

TEACH YOURSELF HOW TO BE A GENERAL*

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Normally, little attention is paid to the authors of military manuals in the imperial period. 'Entertaining though trifling' is a comment that can generally be heard.¹ Frontinus is more familiar than most because of his distinguished career and other writings, but even his *Strategemata* is considered more as a source of historical anecdote than as an object of serious study in its own right. Yet the military textbooks fit into the tradition of didactic literature in antiquity and as such raise questions about their scope and purpose, and about what use could be or was made of them. This has special significance in relation to generalship and the evolution of tactics in the Roman empire.

I

Military manuals or textbooks fall into two broad categories:— (i) precepts on strategy and tactics; here historical examples and illustrations are frequently adduced; (ii) technical accounts of drill, formations, and weaponry. Here, too, it might be relevant to cite historical illustrations in reference to the employment of drill which was not in normal use but might be helpful in unusual situations.² Some ancient manuals, however, appear to contain merely antiquarian accounts of past techniques with no indication that they have become obsolete or require adaptation.

In addition to these categories, historians and other writers could provide guidance on the organization of the army, and the tactics and skills that had proved successful in past battles. By way of example we may mention Polybius' description of the Roman army (cf. Josephus' analysis of the army of the imperial period), Livy's accounts of battles, and Caesar's *Commentaries*.

(i) (a) Onasander, a philosopher who compiled a commentary on Plato's *Republic*, wrote a treatise on the art of generalship dedicated to Quintus Veranius, who was consul in A.D. 49 and governor of Britain c. 58. Onasander deals with several themes relating to the commander's conduct of a war. It is notable that he concentrates on common-sense, even obvious, advice, emphasizing care and watchful diligence, rather than mastery of technical knowledge or complicated manoeuvres. Strength of character and moral uprightness are well to the fore among the qualities required.³

The routine of a commander's life may be summed up as follows:

- (i) he should take advice from experienced men (III)
- (ii) he should control carefully the army on the move, paying particular attention to marching order in enemy country, negotiating narrow passes and making suitable camps (VI-IX)
- (iii) he should protect and improve his army before battle by training the soldiers, foraging, posting night guards, obtaining information from spies or deserters, by estimating the size of the enemy, and by deceiving them over his own troop numbers. If retreat is necessary it should be effectively concealed. Discussions with the enemy should be organized to impress and intimidate (X. 1-14), a typically Roman idea.⁴
- (iv) he should conduct cautiously the pursuit of a fleeing enemy (XI)

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¹ H. J. Rose, *A Handbook of Greek Literature* (1951), 394, commenting on Polyaeus.

² I am not here concerned with handbooks on the

construction and design of artillery. See E. W. Marsden, *Greek and Roman Artillery, Historical Development* (1969), 2-4; *Technical Treatises* (1971).

³ 1. 1, 'The general should show integrity and self-restraint; be sober, frugal, hardworking, alert, free from greed; be neither too young nor too old, in fact a father of children if possible; he should also be a good speaker and have a distinguished reputation'.

⁴ See B. Campbell, *The Emperor and the Roman Army* (1984), 134-6; 147.

(v) he should be alert to the psychology of the army, especially when things are going wrong (XIII; XIV. 1-4; XXIII)

(vi) he should be aware of the rudimentary principles of troop formations for cavalry, light-armed men, and infantry, depending on the terrain and the dispositions adopted by the enemy; in this the employment of reserves was an important factor (XV; XVI-XXII; XXX-XXXI)

(vii) he should understand the tactics and devices to be employed at sieges (XL-XLI; XLII. 3-16)

(viii) at all times he should lead by personal example, though not by fighting in battle (XLII. 2; XXXIII)

(ix) he should observe a code of restraint and moderation in his personal conduct after winning a victory, in dealing with prisoners, and in burying the dead (XXXV-XXXVI. 1; XLII. 24)

(x) for the commander's benefit a miscellaneous series of ploys and maxims is cited, ranging from the giving of watchwords (XXV-XXVI), and the strategic use of trumpets (XLII. 17), to the importance of keeping the army splendidly attired (XXVIII), which Julius Caesar also considered important.⁵

The tremendous popularity of Onasander in the Renaissance, and even among soldiers of later ages,⁶ suggests that his work had some kind of general relevance. Claiming for his writings both practical benefit and entertainment value, he pointed out that his examples were from 'real' life and that they particularly reflected Roman experience:

Finally I may say confidently that my work will be a training school for good generals and will give pleasure to past commanders in this period of imperial peace. Even if I achieve nothing else, I shall make clear why some generals have suffered mishap, and why others have been successful and become glorious ... Therefore I think that I must say in advance that the examples of military technique collected in this book are all derived from experience of real exploits, and indeed exploits of men to whom Rome owes her superiority in race and courage right down to the present.⁷

(b) Frontinus is the only Latin author of military treatises in the early imperial period whose work survives, at least in part. He was a man of wide experience in various aspects of administration, being suffect consul in 73(?), again in 98 with Trajan, and *ordinarius* III with Trajan in 100. He governed Britain, probably from 74-7, and led a campaign against the Silures, was proconsul of Asia in 86, and in 97 was appointed *curator aquarum*.⁸ Frontinus wrote didactic manuals on various technical matters—the management of the water supply in Rome, land surveying, Greek and Roman military science (now lost),⁹ and the surviving *Strategemata*. This work, which won the approval of Trajan, sets out the exploits and stratagems of earlier commanders.

In Frontinus' view the art of generalship was a straightforward, common-sense activity for which a man could prepare himself, at least to some extent, by copying previous *exempla* and by using handbooks. He saw generalship partly as a series of grand stratagems which were to be learned off, rather than as the product of theoretical training. This glamourizing but amateur approach assumed that the techniques of ancient warfare had changed little, and that since in general terms armies pursued the same kind of tactics, the same counter-measures would be effective. Naturally a commander would need to supplement this with some knowledge of how to manoeuvre troops.

⁵ Suet., *Caes.* 67. 2.

⁶ The most accessible text is that of the Loeb ed. (1923), translated by the Illinois Greek Club. See introduction, pp. 351-2.

⁷ Sections 4 and 7; cf. 8, 'This treatise has not been written in an off-hand manner by a young mind with no experience of war; rather, everything in it has been

taken from genuine deeds and exploits, especially those involving Romans'.

⁸ *PIR*² 1. 322; A. R. Birley, *The Fasti of Roman Britain* (1981), 69-72.

⁹ Cf. Vegetius 1. 8; II. 3. It is not true to say that the *Strategemata* are merely an appendix to this work (G. Webster, *The Roman Imperial Army*² (1981), 221). Cf. Frontinus, *Strat.* 1. *prooem.*

Frontinus divides his stratagems into three categories—before battle, during and after battle, and sieges. He later added a fourth book on maxims on the art of generalship.¹⁰ These are mainly concerned with the strength of character and moral qualities which the Romans regarded as so important for a military commander. There are sections on discipline (i–ii), self-restraint, integrity, and personal example by the commander (iii), justice (iv), determination (v), moderation (vi), miscellaneous stratagems (vii). In these passages a large majority of the examples comes from Roman history, reversing the trend in the first three books.¹¹ This may show how the Romans believed in the superiority of their discipline, and the qualities consistent with the upper classes' view of army commanding. Furthermore, contemporary or near-contemporary examples add more interest and relevance to the narrative and show how such ploys could be used by 'real' generals.¹²

In the first three books of the *Strategemata*, Frontinus chooses historical illustrations to show commanders how to perform tasks that he considered important. There is a similarity in approach with Onasander, and Polyænus, who indeed uses some of Frontinus' examples. The general is instructed how to protect his army on the march and prepare ambushes (I. iv, v, vi), discover the enemy's plans while concealing his own, and cover up deficiencies (i, ii, vii), distract the enemy's attention (viii), look after the psychological welfare of his army (ix–xii), and dictate the nature of the war (iii).

In book II Frontinus shows the general how to fight in suitable circumstances (i, ii), position his troops (iii), disrupt the enemy and lay ambushes (iv, v), maintain the morale of the army (vii, viii), avoid forcing the enemy to fight in desperation (vi), end the entire campaign (ix), cover losses and retreat (x, xiii), safeguard his position and defend the camp (xi, xii).

In book III Frontinus demonstrates how to reduce the enemy to great straits in a siege and encourage treachery (iii, iv, v, vii, viii), how to draw out the besieged (x, xi), and use surprise (i, ii, vi, ix). In protecting a besieged force, the commander should ensure supplies and reinforcements (xiv), maintain morale (xii, xvi), preserve communications (xiii), deceive the enemy about provisions (xv), and make use of sorties (xvii).

