

Alexander the Great

Lessons in strategy

David J. Lonsdale



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Alexander the Great

This book offers a strategic analysis of one of the most outstanding military careers in history, identifying the most pertinent strategic lessons from the campaigns of Alexander the Great.

David Lonsdale argues that since the core principles of strategy are eternal, the study and analysis of historical examples have value to the modern theorist and practitioner. Furthermore, as strategy is so complex and challenging, the remarkable career of Alexander provides the ideal opportunity to understand best practice in strategy, as he achieved outstanding and continuous success across the spectrum of warfare, in a variety of circumstances and environments. This book presents the thirteen most pertinent lessons that can be learned from his campaigns, dividing them into three categories: grand strategy, military operations, and use of force. Each of these categories provides lessons pertinent to the modern strategic environment. Ultimately, however, the book argues that the dominant factor in his success was Alexander himself, and that it was his own characteristics as a strategist that allowed him to overcome the complexities of strategy and achieve his expansive goals.

This book will be of great interest to students of Strategic Studies, Military History and Ancient History.

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22 Alexander the Great

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For my loving wife Maria

Contents

<i>List of figures</i>	x
<i>Acknowledgements</i>	xi
Introduction	1
1 The art of strategy	5
2 Ancient Greek warfare	22
3 Lessons in strategy 1: grand strategy	45
4 Lessons in strategy 2: military operations	79
5 Lessons in strategy 3: use of force	111
6 Lessons in strategy: conclusions	145
<i>Notes</i>	159
<i>References</i>	180
<i>Index</i>	187

Figures

The campaigns of Alexander	2
Battle of Issus	80
Battle of Hydaspes	87
Battle of Granicus	98
Battle of Gaugamela	128
Operations at Pelium	141

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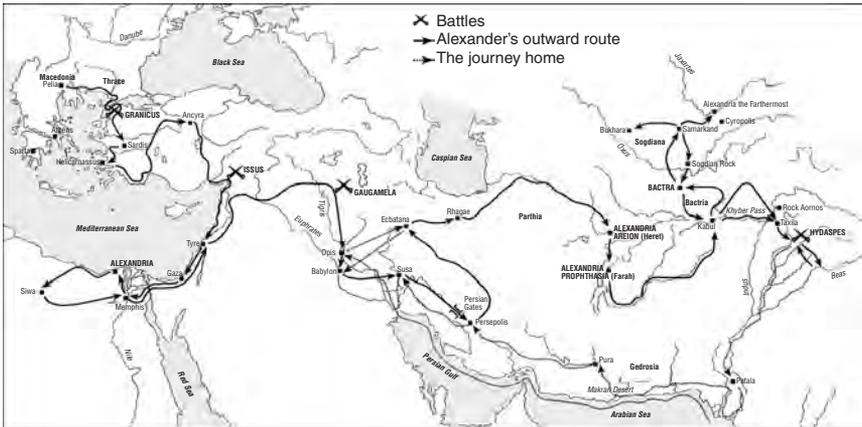
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Introduction

The nature of strategy is eternal. Regardless of time or place, those using military force for the purposes of policy will face the same complex phenomena.¹ Strategy has always been, and will remain, a complex, non-linear, multidimensional, violent, and competitive activity. Thus, although every case of strategy in action displays unique features, each has something to teach us about dealing with the universal challenges. In this sense, the campaigns of Alexander the Great present us with an opportunity to study and understand how success can be achieved. And yet, despite this commonality of strategic experience, Alexander's campaigns do seem completely removed from strategy in the modern world. The events that this book analyses occurred over 2,300 years ago. Whether it is the great battle on the plain of Gaugamela or Alexander's counterinsurgency campaign in Bactria and Sogdiana, these events seem distant and almost mythical to a modern audience. However, at the time of writing war rages in modern Iraq (the site of Gaugamela) and Afghanistan (the area Alexander knew as Bactria and Sogdiana). Much may have changed since Alexander led his army through the Persian Empire; but war has remained a constant feature of man's experience.

In order to understand best practice in strategy we must look to history, for as Bernard Brodie notes 'the only empirical data we have about how people conduct war and behave under its stresses is our experience with it in the past'.² A career as outstanding as Alexander's presents a good opportunity to help unravel the secrets of success in strategy. At this juncture the author of this work finds himself, for once, at odds with Clausewitz. The Prussian theorist saw less value in studying ancient campaigns, 'The further back one goes, the less useful military history becomes...'³ In this respect Clausewitz, unusually, may have been overly impressed by the novelty of war in his time. It is argued here that since the core principles of strategy are eternal, the study and analysis of any historical example, however ancient, has value to the modern theorist and practitioner. Indeed, it was Clausewitz himself who convincingly wrote that 'all wars are things of the same nature'.⁴ From this, Colin S. Gray concludes 'Because war and strategy are unchanged and unchanging in their natures, it has to follow that we should allow ourselves to seek education from historical experience'.⁵ Thus, despite Clausewitz's reservations

2 Introduction



concerning the utility of ancient history, we will seek education from Alexander's campaigns.

Since war has remained a constant feature in man's existence, the history books are replete with accounts of conflict. An integral part of these historical accounts of war is the role played by great commanders. The likes of Hannibal and Napoleon are credited with displaying an unusually harmonious combination of the qualities required to excel in strategy. And yet, even amongst such revered company, Alexander stands apart. When one studies his campaigns, the prominence of Alexander becomes understandable. He enjoyed continuous success against a range of different foes, often with forces superior in number to his own, over a twelve-year period. Geographically, his campaigns ranged from the river Danube in Europe, through the Middle East and on into India. His opponents included both regular and irregular forces. When overcoming the Persian Empire he faced Darius' great army and fleet. In addition, throughout his campaigns he faced rebellion and insurgency from irregular, mobile, elusive foes. To add further variety, Alexander successfully commanded forces in open plains, urban environments and dense, mountainous terrain. The fact that he achieved such outstanding and continuous success across the spectrum of warfare, and in such a variety of terrains, suggests that he is the perfect subject to study in the search for best practice in strategy.

In the cause of best practice, this work seeks to avoid moral judgements of Alexander's actions. Unfortunately, such judgements do appear in some of the historical works on this subject. For example, Victor Davis Hanson uses phrases such as 'gratuitous slaughter' to describe Alexander's decisive defeats of his enemies. He concludes that '[t]he four-century evolution of Greek warfare had now come down to the mastery of murder on a grand scale'.⁶ Whilst valid from an ethical standpoint, such moral judgements may cloud our analysis of the strategic rationale and efficacy of an action.

Strategic Studies seeks to present an amoral analysis of military affairs.⁷ This has led to some severe criticism of both the subject and certain works in particular. For example, Herman Khan's *On Thermonuclear War* has been described as 'a moral tract on mass murder, how to commit, how to get away with it, how to justify it'.⁸ Nonetheless, it is the nature of the subject itself that encourages an amoral approach. Colin Gray describes how ethics 'play scant explicit role in the process of strategy-making and strategy execution ... In practice, it is hard to locate many unambiguous historical cases wherein prudential strategic logic was challenged from within the relevant defence community by people wielding explicitly ethical principles'.⁹ By taking an amoral stance, we can objectively assess actions and/or individuals that as moral beings may cause us concern. In the search to understand best practice in strategic affairs we can, and should, be able to disentangle moral judgements from strategic ones. A modern moral observer of Alexander's campaigns will find plenty to condemn. The treatment of the citizens of Tyre and the brutal campaigns in India are but two examples of such actions. However, regardless of any moral response these events may generate, we should be able to judge their strategic value. The slaughter of a defeated enemy may provoke a sense of moral outrage, but it may also be the most prudent strategic course of action. As strategic analysts we should be able to accept the latter, without denying the former.

This however creates a major dilemma for the practice of strategy in the modern environment. In an age of post-modern, post-heroic, and humane warfare, a moral dimension to strategy appears essential.¹⁰ Indeed, in a recent analysis of the United States' successful counterinsurgency campaign in the Philippines (1899–1902), Timothy K. Deady concludes that to apply lessons from that period, operations in the Philippines must be adapted to 'identify alternative ways more appropriate for modern norms'.¹¹ However, the dilemma appears if the cause of strategic efficacy calls for a seemingly immoral act. This debate often takes the form of a clash between 'military necessity' and moral considerations.¹² However, an answer to this dilemma does exist in the guise of 'strategic necessity'. This approach will be outlined in detail in the conclusion of this work. At this stage, it is sufficient to note that 'strategic necessity' does not inevitably result in the praising of acts of brutality as a matter of course. In fact, often acts of brutality can be heavily criticised from a strategic perspective. In the complex world of strategy, a particularly brutal act may simply serve to inflame resistance rather than subdue an enemy. Equally, a widely condemned act, although militarily successful in the short term, may damage the prospects of achieving the broader policy objectives in the long term. In the end, what must guide the actions of the strategist is the attainment of the policy objective; it is that which should dictate how to use force.

In order to extract the most pertinent lessons from a study of Alexander's campaigns, this book is divided into five substantive chapters. The first of these presents an analysis of strategy, outlining its complexities and how to deal with them. This opening chapter also describes the various uses to which military force can be put, and thus provides an understanding of the various options

4 *Introduction*

available to Alexander. Chapter 2 examines the Macedonian art of war. The chapter begins with an analysis of Greek warfare before the rise of Macedonia. In essence, this is therefore an analysis of hoplite warfare – a style of conflict that dominated Greece until the fifth-century BC. From here, the work will explain how the art of warfare developed from this quasi-ritualistic style to the more total and effective approach developed by Alexander and his father.¹³ It will be shown that these two Macedonian rulers did not produce an independent leap forward; rather, they built upon developments already underway in the wider Greek world. However, the end result was an army much more effective as an instrument of strategy. Before we can effectively analyse Alexander's prowess as a commander we must understand the instrument at his disposal. Thus, the chapter then proceeds with a detailed description of the Macedonian army that Alexander would lead into the Persian Empire. Finally, there is an analysis of the battle of Chaeronea, in which both the army and Alexander were tested against their Greek neighbours.

The main lessons of strategy are divided into three sections, each with its own chapter. The first of these (Chapter 3) deals with grand strategy: specifically, with the limits of force, harmony in the levels of strategy, centres of gravity, and concludes with an analysis of J. C. Wylie's concept of control in strategy.¹⁴ Chapter 4 focuses its attention on Alexander's military operations. This manifests itself in five main lessons, dealing with combined arms warfare, war's polymorphous character, the role of the commander, details and war preparation, and the principles of war. Having focused on the level of military strategy, Chapter 5 broadens the analysis and considers the use of force from a conceptual basis. This involves discussion of coercion, ethics and war, the centrality of policy, and dealing with complexity.

In order to illustrate these thirteen lessons, examples from Alexander's campaigns are offered as evidence. These examples cover a broad range of activities, including battles, sieges, counterinsurgency operations, as well as non-violent grand strategic measures. Where detailed accounts of events are included, it is hoped that, beyond acting as an illustration, these will also help the reader to appreciate the extraordinary nature of Alexander's career. On a final note, the said examples are not presented necessarily in chronological order. Rather, they are presented in a manner that best illustrates the particular lesson in question. In this respect, this book does not offer a chronological account of Alexander's exploits.¹⁵ Nonetheless, it is hoped that aside from fulfilling its main objective of seeking to understand best practice in strategy, this book will also inspire the reader to pursue more detailed historical study of this extraordinary individual.

1 The art of strategy

Introduction

Individuals such as Alexander are so conspicuous in strategic history because they excel in the art of strategy. This is a noteworthy attribute since strategy is such a complex and challenging activity. The complexity of strategy is such that achieving a satisfactory end state at reasonable cost, and within a reasonable time-frame, is often elusive. Strategy is here defined as an art, not a science. This is done to reflect the fact that there are no formulas for strategic success. Every strategic context is unique, and therefore requires its own unique mixture and application of strategic assets. In order fully to appreciate the challenges faced by those practising strategy, and to provide a common set of definitions and concepts, this chapter seeks to dissect the art of strategy. In undertaking this task, the work is by default asking the question: ‘why is strategy so difficult?’¹ Having initially defined strategy and its various levels, the chapter will then explore the various characteristics of strategy that make it difficult. This will include an analysis of its multidimensional nature,² the nature of war,³ the paradoxical logic of strategy,⁴ war’s polymorphous character, and the Clausewitzian concept of ‘friction’.⁵ From here, the chapter will examine the various ways in which military force can be utilised in the pursuit of policy. This will entail an analysis of defence, deterrence, compellence, posturing, offence, and the miscellaneous uses of force. Finally, it will conclude with an analysis of the key Clausewitzian concepts of ‘centres of gravity’ and ‘military genius’. These two concepts represent analytical tools by which we can understand best practice in strategy. In addition, both concepts are extremely useful analytical tools when evaluating strategic performance. With these definitions and concepts under our belt, we can then begin an examination of Alexander’s campaigns with a common and appropriate analytical framework.

The levels of strategy

A reader of strategic literature will find various definitions of strategy available.⁶ Colin S. Gray defines strategy as ‘the use that is made of force and the threat of force for the ends of policy’.⁷ Similarly, strategy is defined by Carl von

Clausewitz as ‘the use of engagements for the object of the war’.⁸ André Beaufre, in his definition of strategy, focuses attention on the interaction between belligerents: ‘the art of the dialectic of two opposing wills using force to resolve their dispute’.⁹ An alternative definition that draws its inspiration from those of Clausewitz, Gray and Beaufre may describe strategy as *the art of using military force against an intelligent foe(s) towards the attainment of policy objectives*.

The key relationship within strategy is that between military force and the policy objective. This relationship is a complex one. Gray describes this relationship as a bridge that links the military and political worlds.¹⁰ Alternatively, Eliot Cohen best described this relationship as an unequal dialogue.¹¹ Whilst military force must serve policy, it is not simply a case of the political leadership demanding whatever it desires from their military commanders. Indeed, Clausewitz notes that although policy must remain the supreme consideration in the conduct of war, ‘[t]hat, however, does not imply that the political aim is a tyrant. It must adapt itself to its chosen means ...’¹² Instead, both the military and political leaderships must discuss what is required, and, just as importantly, what is possible. This is why the dialogue aspect is so important. However, the dialogue lacks equity because the military instrument must ultimately serve the policy goals. This relationship is at its most complex in a modern democratic state. In such circumstances the political leadership may have little understanding of the military instrument and may be more concerned with the domestic political environment. Likewise, the military may have little understanding of the political world. For rulers like Alexander the Great or Napoleon the situation was, on the surface, much simpler. The roles of both the political and military leaderships were joined together within the individual. However, this unification of the two roles did create its own dangers. Without an external dialogue assessing the strategic rationale of decisions there is not such an effective check on the strategic efficacy of certain actions. In the case of Alexander, the significance of this becomes evident during the later campaigns, especially in India where he lost strategic focus and subtlety.

Successful strategic performance is not just the product of competence at the level of matching means to ends within the interaction between military force and politics. It also requires competence across all of the levels of strategy. The highest level in the taxonomy of strategy is *policy*. Policy is simply the overall objective that is sought. It is important to understand the policy objectives, because it is these that should determine the methods used in the campaigns. Once policy has been established the political leadership must then devise a *grand strategy* through which to pursue the objectives sought. Grand strategy encompasses all the instruments at the state’s disposal: diplomatic; intelligence assets; military and economic. As Basil H. Liddell Hart notes, ‘the role of grand strategy – higher strategy – is to coordinate and direct all the resources of a nation, or band of nations, towards the attainment of the political object of the war – the goal defined by fundamental policy’.¹³ The key challenge in grand strategy is choosing the right instrument, or the right balance of instruments,

necessary to fulfil the policy requirements. This decision will be influenced by a wide array of factors, including the policy itself, available resources, nature of potential enemies, strategic culture, and the geopolitical environment, to name just five.

One element of grand strategy is military strategy. Once a military strategy has been decided upon (i.e. a plan has been developed in which military force will be used to serve the ends of policy) it must be put into practice. This is achieved at the lowest level by *tactics*. Tactics simply refers to actions on the battlefield in the face of the enemy. So, for example, tactics is concerned with how forces are deployed, how they engage the enemy, and how the various units interact with one another. In this sense, tactics is very much about the details of combat. Each battle or contact with the enemy represents a tactical event that occurs in a distinct time and place. Of course, ideally one aims to be successful in every tactical event. However, to have a successful overall military strategy a commander must link his tactical engagements together, so that they serve the broader purpose. This is where the *operational* level comes into play. The operational level links tactical engagements with the overall military strategy. Or, as Edward Luttwak so aptly describes it: ‘this operational level governs the consequences of what is done and not done tactically’.¹⁴

The operational level can be thought of in both conceptual and material terms. Conceptually, it links tactical engagements together in the service of military strategy. Materially, we can think in terms of a geographic area of operations, within which the operational-level commander moves his forces from objective to objective. The operational level contains a whole range of factors essential to the success of a military campaign. Amongst the most important are logistics and lines of communication, movements of the enemy, and decisive points in the theatre of operations such as cities and key terrain features. The above linear description of the levels of strategy, although valid and useful, does little to reflect the complexity and nonlinear nature of strategy. Thus, the work will now analyse those features of strategy that make it so complex.

