems to indicate a phalanx.⁵⁷

years after the war. The phrase, *stipendiorum vero post bellum Persicum maiorum* (HA Sev. Al. 50, 5), could indicate more years of military service rather than higher pay, as it is usually taken.

⁵³ There is some archaeological evidence that in the Tetrarchic period the number of *contubernia* in a *cohors milliaria peditata* was cut from ten to six, indicating a reduction in the century from one hundred to sixty men. See E. BIRLEY, Hadrian's Wall and its Neighborhood, in: *Studien zu den Militärgrenzen Roms*, Cologne 1967, 6–7. Similar evidence for the legionary century has not yet appeared, but a return to the size, although not to the organization, of the Republican century of sixty in the Late Roman period would not affect our argument.

⁵⁴ For bibliography on this battle see G. A. CRUMP, Ammianus Marcellinus as a Military Historian, *Historia Einzelschrift* 27, Wiesbaden 1975, 87 n. 69 and 88 n. 72, to which should be added E. NISCHER, Die Schlacht bei Straßburg im Jahre 357 n. Chr., *Klio* 21, 1927, 391–401, and most recently, R. C. BLOCKLEY, Ammianus Marcellinus on the Battle of Strasbourg, *Phoenix* 31, 1977, 218–31. I have not seen N. BITTER, *Kampfschilderungen bei Ammianus*, Habelts Diss., *Klass. Phil.* 23 (in press 1976). NISCHER conceives the battle in terms of the Caesarian *triplex acies*, for which neither Amm. 16, 12 nor Libanius, Or. 18, 54–62, offers any evidence.

⁵⁵ Cf. 16, 12, 38: [*pedites*] *ni conferti illi ubique vicissim innixi stetissent immobiles*. The Romans did have a formation called *turris* (Gell. NA 10, 9, 1), but Ammianus' phrase seems descriptive rather than technical.

⁵⁶ Above, p. 308.

⁵⁷ Amm. 29, 5, 41, 48; 24, 6, 9. Cf. Il. 4, 297–300; Asclep. Tact. 3, 5–6; Ael. Tact. 5, 13; Arr. Tact. 5, 4, 6; 12, 1–5, 11.

Ammianus' account of Adrianople is extremely vague, but some evidence suggests that Valens' army might have formed a phalanx.⁵⁸

Vegetius' *«Epitoma Rei Militaris»* not only strongly supports the view of a Late Roman phalanx, but also offers striking parallels with Arrian's *«Acies»*.⁵⁹ In 2, 15–17 Vegetius describes the Roman order of battle, interspersing his account with antiquarian data.⁶⁰ The deployment consists of two lines of heavy infantry, called *principes* and *hastati* respectively. Light-armed skirmishers equipped with missile weapons stand between them, and a third line of heavy infantry, the *triarii*, act as a reserve behind the *hastati*, the second line. Vegetius conceives the ten cohorts of the *principes* and the *hastati* in their respective lines as two parallel phalanges. No intervals are mentioned between the units. They are jointed to each other: *coniungitur, adnectitur, iungebatur, and comitante*.⁶¹

When the battle opens, the light-armed skirmishers attack and either put the enemy to flight or retreat behind the heavy infantry. Meanwhile, the heavy infantry has not moved (*stabat immota*). If the enemy presses their attack, the heavy infantry stands ready to meet them like an iron wall (*gravis armatura, et tamquam murus . . . ferreus stabat*). Should the enemy flee, the heavy infantry leaves the pursuit to the light-armed skirmishers, for, as Vegetius states, *legionis ius est facile nec fugere nec sequi*. We find here not only the phalanx, but also the same scenario for pursuit which Arrian prescribes in *Acies* 27–29. Vegetius seems to recommend the principle of the legionary προβολή.⁶²

In 3, 14 Vegetius offers a somewhat more detailed variant of the order of battle

⁵⁸ Amm. 31, 13, 2: *steterunt impropecti pedites, ita concatenatis manipulis ut vix mucronem exerere aut manus reducere quisdam posset*. For bibliography on this battle see CRUMP (above n. 54) 92 n. 86–87; 93 n. 89; 93. The most recent treatment of Adrianople, TH. S. BURNS, *The Battle of Adrianople: A Reconstruction*, *Historia* 22, 1973, 336–45, is misguided.

⁵⁹ The date of Vegetius is still debated. C. D. GORDEN in a rather superficial article, *Vegetius and his Proposed Reforms of the Army*, in J. A. S. EVANS (ed.), *Polis and Imperium: Studies in Honour of Edward Togo Salmon*, Toronto 1974, 35–58, revives SEECK's view for composition under Valentinian III in the fifth century. A. CHASTAGNOL, *Végèce et l'Histoire Auguste*, BHAC 1971, Bonn 1974, 59–80, offers new arguments for the reign of Theodosius I. For the older literature see A. R. NEWMANN, *RE Suppl.* 10 (1965) 992–1020, and D. K. SILHANEK, *Vegetius' Epitoma, Books 1 and 2: A Translation and Commentary*, Diss., New York University 1971, 183–87. While this article was at press, the learned contribution of WALTER GOFFART, *The Date and Purpose of Vegetius' De Re Militari*, *Traditio* 33, 1977, 65–100, appeared. GOFFART adds new arguments for a date under Valentinian III, although he has not seen the article of CHASTAGNOL.