Frontinus, too, claims a practical purpose in his introduction:

For in this way army commanders will be equipped with examples of good planning and foresight, and this will develop their own ability to think out and carry into effect similar operations. An added benefit will be that the commander will not be worried about the outcome of his own stratagem when he compares it with innovations already tested in practice.¹³

Frontinus goes on to emphasize that he undertook the work to help other people rather than to win recognition for himself, and he reinforces his claim to be of use by setting out the examples clearly and briefly, and by providing at the start of each book, 'for the guidance of the commander', a list of headings.

(c) Polyænus was a Greek rhetorician and advocate whose collection of eight books of *Strategemata* was dedicated to Marcus Aurelius and Lucius Verus c. A.D. 162.

¹⁰ It has been suggested, largely on subjective grounds of style, that Book IV was not written by Frontinus, but added much later. A marginal preference now prevails in favour of authenticity; see J. Wight Duff, *A Literary History of Rome in the Silver Age* (1960), 339–42, and C. E. Bennet, Loeb edition (1925), vii–xxiv, for a judicious summary.

¹¹ In books I–III examples from Roman history make up about 49 per cent of the total; in book IV they comprise over 70 per cent of the total. The figures, excluding all suspected interpolations and identical examples, are: book I—61 Roman examples out of 129;

book II—101 out of 189; book III—43 out of 99; book IV—101 out of 140.

¹² Domitius Corbulo, that paragon of senatorial commanders, appears four times—IV. i. 21, 28; ii. 3; vii. 2. Frontinus also produces a personal reminiscence of how the Lingones were persuaded to desert Civilis when Frontinus refrained from sacking their city contrary to all expectation—IV. iii. 14. Moreover, there are several references to Vespasian and Domitian—II. i. 17; IV. vi. 4; I. i. 8; I. iii. 10; II. iii. 23; II. xi. 7.

¹³ I. *proem*.

Although he includes a number of exploits by gods and heroes (I. 1 ff.), political devices of Greek tyrants (v. 1 ff.), and a section on the courage, virtue, and self-sacrifice of famous women (VIII. 30 ff.), most of the text consists of stratagems employed by historical Greek and other commanders down to Hellenistic times, with a few examples from the Roman republic, including the exploits of Rome's great enemy Hannibal (VI. 38. 1 ff.), Julius Caesar and Augustus (VIII. 1-25).¹⁴

The stratagems are not grouped in categories as in the case of Frontinus. Instead, each book contains a fairly random selection of ploys, many of which appear to be rather obvious clichés, moralizing points, or pleasing stories. There is, however, a common theme: the use of skill, cunning, foresight and resourcefulness to protect your army and defeat the enemy, especially in circumstances where you have the inferior position. Polyænus' collection of examples illustrates some of the devices by which the enemy could be tricked in battle, or a false impression given to them of your plans, strength, or position; the use of surprise attacks and ambushes; the exploitation of natural resources; the transportation of troops across a river; the conduct of a safe retreat; the conduct of sieges; the maintenance of the army's morale; methods for stopping cavalry attacks and assailants wielding long spears; the importance of moderate conduct by the commander.¹⁵

In the prologue of Book 1, Polyænus recognizes that military affairs and the defence of the empire were the responsibility primarily of the emperor, who should therefore have some knowledge of the military arts, and also claims a practical purpose for his work. A good general should learn from the techniques and ploys of previous commanders:

Most glorious emperors Antoninus and Verus, you will achieve victory over the Persians and the Parthians with the help of the gods, your own prowess, and the traditional valour of the Romans. You have always been victorious in the past and continue to be now in wars and battles ... I offer these elements of military science, stratagems used in the past, which will provide you yourselves with considerable knowledge of venerable exploits, and will also give those under your command ... the opportunity to learn the skills and courage which accompanied successful battles in the past.

Polyænus also claims that Marcus and Lucius were keen to read his work:

I do not think that I deserve as much praise for writing as you do for your eagerness to read work of this kind, being masters of a great empire ... You consider it part of the art of winning victories to study the ways by which commanders in the past triumphed ... Knowledge of exploits is the best teacher for army commanders of what they must do in emulation of successful generals in earlier times. The *Strategemata* will show you how to emulate the skill and success of the ancients.¹⁶

(d) Vegetius wrote the *Epitoma Rei Militaris* after 383; the addressee was perhaps Theodosius the Great. Vegetius was not himself a military commander and his work

¹⁴ Most of these examples are taken from Appian and Suetonius.

¹⁵ The following examples are representative of the material in Polyænus: giving a false impression and using surprise and ambush—I. 14-15; 20. 2; 23; 27. 2; 28. 1-2; 29. 1-2; 30. 5; 32. 3; 33; 34. 1; 35. 1; 37; 38. 4; 39. 2; 40. 4; 41. 2; 42. 2; 45. 1-2; 46. 1; 47. 1; 49. 2; II. 1. 10, 12, 16-17, 23-5, 27; 2. 6-7; 3. 7, 14; 4. 1; 5. 2; 10. 1; 23; 38. 2; III. 1. 2; 9. 5-6, 18-20, 50, 53; 11. 6; 13. 3; IV. 2. 14; 3. 9; 6. 8, 19; 8. 1, 4; 9. 2, 4-5; 11. 4; 12. 1; 13; 15; 18. 1; 19; V. 2. 5, 7, 9; 7; 10. 3, 5; 16. 2, 4; 44. 4; VI. 4. 2; VII. 6. 10; 18. 2; 21. 6; 27. 1, 2; 28. 2; 36; 39; 43; VIII. 10. 2; 16. 1; 17; 20; 23. 7, 10, 12; the use of natural resources and choice of the right moment to attack—I. 40. 7; III. 9. 13; VIII. 10. 3; 23. 4; transport across a river—II. 2. 1; 4. 2; IV. 7. 12; VII. 21. 3; conduct of a retreat—III. 9. 50; 11. 15; IV. 18. 2; VII. 8. 2; 33. 3;

conduct of sieges—VI. 3; VII. 6. 8; 11. 5; VIII. 23. 11; maintenance of morale—II. 1. 3, 6-8; 3. 4, 8, 11-12, 15; III. 9. 34; IV. 3. 3; 9. 6; 14; 20; V. 12. 3; 24; 25; VII. 21. 7; methods of stopping cavalry—II. 2. 9; III. 10. 7; VII. 14. 3;

moderate conduct by the general—IV. 11. 1; VIII. 16. 6.
¹⁶ v *prooem.* Cf. VI *prooem.*, 'Most glorious emperors Marcus Aurelius and Lucius Verus, I present to you the sixth book of my *Strategemata* with the prayer that you are victorious in war and that I may therefore describe many excellent stratagems associated with your valour ... I shall be eager to write up these exploits as being worthy of note in the present crisis. But now I shall publish in addition to my previous efforts some stratagems which have not the benefit of your personal experience, but are supported by the truth of having been carried out in the past'.

collects material from many sources and periods without chronological classification. Nevertheless, much of it relates to an earlier age, and Vegetius seems to be old fashioned, to look back, and to ignore the changes in the army accomplished by Diocletian and Constantine. So his fourth-century analysis of what was expected of a commander and the technique and fieldcraft he required, has some interest for the study of the early empire.¹⁷ He stresses the importance of maintaining discipline and morale in the preparations for battle, keeping order and vigilant readiness in enemy territory, organizing a camp, planning the campaign in detail, preparing tactical manoeuvres to suit the situation, allowing a defeated enemy to flee, conducting a retreat, and using stratagems. The work closes with a series of brief general maxims which, 'tested by different ages and proved by constant experience, have been passed down by distinguished writers' (III. 26). Vegetius clearly affirms the relevance of this kind of approach. In the past, the principles of war, when neglected, could be learnt again from books and established by the authority of commanders; the emperor had instructed him to abridge ancient authors and sought instruction from past exploits, despite his own achievements.¹⁸

(ii) (a) 'Hyginus'. The account of the construction of a military camp, erroneously attributed to Hyginus, may have been written in the time of Trajan.¹⁹ The opening, which presumably defined the purpose and intended audience, is lost. The remainder consists of three sections, on the divisions of the army and their place in the camp, the measurements of the camp, and the construction of its defences. The author claims to be giving practical instruction and to have consulted previous works on the subject.²⁰

(b) Aelian wrote on the technical details and organization of the Greek phalanx.²¹ His topics include the various subdivisions of the phalanx, the numbers of infantry troops and how they should be drawn up, the disposition of the light armed troops and cavalry and the intervals to be kept in the lines, the use of chariots and elephants, the names and types of manoeuvres and how to conduct them, and marching formations. Despite some doubts about the value of his work, Aelian, who seems to have had access to the highest social circles, found encouragement in a visit to Frontinus at Formiae. The distinguished consular had won a reputation for expertise in military science:

When I met him I found him no less interested in the military principles worked out by the Greeks; so I ceased to hesitate about writing on military tactics. For I thought that Frontinus would hardly be enthusiastic about such a work if he believed that it lagged behind Roman military practice.²²

Although Aelian's treatise seems antiquarian and unrelated to contemporary military practice, Frontinus' interest may suggest that there was some practical benefit to be derived from it. Aelian's humorous, self-deprecating comments about himself

¹⁷ For Vegetius' date see T. D. Barnes, 'The Date of Vegetius', *Phoenix* 33 (1979), 254. In general, military handbooks use earlier authors and the precedents and examples of past commanders. In contrast to this is the *De Rebus Bellicis* (see B. A. R. International Series 63 (1979), Part 1, *Aspects of the De Rebus Bellicis*, papers edited by M. W. C. Hassall; Part 2, the text, edited by R. Ireland) written in the second half of the fourth century, which contains suggestions for radical changes in the Roman army's equipment. The proposed innovations seem eccentric, and it has been recently argued that the author's real intentions were to highlight the financial pressures on the empire's taxpayers (A. E. Astin, 'Observations on the *De Rebus Bellicis*', *Collection Latomus* 180 (1983), 388). In view of this, it has been excluded from this study.