The complexity of strategy

The complexity of strategy can be explained by various means. The awkward relationship between policy and military force is but one. This factor alone would make strategy a difficult art to master. However, there are many other considerations, or dimensions if you will, that further complicate the job of the practitioner. Clausewitz identified five dimensions of strategy in his work: moral, physical, mathematical, geographical and statistical.¹⁵ Modern Strategic Studies is slowly developing a deeper understanding of the many varied relationships that occur within the strategic world. In this sense, the work of two authors stands out for particular praise. In a 1979 article, ‘The Forgotten Dimensions of Strategy’, Michael Howard identified four dimensions to strategy. The four dimensions in Howard’s taxonomy are technological, operational, social and logistical. Howard argues that the relative dominance of each dimension is

dependent upon circumstance.¹⁶ Twenty years after the publication of Howard's article, Gray further developed the concept of dimensions within strategy. For Gray, there are seventeen dimensions, which he organises into three categories: 'People and Politics', 'Preparation for War' and 'War Proper'. Within these categories the dimensions include society, culture, economics and logistics, strategic theory and doctrine, command, and time, to name just six. As Gray himself notes: 'the precise number [of dimensions] does not matter so long as everything of importance is properly corralled'.¹⁷ For our purposes, the significance of Gray's analysis is the identification of the vast range of factors that must be considered and dealt with in the practice of strategy. Of course, what makes the task of the practitioner even more difficult is the fact that there are complex interactions amongst these dimensions. In addition, as Gray argues, the practitioner must achieve a reasonable degree of competence in each of them. The challenge of this objective is intensified by the fact that an enemy may have the advantage in a very significant dimension. For example, for any continental enemy wishing to invade the British Isles, the English Channel gives Britain a substantial advantage in the geographical dimension.¹⁸

Aside from having to achieve a degree of competence amongst the many dimensions of strategy, the practitioner must also seek to attain a degree of harmony amongst the levels of strategy. So, for example, actions taken at the tactical level must be in accordance with the objectives desired at the higher levels of strategy. This may sound like a rather simple task, but as Clausewitz reminds us: 'Everything in strategy is very simple, but that does not mean that everything is very easy'.¹⁹ Indeed, far from being easy, the establishment of harmony is the exception rather than the norm. Edward Luttwak notes that the normal state of affairs is measured disharmony.²⁰ In his excellent study, Luttwak provides us with a number of examples to illustrate this point. An intriguing one is that of Japan at the beginning of the Second World War. Luttwak argues that, in terms of the grand strategic picture, the Japanese attack on Pearl Harbor was too successful at the tactical and operational levels. The success of the attack compelled the United States into a policy of unconditional surrender. From this position it can be argued that Japan was always destined to lose the resulting war.²¹ Thus, failure to harmonise the levels of strategy can be the result of success, just as much as it can be the product of failure. In this sense, we can also look to the Second Punic War. Disharmony amongst the levels ultimately signalled the end of Hannibal's objective of defeating the Roman Republic. Hannibal could not translate a series of spectacular tactical and operational successes, most notably the battles of Cannae and Transimene, into strategic victory. Hannibal chose not to attack Rome itself. Thus, in the face of overwhelming Roman manpower resources, Hannibal's outstanding battlefield successes were out of kilter with the situation at the strategic and grand strategic levels. This disharmony was substantially magnified by Rome's adoption of Fabius Maximus' strategy of avoiding battle under anything but the most favourable circumstances. This Fabian strategy gave Rome the time it needed to mobilise its resources and regenerate its forces.²² This latter point illustrates

Luttwak's notion that the challenge of harmonising the levels of strategy is further complicated by the fact that the paradoxical logic of strategy operates in each level, so that a complex series of interactions is taking place within and amongst the levels of strategy.²³

In Luttwak's insightful analysis, the paradoxical logic is pervasive in strategy and operates in many different ways. For example, its presence can be seen in the fact that a manoeuvre that takes the more difficult, less logical, path may be the most effective in war. This is because the enemy may be caught by surprise as a result. Alternatively, the paradoxical logic also operates in the sense that as a military operation becomes more successful it may begin to produce diminishing returns. This may occur simply because an advancing force moves further from its sources of supply. In addition, an enemy may adapt in such a way as to counter the effects of a successful course of action, as with the example of Fabius Maximus. Although Luttwak may somewhat overplay the pervasiveness of the paradoxical logic, his emphasis on the significance of competition with the enemy is worthy of continued attention. Perceptively, Luttwak notes:

Although each separate element in the conduct of warfare can be very simple ... the totality of these simple things can become enormously difficult when there is a live enemy opposite, who reacts to undo everything being attempted, with his own moves and his own strength.²⁴

Or, as General George Pickett famously commented when asked why the Confederates lost at Gettysburg: 'I think the Union Army had something to do with it'.²⁵

Another factor that those conducting strategy have to deal with is the nature of war. According to one dictionary definition, 'nature' refers to 'a thing's essential qualities'.²⁶ In this sense, the nature of war is different from its character. The character of war, or rather its style, is a constantly changing phenomenon; it is less absolute, whereas the nature of war is unchanging.²⁷ The nature of war is a complex beast, composed of elements that are always present but fluctuate in their relationships with one another. This complexity can be described in various ways. For Christopher Bassford, Clausewitz's 'fascinating trinity' is the key to understanding the nature of war. Within this thesis the trinity is composed of rational and non-rational forces (policy, emotion, chance). In turn, these forces are represented by the following agents: 'political leadership, popular base, and fighters'. The relative strength or influence of each of these forces varies with context. Thus, the nature of each particular war is unique and can be discovered floating somewhere between these forces. From this basis, Bassford concludes that the dynamics that occur within the trinity, and between the trinities of the various belligerents in a conflict, are the key to understanding the nature of war.²⁸ Another theorist who has focused upon the complexity of war is Alan Beyerchen. For Beyerchen, war can be best thought of as a nonlinear activity, where small fluctuations can have significant consequences. The roots of this nonlinearity are to be found in the many complex interactions that occur in war, as well as in the moral forces that inevitably infuse the whole activity.²⁹

In addition to the Clausewitzian trinity, the nature of war includes other aspects, which likewise are always present. Several words or phrases may be used to describe these elements, but they can be best described as ‘uncertainty’ and ‘violence’.³⁰ In addition, war is of course characterised by human participation, and the further complexities that this produces. All of the above are reflected in another Clausewitzian concept ‘the climate of war’, which the Prussian theorist describes as being composed of danger, exertion, uncertainty and chance. Thus, Clausewitz concludes that human psychology plays a crucial role in the activity of war.³¹

It is perhaps necessary to examine some of these various elements in the nature of war more closely. The uncertainty inherent in war emanates from a number of sources. For Clausewitz, who declared that everything in war is uncertain,³² unreliable information creates a fog of war that distorts the true situation.³³ In addition, uncertainty is guaranteed by the fact that war is waged between human belligerents. Since war is an interaction with an intelligent enemy, certainty is reduced by the non-linear results of the interaction itself. This is intensified by the problem of intent. Seeing the disposition of enemy forces is not the same as understanding what he will do with them, although dispositions can give an idea of intent. Also, human involvement brings with it intangible moral forces of an unquantifiable nature.³⁴ Uncertainty is further enhanced by the geography of any particular battlespace. For example, this is particularly relevant in the increasingly prevalent urban battlespace. Uncertainty in this instance is not just a product of the physical structure of an urban area but can also be produced by an enemy mingling with the civilian population. This suggests another related problem for acquiring greater certainty, and is concerned with the many forms war can take. Some of these forms do not include regular identifiable forces. Finally, information has to be handled and interpreted by human users. Thus, uncertainty may be the product of human error or bias.

Violence, or what Clausewitz describes as the ‘dominance of the destructive principle’,³⁵ is inherent to the nature of war. Clausewitz is persuasive when he argues, ‘War is a clash between major interests, which is resolved by bloodshed – that is the only way in which it differs from other conflicts’.³⁶ Although violence may not always actually occur in war, its presence is always possible. This is for a number of reasons. Strategy may require that enemy forces are physically destroyed, rather than just coerced. Prior to D-Day, the Combined Chiefs of Staff issued the following directive to Eisenhower: ‘You will enter the continent of Europe and, in conjunction with the other Allied Nations, undertake operations aimed at the heart of Germany and the destruction of her armed forces’. Eisenhower goes on to note, ‘This purpose of destroying enemy forces was always our guiding principle’.³⁷ In a similar vein, the control and/or occupation of territory may require the physical removal/destruction of enemy forces.³⁸ Ultimately, war is a violent activity as a result of its dialectic nature. As Clausewitz recognised, the competitive aspect of war compels it towards an escalatory process as each belligerent attempts to outdo the other. Put simply, the enemy can always introduce violence into this conflictual relationship. In addition, even when violence does not occur in war, its presence is still dominant. As Clause-

witz notes: 'it is inherent in the very concept of war that everything that occurs *must originally derive from combat*' (emphasis in the original).³⁹ From this latter statement we can conclude that capitulation without fighting, whether this emanates from calculations of combat strength or positions brought about by manoeuvre, always relates back to what would occur if combat took place. The centrality of violence in war produces moral forces and an attritional effect that further complicates the role of the strategist. In this respect, he must continue to strive for his objectives despite the debilitating effect violence has on himself, his forces, and possibly also the will of his domestic population.

The conduct of strategy is further complicated by the play of chance and the existence of friction. Again, Clausewitz is persuasive when he writes: 'No other human activity is so continuously or universally bound up with chance'.⁴⁰ In the Clausewitzian paradigm the concept of friction is a central feature of war's true nature: 'Friction is the only concept that more or less corresponds to the factors that distinguish real war from war on paper'.⁴¹ In terms of understanding how friction and chance occur, Clausewitz explained it in terms of, '[c]ountless minor incidents – the kind you can never really foresee – [that] combine to lower the general level of performance, so that one always falls short of the intended goal'.⁴² In his excellent study on future war Barry D. Watts defines friction as the resistance within one's own forces.⁴³ To further complicate matters, friction is exacerbated by the paradoxical logic. Luttwak notes that when taking a paradoxical course of action, for example to surprise an enemy, friction is increased because the normal, complete and logical procedures cannot be undertaken. In Luttwak's words, these actions increase the risk of organisational failure. For example, to achieve surprise some forces will have to be diverted to deception manoeuvres, normal communications procedures will be dropped and a less conducive axis of advance may have to be used.⁴⁴ In addition, friction is intensified by the actions of the enemy.

When considering the significance of friction it is important to note that even Clausewitz did not overplay its invincibility. He suggests that human characteristics such as determination can go some way towards overcoming friction.⁴⁵ Gray also notes that other steps can be taken to help limit its influence on performance. These include good and ample equipment, high morale, rigorous training, imaginative planning, historical education, combat experience and sensitivity to potential problems.⁴⁶ However, despite such measures to reduce the influence of friction, there is still much wisdom in the USMC's advice in *Warfighting* that 'the greater requirement is to fight effectively within the medium of friction'.⁴⁷

Any analysis of the nature of war cannot ignore what is perhaps one of its most basic elements. Regardless of what character a war assumes, it is always a human activity in that humans do the fighting and also that war is a contest between opposing human wills. Gray persuasively argues: 'in war and strategy people matter most'.⁴⁸ That being the case, war is imbued with human traits, emotions, concerns and factors: 'The art of war deals with living and with moral forces'.⁴⁹ Based upon his after-action surveys of combat troops, the work of S. L. A. Marshall displays an acute awareness of how understanding and dealing

with human nature is central to the successful conduct of war.⁵⁰ The human dimension accounts for a great deal of what Clausewitz described as the climate of war. As already mentioned, Clausewitz suggests that uncertainty is compounded by human perceptions. Likewise, both chance and friction are partly the product of human actions. Two elements in Clausewitz's climate of war that relate directly to the participation of humans are 'danger and exertion'. These two prominent features of war directly impact upon a crucial range of issues that come under the heading of 'moral forces'. Equally, they are credited with affecting the ability to think and act effectively, and thereby place further limits on the conduct of war. For Clausewitz, danger and physical effort are contributory factors to friction in war. Indeed, he notes that because the limits of physical effort cannot be measured accurately it makes the estimation or understanding of friction uncertain.⁵¹ The existence of human limitations, in both the physical and psychological realms, places limits on what armed forces can do. In which case, war is prevented further from reaching its absolute form.⁵²

The human element imbues war with powerful moral forces. War is essentially a battle of wills. Martin van Creveld notes that war is always a duel between two moral forces and that any analysis of war that ignores passionate emotions is without value.⁵³ This places psychological considerations at the heart of warfare. Reflecting such thoughts, Sun Tzu notes that the primary target in war is the opposing commander's mind.⁵⁴ In this sense, the Chinese theorist reflects well the intellectual competition at the heart of war, and the significance of the emotions of the commander. A similar thought is echoed by Jomini when he states that war is an impassioned drama.⁵⁵ Displaying his synthesis of enlightenment and romantic thought, Clausewitz perceives physical and psychological factors forming an organic whole.⁵⁶ An outcome of these considerations is that armed forces cannot simply be regarded as symbols on a map, or a collection of technologies that can be counted and reduced to quantifiable analysis. Rather, they are social organisms in which personal dynamics and relationships are critical to their functioning.⁵⁷ Consideration of the human dimension is a significant concern in the preparation for, and conduct of, war. Taken together, the elements that constitute the nature of war produce a vision of war that is uncertain, chaotic, violent, and ultimately a human activity both at the physical and psychological levels. In which case, to expect armed forces to be able to operate in a manner that is entirely controlled, unambiguously effective, and in line with a modern, legalistic vision of conflict is unrealistic and ignorant of the unique nature of war.

When considered alongside the paradoxical logic, multidimensional nature of strategy and the ever-present (and varied) nature of geography, the nature of war presents a challenging environment for the strategic practitioner. These various factors that complicate the practice of strategy have found theoretical form in Clausewitz's 'unified concept of general friction', as identified by Barry D. Watts. In his excellent study on future war Watts identifies the following taxonomy for the unified concept of general friction: danger, physical exertion, uncertainties and imperfections in information, friction in the narrow sense of

the resistance within one's own forces, chance events, physical and political limits on the use of military force, unpredictability stemming from interaction with the enemy, and disconnects between ends and means in war.⁵⁸

In addition, war can take many forms. In this sense it can be said to have a polymorphous character. The character of war can range from the use of weapons of mass destruction, through regular conflict between uniformed and similarly organised foes, to irregular warfare involving terrorism and insurgency. This variety of forms poses a range of challenges for both war preparation and the conduct of operations. Different forms of warfare require different capabilities, which in turn may require varied types of forces, equipment, doctrine, and/or training. Writing on the subject of small wars, Callwell reminds us that '[t]he art of war, as generally understood [for regular forms of warfare] must be modified to suit the circumstances of each particular case. The conduct of small wars is in fact in certain respects an art in itself ...'⁵⁹ To emphasise the point, Gray warns about the dangers of not adapting oneself to the polymorphous reality of war: 'Small wars can detract from the readiness of regular forces to take the field against other regular forces'.⁶⁰ Thus, the strategist may be called upon to be able to achieve a degree of competence in a range of different forms of warfare. In this sense, one may have to operate effectively enough in a particular form of war, without being too specialised so that one cannot easily adapt to another form. Of course, understanding the exact character of the war one is engaged in is important, but not always easy. Clausewitz counsels: 'The first, the supreme, the most far-reaching act of judgement that the statesman and commander have to make is to establish by that test the kind of war on which they are embarking'.⁶¹ However, this task is not always straightforward. The US war in Vietnam and the American War of Independence both had a complex character. Simultaneously they both contained elements of regular and irregular forms of war. Nonetheless, regardless of how complex the character of a war, it is still a war. In which case, it is still a violent, competitive activity in which the battle of the wills is often paramount and a theory of victory must exist.

All of the above complexities create substantial command implications. These range from dealing with an absence, or sometimes an abundance, of information, to coping with the human side of warfare. The latter includes not only dealing with the leadership of one's own men, but may also include having to 'manage' a local civilian population.⁶² In a more general sense, it is vital that one's military forces are well prepared for the nature of war and the many varied forms it can take. In this respect, it is essential that the military culture of one's forces be in tune with the nature of war. Williamson Murray wisely draws our attention towards the fact that military culture, through which military organisations develop an understanding of the nature of war, is a central component of military effectiveness.⁶³ Echoing this wise counsel, the United States Marine Corps has described its doctrine of 'Manoeuvre Warfare' as a culture designed to cope with the fog, chaos, and friction inherent in war.⁶⁴ In a related sense, doctrine must be flexible so that forces are capable of adapting within the varied, and sometimes surprising, environment of warfare. The logic of this argument

extends to the procurement and organisation of military forces. What are required are flexible forces capable of operating in a range of environments, against a range of different foes, and for a range of different objectives. Colonel Dick Applegate concludes that what is required is a broad range of capabilities, so as to avoid disappearing up a strategic cul-de-sac.⁶⁵ Again, this sounds like straightforward, even simple, advice. And yet, the practitioner usually has to operate with limited resources in an uncertain world. Thus, achieving the ideal of flexible and balanced forces, endowed with a military culture finely in tune with the nature of war, is often an unreachable goal.