⁶⁰ For a dissection of the passage see E. SANDER, *Die Antiqua Ordinatio Legionis des Vegetius*, *Klio* 32, 1940, 387–90.

⁶¹ Also noted by HOLMES (above n. 18) 596. Cf. Veg. 3, 15: *Magis enim expedit, ut conferti pugnent, quam longius separati*.

⁶² SANDER (above n. 60) 389–90 compares Veg. 2, 15–17 with Mons Graupius. In 1, 20 and 2, 6 Vegetius gives similar accounts of legionary deployment.

in 2, 15–17, which resembles Arrian's disposition even more closely. The phalangic topos, *ad vicem muri*, is repeated as well as the *legionis ius* for pursuit. Heavy infantry compose the first two lines, of which the second is armed with spiculae and lanceae. Two lines of archers and other light infantry armed with various missile weapons stand behind the heavy infantry, followed by the artillery in the fifth rank and the *triarii* in the sixth. Mounted cataphracts guard the flanks. Several scholars have already noticed that if the *triarii* are excluded and allowance is made for the absence of mounted archers behind the artillery, Vegetius' disposition is identical with Arrian's phalanx of the 'Acies'.⁶³

Use of Vegetius presents a problem, since he rarely indicates when he is speaking of his own time or from what source he took his information. Most scholars agree that Vegetius 1, 20, 2, 15–17, and 3, 14 come from Cato's lost 'De Re Militari'.⁶⁴ Certainly Vegetius' archaic terminology reflects a Republican source, and in fact his descriptions bear a close resemblance to Livy 8, 8, 3–18. The depth of six for his formations (cf. 3, 15) also points to a source before 135 which could easily be Republican. Scholars, however, have placed too much emphasis on Vegetius as a 'cut and paste' artist and have failed to appreciate his relevance to his own time.⁶⁵ Vegetius' phalanx could not have been copied from Cato or Cornelius Celsus. Frontinus is a more serious candidate, but we have already seen that in Frontinus' day, the period of Mons Graupius, the Roman phalanx had not yet reached its more mature form found in Arrian's 'Acies'. Vegetius has reworked material from a much earlier time into a form applicable to the fourth century. Coupled with the clear, reliable evidence of Ammianus, Vegetius' order of battle leaves no doubt that the Late Roman army often deployed as a phalanx, and one very similar to Arrian's.

It is impossible to overemphasize the significance of Arrian's 'Acies contra Alanos' for Roman military history. The 'Acies' is the only reliable, detailed account of Roman deployment between the end of the Republic and Ammianus' description of Argentoratus in 357. Using the 'Acies' as a *point d'appui*, we have been able to identify and to trace the tactical development of the Roman army so as to show that legion and phalanx were not two diametrically opposed tactical systems. The secret of the legion, and thus Roman military success, lay in flexibility, which permitted a Roman commander to adapt his army to the needs of the situation. As DELBRÜCK noted long ago, the legion was a phalanx with joints.⁶⁶ Roman

⁶³ LAMMERT, RE Suppl. 4 (1924) 1090; E. SANDER, Die Hauptquellen der Bücher I–III der epitoma rei militaris des Vegetius, Philologus 37, 1932, 370–71; MARSDEN (above n. 4) 190–91.

⁶⁴ JÄHNS (above n. 36) I 54; D. SCHENK, Die Quellen der Epitoma Rei Militaris, Klio Beiheft 22, Leipzig 1930, 36; 52 (through Cornelius Celsus); SANDER (above n. 60) 390 and: Triarius Ordo, RhM 95, 1952, 89 (through Frontinus); RAWSEN (above n. 7) 17–18. Contra, WEBSTER (above n. 42) 221, prefers Frontinus as *Urquelle*.

⁶⁵ Cf. GOFFART (above n. 59) 92; 95 f.; 100.

⁶⁶ DELBRÜCK I 275.

genius developed the legion from the Etruscan phalanx, and Roman adaptability reverted to it when the style of warfare changed. Nevertheless, even in the Late Empire the Roman army never stagnated in the tactical rigidity of the Hellenistic phalanx. For the Romans the phalanx remained one formation among many.⁶⁷

⁶⁷ NISCHER's remarks (KROMAYER-VEITH 597-600) about a Late Roman *triplex acies* and Vegetius' seven orders of battle (3, 20) should be treated with extreme caution.