¹⁸ II. Pref., III. 10. Note also Vegetius' comments on

Cato's writings: 'Cato the Elder often commanded an army as consul and was invariably victorious; but he believed that he could help his country more effectively by writing on military matters. For the results of courageous actions do not last long, while works written for the public good are of constant benefit' (II. 3). For a brief summary of Vegetius' comments on tactics (perhaps partly based on Frontinus' lost work), see Webster (n. 9), 221-5.

¹⁹ See M. Lenoir, *Pseudo-Hygin, des Fortifications du Camp* (Budé, 1979), 111-33. The work may have been addressed to an emperor or a superior officer; see pp. 124-6.

²⁰ Sect. 45.

²¹ See A. Dain, *Histoire du Texte d'Élien le tacticien* (1946), 26 ff.

²² Pref. 3.

should not obscure the fact that he addressed the work to an emperor (probably Trajan) and inserted a table of contents so that he could pick out the parts he found interesting or useful.²³

(c) Arrian, a Greek senator from Bithynia, was *legatus Augusti* in Cappadocia c. A.D. 132, when he dealt with a threatened invasion by the Alani.²⁴ His *Tactica* has a similar lay-out and close verbal similarities to Aelian's treatise, which he may have copied closely; or perhaps both authors used a common source.²⁵ Concentrating on Hellenistic practice, Arrian analyses weapons and equipment (3-4), the different units involved (5-10), systems for drawing up the troops for battle (11-19), battle manoeuvres (20-7), formation on the march (28-30), and the art of giving commands effectively (31-2).

However, Arrian's manual differs in two important ways from that of Aelian. Firstly, he introduces contemporary references and examples, by citing several dangerous enemies of Rome—the Alani, Sarmatians, Armenians, and Parthians, all of whom were noted for heavy cavalry or archers. In his description of the organization of the phalanx he explicitly states that a more tightly packed infantry formation is required in certain cases, one of which is the need to repulse attackers like the Sarmatians or the Scythians (11. 1-2). There is a clear connection between the close-packed phalanx and the Roman *testudo*.²⁶ Secondly, Arrian concluded the *Tactica* with an account of contemporary cavalry tactics and training (33-44).²⁷

Although the preface, where Arrian presumably described his intentions, is lost, it is plausible that he too claimed some practical purpose. A knowledge of the history of warfare was important so that certain practices could be adapted to assist the Romans with contemporary military problems. Moreover, we have Arrian's *Ectaxis contra Alanos*, an account of the military dispositions and tactical preparations he made for the battle against the Alani. These included an unusual defensive formation seemingly modelled on the Greek phalanx.²⁸

II

The military handbooks examined above can be placed in the context of those manuals on military technique common from the fourth century B.C. in Greek literature, and which clearly did have a practical relevance to those organizing the phalanx and leading troops, especially mercenary commanders. This tradition of military textbooks continued; the best-known author of the first century B.C. whose work survives is Asclepiodotus, a possible pupil of Posidonius the philosopher. He wrote a drill book for the phalanx, setting out the various divisions of the army, their equipment and different manoeuvres, and examined how best to give orders in battle.²⁹ But there was also a strong general tradition of the *Lehrbuch* in antiquity. These didactic works covered a wide range of activities, including law, rhetoric, agriculture and various technical matters, and frequently emphasized the ethical qualities needed for success. Of course in many areas experience on the job and learning from others were more important than textbooks. For example, in rhetoric,

²³ *ibid.* 7.

²⁴ See F. Kiechle, 'Die "Taktik" des Flavius Arrianus', 45 *Bericht der römischen-germanischen Kommission 1964* (1965), 87; A. B. Bosworth, 'Arrian and the Alani', *HSCPh* 81 (1977), 217 (hereafter = Bosworth); *A Historical Commentary on Arrian's History of Alexander*, vol. 1 (1980), 1-34; P. A. Stadter, *Arrian of Nicomedia* (1980), 41-9, 162-3; P. A. Brunt, *Arrian: History of Alexander and Indica* (Loeb, two vols., 1976 and 1983).

²⁵ H. Köchly and W. Rüstow, *Griechische Kriegsschriftsteller*, II, 1, 240 ff.; A. Dain (n. 21), 26-40; P. A. Stadter, 'The *Ars Tactica* of Arrian: Tradition and Originality', *CP* 73 (1978), 117; *Arrian of Nicomedia*, 41-5.

²⁶ 11. 3-6. Arrian apparently refers to the *testudo* used in open battle conditions.

²⁷ See Kiechle, *op. cit.* (n. 24); R. W. Davies, 'Fronto, Hadrian and the Roman Army', *Latomus* 27 (1968), 75; P. Stadter (n. 24), 43-5.

²⁸ See below, pp. 22-3.

²⁹ Aeneas Tacticus was the most important of the earlier writers on tactics. He wrote perhaps c. the mid-fourth century B.C. about the specialized warfare of the Greek city states, and was probably the model for several other military authors (he is mentioned by Aelian 1. 2) whose work is now lost, e.g. Polybius, Cineas, Pyrrhus of Epirus, Alexander of Epirus, Clearchus, Posidonius. For Asclepiodotus, see K. K. Müller, *RE* II. 2, cols. 1637-41.

Tacitus claims, it had been the custom in the late Republic for the aspiring orator to frequent the company of the masters of the day and to learn from them.³⁰

Manuals dealing with agricultural practice invite direct comparison with military handbooks in their specific claims to be of practical use to the reader. Cato, Varro, Celsus, Atticus, Graecinus, the elder Pliny and Columella were the major authorities.³¹ However, the exact relevance of these authors is problematical. Doubt has been expressed as to what type of audience was aimed at; if the handbook writers were concerned with certain types of farming and estates, their work could not be generally applicable, and indeed they might not have understood the wider principles of agricultural production.³² On the other hand, the agricultural writers do offer specific advice, based not on mere theory but on past experience and personal observation—'... Roman agricultural writing was based from its inception on practical farming experience'.³³ And Columella himself, although he recognized the limitations of manuals, which might be out of date or become inapplicable, accepted their importance in the education of farmers, and expected others to do so:

Therefore a prudent head of the household who earnestly wishes to follow a definite plan for increasing his fortunes by tilling his fields, should take special care to consult about everything the most knowledgeable farmers of his own day; he should also carefully examine manuals written in the past and evaluate the views and teachings of their authors, to see if they are relevant to contemporary agriculture or are out of step in some way.³⁴

Yet it is in fact difficult to compare the agricultural writers with the authors of military manuals, however tempting the comparison may seem. Certainly it is important that the Romans apparently accepted the concept of preparing for practical activities through instruction from books. But, apart from Frontinus and Arrian, the writers of military handbooks, unlike most of the agricultural writers, had no personal experience of what they wrote about. Furthermore, advice on farming procedure could perhaps be more directly helpful to a farm owner than examples of stratagems to an army commander.

The assertion by many writers of manuals that they are giving practical advice raises difficult problems for the historian. How far is this a literary *topos*, a conventional justification of didactic works? Moreover, that a writer claims to be useful does not mean that others found him so, or that he was much consulted. These questions are particularly intriguing in respect of military handbooks, where it may be hard to see how army commanders could take seriously textbooks on stratagems and old-fashioned drills and manoeuvres. Furthermore, in the case of Greek military writers, is it likely that Romans accepted the theoretical precepts of 'Graeculi' rather than *exempla* derived from proved experience? Indeed, it could be argued that Greek writers mainly hoped to propagate the distinguished past of Greece in their work. It was important to show not only that the Greeks were culturally superior, but also that they had an impressive record in war and politics.³⁵ Polyaeus, for instance, associates the effectiveness of his writings on *strategemata* with his Macedonian background and the distinguished past of the Greeks, who had mastered Oriental peoples.³⁶

³⁰ Tac., *Dial.* 34. 1.