The use of force

However challenging the practice of strategy may be, the strategist must still endeavour to use military force in such a way as to serve the policy objective. To this end, there are various ways in which force can be used. For analytical purposes these various uses can be delineated into six categories: defence, deterrence, compellence, posturing, offence, and miscellaneous. Modern literature on this subject tends to mention only the first four.⁶⁶ The exclusion of the fifth and sixth uses of force categories reflects a trend away from regarding military force as a decisive, flexible or legitimate instrument.⁶⁷

The task of defending the state/community is the first and most obvious of the uses of force. The defensive use of force can have two functions. In the first instance, it is designed to repel an attack. In addition, it can also serve to limit the damage caused by an attack.⁶⁸ Events since the terrorist attacks of 9/11 have reopened debate on when the use of force can be considered as an act of defence. It is generally assumed that self-defence can only occur either in the face of an armed attack or if such an attack is imminent.⁶⁹ However, Robert J. Art echoes the Bush Administration's National Security Strategy when he describes both pre-emptive attacks and preventative war as forms of the defensive use of force.⁷⁰

Whereas defence is a fairly straightforward physical act, deterrence, compellence and posturing rely much more on the psychological effects of military force. Deterrence 'has the negative object of persuading an adversary not to take an action he might otherwise have done'.⁷¹ There are two main forms through which deterrence can be achieved: punishment and denial. Punishment seeks to dissuade an actor from acting in a certain way by threatening to respond with actions so ruinous that the costs associated with the enemy's actions outweigh the potential benefits. A classic example of deterrence by punishment is the concept of Assured Destruction within the realms of nuclear strategy. Under this strategy, the United States sought to ensure that it could inflict enough destruction on the Soviet Union's society and economy to the point at which it ceased to exist as a functioning society. As Keith B. Payne and C. Dale Walton indicate, the definition of what actually constituted assured destruction changed over time. However, in the 1960s Secretary of Defence Robert McNamara considered that 'the destruction of 20–33 per cent of the

USSR's population and 50–75 per cent of its industrial capacity would be unacceptable to Soviet leaders'.⁷²

In contrast, deterrence by denial seeks to dissuade an enemy by persuading it that the goals of its actions cannot be achieved. Hence, the enemy will be denied its strategic objectives. A good example of this form of deterrence is Operation Desert Shield, 1990–91. In the immediate aftermath of the Iraqi invasion of Kuwait in August 1990, limited numbers of US forces were deployed to Saudi Arabia. The deployment of these forces had the ultimate objective of defending the Saudi kingdom from an Iraqi invasion. They would also act as the first component of a more substantial force, which had the larger goal of ejecting Iraqi forces from Kuwait. However, in the early stages of the deployment the forces would have been insufficient to repel any substantial Iraqi aggression against Saudi. At this stage, the ground forces were drawn primarily from the 82nd Airborne Division. Without heavy armour, the 82nd lacked the required capability to deal effectively with the Iraqi forces massing on the Kuwait–Saudi border. Indeed, General Norman Schwarzkopf, CENTCOM commander, was very well aware of this: 'The 82nd was nothing more than a trip-wire force. It was a show of resolve ...'⁷³ Thus, the main objective of the 82nd at this stage of the operation was to deter Iraqi forces from crossing the border into Saudi. In fact, the combat forces of the 82nd were deployed without the necessary logistical support. Although this left them vulnerable if attacked, it did 'create the impression that Saudi Arabia was well defended until the heavy reinforcements arrived'.⁷⁴

Of course, the two forms of deterrence described previously are not mutually exclusive. Often, the deterrence by denial value of forces can be reinforced by the additional threat of punishment. This punishment may be related to the anticipated losses of any military action, or may be a separate threat aimed at assets of value beyond those involved in the initial military action.⁷⁵ The deployment of the 82nd Airborne Division in Saudi Arabia displays this reinforcement well. On the one hand, Schwarzkopf hoped to deter the Iraqis by manipulating the perception of the 82nd's capability. On the other hand, by acting as a trip-wire force the 82nd brought with it the promise of greater punishment, and indeed a greater certainty of denial. During the Cold War, NATO forces deployed in Europe fulfilled this double deterrence mission as well. Their presence, especially if we include battlefield and theatre nuclear weapons, would complicate the attainment of Soviet military objectives; they also brought with them the threat of escalation to the level of central nuclear war, and hence severe levels of punishment on the Soviet homeland.

Whilst deterrence is recognised as an age-old instrument of strategy, its reliability cannot be taken for granted. Indeed, there is a growing body of literature that is increasingly asking challenging questions of deterrence, within historical, contemporary and future contexts.⁷⁶ By default, the efficacy of deterrence is difficult to prove, in that one cannot prove a negative. For any deterrence posture to have a chance of success it must fulfil three criteria. These are commonly referred to as the three Cs of deterrence: capability, commitment and

communication. To deter, one must have the capability to prosecute the punishment or denial operations effectively. One must also possess the commitment to go through with the act. This is particularly a problem within a relationship characterised by MAD. For example, during the Cold War the United States always had the problem of persuading the Soviet Union that it was willing to commit suicide in order to defend Western Europe from Soviet attack. This is the main challenge of 'extended deterrence'. Finally, the possession of the said capability and commitment, along with the purpose of the deterrent policy, must be communicated to the actor to be deterred. If all of these attributes are fulfilled, then one can be said to possess a credible deterrence posture, albeit with no guarantee of success.

Clearly, there are a number of issues on which a deterrence posture can come unstuck. As Lawrence Freedman notes: 'deterrence works best when the targets are able to act rationally, and when the deterrer and the deterred are working within a sufficiently shared normative framework'.⁷⁷ Thus, cultural differences may cause a mismatch in the deterrence relationship. Deterrence may also fail if the targeted actor is beyond deterrence. An obvious candidate for such an assessment in the modern world is al-Qaeda. This conclusion appears obvious if one considers their extreme ideology and the commitment to the cause demonstrated by the foot soldier suicide bombers. However, Rohan Gunaratna notes that al-Qaeda can be deterred from attacking certain targets if they are protected well enough. Thus, deterrence by denial may have a role against such foes. Gray expands this thought somewhat by noting that the recruitment of the foot soldiers becomes more difficult if the cause appears to be losing momentum. Again, in this scenario deterrence is in play by the denial of the greater objectives.⁷⁸ Of course, deterrence can also be undermined if the three Cs are not adequately met. A lack of capability or commitment, or indeed a failure to communicate these to the enemy, could provide a fatal blow to a deterrence posture. Finally, as Bruce Blair indicates in his work *The Logic of Accidental Nuclear War*, friction can prove so dominant at times that deterrence may fail even though many of the basic requirements for success are met.⁷⁹ However, these routes to failure should not compel us to disown deterrence in an absolute sense. Rather, it is simply wise to acknowledge that, like all defence postures, in the complex world of strategy deterrence has its limitations. Thus, because of this, deterrence should merely act as one possible instrument of grand strategy: 'deterrence does not offer a self-contained strategic relationship but is part of a wider set of relationships'.⁸⁰ Of course, although this section has focused on the limits of deterrence, this does not mean that as a defence posture deterrence is uniquely weak. Indeed, the other possible uses of force have their own vulnerabilities. For example, when using force in an offensive manner one needs to consider that an enemy may be too strong to be defeated. And, of course, compellence, being an obviously psychological use of force, shares many of the same problems as deterrence.

Whilst deterrence has a negative objective, compellence has a positive objective 'so as to be able either to stop an adversary from doing something that he

has already undertaken or to get him to do something that he has not yet undertaken'.⁸¹ Again, the significant factor is that this represents the use of force as a psychological tool; the situation is not completely under one's control in a physical sense: 'The adversary must still have the capacity for organised violence but choose not to exercise it'.⁸² Thomas Schelling describes this difference in rather simple, but accurate terms: 'There is a difference between taking what you want and making someone give it to you'.⁸³ Compellence can be accomplished with or without the application of violence – although, as previously noted, it is the promise or threat of violence that actually compels. Indeed, Schelling notes that the power to hurt is most effective when held in reserve. In this sense, it is the threat of more pain to come that compels.⁸⁴ Compellence is ideal for limited objectives, when complete overthrow of the enemy is not desired. This may be particularly important when the attacker wishes to engage in some form of positive relationship with the target after the conflict has ended. It is also a particularly important tool for those who have limited resources at their disposal. In such cases, an attritional campaign would be difficult to sustain, whereas a carefully targeted application of force against valued assets of the enemy may bring success at a reasonable cost. Of course, this is premised on the notion that you understand what the enemy values, and the amount of pain he is unwilling to bear. In such circumstances, Sun Tzu's advice to know your enemy is useful, if somewhat vague and difficult to achieve in reality.⁸⁵ Note NATO's underestimation of Serbia's pain threshold, as well as an overestimation of its own ability to inflict that pain in the Kosovo conflict.⁸⁶

Despite the utility of compellence, the ability to inflict pain for strategic effect is often overlooked. Schelling bemoans this lack of recognition: 'It is extraordinary how many treaties on war and strategy have declined to recognise that the power to hurt has been, throughout history, a fundamental character of military force and fundamental to the diplomacy based on it'.⁸⁷ If this was a problem in Schelling's time, it has intensified since. In many respects, 'the power to hurt' has been increasingly undermined by social, ethical and legal restrictions.

As Art notes, 'swaggering' or 'posturing' is something of an ill-defined use of force. It essentially involves events such as military parades and/or the purchase and display of military capabilities. It is primarily designed to enhance the reputation of the actor, without necessarily being aimed at any other actor in particular; therefore its aim is general rather than specific. However, an improved reputation in terms of military capability can enhance defence, deterrence and compellence.⁸⁸ Posturing can also occur during what is commonly termed as 'defence diplomacy'.⁸⁹ In this use of force (which mainly belongs in the miscellaneous use of force section), military capabilities are generally used for peaceful purposes to enhance political and trading relationships between actors. A classic example of such an activity is 'port visits' by naval ships. By hosting such activities as cocktail parties, military force can help grease the wheels of diplomacy. However, the arrival of an advanced naval vessel in a foreign port can also serve the posturing function.

As mentioned earlier, the offensive use of force is often missing from discussions on the roles of the military.⁹⁰ However, in the wake of American-led operations in both Afghanistan and Iraq, the offensive use of force is certainly back on the agenda. Schelling had recognised the offensive potential of force when he listed many of the specific ways in which it could be used in this respect: ‘penetrate and occupy, seize, exterminate, disarm and disable, confine, deny access’.⁹¹ In this respect, military force can perform many functions. For example, it can be used to seize resources, force political change, or eradicate or ethnically cleanse an enemy or population. In this respect, military force can be used to take ‘control’ of a situation. The concept of control is central to the exercise of strategy. The method of control has been most clearly defined by J. C. Wylie, who declared: ‘The ultimate determinant in war is the man on the scene with the gun. This man is the final power in war. He is control’.⁹² Control over resources and populations can only reliably be exercised by the physical presence of one’s forces.

Aside from the above, there are a host of other uses of force that can be categorised in a general miscellaneous category. These include policing, humanitarian aid, disaster relief, ceremonial, counter-smuggling operations and garrison duties. Many of these activities come under the heading of Military Assistance to Civil Authorities (MACA), and may include duties such as fire-fighting during industrial action by civilian fire-fighters. A more obvious example of MACA is the use of the British army in support of police operations in Northern Ireland. Thus, from the above list, it should be clear that far from being a blunt and limited tool, military force is actually a very flexible instrument of policy. Whether this flexibility can be used to good effect is very much at the behest of the commander, and whether he is able to deal with the varied and complex interactions in strategy.

Dealing with complexity

The challenges of strategy are many. However, the commander does have a number of practical and conceptual aids to help him deal with the complexity of strategy. Perhaps the most important of these resides within the commander himself. Certain attributes are required to improve the chances of success in strategy. ‘Military genius’ is a term used by Clausewitz to describe those individuals who possess an outstanding ‘harmonious combination of elements’ required to excel in command.⁹³ Although Clausewitz refers to genius, this is not meant to restrict the study of command to the very few individuals who display something extraordinarily special. Rather, military genius can be used as a vehicle for understanding the qualities of good command more generally. The key point to note is that military genius is a human attribute that includes certain cognitive skills, certain moral qualities, and an understanding of human issues. Underneath these broad, umbrella terms, Clausewitz identifies a number of characteristics that a commander should possess. These include physical and moral courage, incisiveness, presence of mind, strength of will and character,

and an ambitious nature. However, Clausewitz gives particular prominence to a general's intuitive ability, his *coup d'oeil*, and the determination to see his decisions through to conclusion. He also acknowledges the significance of leadership, as is particularly evident in the task of supporting the men through the psychological trauma of battle. Finally, a Clausewitzian general must understand how military force relates to policy.⁹⁴ More recently, General De la Billière has expanded on this latter requirement. Reflecting on his 1991 Gulf War experience, he notes that the commander must give considerable time during a campaign to the post-conflict settlement.⁹⁵ To this end he must consider a range of factors, including political, moral, legal, socio-economic and cultural issues. Such concerns surely require a skilled human touch.

As an aside, it is important to note that command cannot be reduced simply to the attributes of the commander. As Gray postulates, because genius is rare, attention should be paid to the creation of a compensatory command process.⁹⁶ In this vein, van Creveld cites the Prussian General Staff as a successful example of this principle.⁹⁷ Indeed, Dupuy goes as far as to suggest that the explanation for the success of the Prussian/German General Staff can be found in its institutionalisation of 'military genius'.⁹⁸ Nevertheless, even in the absence of a military genius, command systems historically have been based upon the principle of hierarchy, with command responsibility resting ultimately with an individual. It is the combination of the commander's qualities, the command structure, and the command ethos that lays the foundation for good command amid the ever-present stresses and chaos of war.

The commander also has at his disposal certain conceptual aides. One of the most important concepts in modern strategy is 'centre of gravity'. They are defined by Clausewitz thus:

particular factors can often be decisive ... One must keep the dominant characteristics of both belligerents in mind. Out of these characteristics a certain center of gravity develops, the hub of all power and movement, on which everything depends. That is the point against which all our energies should be directed.⁹⁹

J. C. Wylie is no less insistent about the centrality of the centre of gravity to strategic performance:

The basic problem facing the strategist throughout all these situations, through any war, any time, any place, is this: Where shall be the center of gravity of the war? ... Control of the strategic weights or centers of gravity in any war, large or small, limited or unlimited, is a basic advantage that should be sought by any strategist. It is the fundamental key to the conduct of warfare.¹⁰⁰

This statement by Wylie raises the possibility that there may be more than one centre of gravity in relation to each actor in a conflict, and therefore a number of

routes to victory. Indeed, as a planning and operational tool, centres of gravity may be identified at all of the levels of strategy. Thus, one could identify a key enemy airfield as the operational level centre of gravity. In addition, at the level of strategy/grand strategy the centre of gravity may be the leadership or the public will. However, although Clausewitz also recognises that there may be more than one centre of gravity, he does note that it is preferable to 'trace them back to a single one'.¹⁰¹ For Clausewitz, the key candidates for centres of gravity are, depending upon the context, the army, capital cities, public will, alliance cohesion, or personalities of the leadership. However, despite the various forms the centre of gravity may take 'the defeat and destruction of his fighting force remains the best way to begin, and in every case will be a very significant feature of the campaign'.¹⁰²

As with all theoretical concepts in strategy, the practical realisation of them is the real challenge. Centres of gravity are no exception to this rule. Thus, when considering the utility of centres of gravity as an operational and analytical tool, a number of questions arise. Does the enemy have a centre of gravity? Can the enemy's centres of gravity be identified? This last question alone presents a severe intelligence and analytical challenge. Take for example the challenge of identifying the centre of gravity within the German economy in this period. Robert A. Pape highlights the size of the task involved in trying to undertake an accurate macrolevel analysis of the German economy in World War II. He notes that the required information was simply not available.¹⁰³ The problems associated with the volume of information required are augmented by the fact that in most cases the intelligence acquired is based on a peacetime analysis of the enemy, rather than when they have mobilised their economy for war. The difficulties involved in understanding how a complex interconnected modern economy works are highlighted by the fact that even modern historians, with all the benefits of historical research and hindsight, still disagree over which component of the German economy, at which period in the war, represented its Achilles' heel. Identifying the enemy's centre of gravity really focuses attention on Sun Tzu's advice to 'know your enemy'.¹⁰⁴ Even if the centre of gravity is identifiable, can one actually put sufficient pressure on it? Beaufre argues that: 'the enemy's vulnerable points must be set against our own capabilities'.¹⁰⁵ For example, if Nazi Germany's centre of gravity was indeed the Wehrmacht, only certain countries were able to place it under severe pressure, and at great cost. Therefore, some of the Third Reich's early victims, Poland for example, were incapable of defeating their aggressive neighbour. Thus, while the notion of centres of gravity may act as a useful tool for the strategist it does not necessarily provide an obvious or easy road map to victory.

Conclusion

Strategy is an inherently complex activity. This complexity emanates from its multidimensional nature, the nature of war, the polymorphous character of war, the involvement of humans, the existence of an intelligent enemy, the play of

friction and the fact that it is the meeting point between the two different worlds of politics and the military. Nonetheless, despite the enormous challenges posed by this complexity, the strategist must still endeavour to use military force in such a way as to fulfil his policy objectives. To this end, he can use force in a variety of ways and for a variety of purposes. Sometimes, military force may be used in a direct manner in order to control or annihilate the enemy. However, often military force is used in a more limited and indirect fashion, whereby the effects are felt more at the psychological level.