³¹ See K. D. White, *Roman Farming* (1970), 14–37; *ANRW* 1. 4 (1973), 'Roman Agricultural Writers I: Varro and his Predecessors', 439; A. E. Astin, *Cato the Censor* (1978), 182–210. For the prefaces to agricultural works see T. Janson, *Latin Prose Prefaces* (1964), 83–95.

³² See for example, P. A. Brunt, *JRS* 62 (1972), 153–4; M. I. Finley, *The Ancient Economy* (1973), 110–11; White, *ANRW* (n. 31), 447; N. Purcell, 'Wine and Wealth in Ancient Italy', *JRS* 75 (1985), 5–6 for some critical comments.

³³ White, *Roman Farming*, 18; *ANRW*, 457–8, 473–82, 489–92—defending the general value and re-

levance of the agricultural writers.

³⁴ 1. 1. 3–4.

³⁵ See E. L. Bowie, 'The Greeks and their Past in the Second Sophistic', *Past and Present* 46 (1970) = *Studies in Ancient Society* (1974), ed. M. I. Finley, 166.

³⁶ IV *prooem.* Polyaeus says that this book was especially pleasant to write because in it the emperors could learn of the exploits of his ancestors, the kings of Macedon. Note that in I *prooem.* 1, Polyaeus makes an anachronistic reference to the emperors' victory over the Persians and the Parthians, which serves to tie Roman affairs more closely with Greek achievement. At VIII *prooem.*, however, he does identify himself with Rome's wars.

Despite the difficulties sketched in above, however, it is worth attempting to relate the military textbooks to 'real' life and the fieldcraft of the imperial period. Two approaches may be suggested:— (i) general consideration of the Roman method of schooling men for important public duties together with the Roman conception of the role of the general; (ii) a comparison of military tactics with the sort of material that appears in handbooks, in particular by examining how the Romans dealt with unusual tactics employed by the enemy.

(i) Pliny, in a letter pointing out how senators needed to learn their duties and senatorial procedures after the appalling hiatus in the reign of Domitian, recalls an idealized past:

In olden times there was a custom by which we acquired knowledge not just by listening to our elders but also by watching their conduct. In this way we learnt what we had to do ourselves and what should be passed on to our juniors. So, men were immersed in military service at an early age and learnt how to give orders by obeying them, how to be a commander by following others. As candidates for magistracies, they gathered round the doors of the Senate House and observed the conduct of public business before they participated in it.³⁷

Pliny probably has in mind Rome of the second century B.C.,³⁸ when (he claims) men preferred to follow a definite *exemplum* if possible. The same idea is found in Quintilian, who thought that while the Greeks excelled in *praecepta* (theoretical instruction), the Romans excelled in *exempla*, and that that was much better. But *exempla* did not mean only practical experience, which indeed was not always possible to a significant degree; it involved reading about famous men of the past and their exploits, and attempting to emulate them.³⁹ Horace was to say that the poet could help to instruct the new generation through distinguished examples, by reciting great deeds.⁴⁰ It may be true that *exempla* were a feature of the literary tradition. But we ought to ask why this was so. Can it in practice have been connected with the nature of Roman public life and the methods actually used for schooling men for the duties of administration and army command?

In the Republic all important magistracies, governorships, and army commands were held by senators. The qualifications for these posts were birth, wealth, and status; none of these necessarily implied either ability or knowledge. Of all the duties a Roman senator could be asked to perform, the command of an army involved the greatest risk, the largest range of responsibilities, and potentially the greatest scope for renown or disaster.⁴¹ Doubtless a man could hope to learn from his experience during his career or when actually holding a top post. But this would depend on his intelligence and willingness to learn, the competence of his subordinates to advise him, and the unpredictable opportunities for active service.⁴²

³⁷ *Ep.* VIII. 14. 4–5. Cf. Seneca, *Ep.* I. 6. 5; Tac., *Dialog.* 34. 1.

³⁸ A. N. Sherwin-White, *The Letters of Pliny* (1966), 462.

³⁹ XII. 2. 29–30; cf. Cicero, *De Am.* 10; *De Off.* II. 46–7.

⁴⁰ *Ep.* II. 1. 130–1. See in general on the importance of *exempla* Z. Yavetz, 'The *Res Gestae* and Augustus' Public Image' in F. Millar and E. Segal (eds.), *Caesar Augustus, Seven Aspects* (1984), 19–20.

⁴¹ 'For who can doubt that military skill is superior to all other accomplishments, since through it our freedom and authority are preserved, our territory enhanced, and our empire safeguarded'—Vegetius III. 10.

⁴² W. V. Harris has argued that until the last years of the second century B.C., candidates for office had to fulfil many seasons of military service, probably ten campaigns, and so gained much practical experience in the military arts (*War and Imperialism in Republican Rome 327–70 B.C.* (1979), 10–16; see too K. Hopkins, *Conquerors and Slaves* (1978), 27–8). I am not certain how demanding the requirement to serve ten campaigns was in practice. The campaigning season might last only a few months and involve no fighting. Moreover, it is by no means clear in the early period how far senators had formal duties in the post of military tribune. It was presumably up to the individual to make what he wanted out of his military service.

In the first century B.C.⁴³ the relationship between practical experience and learning from textbooks can best be illuminated by Cicero. In his speech on behalf of M. Fonteius, he laments that military pursuits have fallen into desuetude among young men, and recalls the great commanders of the past, 'who acquired their knowledge of the military arts not from textbooks, but by experience and victories'.⁴⁴

We see the same distinction between men of exceptional talent who could make the most of any opportunity, and the rest, in Cicero's speech for Cornelius Balbus. He imagines the ghost of Gaius Marius:

Let him tell you that ... he acquired his military skill on active service and as a commander in wars; that if he had read about such important wars as he himself waged and brought to a successful conclusion ... he could have obtained a detailed knowledge of all the rules of war.⁴⁵

Pompey too by his practical experience was out of the ordinary—'in his youth he waged more wars than others have read about ... in his youth he was educated in military science not through the precepts of others but by his own commands ...'⁴⁶

In these speeches, designed to appeal to conventional upper-class sentiment, Cicero asserts the primacy of practical experience. But the manner of his praise suggests that senators of conventional mediocrity did learn from textbooks and collections of *exempla*. Naturally, the more experience a man had the better, but few could expect the opportunities of a Marius or a Pompey. Textbooks, therefore, could have a part to play, as Polybius pointed out,⁴⁷ and some might have to rely on this type of knowledge until they were actually in the field and could look to their officers and centurions for advice. Indeed, when it suited his theme, Cicero approved the use of textbooks. We see this in his exaggerated praise of Lucullus' method of preparing for his command against Mithridates.⁴⁸

The problem of training men for the post they might be called upon to hold in the administration will hardly have been less difficult in the imperial period. The process by which one Roman learned to cope with an unfamiliar task is well illustrated by Frontinus' work on the aqueducts of Rome. When he was appointed consular *curator* by Nerva in 97, he had no knowledge of the job:

I believe that it is of the first and foremost importance to follow the procedure I have adopted in other affairs and thoroughly get to know the task I have undertaken.

In my opinion there is no more secure basis than this for any activity and no better way of determining what I ought to do and what I ought to avoid (*prooem.* 1-2).

That Frontinus felt it necessary to say this may tell us a lot about the general approach of Roman administrators. He accepted that the inexperienced official should seek advice from his subordinates who had practical knowledge. But it was improper for a capable man to rely entirely on his assistants, 'for they are merely the hands and instruments of the organizing intelligence'. Therefore Frontinus collated scattered

⁴³ Cato, in the second century B.C., had published a didactic work entitled *De Re Militari*, which was apparently intended as a practical guide to Roman military techniques, supported by reference to particular exploits (see A. E. Astin, *Cato the Censor*, 204-5, 209, 231-2). Pliny (*NH* xxv. 4) could describe Cato as 'omnium bonarum artium magister'. It has also been suggested that Polybius' account of how the Romans built a camp was derived from a manual for the guidance of military tribunes—F. W. Walbank, *A Historical Commentary on Polybius* 1 (1957), 711 on Polybius vi. 27 ff.

⁴⁴ *Pro M. Fonteio* 42-3.

⁴⁵ *Pro Balbo* 47; cf. Sallust, *Bell. Jug.* 85. 12-14.

⁴⁶ *De Imp. Cn. Pomp.* 27-8. We may contrast Pompey's civilian career. His long military service had left him ignorant of senatorial procedure and 'res urbanae'. So, to avoid embarrassment during his consulship of 70, he asked his friend Varro to prepare an introductory handbook—'ex quo disceret quid facere dicereque deberet' (Aul. Gell., *Noct. Att.* xiv. 7. 2).

⁴⁷ xi. 8. 1-2.

⁴⁸ *Lucullus* 1. 1-2. Cicero says that Lucullus arrived in Asia 'having become a general, although on leaving he had been ignorant of military science'. He has chosen to ignore Lucullus' not inconsiderable experience as *proquaestor* and trusted lieutenant of Sulla during his campaigns in Asia (Plutarch, *Luc.* 3-4).

comments on the administration of the aqueducts. This textbook, written at the start of his term, was to serve primarily as a guide to himself, but could also be of use to his successors. Clearly he did not think that experience gained in office would be adequate. Frontinus is critical of some of his predecessors and the extent of abuse and corruption.⁴⁹ Perhaps not all *curatores* were as conscientious as he was; the lack of a systematic textbook before Frontinus may have made it difficult for these inexperienced officials to get to grips with their duties. It was up to the individual whether and how to educate himself for the task assigned. It is interesting that Frontinus refers to other books he had written after experience in certain posts, specifically to guide his successors. He may be thinking of his treatise on military science and the *Strategemata*.

Architecture could perhaps be described as a skill that required a didactic approach. Vitruvius in his specialist study admits that some self-styled architects had neither education nor experience in the science:

Therefore I thought that I should very carefully write up a coherent system of architecture in the belief that it would be a welcome benefit to everyone.⁵⁰

His purpose is to educate practising architects with a concise and lucid exposition of the science in contrast to the disordered writings of previous authors.⁵¹ His ideal architect should be able to combine the technical experience of a craftsman with the learning of a scholar—‘those who have trusted in theory and learning have evidently pursued a shadow, not reality’. Vitruvius is also concerned that the architect should be well educated in general, with a good knowledge of philosophy, music, and historical examples relevant to his work.⁵² In this context, that of a society that had no formal qualifications for individual careers, accounts of the principles that had influenced men’s conduct in a variety of situations were not out of place.⁵³

Military commands were the most responsible and demanding of public posts in the imperial period. Despite the increased number of military commands available to senators, it seems to me that the emperor could not count on finding men of significant experience for the major consular provinces, and that there was no deliberate attempt to ensure regular experience of commanding troops.⁵⁴ In any case, it is certain that the Romans had no military academy, no formal process for educating officers in ordnance, tactics, and strategy, and no systematic means for testing the quality of aspirants to top commands. Furthermore, the length of time spent in commanding an army of several legions and *auxilia* was normally too limited to allow the development of a military hierarchy or specialized high command which could have provided a fund of military experience.⁵⁵

The emperor was commander-in-chief, and increasingly emperors took an active part in directing campaigns. But few emperors had much, if any, military experience before they assumed the purple. They could take advice, but from what sources? Augustus used to jot down elevating precepts from Greek and Latin authors, which he then sent to members of his household staff, generals, and governors. Doubtless the tactical acumen of Augustus and his advisers extended further than this. Nevertheless, he was fond of quoting principles of conventional wisdom on the role of the mature commander, for instance, that all ill-considered actions should be avoided and that battle should not be engaged unless there was a greater expectation of success than fear

⁴⁹ II. 76; IOI; I12–15.

⁵⁰ *De Architectura* VI prooem. 6–7.

⁵¹ I. I. 18; IV prooem. I; V prooem. I–2; IX. 8. 15; X prooem. 4.

⁵² I. I. 2–4.

⁵³ Valerius Maximus (II prooem.) claimed that his collection of famous deeds and sayings from the past might be of some benefit for the conduct of people in the present.

⁵⁴ My basic thesis, as stated in *JRS* 65 (1975), II, has

not in my view been significantly affected by any new evidence or criticism of points of detail. Nor am I persuaded by A. R. Birley’s restatement of the traditional view (see e.g. *The Fasti of Roman Britain*, 4–35).

⁵⁵ Syme’s comment is appropriate (*RR*, 395)—‘The Romans were at least preserved from the dreary calamities that so often attend upon the theoretical study of the military art or a prolonged and deadening course of professional training’.

of loss.⁵⁶ Augustus' perception of the relevance of advice of this type is similar to the hopes expressed by Frontinus and Polyaeus in the introduction to their works.

It is relevant to note here that the authors of military handbooks themselves had a limited concept of the qualities and skills required of a military commander. Common sense, care, diligence, moral uprightness, a good grasp of how past commanders had succeeded, and naturally the ability to manoeuvre troops are predominant, rather than specialized knowledge or professional expertise (see above, pp. 13–17). In a way this reflects the ideology of the Republic. In a public definition of a good commander, Cicero mentions not only knowledge of military science (*scientia rei militaris*), but also *virtus*, *auctoritas*, and *felicitas*. The last two may be rendered as 'proved reputation' or 'dignity', and 'good fortune'. In this context *virtus* need not mean merely 'courage', but perhaps also 'moral excellence'.⁵⁷ Cicero's predilection for qualities of character and strong morality presumably caters for the taste of an audience containing senators, who held that because of birth, upbringing, and inherited ability, a man of the upper classes was capable of any activity the state required and worthy of the support of the *comitia* for high office.⁵⁸

When referring to his own activities as a commander Cicero emphasizes again the qualities of moral excellence, doing one's duty, good judgement, energy, concern, personal reputation and dignity, and good luck.⁵⁹ Yet, despite his frequent references to military operations,⁶⁰ Cicero tells us little about tactics and strategy; he seems uninterested in the technical details of his campaigns.

Even in Caesar's *Commentaries* on the Gallic and Civil wars, it is the general aspects of the commander's role that are emphasized rather than technical material on fieldcraft.⁶¹ Either Caesar assumed that all his readers were familiar with this, or, as is perhaps more likely, he expected them to be uninterested in numerous technical details of military tactics. Perhaps the rather vague attitude of Roman senators to generalship is best summed up by Dio's praise of Rome's great enemy Decebalus:

Decebalus had a shrewd understanding of both the theory and practice of war; he was expert in knowing when to attack and in choosing the right moment to retreat; he was skilled in setting ambushes and competent in organizing a set battle; he could exploit a victory, but also cope well with a set-back.⁶²

If the perception of what a general needed to know was limited, this can help us to understand how military manuals might be useful to prospective generals; it cannot of course prove that they were useful in practice.

(ii) Unfortunately it does not help very much to seek parallels between the military handbooks and what we know of tactics in the imperial period. Firstly, we

⁵⁶ Suet., *Aug.* 25. 4; 89. 2. Cf. Onasander xxxii. 1–4; Vegetius iii. 9.

⁵⁷ *De Imp. Cn. Pomp.* 28–9; 36; 49. Cf. *Pro Fronteio* 43; *De Off.* i. 108; *Pro Murena* 22.

⁵⁸ Caelius wrote to Cicero that a man discharging a public duty was expected to be able to deal with any eventuality just as if he had everything he needed for the job in hand—*ad Fam.* viii. 5. 1 = SB 83. (In the following notes SB refers to D. R. Shackleton Bailey, *Cicero, Epistulae ad Familiares* 2 vols. (1977), or *Cicero's Letters to Atticus* 6 vols. (1965–70) as indicated.)

⁵⁹ Moral excellence—*ad Fam.* xv. 1. 3 = SB 104; 3. 2 = SB 103; cf. *ad Att.* v. 18. 1–2 = SB 111. Doing his duty—*ad Fam.* xv. 1. 4 = SB 104; 2. 1 = SB 105; *ad Att.* vi. 5. 3 = SB 119.

Other qualities—*ad Fam.* ii. 10. 2–4 = SB 86; xv. 1. 4–6 = SB 104; 2. 1 = SB 105; *ad Att.* v. 20. 3 = SB 113. Note the comments of Cato on the qualities displayed by Cicero—*ad Fam.* xv. 5. 1 = SB 111.

⁶⁰ *ad Att.* v. 18. 2 = SB 111; 20. 3–5 = SB 113; *ad Fam.* ii. 10. 2–3 = SB 86; ix. 25. 1 = SB 114; xv. 2. 2–3 = SB 105; xv. 4. 4–10 = SB 110.