The cause of good strategy can be served by an awareness of certain key concepts. However, the strategist must translate theory into practice in a vast range of different, indeed unique, contexts. For this, balanced and well-trained forces provide an obvious advantage. However, even superior forces can be poorly led. Thus, a great deal of emphasis must be placed on the commander himself. And, since strategy is an art, the judgement of the commander is paramount. Sound judgement is difficult to define or predict. Yet, being able to make the right decision at the right time is often the key to success in war. Indeed, one might conclude that the military genius, armed with his *coup d'oeil*, is blessed in strategic terms precisely because he is able to identify the decisive moment and point, and is then able and willing to act upon it until victory is assured. Even the great theorist Clausewitz was conscious of the limits of theory when compared to the judgement of the human commander: 'what genius does is the best rule, and theory can do no better than show how and why this should be the case'.¹⁰⁶ This leaves us with the uncomfortable conclusion that for strategy, upon which wars are won and lost, there are no formulas for success. However, theory can educate the mind of the strategist, and lessons can be learnt from the vast array of historical experiences.¹⁰⁷ Hopefully, the following analysis of Alexander the Great as a strategist will provide some insight into how a military genius functions. To quote Napoleon, a candidate military genius:

Tactics, evolutions, artillery, and engineer sciences can be learned from manuals like geometry; but the knowledge of the higher conduct of war can only be acquired by studying the history of wars and the battles of great generals and by one's own experience. There are no terse and precise rules at all ...¹⁰⁸

2 Ancient Greek warfare¹

Introduction

The military developments wrought by Alexander can only be fully appreciated when seen in their proper context; that is, the development of Greek warfare before the rise of Macedonia. With an understanding of earlier Greek warfare we can begin to comprehend the significance of the changes introduced by Alexander and his father Philip II. These changes, which will be described in detail in this chapter, gave Macedonia a substantial military advantage over their rivals. Prior to the rise of Macedonia warfare among the Greek city states had been largely dominated by the hoplite phalanx, often described as a heavy-infantry formation. However, hoplite warfare had also proved successful in the wars against the Persian enemy. It should be noted that the dominance of the hoplite was not brought to an end purely as a result of Macedonian innovation. Before the arrival of Philip and Alexander, Greek warfare was already undergoing a degree of evolution. This evolution was particularly intense during the Peloponnesian War (431–404 BC). Thus, Greek warfare was already witnessing some substantial changes in the fifth and fourth centuries. Nonetheless, the maturation and combination of these earlier developments were only fully realised by Philip and Alexander. However, it would be wrong to suggest that the two Macedonian rulers merely welded together the developments of others. Indeed, Alexander and his father introduced a number of key innovations themselves. Whether or not Philip and Alexander revolutionised the art of warfare is a peripheral question to which this work will seek to provide an answer. In order to address this question, the book will make use of the so-called ‘Revolution in Military Affairs’ (RMA)/Military Transformation hypothesis.² This concept, which has dominated the defence profession since the early 1990s, provides a theoretical framework through which to understand military innovation and its significance. According to the RMA literature, an RMA occurs when certain developments in warfare are exploited in such a way that massive military advantage is gained over those employing the older forms of warfare. By analysing the Macedonian art of warfare through the said framework, we can gain a better understanding of the changes wrought by Alexander and his father; this case study will also provide a further examination of the validity of the RMA hypothesis itself.

Revolutions in military affairs

Certain works in the RMA literature identify RMAs throughout history.³ For example, four strong candidates for the title of RMA are the gunpowder, Napoleonic, airpower and nuclear revolutions. Often, RMAs develop out of technological and/or political developments. Whilst new technological developments may offer new tactical or operational possibilities, changes in the socio-political order can provide the motivation and guide for the development of an RMA. Although technology may provide the tool for military innovation, political change may provide the necessary context in which the said innovation can flourish. For example, the Napoleonic revolution was facilitated by the changing political environment that introduced the notion of the *levée en masse*.⁴ In addition, political objectives may influence the direction certain changes take. However, new technology and political conditions alone are not sufficient to induce significant relative advantage in warfare. Any new or maturing piece of technology must be integrated and used effectively. This often requires new tactical and operational concepts. In turn, for these new concepts to be realised fully an armed force must be reorganised into new organisational structures. The above constituents are neatly summarised by Andrew Krepinevich, when he describes how an RMA is ‘what occurs when the application of new technologies into a significant number of military systems combines with innovative operational concepts and organisational adaptations in a way that fundamentally alters the character and conduct of conflict’.⁵

A classic example that most clearly reveals how an RMA can occur is the development of blitzkrieg during the twentieth-century.⁶ In this particular case, a range of new technologies had appeared that could be utilised to enhance the art of warfare. The internal combustion engine made possible the development of the tank and supporting logistics and infantry vehicles. Together, these vehicles enabled more rapid manoeuvres in the theatre of operations. When a force rapidly increases its pace of advance there is always the potential that the entire operation becomes disjointed and chaotic. In this sense, the advent of wireless radio was an adequate solution to this problem. Taken together, these two technological developments produced forces that could move rapidly in a coordinated manner, and thereby achieve a higher tempo of operations.

However, as noted previously, merely having the technological capability is not enough. A doctrine, or operating procedures if you will, was required to get the most out of this combination of technologies. It is interesting to note that the various European armies utilised their new forces differently in the early stages of the Second World War. These differences can be largely explained by the different political and strategic circumstances of the countries. The French, who had a defensive and conservative outlook, spread their tanks throughout their existing infantry formations, essentially treating them as mobile artillery. In this sense, the French were certainly not doing anything revolutionary with their new technological acquisitions. In contrast, Nazi Germany developed the operational concept of blitzkrieg. Within this new doctrine the armoured forces were

concentrated, and acted as the spearhead of rapid offensive formations. This doctrine reflected the revolutionary and revisionist nature of Nazism, and also suited the strategic requirements of Germany at that time. As in the First World War, Germany potentially faced a war on two fronts against enemies with substantial resources at their disposal. This geostrategic reality translated into the need for forces that could rapidly defeat one enemy before turning to face the other. Here is a clear example of political circumstances driving the development of an RMA. However, the doctrine of blitzkrieg was not entirely new. Towards the end of the First World War both sides had developed operational concepts that formed the foundation for blitzkrieg. In their attempts to break the deadlock of the trenches, both sides had developed self-contained formations that conducted deep and rapid advances along a narrow axis of attack. The architects of blitzkrieg, men such as Guderian, further developed these ideas with the aid of the maturing technologies.⁷

One of the greatest dangers for units with the task of rapidly advancing deep into the enemy's rear is that they may become cut off from the rest of the army. This is a particular worry for the lead armoured units in blitzkrieg. Tanks are powerful instruments that can advance rapidly and deliver significant levels of firepower. Nevertheless, when operating on their own they are vulnerable to infantry armed with effective anti-tank weapons. With these concerns in mind, the Germans developed the Panzer division. This new formation contained tanks, infantry, artillery and support troops. This range of capabilities gave the Panzer division a degree of self-sustainability, and ensured that the different elements could offer each other mutual support and protection.

Thus, we can see from the above description of blitzkrieg how the different developments coalesce into the basic elements of an RMA; but a question still remains over the relative effectiveness of this development in the art of warfare. Did blitzkrieg give the Germans a distinct military edge? In the short term the answer is a resounding yes. Blitzkrieg did indeed confer substantial advantages on the Germans in their invasions of Poland (1939), France (1940) and the Soviet Union (1941). The forces facing the Germans could not initially cope with these rapid coordinated attacks deep into their territories. However, history clearly shows that the Germans began to reap diminishing returns from their blitzkrieg operations. Germany was unable to maintain the levels of success they had achieved in the first three years of the war. This can be attributed to a number of factors, and is very significant in our analysis of RMAs. The weather and geographic depth of the Soviet Union neutralised many of the advantages conferred by blitzkrieg. The Germans simply could not sustain rapid operational tempo in such conditions. Also, the substantial resources of their enemies meant that Germany could not translate their overwhelming tactical and operational successes into a war-winning outcome. No matter how many Soviet forces were neutralised and destroyed, there always appeared to be more available. Significantly, Germany's enemies also slowly adapted to blitzkrieg, either imitating it themselves or discovering ways to offset its advantages. The significance of this section is to show that developments that produce substantial military advantage

can eventually be offset either by the enemy or the environment. Therefore, an RMA has to be adaptable in order to remain effective. In later chapters we will see that one of Alexander's great qualities was his ability to adapt the instrument and concepts he had used so effectively in the earlier battles.

So, how useful is the concept of the RMA to the study of Alexander the Great? The concept of the RMA has come under some severe criticism. It is alleged that it may simply be a construct of academics rather than reflecting any historical or contemporary reality. Likewise, it has been alleged that it may in fact be a creation of the United States defence establishment in order to justify increased defence expenditure.⁸ The logic behind this criticism is that by identifying a new RMA (in recent years this has been the Information Age RMA) the US military can justify increased investment in new technology. Nonetheless, despite these and other criticisms, the RMA hypothesis does provide a useful analytical framework when analysing military innovation. If the purpose of this book is to explain Alexander's outstanding military success, then the RMA hypothesis provides us with a range of useful concepts and ideas from which to start our analysis.

Traditional hoplite warfare

If one thinks of Classical Greek warfare the image of the hoplite comes instantly to mind. As Hans van Wees notes, the hoplite 'was an iconic figure in Greek culture, who dominated in art, literature, political discourse and historical writing'.⁹ The historical evidence suggests that the hoplite appeared sometime in the seventh century, and would dominate the Greek world until the Peloponnesian War.¹⁰ The hoplite was a heavily armoured infantryman who took his name from the equipment he fought with. However, there is some debate over the exact source of the term 'hoplite' and the how he was equipped. On the one hand, F. E. Adcock, J. K. Anderson and Victor Davis Hanson all claim that the term 'hoplite' derives from the round shield (*hoplon*) he carried into battle.¹¹ In contrast, van Wees declares that the literal translation of hoplite is 'equipped', and is therefore distinguished from the 'unequipped' or *aoploi*.¹² However, as the shield was the one piece of equipment that distinguished the hoplite from other forms of soldiery, the term 'equipped' may well be a reference to the shield itself.

To some extent, the hoplite reflected a distinct socio-political structure in Greece. This development in infantry was based upon a new class of landowning farmers who could afford to arm themselves and defend their land. Again, there is debate concerning the actual social status of the average hoplite. This debate is significant, since the social status, and therefore wealth, of the hoplite has an impact on the equipment he would fight with, and thus how he would fight. Hans van Wees notes that the traditional perspective on the archaic hoplite as being a middle-class farmer protected by heavy bronze armour does not provide the whole truth (and this is certainly the case for later hoplite forces, who were much lighter). He concludes that, whilst landowning men of leisure

did make up some of the hoplite force, many of the soldiers were working-class farmers. The significance of this is that whilst the wealthy landowner could afford the entire panoply of bronze armour, many of the hoplites would simply wear a cloth cuirass and felt *pilos*. In fact, in terms of uniform and equipment it appears that a hoplite force would not have presented a homogeneous group. The only exception to this was the shield, which seems to have been universal.¹³ Nonetheless, whether they were middle-class or working-class farmers, the fact that hoplites were tied to agricultural land did mean that they tended to have distinct campaigning seasons.¹⁴

As noted, over time the hoplite became an increasingly lighter form of infantry. For example, J. K. Anderson claims that by 400 BC the hoplite had dispensed with his heavy armour and bronze Corinthian helmet, and subsequently relied for protection on his shield and the *pilos* (a felt cap). Anderson claims that these changes reflected the need for greater mobility, which was required to deal with the threat posed by increasingly effective light infantry forces.¹⁵ A fully equipped hoplite of the archaic period was protected by bronze plate armour. Typically, he would wear a Corinthian helmet. This cumbersome bronze helmet offered substantial protection against blows to the head, but at the same time denied its wearer much of his hearing and his peripheral vision. Similarly, the bronze breastplate would deflect the vast majority of attacks from a range of weapons, including arrows, swords and spear thrusts. Yet, like the helmet, the breastplate was heavy, hot and cumbersome. The concave shield was typically just over three feet in diameter. Because it was so large, to keep the weight of the shield down the *hoplon* could not be particularly thick. Even so, it still weighed approximately 16–20 pounds. It was primarily constructed of wood, with a bronze layer over the front. The shield was carried with a handgrip and arm support, although in the push of battle the hoplite could fix his shoulder under the rim. This practice would give his arm something of a rest from carrying the weight of the shield, but more importantly would enable him to push his bodyweight in against the shield. Finally, the hoplite may also have worn bronze leg and arm greaves to protect his limbs. Thus, when considering those who could afford the full panoply of armour, the hoplite was a relatively well-protected protagonist.¹⁶ However, by the time of Peloponnesian War hoplites had essentially discarded their bronze armour in favour of linen corslets and the felt *pilos*.¹⁷

In terms of offensive armament, the hoplite's primary weapon was a spear approximately seven to nine feet in length. The spear had both an iron spearhead and a butt-spike at the other extremity. This latter device is believed to have served a number of purposes. In the first instance, should the spear break during combat, the hoplite could simply turn his spear around and continue to thrust at his enemy with the butt-spike. Also, the butt-spike could be used to dispatch any fallen enemy underfoot. The spear was essentially used as a thrusting weapon, and not as a missile to be thrown. Although the hoplite relied primarily upon his spear for offensive attacks, he also carried a short sword should his spear be lost or irrevocably damaged.

All told, the archaic hoplite marched into battle with approximately 50–70 pounds of equipment weighing him down.¹⁸ It should also be remembered that the majority of the battles would be fought during the spring or intense Greek summer. One can only imagine the discomfort of marching and fighting in such conditions whilst wearing heavy bronze armour, carrying the substantial *hoplon* and wielding an eight-foot spear. From a practical perspective, it thus becomes clear why the hoplites dispensed with their heavy equipment over the years.

As noted, hoplites were not professional soldiers who campaigned all-year round. Hoplite warfare was often a very limited affair.¹⁹ In fact, it is fair to say that hoplite warfare was quasi-formulaic in nature.²⁰ Typically, the belligerents would meet on an open plain for a decisive and short clash of arms to decide the issue in question. Van Wees claims that, although most battles were not strictly ‘arranged’ as such, the reality of bringing together large, slow-moving hoplite formations gave the battles the appearance of being arranged at a distinct time and place.²¹ Battles would last for a couple of hours and were limited to daylight. In no way was this total or irregular warfare in which surprise night attacks or ambushes had any part to play. Also, there was a quasi-formulaic element to the outcome of a battle. The victor was often decided on the basis of who commanded the battlefield, and in particular the dead, at the end of the engagement. As van Wees concludes, ‘most classical Greeks sought control of the battlefield for the sake of symbolic gain – the recognition of superiority’.²²

Although for those in the front lines the experience of hoplite warfare could be horrific and bloody, casualties were fairly light. Most battles did not produce casualty figures above 10 per cent.²³ This was partly because, aside from those forces killed in the initial rout on the battlefield, determined and sustained pursuit of a defeated enemy was rare, and may even have been discouraged.²⁴ As we will see later with the battles of Alexander, pursuit was the moment at which the greatest slaughter of the enemy could occur. Pursuit rarely happened in hoplite warfare for two main reasons. First, as part of the formulaic nature of this warfare it was sometimes commonly agreed by the belligerents that pursuit would not occur. Indeed, Victor Davis Hanson notes that ‘Ancient treaties among city states sometimes outlawed ... any opportunity for pursuit after the main engagement’.²⁵ Once an enemy had been recognisably defeated on the battlefield, an agreement could be reached whereby the victor gained whatever spoils were on offer, and the vanquished were allowed to return home to their farms (although the release of prisoners may have involved a ransom).²⁶ This was warfare between similarly minded and motivated people. Second, the forces involved were not well suited to engage in a pursuit. A force of hoplites that broke ranks to engage in a pursuit instantly lost the protection of its dense formation.²⁷ Thus, hoplites too eager to annihilate their opponents could run the risk of being annihilated themselves. Also of relevance to the ineffective nature of pursuit was the underdeveloped use of cavalry. Indeed, before the rise of Macedonia, cavalry was an underused arm of military forces in Greece. Aside from states such as Thessaly and Boeotia, cavalry had never been developed to a point where it could challenge

the well-armoured hoplite on the battlefield. The rugged geography of southern Greece restricted cavalry operations and made them difficult and expensive forces to maintain. Thus, without an effective cavalry arm, the burdensome equipment of the hoplite made pursuit an unattractive and somewhat impractical undertaking.