⁶¹ Caesar illustrates the importance of the general's personal example and the use of speeches to encourage the troops—*BG* i. 25; 40; ii. 25; v. 52; vii. 52; *Bell. Alex.* 9; the necessity of knowing the terrain in advance, choosing the time and place of battle, using the element of surprise, and deceiving the enemy—*BG* i. 12; 21–2; 52; iii. 17–18; 26; vi. 7; vii. 35; 44–5; viii. 8–9; *BC* ii. 40–1; iii. 38; the organization of battle tactics and formations, safe retreats, and defence against guerrilla tactics—*BG* v. 5–18; vii. 62; *BC* i. 27; 44–6; iii. 43–50; 75–6; 88–94; *Bell. Afr.* 12–18; 70–3; 81–3; it is in the matters of siege tactics and entrenchment and bridge building that the commentaries contain some useful technical material—*BG* iv. 17; vii. 17–18; 22–8; 68–74; 79–88; viii. 40–3; *BC* ii. 8–16.

⁶² LXVII. 6. 1. Cf. Velleius' description of the military virtues of his hero Tiberius; caution and the safety of the army were paramount; victory was not to be sought through sacrifice of Roman troops; the general should make decisions himself and never place his own reputation before common sense—ii. 115. 5; cf. iii. 4. Note also Tacitus' description of the qualities of Agricola—*Ag.* 20; 22.

should not expect to find precise parallels between textbook stratagems and the ploys used by commanders in historical narratives (and there are in any case few battle narratives); the stratagems were intended for general guidance in certain types of situation—they would be adapted and developed according to the particular circumstances. Secondly, if in a historical battle a general used a stratagem that closely resembles one described by Frontinus, without external evidence we cannot know if he had actually read Frontinus or had him in mind at this moment. He might have devised the stratagem independently or received advice from his officers. By contrast, if the type of ploy discussed in Frontinus' *Strategemata* rarely appears in historical narratives of battles, this does not prove that generals did not know them. They may have had no suitable opportunity, or they may have adapted them significantly, or our narrative source may not have known what guidance and instruction the general had taken in evolving battle tactics. So, it is not possible to prove the contemporary relevance of collections of stratagems by citing supposed cases where such stratagems are used in 'real' battles.

Indeed, we know very little about military tactics from the late first century B.C. onwards. Appian gives us a fascinating glimpse of a discussion about Pompeian tactics at Pharsalus and Caesar's criticisms of them.⁶³ But this kind of insight is the exception. Literary sources rarely reveal or discuss details of tactics. It may have been difficult to get reliable information,⁶⁴ but it is also possible that the writers were simply not interested in tactical theory.⁶⁵ The few references to the practical application of tactics are difficult to interpret since there is a danger that one example used on a particular occasion and which especially attracted the attention of a writer may not be representative of what was considered normal at the time. This makes it difficult to estimate the influence of handbooks on fieldcraft. It is not even clear what was held to be usual and acceptable, or daring and innovative, in the conduct of army commanders. By what criteria were generals to be judged in a military autocracy where the emperor was commander-in-chief?

Despite these difficulties, it is worth making three points. Firstly, it is clear that seemingly obvious ploys were in fact used in the imperial period. The handbooks make many references to the value of deceiving the enemy about troop numbers. Josephus illustrates one such ploy in operation. While commanding the Jewish force at Tarichaeae, he prevented the defection of Tiberias by arriving with a large fleet which he kept sufficiently far away that the inhabitants could not see that each ship was manned by only four sailors.⁶⁶ Similarly, Cestius engineered his escape from Beth-horon by leaving a few men on the roofs to shout the watchwords while he slipped away with the rest of the army.⁶⁷ Petilius Cerialis, in an attempt to destroy Civilis' support, ravaged the land of the Batavians but left Civilis' property untouched 'nota arte ducum'.⁶⁸

Secondly, known examples of battle tactics employed by emperors and their generals indicate an organized but uncomplicated approach in which some of the main principles were: the use of cavalry for attack in the flank and rear; the keeping of a force in reserve; the deployment of a combat line that could maintain contact; the well-timed counter attack; flexibility when the enemy did something unexpected. All this sort of thing is consistent with the advice of writers on warfare and fieldcraft, though the material may be considered too general to be of much value.⁶⁹

Thirdly, the history of Rome's military activity in the East gives us our only clear picture of the development and practical application of tactics, in this case to deal with

⁶³ Appian, *BC* II. 79; cf. Caesar, *BC* III. 92–3. See too L. Keppie, *The Making of the Roman Army, From Republic to Empire* (1984), 108–9.

⁶⁴ See Dio LIII. 19. 3–5.

⁶⁵ For example, in his famous description of the Roman army, Josephus admires its organization, trained skill, discipline, and technical expertise in siege warfare. But on battle tactics his comments are general and straightforward: the Romans insisted on proper planning for battle; nothing was left to chance, and the

agreed tactics were carried out; they learned from their mistakes—*BJ* III. 70–107 (army in general); 98–101 (tactics).

⁶⁶ *BJ* II. 634–7; cf. III. 186–7.

⁶⁷ *BJ* II. 551.

⁶⁸ Tac., *H*, 5. 23. We may recall that Pericles suspected that the Spartans would try a similar trick to discredit him—Thucydides II. 13; cf. Polyaeus I. 36. 2.

⁶⁹ See Appendix.

heavy cavalry and mounted archers. In his campaigns against Mithridates and Tigranes, Lucullus devised original and brilliant tactics to overwhelm the enemy's heavy cavalry by deflecting them into the rest of their own forces.⁷⁰ But in 53 B.C. at Carrhae Crassus was on the defensive against the armoured cavalry and archers of the Parthian commander, the Surenas, and changed his line formation to a hollow square with cavalry assigned to every side.⁷¹ This eventually proved unsuccessful against the combination of archers and spear-carrying cavalry, the effect of whose charge is well described by Dio.⁷²

When the Romans next engaged the Parthians in 39 B.C., Antony's lieutenant, the redoubtable Publius Ventidius, defeated them twice, and again in 38. It is not clear from Dio's account what tactics he employed. However, in the third battle, in which Pacorus the son of the Parthian king was killed, the Parthian armoured cavalry was defeated by an unexpected Roman sally and especially by the slingers, whose long-range weapons proved very effective.⁷³ In his invasion of Parthia in 36, Antony seems to have learned from Ventidius, for he deployed a strong force of javelin men and slingers who directed a concentrated fire against the heavily armoured Parthians; the slingers were particularly effective since they could shoot further than the Parthian archers.⁷⁴ Antony continued to employ the hollow square in his marching order despite what had happened to Crassus. But the Romans now introduced a more effective defensive formation using their shields in a *testudo*. The first rank knelt and held their shields in front of them; the men of the second rank held their shields over those in front, while the third rank did the same for the second rank and so on. In this way a defensive barrier like a tiled roof was created with the additional benefit that the Parthians were deceived by the kneeling first rank into thinking that the Romans were weakening, and so exposed themselves to counter attack.⁷⁵

In the history of this thirty-year period of warfare, one interesting point stands out—the need for a very strong defensive formation to resist cavalry attacks or archers, if necessary backed up by concentrated fire power. Not until Trajan invaded Parthia in 114⁷⁶ did the Romans have the opportunity to practise or develop the special fieldcraft required in the East, although from the mid first century onwards the Roman army had been encountering the heavy mailed cavalry of the Sarmatians and other related tribesmen, like the Alani, who threatened Cappadocia c. 135.⁷⁷

How did the Romans of the second century A.D. react to these problems? The less professional training army commanders had, the harder it is to accept that they or the emperor could make innovations in the traditional methods of fighting, unless perhaps in the light of long experience. The major innovations of the last century of the Republic were carried through by C. Marius, who had acquired such experience. But the army commanders of the imperial period rarely enjoyed a long tenure of a senior post. However, Trajan and Hadrian were emperors who did have relatively extensive military experience, and who are attested as taking a great interest in military affairs.⁷⁸ They can be seen as possible innovators, and it is in line with what we know of Roman thinking to suppose that developments in fieldcraft would be analysed in the context of what had proved effective in the past and of practical experience.

⁷⁰ His light cavalry attacked in the flank and used their short swords to knock aside the enemy's long spears; Lucullus then led part of the infantry against the heavy cavalry and ordered them to attack the thighs and legs of the riders, which were the only exposed part—Plutarch, *Luc.* 26. 6; 28. 2–5; see too Bosworth, 235–6.

⁷¹ Plutarch, *Crass.* 23–4; Dio XL. 23–4.

⁷² XL. 22. 2–4. Cf. Plutarch, *Crass.* 27.

⁷³ Dio XLIX. 20. 1–3; for the campaigns of 39, see XLVIII. 39–41. 6. Frontinus, *Strat.* I. i. 6; II. ii. 5; v. 37.

⁷⁴ Plutarch, *Marc. Ant.* 41–2; 45; Dio XLIX. 26. 2.

⁷⁵ Plutarch, *Marc. Ana.* 45; Dio XLIX. 29. 3–30; Frontinus, *Strat.* II. iii. 15. It is worth noting Strabo's statement (VII. 3. 17) that all barbarian light-armed

troops were feeble in opposition to a well-organized and heavily armed phalanx. He may, however, have in mind the general and traditional superiority of Greek hoplites over oriental troops.

⁷⁶ Corbulo's operations in A.D. 58–64 involved no pitched battle.

⁷⁷ R. Syme, 'The *Argonautica* of Valerius Flaccus', *CQ* 23 (1929), 129–34; Bosworth, 220–32; J. W. Eadie, 'The Development of Roman Mailed Cavalry', *JRS* 57 (1967), 165–6; F. B. Florescu, *Die Trajanssäule* (1969), Taf. 23; 28; see also *HA, Vit. Had.* VI. 6–7—trouble from the Sarmatians in Hadrian's reign.

⁷⁸ Cf. E. L. Wheeler, 'The Legion as Phalanx', *Chiron* 9 (1979), 313–14; Davies (n. 27), 75; Campbell (n. 4), 45–8; 77–80.

The *testudo* described above bears a certain resemblance to the Greek phalanx in so far as the soldiers were massed in a close-packed formation. When Frontinus expressed an interest in Aelian's study of Greek phalanx tactics, he perhaps was thinking of their possible adaptation for contemporary warfare to help the legions resist the initial shock of armoured cavalry charges. That interest may have been disappointed in the case of Aelian's theoretical and rather dreary work. But Arrian, using substantially the same material, made a greater effort to show its relevance, specifically linked the *testudo* and the phalanx, and included Roman cavalry manoeuvres.⁷⁹

Moreover, the *Ectaxis contra Alanos* shows how Arrian himself may have adapted the phalanx for use in battle. To resist the armoured cavalry of the Alani Arrian used a formation which included legionaries in a close-packed mass, eight ranks deep. The first four ranks wielded a long thrusting spear (κοπτός), the next four being equipped with the usual *pilum*.⁸⁰ The fact that the legionaries had the κοπτός indicates some previous training and preparation, and a conscious decision to adopt as a possible tactic a battle formation which closely resembled the Greek phalanx.⁸¹ The legionary formation in the *Ectaxis* was for defensive purposes only, and it is true that in Classical and Hellenistic times the momentum of its charge made the phalanx formidable.⁸² But it would be odd to deny that the phalanx had other qualities that made it useful in facing up to heavy cavalry—its strength and cohesion, its requirement that men work together with perfect discipline and consistency, the confidence it gave them in close array, and its fearful appearance bristling with spears.⁸³ If the Romans wished to exploit any aspect of the Greek phalanx, it would assist them to know how it worked and was drawn up.

It has, however, been argued that the tactics Arrian describes in the *Ectaxis* bear little or no resemblance to the complex manoeuvres of the Hellenistic phalanx as outlined in the *Tactica*. But that is not surprising. The Romans wished to adapt the phalanx for a special purpose (*Tact.* 11. 1–2), not to recreate all its parts. Since they were experimenting, it is reasonable that the formation described in the *Ectaxis* is not uniform and has two different types of weapon. The early Greek phalanx was not uniform in weaponry and did not remain static during its long history.⁸⁴

Moreover, that Arrian dealt with contemporary Roman infantry tactics in a separate monograph need not mean that the survey of Greek and Macedonian methods in the *Tactica* was only of antiquarian value.⁸⁵ Arrian simply says he included Greek tactics 'for anyone who does not wish to be ignorant of them' (32. 3). Discussion of the phalanx was presumably placed in a separate treatise because such tactics would be used only in exceptional circumstances. Indeed we do not know that a reference to the possible use of phalanx tactics was not made in the lost work.

Arrian's battle plan against the Alani also involved the use of strong cavalry forces to block any encircling movements and to lead the pursuit. In addition, archers, slingers, and javelin men were deployed to open the battle with a concentrated barrage.⁸⁶ It seems that by the Hadrianic era the Romans had developed the idea of

⁷⁹ See above, p. 18.

⁸⁰ *Ectaxis*, 15–17. See Bosworth, 237–42.

⁸¹ For discussion of the phalanx as a model for Roman infantry tactics and the relevance of Arrian's *Tactica*, see Kiechle (n. 24), 87 ff.; Bosworth, 217 ff.; Stadter (n. 25), especially 122–8; E. L. Wheeler, 'The Occasion of Arrian's *Tactica*', *GRBS* 19 (1978), 351. Wheeler argues that Arrian wrote the work to celebrate the twentieth anniversary of Hadrian's rule and to persuade the emperor to extend his active service. It seems to me that there is insufficient evidence for this idea. Note also Wheeler (n. 78), 310–14.

⁸² See Bosworth, 243.

⁸³ *Tactica* 11; 12. 6. Cf. Wheeler (n. 78), 303, especially 307–14. However he goes too far in his attempts to find phalanx tactics in operation in the Republican and imperial periods.

⁸⁴ Bosworth, 242–6. For the early Greek phalanx see J. B. Salmon, 'Political Hoplites', *JHS* 97 (1977), 90–2; F. E. Adcock, *The Greek and Macedonian Art of War* (1962), 24–8. It is not significant that no Latin terms were devised to describe the component parts and manoeuvres of the phalanx. That would not be necessary if the formation was only infrequently used.

⁸⁵ Bosworth, 244. Wheeler, *GRBS* (1978), 356 doubted the existence of this separate monograph, but his arguments seem unconvincing.

⁸⁶ *Ectaxis* 20–1; 25–6; for improved methods of archery training see Bosworth, 245; and Marsden (n. 2, *Historical Development*), 178, 187–91 for the development of Roman artillery in tactical plans for open battle.

allowing heavy cavalry to wear itself out against a defensive formation, by adapting the Greek phalanx as an improvement on, or alternative to, the hollow square and *testudo*. Slingers, archers, and cavalry were the main offensive weapons.⁸⁷ This was not the result of a mechanical reading of Greek theoretical works. The Romans had learned principally from their own experience in the East since the 50s B.C. and had supplemented this by adapting the practices of another era, presumably in the light of experiences of people like Arrian, who intelligently applied tactical theory and thereby created a fresh *exemplum*.⁸⁸

SUMMARY AND CONCLUSIONS

The success of the Romans in controlling and maintaining a huge empire with a fairly small professional army is intriguing in view of the absence of any military academy or formal training for its commanders, many of whom lacked extensive experience in the field. The lack of a sophisticated military structure and cadre of officers will have discouraged initiative. Moreover, military thinking itself tends to be conservative, while a further disincentive for generals to have original or stimulating ideas about tactics was the existence of the emperor as commander-in-chief. He might be suspicious or jealous.⁸⁹ The emperor indeed was the only central initiating power and the only person who could give a consistent direction to military tactics. But it was not until the late third century, when contenders for the purple had to prove themselves in violent armed struggles, that conspicuously capable generals like Aurelian, Probus, and Diocletian emerged as emperors. Before this the emperor himself might require whatever guidance was available in military tactics. In the Romans' unsystematic approach to fieldcraft much was left to the individual commander or officer with respect to how he prepared himself for his duties.

In this context, the fairly consistent publication of military handbooks in the imperial period requires the historian's attention. Partly they were intended to entertain—the ancient concept of a textbook was certainly not like ours. And doubtless many commanders found these works to be inadequate or irrelevant, relying instead on the advice of others and experience gained on the job. Moreover, it is impossible to estimate the general availability of military handbooks and to discover how often the texts we have were actually used.

Nevertheless, the authors did claim public attention, not as antiquarians and romantic anecdotists, but as providers of practical guidance. This is the more interesting in that the handbooks were often a thematic derivative of narrative histories, which were agreed to offer moral and practical guidance for those in public life. Several factors point to a connection between the handbooks and the reality of military command. In the absence of organized or systematic preparation of men for military and other public duties, textbooks were held to be important in their training (although other methods might be preferable, if available). Ploys and stratagems of the type described in the military handbooks were used in ancient warfare. The main characteristics and techniques of warfare changed little in a period of slow technological progress; so, stratagems employed in past battles remained generally relevant.

⁸⁷ On Roman cavalry tactics in general, see Kiechle (n. 24), 87–129; Davies (n. 27), 88–9; Eadie (n. 77), 167–8. I cannot agree with Eadie's further contention (173; cf. 164) that mailed cavalry was generally ineffective and that to stand firm against it was to invite disaster. This takes no account of much of the available evidence. Note also Wheeler (n. 81), 357–61. I am not persuaded by his suggestion that the cavalry exercises described by Arrian were purely for entertainment and not for training. This is too fine a distinction. Wheeler's own description of the *armatura* (p. 360) shows how competitive it was.