With such forces and conventions as those described above, what were the tactics employed in hoplite battle? Unfortunately, the evidence concerning this subject is incomplete and thus inconclusive: 'Exactly how hoplites fought their fearsome battles is not immediately clear from ancient descriptions'.²⁸ This confusion over the tactical details even concerns the most basic of issues, such as the nature of the phalanx formation. The phalanx was the formation of choice for hoplite warfare. The orthodox view describes the phalanx as a close order formation several ranks in depth. The hoplites would stand in densely packed lines with a spear in their right hand and the shield on their left arm. Indeed, it is commonly assumed that the distance between each hoplite was three feet.²⁹ In such a formation the shields would overlap, thereby ideally presenting a solid front of protection. The main side effect of this was that the entire line would edge to the right as each man sought protection from his neighbour's shield. The phalanx was typically eight or more men in depth. However, due to the length of the spear, only the weapons of the first three ranks protruded into the killing zone. The key to success in such a formation was cohesion and discipline rather than individual acts of glory. Indeed, maintaining the line was the primary concern of the phalanx. A cohesive and solid phalanx was a formidable defensive formation. It presented an enemy with a solid line and mass of shields and spearheads. However, should any gaps appear, or should the enemy get behind the phalanx, then the vulnerable flanks and rear would be exposed. In most instances this could spell disaster for the phalanx. Because of their heavy armour and the nature of their tactics, the hoplite phalanx was not a particularly mobile formation that could rapidly turn to protect its flanks and rear.³⁰

The above orthodox view has been challenged somewhat by van Wees. Rather than being a mere three feet apart, van Wees claims that the gap between hoplites would have been six feet. This spacing is akin to later Roman formations, and clearly allows greater room for manoeuvre when using the hoplite spear or sword. The main obstacle to van Wees's thesis on this issue concerns the limits of protection offered by the hoplite shield. The orthodox view rests on the basis that the shield, held in the left hand, does not adequately cover the right side of the hoplite. Thus, as noted previously, the entire line would edge to the right as each man sought protection from his neighbour's shield.³¹ This would, of course, indicate a close-order formation. However, van Wees easily overturns this notion by claiming that if the hoplite stands side-on to the enemy (with his left shoulder facing the enemy), then the shield adequately covers the hoplite's upper body.³² The significance of this debate concerning the spacing of the hoplites will become apparent below. Nonetheless, regardless of the actual spacing, as Aristotle noted, the cohesion of the phalanx was always critical: 'Without good order the hoplite arm is worthless'.³³

It is important to point out that the fighting during the classical period in Greek history was dominated by the clash of similarly armed hoplite phalanxes. Again, due to a combination of convention and practicalities, cavalry or light-infantry forces took little part in this form of warfare. The clash of hoplites in face-to-face combat fitted with the heroic tradition of Greek legend. Indeed, it was regarded as a somewhat less-honourable and cowardly act for a hoplite to be slain by an archer or any other form of socially inferior missile-wielding combatant. In fact, missile weapons were regarded as an effeminate tool of war.³⁴ There were also practical reasons for the dominance of the hoplite over light-infantry troops. Anderson claims that the reluctance to use missile troops relates primarily to the fact that they were ineffective.³⁵ This may have been for a number of reasons. As noted above, the armour of the hoplite offered a degree of protection against missile attack. The raised spears of the hoplite phalanx magnified this resistance as they marched towards the enemy. The density of the spears could deflect a number of the missiles launched against the phalanx. Also, the limited range of missile weapons in this period meant that there was only a brief period of opportunity to attack the hoplites before they were upon their foes. In a classic open-pitched battle, light-infantry forces could ill afford to be caught in the open by well-armed hoplites.

Cavalry forces faced similar practical obstacles on the hoplite field of battle. In an age before stirrups, mounted troops did not possess such a stable platform from which to operate. Therefore, if they were faced with a solid and disciplined phalanx they would be unable to drive home a lance with the required force without becoming unseated. This is assuming that both horse and rider would have the courage to charge headlong into an unbroken line of spears and shields. In most cases, if a phalanx could maintain its solid formation it would be largely invulnerable from a frontal cavalry charge.

So, battle between Greek city-states during this period was largely an affair conducted by opposing hoplite phalanxes. The details of how such formations fought at the tactical level are somewhat confused in the original sources. What is not disputed is the fact that the phalanx ideally required a relatively flat plain upon which to operate. Any obstacles or significant undulations in the terrain could make it very difficult for the phalanx to maintain its cohesion. For similar reasons, the phalanx was not well suited to rapid changes of direction and manoeuvre on the battlefield. The phalanx was a powerful, but somewhat restricted formation that lacked any significant mobility. In this sense, battles between hoplite phalanxes were rarely won by cunning manoeuvre on the battlefield, in which one side would fall upon the enemy's decisive point.³⁶ Instead, the phalanxes would normally meet head-on in a shock action. At first the phalanx would move at walking pace towards the enemy. Initially, the spear would be held at a slope, but prior to engagement with the enemy it would be lowered and held in an underarm fashion. The phalanx would sometimes advance at the double as it came within range of the enemy's missile forces. Of course, unless well disciplined and well trained, this increase in pace could well reduce the cohesion of the formation. However, as the two phalanxes closed

with each other they would normally reduce their pace back to a walk. Indeed, there is some evidence that on occasions a phalanx would stop entirely to regain its cohesion before the clash of arms.³⁷

It is at the point of contact that there exists some confusion over how the hoplites initially engaged one another. The confusion concerns whether the initial blows were delivered with the spear held in an underarm or overarm position. On balance, the classical historians tend to agree that those hoplites in the front rank would have switched to an overarm position in order to stab downwards at the face and neck of their opponents over the shield.³⁸ This fits the recorded evidence of the injuries hoplites suffered, and also reflects images depicted on a number of contemporary vases. However, if this were the case one has to ask the question: if combat involves stabbing down at an opponent, why advance with the spear in underarm fashion? The answer to the above dilemma may be that the front rank used their spears in an overhand fashion to stab down at their opponents, whilst the next two or three ranks created the shock collision with spears held underarm. However, this debate is only valid if we accept the orthodox view of a hoplite phalanx formation in which the troops are closely packed together. Alternatively, if we accept that there was much more space amongst the men, then they have much greater opportunity to change grip and wield their spears in various ways.³⁹

As the two forces finally engaged each other, a number of spears may have broken on impact with the enemy's armour and/or shields. The front lines of the phalanxes were now engaged in what John Lazenby describes as 'slogging it out'.⁴⁰ Those whose spears had broken may have opted to use the butt-spike, or indeed may have unsheathed their swords. Victor Davis Hanson paints a grim picture for those in the front lines during this stage of the battle. He describes how bodies could be piled two or three high at the point of contact between the two sides. Penetration wounds to the face and groin were common as the hoplites sought out the unprotected parts of their enemy's anatomy. Alternatively, heavy impacts on the Corinthian helmet could cause fatal internal damage to the brain of its wearer. Thus, although in general terms hoplite battle was often a limited affair, for protagonists in the front lines it was a high intensity, total experience.⁴¹ At this stage of the battle the objective was to kill the enemy in front, and so begin to create a gap in the opposition's line. As gaps appeared, the enemy would desperately attempt to fill them with men moving through from the rear ranks. Alternatively, these gaps could be further breached and thereby expose the vulnerable flanks of the enemy's front ranks in that vicinity. On occasions, a breach in the enemy's line could bring victory fairly quickly. On seeing a breach appear, men in other sections of the phalanx may have believed the end was near, and thus the entire formation could begin to crumble as they made a bid to escape the battle.

However, if no decisive gaps were created the battle would move onto a stage of 'pushing and shoving'.⁴² By now, the two phalanxes would literally be toe to toe and shield to shield. The men in the rear ranks would put their shoulders under the rim of the *hoplon* and push those ahead into the enemy. The objective

now was to force the enemy formation back and drive it from the field of battle. For those in the front ranks the situation must have been desperate. In some sense they still attempted to dispatch their opponents with their weapons. Alternatively, if it had become too congested they would try to wrestle their opponents to the ground with their bare hands. There is evidence that on occasions some in the front ranks were crushed to death or asphyxiated were they stood, their bodies unable to fall because of the mass of men.⁴³ Again, this description of hoplite battle has been challenged by van Wees. He claims that evidence exists to suggest that there was room for manoeuvre in the front ranks. This room was sufficient for the wounded to be collected and carried back through the ranks.⁴⁴ As is so often the case, the actual truth may lie somewhere between these two descriptions. It is not inconceivable that on occasions the front line could become so congested that the battle eventually resembled a shoving match. However, it seems unlikely that this would represent either the norm or the general intent of the belligerents. Surely more damage could be inflicted on the enemy, and therefore there was more chance for achieving a decision, with the continued use of spear and sword, rather than merely relying on pushing one's foe from the field. This approach also seems to represent a more likely evolution from the Homeric form of battle. During this earlier period, the formations were much more open and fluid. Battle tended to be characterised by a fluctuating front line in which each side would engage in a series of charges, during which individuals would attempt to dispatch an opponent from the opposing side. Decision could be achieved when one side eventually broke and fled the field of battle.⁴⁵

What factors made the difference between victory and defeat in this style of warfare? There was precious little opportunity for tactical ingenuity in this type of combat. This constraint was multiplied by the fact that hoplite generals served alongside their men in the front ranks. Whilst this enabled them to inspire those around them, it prevented them from 'managing' the battle once it had begun. Perhaps the most adept in the tactical realm were the Spartans. However, even these professional hoplites from a militaristic society could show little ingenuity within the tight constraints of hoplite battle. The main tactic employed by Sparta was to place its strongest forces on the right wing. Because hoplite phalanxes had a tendency to edge to the right anyway, by placing their best men in this position the Spartans could often break the enemy's left wing and roll-up the remainder of their forces.⁴⁶ There is some evidence to suggest that over time the Spartans developed this tactic to the point at which they could detach a section of the phalanx to manoeuvre around the enemy's left flank. A relative advantage in numbers could in theory make a difference, especially if we accept that battle could be concluded by some form of 'pushing and shoving'. Numbers could also make a difference if there was a high rate of attrition. The role of the rear ranks was usually to replace their fallen comrades at the front. Subsequently, in theory one side could be bled dry of its replacement forces; thus the danger of gaps appearing in the phalanx would arise.

However, as is so often the case in other forms of warfare, the key factor contributing to success was morale. The willingness of the men to stand face to face

with the enemy, and a belief in victory, was especially crucial in such a limited tactical environment. As Victor Davis Hanson notes in relation to the rise of Thebes: ‘the Thebans in mass often broke through enemy ranks because they thought they could’.⁴⁷ In more fluid forms of conflict, inspired generalship, tactical ingenuity, and tactical proficiency could turn battles. War is always an activity in which moral and physical forces interact. In war, Clausewitz perceives physical and psychological factors forming an organic whole.⁴⁸ However, it appears that in hoplite warfare morale could decide a battle very rapidly. Indeed, there were many occasions when one side would flee at the sight of the enemy. The Spartans often had this effect on their enemies. In fact, they realised how significant this was and enhanced its effect. Spartan hoplites would wear the same uniform red cloaks into battle, and would try to unsettle their opponents with a steady advance at walking pace. However, this latter technique may have also been intended to maintain the cohesion of the formation.

The battle of Marathon

Hoplite warfare not only dominated conflict between Greek city-states, it was also an effective instrument against invading Persian forces. Perhaps one of the greatest examples of this is the battle of Marathon in 490 BC. This battle gives us an illustration of how effective hoplite heavy infantry could be if used correctly. At the beginning of the fifth-century Greek cities on the western coast of Asia Minor rebelled against Persian rule. This so-called ‘Ionian Revolt’ was supported by both Athens and Eretria. For their part, the Athenians supplied twenty-five ships to the rebels, whilst Eretria sent five. The rebellion enjoyed initial success. In 498 the Greek forces captured and destroyed Sardis, the Persian regional capital. From here, the rebellion spread further throughout the Greek cities in the region and even infected the island of Cyprus. However, logistical problems and a lack of reinforcements from the Greek mainland meant that the rebellion began to lose its momentum. At the same time, the Persian ruler Darius mobilised increasing amounts of men, and went on the offensive against the rebels. Slowly, the rebel forces lost many of their gains, and with the Persian recapture of the city of Miletus in 494 the Ionian Revolt essentially came to an end. However, this was not the end of the affair. Having faced a revolt on its periphery, the Persian Empire sought security by extending its borders, and hoped to conquer the Greek mainland. Also, Darius wished to enact revenge on Athens and Eretria for their support of the rebellion. After a limited and failed advanced expeditionary operation in 492, Darius organised the main invasion for 490. Prior to the arrival of the Persian forces Darius had attempted to gain submission through coercive diplomacy. However, Athens rejected these overtures and the stage was set for a Persian invasion of the Greek homeland.

The Persian fleet gained control of the Aegean Sea and was thus able to put ashore the 25,000 strong invasion army.⁴⁹ The campaign started well for the Persians with a successful operation against Eretria. After a week-long siege, the city was betrayed. Once the defences of the city had been breached the Persian

forces all but destroyed it. With the first of their main objectives met, the Persians could now turn their attention to Athens. The Persian forces now sought a harbourage on the north-west coast of Attica where they could land their forces for the march on Athens. Hippias, an exiled Athenian acting as a military adviser to the Persian forces, recommended the Bay of Marathon for the landing. Marathon was a small village some thirty-eight kilometres from Athens. Its bay offered an ideal spot for the army to disembark. The beach was large enough for the 600 ships of the fleet, and just beyond this was an open, flat and fertile plain that would be ideal ground for the Persian cavalry.

The Persian army landed without opposition and began preparations for an attack on Athens. An early warning system that was based on the use of beacons alerted the Athenians to the impending attack. Once news of the invasion reached the city, messengers were dispatched to both Sparta and Plataea calling for military aid against the Persians. The news from Sparta was not promising. Their reply indicated that for religious reasons reinforcements would only be forthcoming in six to seven days, after the full moon. The Plataean response was more encouraging, but they could only send approximately 1,000 troops. The Athenians decided that they would not share the fate of the Eretrians, and so 10,000 Athenian hoplites headed north under the command of Miltiades and Callimachus to face the numerically superior Persian invaders. Their objective was to contain the Persians and prevent their march on Athens. When the Athenians arrived at Marathon they deployed in a defensive formation at the southern end of the plain so as to block the route to Athens. Their defensive position was fairly secure. Their left flank was guarded by Mount Agriekliki and the sea protected their right. To protect themselves from a frontal assault by the Persian cavalry they placed felled trees to their front. For four days the two armies, who were now just five kilometres apart, faced each other without moving. Neither side wanted to take the chance of making the first move. For the Athenians to advance into an open plain against a force three times its size and strong in cavalry would be to court disaster. Likewise, the inferior and more lightly armed Persian infantry would struggle against the hoplites in their prepared defensive position. On balance this represented a small tactical victory for the Athenian generals. By establishing a defensive position that protected their flanks, they had multiplied the inherent frontal defensive qualities of the hoplite phalanx. They had managed to deter the numerically superior Persian forces. In this respect, the Athenians had already achieved part of their objective. By taking up such a strong defensive position on the route to Athens they had already contained the Persians, and thereby had bought their city a few extra days to prepare for an attack.

Finally, Datis, one of the two Persian commanders, made the first move. The Persians had to take action because the entire invasion campaign could have lost momentum had they remained inactive. The Persians also had to factor-in the possibility that Spartan forces would eventually reinforce the Athenians and Plataeans at Marathon. Thus, overnight Datis loaded some of his forces, including the majority of the cavalry, back onto the ships. With the Athenian hoplites

stuck at Marathon, Datis hoped to outflank them by sea and attack Athens directly via Phaleron Bay.⁵⁰ Artaphernes, the second Persian commander, was left with a holding force to occupy the Greek hoplites at Marathon. This was a high-risk, high-payout, operational-level manoeuvre. Datis should be congratulated for thinking outside the box, and for utilising the operational flexibility inherent in his naval forces.⁵¹ However, dividing one's forces is often a risky undertaking, and so it would prove for Datis.

Of course, Datis' departure did not go unnoticed, and Athenian scouts reported this development to Miltiades at about 5.30 in the morning. Upon hearing this news, the Athenian general displayed a substantial degree of moral courage and insight, and decided to take his one fleeting opportunity to defeat the enemy forces. It was estimated that Datis' passage to Phaleron would take approximately ten hours, with a further few hours to disembark his forces. Miltiades took the decision to engage the Persian forces still at Marathon, and then return to defend Athens against Datis. This was another high-risk plan. There were two main dangers for Miltiades to overcome. In the first instance, he was taking a risk by moving his forces away from their prepared defensive positions to face the Persian archers. However, this was not such a worry, because, as we have seen, archers were relatively ineffective against well-disciplined hoplites. The greater danger lay in the fact that even if the battle went well for the Athenians they could still lose the war if they failed to return to Athens in time to save the city from Datis. Miltiades needed to achieve victory on the plain at Marathon within three hours.

In order to achieve the required rapid victory, Miltiades took a calculated risk with his battle formation. Reminiscent of Hannibal's great victory at Cannae in 216 BC, the plan was to deploy a weakened centre whilst placing the real strength of the army on the wings.⁵² If all went to plan, the centre would fall back, drawing the Persians forward into a trap. As they surged forward to finish the Greek centre, the stronger Greek forces on the flanks would begin to encircle the hapless Persians in a double envelopment manoeuvre. Of course, the main danger with such a plan comes from the possibility that the centre is so weak that rather than fall back it simply collapses, leaving the Greek flanks exposed. In order to achieve the desired effect, Miltiades showed tactical ingenuity to create a weaker centre. He simply widened the gap between the men in the centre and reduced the ranks from eight to four. It has also been suggested that by this method of deployment the Greek line would match the length of the Persian line, and thereby guard against an outflanking manoeuvre. The central forces were made up of Athenian hoplites and came under the command of Themistocles and Aristides. The right wing, again Athenian, was commanded by Callimachus. To complete the formation, the Plataeans held the left flank.

Thankfully for Miltiades, the Persians deployed their troops as he had expected. The Persian centre was manned by their superior infantry forces, with their front protected by archers. Inferior conscript troops and the remaining light cavalry held the Persian flanks. It has been suggested that the Persian cavalry at Marathon was primarily composed of horse archers. At six in the morning a

trumpet call signalled the start of the Athenian advance. In true hoplite fashion the Greeks started at a trot, before advancing at the double to cover the ground in which they were within range of the Persian archers. As the Athenians advanced on their enemy the Persian archers made little impact on the hoplites; thus, as the two armies clashed, Miltiades' plan was still intact. With the forces now in contact the battle went as planned for the Greeks. The Persian centre began to make headway against their Greek counterparts, but not enough to break the Athenian phalanx. Instead, the Greek centre gave way as planned, and sucked the Persians into the trap. The inferior Persian flanks could not stand against the heavily armed and disciplined Greek hoplites, and they began to flee the battlefield. In their rush to escape the advancing enemy some of the Persian forces drowned in a marsh to their rear. With the enemy flanks in flight, the Athenians and Plataeans on both wings broke off the pursuit and closed the trap on the Persian forces still advancing in the centre. By now the Persians were in complete disarray. They had ceased to resemble an organised military force. Instead, they desperately made their way to the shore to escape in their ships. As the battle drew to a close, 6,400 Persian troops lay dead and seven of their ships were lost. In contrast, the Greek casualties were incredibly light; only 192 were killed. Among the Greek dead was one of their commanders – Callimachus.

Critically for the fate of Athens, this decisive victory had been concluded before nine in the morning. The Athenian forces could now turn their attention to defending the city itself from Datis. The Athenian troops marched at such a pace that when Datis' forces arrived at their disembarkation point, the Athenian hoplites were already south of the city and had taken up strong defensive positions. Faced with an opposed landing, and in command of depleted forces, Datis decided to abandon the assault on the city and returned to Persia. Miltiades and his men had achieved a remarkable feat. They had taken full advantage of their enemy's decision to separate his forces, and used interior lines of communication to defeat one detachment and then deter the other from landing.⁵³ The Greek victory can be attributed to a number of key factors. The Greek forces at Marathon were blessed with an outstanding commander. Miltiades had shown tactical insight in his original defensive deployment, and then displayed remarkable moral courage and tactical ingenuity to defeat the forces under Artaphernes. In addition, the Greek heavy infantry had proved how effective it could be against enemy forces superior in numbers but less well armed and disciplined. This point is particularly evident in the way that the hoplites retained their cohesion in the centre, despite the fact that they were left deliberately weaker in that sector of the battlefield. Finally, there was the remarkable forced march after the battle to defend Athens from Datis. As we will witness in the following chapters, such rapid operational-level manoeuvres were often critical to Alexander's own success.

The decline of the hoplite phalanx and the rise of Macedonia

The dominance of the hoplite phalanx began to wane as a result of the more ambitious Persian invasions, beginning in 480, and the Peloponnesian War.

With the coming of the fifth century the hoplite panoply became lighter, and more importantly light-infantry forces became more significant. This evolution in Greek warfare is significant when we consider the basis from which Philip II and Alexander would build their RMA. In one sense, the victories over the Persians at Marathon and later at Plataea cemented the dominance of Greek heavy infantry. However, in a more general sense the scale of the Persian wars placed a greater emphasis on a variety of forces operating in a range of environments. For example, the poorer sections of society, who had been excluded from hoplite warfare, were now required to man the Athenian fleet. The socio-political dominance of the landowning farmers was eroding.⁵⁴ The Peloponnesian War was even more significant in the evolution away from classical hoplite warfare. The two main protagonists in this war, Athens and Sparta, were diametrically opposed in their strategic culture and strengths. Athens was primarily a maritime power, with her strength resting on her naval forces and imperial possessions. In contrast, Sparta's power lay in its land forces, and in particular in its professional hoplite army. The main strategic problem for these two belligerents was the inability to match the other in their own environment.⁵⁵ Athens could not defeat the Spartan land forces, no more than Sparta could match Athens at sea. Consequently, the Peloponnesian War would not be won by a decisive clash of hoplite phalanxes. Both sides had to search for an alternative route to victory. In this manner, the demands of strategy induced significant tactical changes.

The Peloponnesian War unleashed a range of forces and resources not typically seen in conflicts between two Greek city-states. The war became a protracted and total affair. Gone were the limited, quasi-formulaic clashes of the past. Battle reached beyond the open agricultural plains favoured by hoplites, and into more varied terrains that were better suited to other types of lighter forces. An example that reveals the limitations of hoplites in more varied environments is the Athenian invasion of Aetolia. Demosthenes led 300 Athenian hoplites and allied infantry to attack the scattered villages and light forces of the Aetolians. Rather than facing their invaders in open battle, the Aetolians instead opted for a guerrilla campaign. They used hit-and-run tactics, leading the Athenians into rugged terrain and attriting the hoplites with missile weapons, ambushes and fire. When the Athenians finally retreated they had lost 120 hoplites and many more of their allied infantry. There were other defeats of hoplite forces by lighter infantry troops. Hans van Wees identifies the surrender of the Spartans at Sphacteria in 425 BC and the defeat of Athenian hoplites by a crowd of poor citizens in 403 BC as noteworthy examples. However, rather than attributing the success of the lighter forces to greater tactical ingenuity, van Wees puts emphasis on their numerical superiority.⁵⁶

Nonetheless, we should consider the fact that the hoplites may indeed have suffered from an asymmetry in tactics and operations. Asymmetrical warfare has gained a great deal of coverage in modern Strategic Studies. It is defined by Steven Metz as 'acting, organizing and thinking differently from opponents to maximize relative strengths, exploit opponents' weaknesses or gain greater freedom of action. It can be political-strategic, military-strategic, operational or

a combination, and entail different methods, technologies, values, organizations or time perspectives'.⁵⁷ In this sense, the very success of the hoplite form of war invited an asymmetric response. When faced with such a response, especially when operating in less favourable terrain, the hoplites may have been unable to respond for cultural or practical reasons.

A further breakdown in the conventions of classic hoplite warfare can be attributed to the rise of mercenary leaders such as Iphicrates. Men such as Iphicrates led lightly armed skirmishers called peltasts. These mercenaries, named after the small wicker/leather shield (*pelta*) they carried, were armed with javelins and specialised in harassment tactics. Rather than engage in open battle, they would conduct raids and hit-and-run tactics against their enemies' troops and resources.⁵⁸ These different approaches to warfare were a world away from the quasi-formulaic clash of hoplites on open terrain. Hans van Wees convincingly claims that the role of light-infantry forces may have been underestimated in the original sources, and that this was due to the cultural emphasis placed on the hoplite. He argues that light-infantry forces would have been often present in the role of skirmishers, and indeed were a threat to the hoplite phalanx if they could attack from the flank or rear. In fact, when these lighter forces became more organised, they often engaged one another in defence of their respective hoplites' flanks and rears.⁵⁹ Interestingly, the history of the Ten Thousand provides us with a pointer to the future success of Alexander in terms of how he would combine these various forces. When facing an onslaught of cavalry, archers and slingers, the hoplites and peltasts could do little, '[b]ut if the hoplites were supported by even a very few horsemen and a small force equipped with long-range weapons, the advantage was on their side'.⁶⁰

This was the military environment into which the rising power of Macedonia would emerge. However, rather than merely accept the existing doctrines and conventions, Philip II combined them in such an effective manner that the art of warfare took a giant leap forward. However, there were two precedents for Philip to follow. Fuller reminds us that Dionysius of Syracuse and Jason of Pherae (c.380–370) were forerunners in many of the innovations that Macedonia perfected. Indeed, mirroring Philip's later plans, Jason had intended to unify the Greek world and wage a war of vengeance on Persia.⁶¹ If it were not for Jason's assassination, Greek history may have been very different. Nonetheless, it was Philip II who unified the Greek world under Macedonian hegemonic rule and began the invasion of Persia. Alexander would continue this war against the old enemy. And, having learnt at his father's side, he would take the new methods of warfare and develop them even further.

Philip became king of Macedonia in 359 BC. The kingdom he inherited was militarily weak and divided by dynastic conflict. Yet, through outstanding military reforms, battlefield victories, cunning diplomatic manoeuvres, and the exploitation of substantial resources, Philip transformed Macedonia into the dominant hegemonic power in Greece. More than that, he created a military force that could inflict decisive stunning victories on both Greek and Persian armies alike. Alexander would later prove that this new military was also

capable of sustained and effective campaigning in a range of different environments and circumstances.

When considering Macedonian military reforms with reference to the criteria of an RMA, we will see that all of the main characteristics of an RMA are fulfilled. Prior to the rise of Macedonia Greek armies had been characterised by part-time hoplite farmers, sometimes with the addition of mercenaries. In contrast, Philip created an army that was imbued with national fervour and manned by professional troops. At the centre of his army was a Macedonian core fired by nationalism and personal loyalty to the monarch.⁶² And, because of the resources and mineral wealth of an expanding Macedonia, Philip was able to create an army that could operate and train all-year round. The Macedonian army was not restricted to campaigning seasons. Since we live in an era when professional armed forces are far more common, the advantages of regular training and preparation for war seem all too obvious. However, the significance of these factors should not be underestimated, especially in the context of ancient times. Throughout history, some of the most outstanding military organisations have gained much of their relative advantage from regular training.⁶³ To appreciate the significance of training we must seek to understand the nature of military forces and the activity of combat. Militaries are complex organisations that are made up of individuals. In addition, military forces spend the vast majority of their time not waging war. In most historical periods combat is the exception rather than the rule for an army. To further complicate matters, when combat does occur it is a chaotic, uncertain, exhausting, dangerous and highly stressful environment.⁶⁴ The challenge for the commander is to get it right first time. Somehow, he has to create the conditions whereby his men will perform effectively both as individuals and as a whole. Whilst the conditions of battle can never be accurately replicated, regular and realistic training should enable one's forces to operate instinctively and in a more disciplined fashion. To this end, the successful Macedonian and Roman armies both trained on a regular basis. For Philip's men, this meant thirty-five-mile forced marches and extensive drilling. As we will see later, the results of this could be impressive. Philip had forged an army that could march great distances at surprising speeds, or perform battle-winning manoeuvres in the heat of combat.

So, Philip had the raw material for an RMA. Next, he would need to develop innovative doctrine, as well as the organisational structure necessary to enact the new operations. Perhaps the most notable feature of Philip's army was its combined arms character. As mentioned previously in relation to the Ten Thousand, combined arms had been developed in a rudimentary sense. Yet the Macedonian version was a much more complex and versatile force than the armies of the past. The Macedonian army still operated infantry forces in phalanx formations, but these were complemented with cavalry and various types of light infantry. Much of the historical literature places a great deal of emphasis on the use of the heavy cavalry as the instrument of decision in battle. Whilst it is true that it was the cavalry that would penetrate the enemy's line, and thereby inflict the killing blow, it is simply inaccurate to describe one force as the instrument of decision

in combined arms operations. The instrument of decision was the army in its entirety, not just one section of it. The tactics of the Macedonian army will be described in more detail later when we discuss the various battles of Alexander and his father. For now, a brief description will be given of how the army operated in general terms. The infantry phalanx no longer delivered the main offensive blow. Rather, the phalanx would initially pin a section of the enemy's line by its presence in the centre. This left the heavy cavalry with the role of creating gaps, or exploiting any that appeared in the enemy's front. The cavalry would then force open these gaps and attack the enemy in the flanks and rear. With the opposing line breached, the cavalry could now roll up the enemy forces onto the pikes of the advancing Macedonian phalanx. A significant danger when conducting such an operation was that the army could become split into different sections, which could be defeated in detail. In theory, an elite unit called the *hypaspists* solved this problem. Amongst the historians there is some discussion over how heavily armed the *hypaspists* were. For example, W. W. Tarn claims that they were probably armed in the same fashion as the phalangites.⁶⁵ However, the roles in which they were used suggest that the *hypaspists* were more mobile than the phalangites. Indeed, the *hypaspists* were mobile enough to act as a linking force between the cavalry and phalanx. As the cavalry advanced, the *hypaspists* would follow immediately behind them leading the rest of the infantry forward. Macedonian battle tactics were completed by the role fulfilled by the light infantry and other cavalry units. These forces were deployed to the front and on the flanks to protect the rest of the army. Thus, we can see how much more evolved were the tactics, composition and organisation of the Macedonian army. Equally, it is evident that each section of the army had a crucial role to play.

Technologically, the army of Philip and Alexander was not so very different from those that had gone before. Interestingly, and in contrast to the technocentric nature of the RMA literature, the capabilities of the Macedonian army only represented a small evolution in the equipment of war. However, small differences reflected substantial changes in operational and tactical practice. The most immediately visible changes in the equipment of the phalanx were the replacement of the spear and *hoplon* with the *sarissa* and a much smaller circular shield. At sixteen feet in length, the *sarissa* was substantially longer than the traditional thrusting spear of the hoplites. It was constructed from solid cornel wood, and had a small iron head that was better suited for piercing armour than the hoplite spear. It also retained the butt-spike. Due to its length the *sarissa* had to be carried underarm with both hands. Of course, this meant that the shield could not be carried in the left hand as the *hoplon* was. Instead, the much smaller and lighter shield had a neck strap, and so it only really covered the left shoulder adequately. The armour of the Macedonian phalangites was also relatively light, consisting usually of a bronze helmet and perhaps only leather or linen cuirasses. The armour could be light because the *sarissa*, being longer than anything the enemy would present, offered protection through its length. In addition, the light infantry would provide a degree of protection from missile

troops. From an offensive perspective, the *sarissa* produced substantial changes in the attack. The length of the *sarissa* meant that more ranks could project their iron spearheads into the killing zone. This could produce a 40 per cent increase in the amount of metal in that zone. However, in a sense the *sarissa* restricted offensive action as well. Obviously, a sixteen-foot pike could not be held in an overarm position and thrust downwards at the enemy. Rather, the Macedonian phalanx advanced at a steady walking pace with the aim of forcing back the enemy with a cohesive hedge of spearheads. These changes in equipment required a much tighter and more disciplined phalanx formation. On its own, the Macedonian phalanx would have been a relatively slow-moving, inadequately armoured and vulnerable formation. However, as an integral part of a combined arms army it was ideally suited to its task. And, as will be described in Chapter 3 in relation to the manoeuvres at Pelium, the well-armed and disciplined Macedonian phalanx was still capable of complex manoeuvres when required, and could have substantial psychological effects on an enemy.

The Macedonian cavalry were also endowed with new weaponry. They were armed with a long spear (*xyston*), again made from strong cornel wood and with a butt-spike. In addition, they also carried a short sword. The *xyston* was used to stab at the enemy horse and rider. In contrast, Persian cavalry were usually armed with two smaller spears that were sometimes thrown as javelins. All of the cavalry seem to have worn bronze Boeotian helmets, but only the 'heavy' cavalry units (Companion, Thessalian, Allied Greek) wore cuirasses and shoulder guards. The usual tactical deployment for the cavalry was the wedge formation. Such a formation allowed the cavalry to shift its axis of advance rapidly, and was therefore crucial when seeking and exploiting a gap in the enemy's line. The wedge was also ideally suited to penetrate a narrow breach in the enemy's front and widen it. In this sense, the wedge formation gave the cavalry mobility, flexibility and punching power. Alexander also had at his disposal the Prodrmoi. These light-cavalry units appear to have fulfilled two functions. First, they operated as scouts for standard reconnaissance missions. However, in battle they could be equipped with the *sarissa*. With such a cumbersome weapon on horseback the Prodrmoi could not operate in the wedge formation. Instead, they deployed in much more open form, and could be used in either an offensive or defensive role in line.

So, the army of Philip and Alexander did indeed operate with technologically evolved weaponry, and clearly developed operational doctrine to gain relative battlefield advantage. They also had a new political motivation to stimulate the development of an RMA. But what of the fourth characteristic of the RMA? How was the army organised? A detailed study of the organisation of the Macedonian army can be found in the work of Nick Sekunda.⁶⁶ The core of the army was recruited from the kingdom of Macedonia itself. It is within these units that the fervour of nationalism was to be found. Therefore, as the following chapters will reveal, these dedicated Macedonian units were central to the success of the entire enterprise. In addition to these core units, Alexander had at his disposal fine troops drawn from vassal principdoms on Macedonia's borders. For

example, the Agrianians and Illyrians fall into this category. The Thessalian army also came under the command of the king. Greek Allied forces were supplied under the terms of the League of Corinth. Finally, a number of mercenary forces from Greece and the Balkans marched with the army into Persia.

Of course, in a monarchical system such as that of Macedonia the army was under the direct control of the king. However, great commanders such as Philip and Alexander understand the need to delegate the tactical functions and running of such a force. To this end, the king appointed seven Royal Bodyguards, who it seems acted as the army's senior staff officers. These men were drawn from a unit of 'bodyguards', who aside from guarding the king's tent, also appear to have served as the general staff of the army. The exact status of the bodyguards is unclear, since on occasions they are mentioned as a fighting unit in some actions. Moving further down the hierarchy from the Royal Bodyguards, we come across the *strategoï* (generals), who commanded individual units and, on occasion, divisions. Finally, there is mention of the *hegemones*, who act as sub-divisional officers. All of the above were recruited from the Macedonian nobility. How this command system functioned on campaign will be discussed in detail in the conclusion of this book.

The basic unit of the cavalry was the *ile* (squadron). Each *ile* had 200 men and was commanded by an *ilarch*. It seems that the *ilarch* would have a trumpeter at his disposal to issue orders in battle. An *ile* was subdivided into four *tetrarchiai* of forty-nine men, with each commanded by a *tetrarch*. The *tetrarchiai* was built upon the wedge formation, and thereby gave the cavalry *ile* its flexibility. Depending upon the circumstances, two, three or four *ile* would be joined to create a *hipparchy* (brigade). These were under the command of a *hipparch*. The cavalry was not a homogeneous organisation. There were essentially six different forms of cavalry in Alexander's army. The most significant was the Companion cavalry. This heavy cavalry unit was commanded by Alexander himself, and was recruited from the Macedonian nobility. It contained eight *ile*. Alexander fought at the head of the Royal Ile, which also happened to be double in strength (400). The other seven *ile* were of normal strength and each recruited from a different region of the kingdom. In battle, the Companions, with the Royal Ile at the front, fought on the right wing and were always the first into the enemy's line. Just as important a unit as the Companions was the Thessalian cavalry. This force of approximately 1,800 has been described as possibly the best cavalry in the entire army. In battle they were given the vital task of holding the left wing of the Macedonian line. It may have been the Companions that broke the enemy's front line, but this action would have been redundant if the left wing of the army had been outflanked. The vanguard unit of this force was the Pharsalian Ile. The final heavy cavalry unit was provided by the allied Greek states. There appears to have been two *hipparchies* present at Gaugamela, producing approximately 1,200 men. In terms of light cavalry, the Prodrmoi have already been mentioned. There were other similarly equipped Thracian cavalry units in the expeditionary force. Mercenary cavalry also supplemented these lighter forces. Again, there appears to have been two *hipparchies* of these mercenaries at Gaugamela.