⁸⁸ The *Ectaxis* probably originated as a report to

Hadrian on Arrian's military operations and tactical experiments, and was subsequently revised in a more elevated style for publication. This can explain Bosworth's objection (247–55) that the style of the work is intricate and was influenced by the historians of Alexander, and is therefore unsuitable for a manual or report. Once published, the *Ectaxis* was on the one hand a private memoir, and on the other could serve as a military handbook, showing how a battle line could be drawn up to deal with a certain type of opponent.

⁸⁹ Cf. Tac., *A.* xi. 19—a comment on Corbulo in the reign of Claudius—'formidolosum paci virum insignem et ignavo principi praegravem'.

The experienced Roman commanders Frontinus and Arrian wrote military handbooks, and that of Frontinus at least was specifically for the guidance of others. The notable tactical development of the second century—the adoption of the *κοινός* and the use of close-packed ranks of legionaries to deal with heavy cavalry—was derived, at least in part, from the apparently unpromising example of the Greek phalanx, and Arrian himself organized its use in a ‘real’ battle.

So, despite all the difficulties of interpretation, the handbooks do seem to offer some illumination on an obscure aspect of Roman imperial government, and if we dismiss them as completely irrelevant, then we may fail to set generalship and warfare in their proper context of ancient culture and society.

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APPENDIX

Below are set out in chronological sequence the main references to battle tactics in the imperial period. For discussion of the tactics employed in the Republic, see J. Kromayer and G. Veith, *Heerwesen und Kriegführung der Griechen und Römer* (1928), 337–75, 417–53; F. E. Adcock, *The Roman Art of War under the Republic* (1940); Keppie, *op. cit.* (n. 63), 27, 30, 38–9, 41–3, 82–3.

(i) A.D. 16: Germanicus' campaign against the Cherusci. Germanicus employed a marching order in which the legions were well protected in the vanguard and flanks by cavalry and bowmen. When the Cherusci charged, Germanicus sent his cavalry to attack their flank, and in a classic ploy detached another mounted force to attack the rear while the legions came up in support. In a subsequent engagement Germanicus exploited his advance knowledge of the enemy's plans in devising effective counter tactics, in which infantry and cavalry worked closely together in a three-pronged attack. Throughout the campaigns Germanicus was astute in maintaining the troops' morale, which he used to test by wandering through the camp at night incognito (Tac., *A.* II. 13; 16–17; 20–1).

(ii) A.D. 22: Blaesus' campaign against Tacfarinas. The enemy waged a guerrilla campaign in which small groups attacked and retreated rapidly, avoiding pitched battles. Blaesus split his army into three, and then into smaller independent formations under experienced officers; these operated as mobile units with desert training. Forts were built to hem in the enemy, and the army was kept in readiness even in winter so that Tacfarinas was harassed continually (Tac., *A.* III. 74; cf. *H.* IV. 20).

(iii) A.D. 47–63: Corbulo made his reputation by his strict training of the troops and meticulous preparations rather than by a display of exceptional fieldcraft (Tac., *A.* XI. 18; XIII. 35; 39–40). He led by personal example in the way approved by the theorists. He was innovative when circumstances required: in order to drive away the Parthian cavalry from the banks of the Euphrates, he arranged large ships in the river fortified with turrets; catapults and siege engines on them kept up a fire which out-distanced the Parthian archers (Tac., *A.* xv. 9).

(iv) A.D. 60: Suetonius Paulinus' campaign against Boudicca. In the decisive battle Paulinus was unable to extend his line to match the British formation since it was numerically greatly inferior. Nor could he keep his troops in a single compact mass in case they were surrounded. So, he divided them into three strong groups which had the capacity to fight simultaneously in three different places (Dio LXII. 8. 2–3).

(v) A.D. 69: Civil Wars. Paulinus and Marius Celsus were in command of the Othonian forces at the battle of *ad Castores* in the build-up to the first battle of Cremona. Aware of an ambush laid ahead, they placed a mixed force of legionaries, *auxilia*, and cavalry on both flanks, three Praetorian cohorts in the centre, and designated one thousand cavalry as a strategic reserve. They succeeded in enticing the Vitellians into a premature assault and caught them in a trap. (Tac., *H.* II. 24–5. See G. Chilver, *A Historical Commentary on Tacitus' Histories I and II* (1979), 189–91; K. Wellesley, *The Long Year A.D. 69* (1975), 65–9. For the first battle of Cremona itself, *ibid.* 74–84; the confused second battle, 142–50.)

(vi) A.D. 82–5: Domitian's German campaigns. Frontinus in the *Strategemata* provides anecdotes which sound authentic and were presumably chosen to demonstrate the emperor's qualities as a general and his competence in fieldcraft: (i) a classic ploy involving the dissemination of false information. While preparing to launch the campaign Domitian pretended to be going to Gaul to take the census and so gained the element of surprise (I. i. 8);

(ii) inventive tactics to deal with the difficulty of bringing the Chatti to a successful cavalry engagement. Since they exploited rough and wooded land, Domitian ordered his men to dismount and fight as infantry as soon as they reached the enemy baggage train; he therefore ensured that the terrain did not delay his victory (II. iii. 23; cf. Tac., *Ag.* 37); (iii) temperate conduct by the commander. Domitian, while building forts in the land of the Cubii(?), compensated the owners for any crops included inside the fortifications. The emperor's fairness won the support of the people in the area (II. xi. 7). This recalls Cicero's insistence that one of the qualities of a good general was moderate conduct (and note Frontinus' conduct, above n. 12).

(vii) A.D. 83 or 84: Agricola at Mons Graupius. Agricola employed a classic formation. Eight thousand infantry made up the centre of the line, with three thousand cavalry on both flanks; the legions followed behind in support. Agricola kept his cavalry in reserve, and it was this force, committed at a vital stage, that turned the battle in favour of the Romans (Tac., *Ag.* 35-7; cf. *H.* v. 16). For the increased use of auxiliaries to do the main fighting, see R. M. Ogilvie and I. A. Richmond, *Cornelii Taciti De Vita Agricolae* (1967), 272. I am not sure that this has much tactical relevance. Rather, it reflects the view that, at a time when there was still a clear division between the citizen legions and the non-citizen *auxilia*, it was desirable to preserve the lives of Roman citizens if possible. In any event, there is not sufficient evidence to show that this was the regular pattern.

(viii) c. A.D. 172: Battle between the Romans and Iazyges on the frozen river Ister. 'Some of the Iazyges charged straight at them while others rode up to attack the flanks, for their horses had been trained to run on an icy surface. When the Romans saw this they were not frightened, but packed themselves closely together and faced the enemy on all sides at once; most of them put their shields on the ground and placed one foot on them to avoid slipping; in this way they finally withstood the enemy charge; some grabbed the horses' bridles, others the riders' shields and spears, and wrestling like this pulled men and horses down' (Dio LXXI. 7. 2). This formation may be a hollow square. But Dio's description suggests strength in depth, and it is possible that here the Romans have adapted the phalanx to cope with an attack from four sides in very unusual circumstances. It is surprising that Dio does not mention spears. Did the soldiers use their spears, either by thrusting or throwing to dislodge the riders? Personal combat will then have been confined to those who got through the first line of defence.

(ix) A.D. 193-7: Civil Wars: battle of Issus. Three points are worth noting. First, both Niger and Anullinus drew up their light-armed troops and bowmen behind the legions so that they could shoot over their heads in a concerted barrage. Second, the battle was decided by the clash of legionaries, and Anullinus employed the *testudo* formation to defeat the artillery barrage. Third, Anullinus arranged for the strategic deployment of his cavalry in a surprise attack in the enemy's rear. Despite Anullinus' more inventive tactics, Niger's troops nearly won and the tide was turned only by an unexpected storm (Dio LXXV. 7).

(x) A.D. 217: Macrinus' campaigns against the Parthians. Macrinus arranged cavalry and *auxilia* on the flanks and filled up the centre with light-armed troops who could attack and retreat rapidly; the legions were presumably held back in support. In this way the Romans resisted the enemy's archers and heavy cavalry. Then, they employed the well-known stratagem of a feigned retreat and entrapped the Parthian cavalry and camels by throwing sharp spikes on the ground (Herodian IV. 15. 1-3). It has been suggested that Herodian's account may owe something to Livy's description of Scipio's tactics at Zama (C. R. Whittaker, *Loeb*, vol. 1, p. 461). Rather it may be that a well-tested formation had become part of the accepted tactics that could be employed by commanders without excessive risk.

For a discussion of tactics in the imperial period, see Kromayer and Veith, 540-67; Webster, *op. cit.* (n. 9), chapter 5; H. M. D. Parker, *The Roman Legions* (1958), chapter 9. The armour and equipment of the Roman army should be a good guide to the general type of tactics employed, but with the possible exception of the introduction of the *kovρός*, they changed little in the imperial period (see Parker above). I hope to return elsewhere to the theme.