Amongst the infantry, the smallest subunit was the *dekas*. This group of sixteen men represented one file of the phalanx. Thirty-two files produced the basic organisational unit of the infantry: the *lochos* (company) with 512 men. Each *lochos* was commanded by a *lochagos*, and two or three of them produced a *taxis* (battalion). Each *taxis* was recruited from a different district of Macedonia. The main infantry units in the phalanx were the Foot Companions. There were six *taxis* of Companions, each constructed of three *lochoi*, and producing altogether 9,000 phalangites. Within this force, a *taxis* under the control of Coenus had elite status and had the position of honour on the right wing at both Issus and Gaugamela. As noted earlier, a crucial linking force between the phalanx and the Companion cavalry were the *hypaspists* (shield-bearers). There were roughly 3,000 *hypaspists* divided into six *lochoi*. Nicanor, the son of Parmenion (Alexander's second in command), initially commanded this elite force. Men in the vanguard *lochos*, called 'The Royal Hypaspists', were chosen on the basis of their height and had the place of honour in the line and guarded the king's tent. Seven thousand Allied Greek infantry were with Alexander's army when it invaded Persia. The Macedonian general Antigonos commanded this force. In addition, there were approximately 9,000 Greek mercenaries at the battle of Gaugamela. These men were equipped along traditional hoplite lines, with *hoplons*, bronze helmets, and armed with a spear and sword. Finally, Alexander had with him various forms of light infantry. He had a corps of archers; 1,000 Agrianian javelin men, who are described as the elite light infantry force of the army; and 7,000 other light-infantry troops armed with weapons such as javelins and slings. As noted, in battle the main function of these light-infantry troops was to protect the main units of the army from pre-emptive attack and, along with some of the cavalry units, to protect the flanks of the entire army. As the campaigns progressed, the Agrianians and archers play an increasingly central role in many of Alexander's operations. Alexander had a diverse army, both in terms of the types of forces and in its ethnic origins. It is to his credit that he maintained it as such an effective and cohesive organisation for the length of time that he did. In his later campaigns, he made increasing use of lighter and specialised oriental units, and indeed made the entire army lighter to deal with more varied terrain and guerrilla forces. The details of these changes will be dealt with later.

The battle of Chaeronea

As with all military innovations, those of Philip II would only be of use if they could bring victory on the battlefield. The strategic world is a very practical one, in which the test of any army is a bloody, violent struggle. Bad or antiquated ideas tend to die on battlefields, along with those who employ them. For Philip, the decisive test for his new instrument in pitched battle in mainland Greece was at the battle of Chaeronea in 338. In the period before Chaeronea Macedonia was quickly becoming the most powerful state in Greece. Militarily it could put into the field an army that would outnumber the forces of many of the other

city-states combined. Nonetheless, Philip had hoped to achieve hegemonic power through peaceful means. His ambitions were resisted by states such as Athens, Thebes and Sparta. Consequently, in August 338 the city-states of Boeotia, Athens, Thebes, Achaea, Corinth and Megara mustered a force of 35,000 at Chaeronea. To face this force of hoplites Philip had 30,000 infantry and 2,000 cavalry. The king commanded the right wing of the army, and the young Alexander took charge of the Companion cavalry on the left. Opposite them, the Greek allies placed their strongest forces on both wings. The Thebans manned the right, whilst Philip faced the Athenian hoplites on the left wing. The inferior forces of the other city-states held the middle of the Greek line. Hanson is derisory in his description of the Greek allied forces. He describes them as reactionary, part-time militiamen. Although this description may be considered somewhat harsh, it is fair to say that relative to the enemy facing them the Greek allied forces were significantly less sophisticated.

In a sense, Chaeronea is one of those moments in history when one side in a battle does not realise that warfare had changed. The Greek allied forces would pay for this error with their lives. Facing these part-time warriors, with their anachronistic equipment, limited tactics and incompetent generals, was a professional, well-equipped, well-motivated, combined-arms force led by two innovative commanders. A similar scene could be found in the deserts of Iraq in 1991. The Iraqi army relied on Soviet equipment and doctrine, was manned largely by conscripts, and at the highest level was commanded by a man with little operational insight. They faced an opponent manned largely by professional troops, who had developed new technologies and doctrine precisely with the aim of defeating a Soviet-style army. To make matters worse for the Iraqis, the war took place in a predominately flat, open terrain that ideally suited the dominant air power of its foe.

The results for both the Greek allied forces and the Iraqis were predictable. As the Athenians advanced in the time-honoured fashion, Philip's well-disciplined phalangites enacted a pre-planned and organised feigned retreat. This manoeuvre dragged the Athenians away from the forces in the centre of the Greek line. As this was occurring, Alexander launched his attack on the Thebans at his front and broke through their line. Just as the Athenian generals were leading their men forward in a rash and false hope for glory, in a well-timed manoeuvre the Macedonian phalanx halted, lowered its *sarissae* and impaled the Athenian hoplites on their spearheads. In all, the Athenians lost approximately 1,000 men. Meanwhile, having breached the enemy's line, Alexander now turned the Companions into the rear of the Thebans and pushed them onto the oncoming pikes of the Macedonian phalanx. The Theban Sacred Band, an elite and highly motivated unit, was slain to a man.

Conclusion

Did Philip II and Alexander enact an RMA? The innovations that proved so decisive at Chaeronea appear to fulfil the main RMA criteria to varying degrees.

Technologically, the changes were minimal. Although the extended length of the *sarissa* and cavalry spear gave the Macedonian forces increased offensive punch, in many respects the forces resembled those of the Greek city-states. And as noted, many of the reforms brought to fruition by Philip had their origins in changes that had been occurring since before the Peloponnesian War. In this respect, technologically the army that Alexander took to Persia was hardly revolutionary. The big changes came in political motivation, organisation and doctrine. As with Nazi Germany and Napoleonic France, the imperial ambitions of both Philip and Alexander were a great driving force that helped mould their military innovations. This helped to produce an army that was designed for campaigning year-round and in all terrains. It was also imbued with the aim of achieving crushingly decisive victories against its enemies. The quasi-formulaic methods of traditional hoplite warfare were forgone, and replaced by warfare much more total in its aims and methods. This called for a combined-arms force that could smash an opponent's line and inflict heavy casualties in the pursuit. The relative advantage of the Macedonian forces came less from any revolutionary leap forward in technology and more from the way this new army was utilised. This is an important point for those in the RMA/Military Transformation community that promote a technological vision of warfare. Perhaps more important still were the men who commanded the Macedonian forces. As the remaining chapters of this book will reveal, the extraordinary military successes during the invasion of Persia cannot be understood without reference to the military genius of Alexander the Great.

3 Lessons in strategy 1

Grand strategy

Fought, as they were, by the superior army of the day, Alexander's great battles and sieges represent the obvious headlines for his campaigns. However, his success cannot be understood without reference to his performance at the grand strategic level. With such expansive goals Alexander could not solely rely upon naked military prowess. Indeed, Alexander's military campaigns were built upon, and integrated into, a solid foundation of grand strategy. This chapter analyses Alexander's grand strategy through the prism of four main lessons, relating to (1) the limits of force; (2) harmony in the levels of strategy; (3) centres of gravity; and (4) control. Each of the four lessons will be illustrated by examples drawn from the campaigns.

Lesson 1: war is rarely the final act (the limits of force)

Although, as the title of his book suggests, *On War* is concerned with military strategy, Clausewitz recognises that war often does not produce lasting outcomes:

Lastly, even the ultimate outcome of a war is not always to be regarded as final. The defeated state often considers the outcome merely as a transitory evil, for which a remedy may still be found in political conditions at some later date.¹

If we consider the period in which Clausewitz served and wrote, which was dominated by the Napoleonic Wars, this is hardly a surprising comment. Time and again, Napoleon failed to turn military victories into lasting political outcomes.² Where Napoleon had struggled, Alexander often excelled. Understanding the limits of military force was an essential consideration for Alexander, especially when we consider the relatively limited forces at his disposal. Although Alexander's army did grow over time (although the quality may have suffered as a result), he crossed the Hellespont into the enemy's territory with only 40,000 men. With these numbers Alexander could not hope to conquer and hold the vast expanse of the Persian Empire at the tip of a spear; certainly not without the aid of the other instruments of policy. Although Alexander routinely

managed to leave garrison forces to maintain security in a conquered area, his resources would have been severely tested, perhaps beyond breaking point, had a number of provinces rebelled simultaneously. As we shall see, the insurgency in Bactria and Sogdiana alone took eighteen months to quell.

Thus, with relatively limited military forces, Alexander had to complement his military conquests with astute pre- and post-conflict policies to cement his rule. This is not to detract from the significance of Alexander's military achievements, upon which the conquests were based. Indeed, the non-military elements of Alexander's grand strategy would have been extremely vulnerable without the security and authority delivered by military force. As evidenced in post-Saddam Iraq, a lack of physical security undermines efforts to provide economic, social and political development. Nonetheless, without effective grand strategy military victories may often only bring temporary benefits and stability. In most cases, the relationship amongst the various components of grand strategy is mutually supportive; perhaps even symbiotic.

The post-conflict policies that Alexander enacted were varied, and chosen to fit the specific locale. However, there were common objectives to many of his policies. In general terms, Alexander pursued stability, development and exploitation. Stability was clearly important to prevent rebellion or unrest once Alexander and the main army had left an area. Alexander's record on this objective is somewhat mixed, but generally favourable. During his campaigns a number of conquered provinces did suffer from some form of rebellion. However, for the most part these rebellions were limited in scale, and never threatened the integrity of the new empire. Nonetheless, the eighteen months Alexander spent quashing the rebellion in Bactria and Sogdiana reveals just how significant this objective was. Had rebellions on this scale been common throughout the empire, Alexander's conquests would certainly have taken substantially longer, been more costly, and perhaps would have eventually failed. The objective of development can be seen primarily in the many cities founded by Alexander. Cities were designed to foster economic, social and political development. The larger aim was to establish a durable empire, constructed from an amalgam of Hellenic and Persian elements. Finally, the use of the term 'exploitation' is not meant to imply that Alexander ruthlessly, and without forethought, raped the empire of its riches. Rather, it refers to the fact that Alexander often saw the advantage of winning over potential enemies to serve his interests. One benefit of such actions is the potential for absorbing their resources and forces into your own. This reflects the advice of Sun Tzu, and was something Alexander achieved on a number of occasions.³ In fact, in the later stages of the campaigns the majority of Alexander's forces had been recruited from within the Persian Empire.

If we examine stability more closely, we can identify three main areas within which Alexander acted: economics, political organisation and religion. From the outset of the campaigns Alexander forbade his troops from looting the areas in which they would operate. For example, as the army advanced into Afghanistan Alexander gave the local satrap (governor), Satibarzanes, forty mounted javelin

men to act as military police, and in particular to stop any plundering by the main body of the army.⁴ Alexander had no intention of simply sweeping through the Persian Empire, plundering as he went. His aim was to become lord of Asia, and thereby the people of the empire would become his subjects. A stable empire could not be built on a foundation of pillaging.⁵ Thus, from an economics perspective Alexander's main aim seems to have been to retain the status quo, and from this basis slowly to establish a developing economy.⁶ Although we do not have as much detail on his economic policies as we do on Alexander's political actions, what we do know suggests that he was aware of the benefits of maintaining existing levels of taxation so as not to upset the local economy. Evidence of this policy can be seen in Sardis, the satrapal centre of Lydia, and the first great city Alexander captured in the empire.⁷

However, Alexander's was not a one-size-fits-all approach. There is some evidence to suggest that on occasions he would use taxation levels, or more specifically their reduction or abolishment, to reward those he wished to influence. In this respect Alexander could be quite an astute politician. For example, when conquering the Greek cities in Asia Minor Alexander realised the benefit of being perceived as a liberator from Persian control. Thus, these cities were afforded something of a privileged status in the empire. Aside from reinstalling democracy in these cities, Alexander abolished the tributes that had been paid to their fallen Persian masters. Nonetheless, the conquests still had to be paid for. So, in a move reminiscent of the so-called 'stealth' taxes of modern Britain, Alexander replaced the tribute with a 'contribution'. Although a seemingly cynical move, Robin Lane Fox concludes that this was in all likelihood a temporary stealth tax, which would be abolished once Alexander had obtained sufficient resources from elsewhere – for example, from the main Persian treasuries.⁸

This is not to suggest that Alexander did not financially benefit at all from his conquests. As the new, self-proclaimed lord of Asia, Alexander seized the contents of the Persian treasuries. At Susa this amounted to 40,000 talents of gold and silver bullion and 9,000 talents in gold Darics. At Persepolis he seized 120,000 talents. Also, Alexander was not averse to devastating regions and cities if strategic requirements demanded it. This was most evident during the rebellion in Bactria and Sogdiana, when economic devastation was used as a tool of coercion. However, such acts of devastation were targeted at specific groups or areas, and could be reversed once order had been restored. Indeed, the rebellion in these provinces eventually died away partially because the inhabitants desired the stability and prosperity offered by Alexander's rule.⁹

Alongside these economic policies, Alexander's political organisation of the empire was of equal significance in terms of stability. For the most part, Alexander was conscious of the need to retain existing political structures as far as possible. However, when faced with potential political strife Alexander was prepared to pursue reforms, or to cement favourable political conditions through marriage. Hammond claims that Alexander's lack of any distinct political ideology conferred upon him a substantial advantage.¹⁰ One could argue that Alexander was committed to promoting only one cause: his own personal

aggrandisement. This approach would seem to have encouraged a distinctly realist, pragmatic approach to policy, one free from the inconvenient commitments of ideology or religion. A similar approach can be identified in Elizabeth I of England. On the surface Elizabeth appeared to be acting as the defender of the Protestant cause. In reality her real objective was the survival of her reign. This contrasted sharply with that of her main rival, Philip II of Spain, who was deeply committed to the defence of the Catholic faith. Philip's self-imposed religious duty led him into a number of ill-conceived foreign adventures, not least of which was the failed invasion of England in 1588.¹¹

At the core of Alexander's approach to the political organisation of the empire was the maintenance of existing local arrangements, albeit with slight amendments. During the early stages of the invasion Alexander 'place[d] his own men over the existing satrapies, preserving the Persian hierarchy'.¹² At this stage, a significant concern for Alexander was establishing security, and therefore he needed to have trusted Macedonian generals present in local administrative arrangements. Beyond this requirement, much of the civil administration could be left intact and under the control of local officials.¹³ In Phoenicia local kingdoms were retained as quasi-independent states, albeit under the overall rule of Alexander.¹⁴ Preserving existing political systems held true even if it meant retaining the Persian satrapal administrative structure and appointing a Persian in the lead role. Much of the motivation behind this decision was purely practical. Lane Fox notes that the existing Persian bureaucracy and taxation systems were extremely complex. Thus, maintaining the existing personnel, with their experience and knowledge, conferred obvious advantages.¹⁵ A striking example of Alexander's approach can be found in Babylonia. After his defeat of Darius at the battle of Gaugamela, Alexander was greeted by the citizens of Babylon as a liberator from Persian rule. In light of this welcome, Alexander's choice of satrap at first appears surprising. For this central role Alexander appointed Mazaeus, a Persian general who had commanded the enemy's right wing at Gaugamela. Hammond well illustrates just how remarkable this move was: 'It was as if King George VI had appointed Rommel after the Battle of El Alamein to be his Viceroy in India'.¹⁶ How can we explain Alexander's decision in such circumstances? Appointing a Persian as satrap ensured a greater degree of stability and continuity, since existing procedures would not have to be replaced or learned by a new chief administrator. Also, an existing Persian official could maintain linguistic forms of communication between the locals and the central imperial bureaucracy. Finally, there is the advantage that those already in place would have a better grasp of local conditions and issues.

Although content to leave existing arrangements in place, Alexander was certainly not relinquishing control of his new territories. In Babylon control was not left entirely in Mazaeus' hands. Alongside the satrap Alexander put in place two Macedonian generals and a Macedonian or Greek tax collector. Thus a Persian may have held political office, but the army and the money (two essential elements of power) were put under the control of Alexander's loyal men. This approach of dividing local control between Persian and Greek elements can be

seen throughout the empire. In Babylon, Lane Fox notes that Mazaeus may have married a local woman (he had certainly named his sons after a local god), and therefore may have been accepted by the local population as one of their own.¹⁷ With such arrangements in place throughout the empire, Alexander could ensure continuity in administration, placate local sentiments, but still ensure that real power lay in Macedonian hands.

Alexander netted other benefits from the manner of his political organisation of the empire. Mithrines, the Persian who had previously surrendered the city of Sardis to Alexander, was made satrap of Armenia. To the Persian elite, such examples of Alexander's favour gave out a clear message. Those who peacefully surrendered cities to Alexander, thus sparing him from lengthy and costly sieges, would be rewarded. Alexander, clearly conscious of his limited military resources, did not wish to fight for every inch of land. If he could encourage existing Persian local rulers, through the reward of governorship, to capitulate without fighting, this was to be welcomed.¹⁸ In fact, Hammond notes that such a result was forthcoming at Susa, one of the three Persian capitals, where the city was handed over by its satrap, Abulites, without a struggle.¹⁹ By minimising disruption to the political fabric of the empire, Alexander was also cementing his legitimacy in the eyes of the Persian governing class. The Macedonian conqueror was not bringing political revolution to the empire, he was merely replacing Darius as king. Hammond even goes so far as to claim that Alexander, by leaving existing elites in power, was establishing a principle of self-governing states within an imperial structure. Thus, states such as Persia, Egypt and Babylonia were afforded a degree of self-rule, albeit at the mercy of Alexander's personal authority.²⁰

With stability as the guiding objective, Alexander had to adjust his approach to political organisation to local circumstances. The conquests of Egypt and Asia Minor both reveal distinctly different approaches to the issue of political control. The Persians had first conquered Egypt 200 years before Alexander arrived in this most south-westerly of the empire's provinces. Rebellion was an ongoing theme in the satrapy. Indeed, Lane Fox reports that during the previous seventy years before Alexander's arrival, only five had been peaceful.²¹ Perceived as a liberator, Alexander was warmly welcomed by the locals. And, once again, Alexander sought to minimise disruption to the local political processes. Conscious of local animosity towards the Persians, Alexander maintained the tradition of not using the satrapal system of government. Rather, control of Egypt was divided (between Upper and Lower Egypt) between two 'nomarchs', who ruled on behalf of the Pharaoh (Alexander). To these posts Alexander appointed two Egyptians, Petisis and Doloaspis.²² Petisis refused the position, which in theory left Doloaspis in sole, and official, political control.

Despite these distinctly Egyptian characteristics of the political system, Alexander once again put his own people in place alongside the local ruler. Two Macedonian generals were given unofficial authority within Upper and Lower Egypt to maintain Alexander's interests. That was not the end of his infiltration of the political process. In reality, the key political figure in Egypt was a Greek, Cleomenes. The primary task of Cleomenes was to collect taxes and maintain

the financial system of this wealthy province. Thus, once again Alexander had a parallel political structure running alongside the official one. However, because it was based upon the military and financial aspects of power, the unofficial Macedonian political structure in Egypt was the key to control. Once again, Alexander maintained continuity in the political system, and thereby promoted stability – but not at the expense of his own control.

Alexander's method of political control in Ionia reveals perhaps his most radical approach to maintaining stability. Although Persian control in the Greek cities had not been particularly exploitative, it was based upon, and maintained by, privileged local elites. As Persian control retreated, Alexander was faced with the prospect of civil and class conflict in many of the cities in the region. Alexander needed policies that would rectify local and class grievances, but without formenting future strife. It is important to note that these were the early days of Alexander's campaign in Asia Minor, and therefore winning local support was critical to help him cement his rule at minimal costs. To these ends, Alexander abolished Persian taxes, replaced oligarchies with democracies, and by the latter enabled local traditions and laws to be respected. At Ephesus, the first Greek city he reached, he allowed those exiled by the now defunct Persian junta to return. However, the local democrats soon began to inflict revenge on those associated with the old system. Alexander, fearful of what this would mean for future stability, brought this outpouring of emotion to an end and forbade any further violence or acquisitions of property against those of the old system.

His actions at Ephesus, especially his promotion of democracy and order, won Alexander support from other cities in the region. Not for the last time, Alexander established control without the direct use of military force. His astute political actions had achieved much. In the satrapy of Caria Alexander saw an opportunity to establish control through Queen Ada, a traditional local monarch who had been deposed by the Persians. This key area included the significant fortified port of Halicarnassus, which Alexander would soon lay siege to. Alexander declared the reinstatement of Ada as queen, and also agreed to become her adopted son. Via this clever political manoeuvre, Alexander quickly won the support of the local populace, who now associated him directly with their struggle for independence against Persian control. Once again, Alexander had played the card of the heroic liberator. Once Alexander left the area, stability and his control would be assured through his adopted mother.²³

Successful empires often exercise political control via the use of legitimate local political elites. The British Empire in India suggests itself as an obvious, modern example. Alexander adopted a similar approach during his own brief period of campaigning in India. At this time India was politically divided amongst a large number of kingdoms. This environment presented Alexander with a string of potential enemies. Rather than attempting to conquer and place each kingdom under direct Macedonian control, Alexander chose to adopt a 'divide and rule' approach. To this end, the crushing defeat of the rajah Porus at the battle of Hydaspes presented Alexander with an ideal opportunity. For Porus, the defeat must have seemed total, and perhaps fatal to his rule. In all, at the Hydaspes Porus

lost perhaps as many as 23,000 men, over two-thirds of his army. However, despite the scale of the victory Alexander did not humiliate the defeated Porus. In fact, Alexander respected his royal position, expanded his kingdom, and thereby used him to contain other local rulers. Porus' gains under Alexander's protection were substantial. In total it is reported that he gained control of seven tribes and 2,000 cities.²⁴ From Alexander's perspective he had defeated a local threat to his ambitions, established his reputation in the country, and gained an ally who could help him to stabilise the local political environment. In particular, Porus' forces fought alongside Alexander's during the campaigns immediately following the Hydaspes, and provided garrisons for the many captured local cities.²⁵

If we consider Alexander's political organisation of the Persian empire alongside that of post-Saddam Iraq, the contrast is striking. Rather than utilising existing political structures and security services, the US-led coalition quickly disbanded the Ba'athist political infrastructure and existing security forces. Without sufficient coalition forces in Iraq, the result was a power vacuum that has been slowly filled by various insurgent groups. It is too early to judge precisely what the motivation for coalition actions in Iraq were. However, we can speculate that part of the motivation may have been an idealistic notion of not dealing with the machinery of brutal dictatorships. In contrast, Alexander was certainly a realist. Alexander's treatment of defeated enemies was always motivated by strategic requirements. As noted, at times this meant retaining existing political infrastructures and individuals intact. However, in other instances Alexander ruthlessly extinguished potential political opposition. For example, in the aftermath of Darius' death at the hands of his usurper Bessus, Alexander perceived the latter as a potential alternative political authority and hunted him down.

Overall, Alexander's approach to the political administration of the empire was motivated by a need for stability, which manifested itself in a pragmatic approach. For the most part, this meant retaining existing structures where possible. However, Alexander was also very conscious of having his own loyal representatives in place alongside, or within, any local arrangements. For example, in the troubled region of Bactria and Sogdiana Alexander appointed the Persian Artabazus as satrap of Bactria. When the latter resigned from his post, and in response to the growing rebellion, Alexander brought in a substantial Graeco-Macedonian ruling class to administer the area.²⁶ In Lycia, the pragmatic Alexander was prepared to redraw the political map and create an entirely new satrapy. Bosworth captures Alexander's pragmatism well in the following statement, 'Alexander was prepared to create and take away satrapal jurisdiction as it suited the current [strategic] situation'.²⁷

Alexander was conscious of the fact that the stability he was fostering in Persia could be undermined if political instability was allowed to take hold in Greece. Alexander had a number of methods to maintain his control over the Greek city-states. Politically, Alexander was able to use an invention of his father, the League of Corinth. Philip had established the League after his victory at Chaeronea. The League was a political union and a collective security organisation amongst the Greek city-states, with Philip as its ruler. Its declared

objective was to maintain peace and stability between the Greek states. In reality it protected governments loyal to Philip and provided legitimacy for Macedonian hegemony. The League was an extremely useful and flexible instrument for Macedonia. For the war with Persia the League provided Macedonia with a ready-made alliance structure from which to obtain forces. It also confirmed Alexander as the leader of this Greek war of revenge. This provided Alexander's campaigns with a degree of legitimacy, because, as Bosworth notes, as 'the hegemon, [Alexander] could represent himself as the elected leader of voluntary allies in a crusade of vengeance'.²⁸ In addition, the League was also used to restrict the foreign and domestic policies of its Greek members. For example, decrees were passed forbidding mercenary service in the Persian armed forces. With stability very much in mind, Macedonia used the League to forbid the passing of revolutionary laws (such as the freeing of slaves) within the Greek states, and used it as an international court of arbitration to settle disputes between its members. In Alexander's absence, the League came under the control of Antipater, Alexander's friend and deputy hegemon.²⁹ Thus, as in Persia, Alexander sought to maintain stability through official political institutions, albeit supported by unwritten Macedonian presence and power.

As in Persia, the political settlement in Greece needed bolstering through military force. Before leaving for Persia, Alexander was presented with two opportunities to flex his military muscles amongst the Greeks. The first came at the very moment of his succession to the throne upon the assassination of his father. The second occurred a year later after his successful campaign in the Balkans. On both occasions a number of Greek states (including Athens and Thebes), sensing an opportunity to throw off Macedonian hegemony, rebelled against the young king. On both occasions the rebellions were stymied by rapid military operations (which will be discussed in later chapters). However, of direct relevance here are Alexander's political actions following the second rebellion. After a 300-mile march from Pelium in the Balkans, Alexander launched an attack on the leading rebellious state, Thebes, which had been engaged in political machinations with Persia. Despite fierce resistance, which led to the deaths of 500 Macedonians, the city defences of Thebes were breached. A massacre ensued, in which 6,000 Thebans were killed. In order to deter future rebellions Alexander decided to make an example of Thebes. He had the city destroyed, its land shared amongst the neighbouring cities, and the remaining 30,000 citizens enslaved. Ever the shrewd grand strategist, Alexander had the fate of Thebes authorised by the League of Corinth, and ensured that local Greek allies participated in the sack of Thebes. Thus, not only could Alexander portray the punishment inflicted on Thebes as being the shared responsibility of the Greeks, he also ensured that the attack was perceived as unified action by the League against a rogue state in collaboration with Persia.

The aftermath of the rebellion gave Alexander a further opportunity to make political capital from the events. In contrast to the fate of Thebes, Alexander's treatment of Athens was lenient. This leniency was not motivated by some moral code; rather, it was a logical strategic decision. Athens was central to

Greek culture, but also possessed naval forces vital for the coming war with Persia. By sparing Athens, Alexander revealed his unity with Greek culture and traditions, and thus this helped to maintain the cohesion of the League. Lest we forget that Alexander's grand strategy was always underpinned by military force, he left Antipater with a substantial force of 12,000 phalangites, 1,000 Companion cavalry, with supporting light cavalry and infantry. As in Persia, Alexander's clever political manoeuvres were not self-sustaining, they required the assets of physical security to support them.

Beyond Greece, Alexander also needed to stabilise the Balkans, whose tribes had often proved to be troublesome northerly neighbours of Macedonia. Without a secure northern flank Alexander could not wholeheartedly commit to his Persian campaign. Alexander's method for ensuring stability in the Balkans was similar to that which he used in Greece. Initial resistance was overcome with rapid military defeat, but then political, economic and religious measures were employed to establish a stable environment and relationship. In many ways, the Balkans represents a microcosm of the Macedonian methods of control in their broader empire. The basis for Macedonian control in the Balkans was established by Alexander's father, and in this sense the young Macedonian king owes much to the inspiration of Philip. In the following summary by Hammond we can see elements that are common to other regions that later came under Macedonian control. At the same time some distinct features are identifiable, which reveal the inherent flexibility in Macedonian grand strategy:

The subjected tribes were left to govern themselves, maintain their own laws and customs, and arm their own militia. There was no imposition of a party system of rule, such as 'democracy' or 'oligarchy' ... and no occupation in the form of a garrison. Rather, each tribal state kept its own traditions, characters and self-respect. The Macedonians required the payment of a fixed tribute, the provision of troops and labour on demand, and the acceptance of Macedonian foreign policy.³⁰

To further foster stability, Philip had built towns to promote intertribal trade. In addition, the towns were populated with a mixture of both locals and Greeks. Together these methods would promote a process of Hellenisation and encourage peaceful relations between the various local tribes.

In addition to his political actions, another important component of Alexander's strive for stability was religious policy. Alexander experienced both the positive and negative sides of this issue. At the city of Tyre, Alexander became embroiled in a seven-month siege following his request to sacrifice in the Tyrian temple of the city god Melqart. A potential neutral city became a resourceful enemy arguably because Alexander misjudged religious sensitivities.³¹ In addition, the rebellion in Bactria and Sogdiana was at least partially motivated by Alexander's policies with regards to local religious practices. In particular, Alexander banned the custom of exposing the dead to vultures. Lane Fox notes that 'like the British prohibition of suttee in India, his moral scruples cost him

popularity'.³² There were other factors involved in the rebellion, including the actions of Alexander's troops looting crops and livestock (in contravention of his earlier orders). And of course, the prime cause of the rebellion was the power aspirations of its main leaders, under the command of Spitamenes. The fall of Darius had created something of a political vacuum in the region, and Spitamenes sought to grasp the opportunity. Nonetheless, rebellions need foot soldiers, and Alexander's cultural insensitivities added to their ranks.

In contrast to the above, in many other instances Alexander's conquests were facilitated by his sensitivity to local religious beliefs and practices. For example, in Babylon Alexander ordered the restoration of the local temples that had been damaged by the Persian ruler Xerxes. He also paid sacrifice to the city's god Bel-Marduk. Showing such respect to local gods was in sharp contrast to Persian control of Babylon.³³ Again, this was astute politics by Alexander. His association with local gods helped to establish his position and prevented religious dissatisfaction becoming a cause of instability in the conquered territories. Perhaps Alexander's greatest association with local gods can be seen in Egypt. At Memphis, the young Macedonian ruler sacrificed to a number of gods, including Apis. Lane Fox explains the significance of this act:

By this one sacrifice, he reversed all memories of Persian unrighteousness and paid honour to the Egyptian god Apis in the form of his sacred bull, most famous of Egypt's many religious animals ... In return, Alexander is said to have been crowned as Pharaoh of Upper and Lower Egypt.³⁴

By this act Alexander had cemented his rule through association with local sacred traditions. And as at Babylon, Alexander contrasted himself sharply with his Persian predecessors. Prior to Alexander's rule the Persians had 'committed gross sacrilege' against Apis.³⁵ Alexander's close association with local gods was especially important in Egypt. As Pharaoh he was worshipped as a living god who, through his mythical father god Amun-Re, was perceived to share a common ancestry with the native Pharaohs. Alexander pursued his Egyptian divinity even further, and made a treacherous journey across the desert to seek the guidance of the oracle Zeus Ammon at Siwah. At Siwah Alexander was confirmed by the oracle as the son of Zeus (son of God). Via a complex historical mythology, the god Zeus Ammon (who had now confirmed Alexander's rule as sanctioned by the gods) represented a merging of the Egyptian, Greek and Libyan cultures.

Egypt is an appropriate place to begin our discussion of Alexander's policy of development. For it was here that Alexander built the most famous of his cities, Alexandria. Alexander's great city-building projects had many objectives. In the first instance the cities 'were a necessary corollary of conquest, providing a permanent alien garrison force in unquiet territory'.³⁶ The cities he established acted as centres of economic activity and development. For example, Alexandria in Egypt was an outlet for the rich produce of Egypt, Sudan and Libya. Hammond also notes that the cities helped to foster the spread and development

of Greek techniques in agriculture, land reclamation and capitalism.³⁷ Beyond the obvious economic benefits of urban development, Alexander used the cities as centres of cultural development and education. Alongside theatres, Alexander established schools for the explicit purpose of teaching Greek and military techniques. Clearly, Alexander was laying the foundations for the future well-trained and loyal forces of the empire. As Lane Fox notes: ‘the Iranians, so far from being treated “as plants and animals”, would be called to share in the empire, obliged to Alexander alone and educated away from their tribal background’.³⁸

Beyond these development projects there seems to have been a larger objective. As he progressed through the empire, Alexander was promoting a Macedonian version of Hellenisation. However, his approach was not just one way, with the Persians absorbing Alexander’s own version of Greek culture. Rather, Alexander wanted to foster stability through the development of unified culture. Indeed, some authors have noted that Alexander’s increasing adoption of Persian etiquette and customs may be evidence of a plan for complete cultural unification between the Greek and Persian worlds.³⁹ Seemingly in support of this notion were the mass weddings at Susa at the end of Alexander’s campaigns in 324 BC. To cement the relationship between the two cultures, Alexander married his Macedonian Companion officers to the women of the Persian nobility. Rather than being representative of some deep-seated cultural ideal, it may be more appropriate to see such acts as clever grand strategic moves to foster stability. Indeed, Lane Fox perceives the weddings less as an ideological belief in creating an empire of mixed blood than as a shrewd political move to tie the Persians into the political fabric of the new political system.⁴⁰ A similar strategic motive possibly explains Alexander’s adoption of the Persian custom of *Proskynesis* within his court at Balkh. *Proskynesis* involved the subjects of the empire paying homage to the king by kissing his hand and bowing. Only in extreme circumstances, perhaps when a subject had been disgraced, would he prostrate himself in front of the monarch. The introduction of this gesture in Alexander’s court caused some consternation amongst the Macedonians, since in Greece *Proskynesis* was only paid to the gods. In spite of the disquiet this caused amongst the Greeks and Macedonians, Lane Fox notes that it was simply a matter of good politics. The Persians expected to pay homage to their king, and its absence may raise questions about Alexander’s status amongst his new subjects.⁴¹ In the eyes of his Persian subjects, Alexander had to associate himself with the trappings of political power. Again, we are reminded of Alexander’s sensitivity to the local circumstances and traditions of the areas he was conquering.

Although Alexander could be both brutal and destructive at times, his ambitious political objectives required that he exploit many of the resources of his newly conquered territories – especially its manpower to swell the ranks of his forces. In this sense, Alexander’s actions appear to be in tune with the advice proffered by Sun Tzu’s promise that victory, particularly when achieved with minimal fighting, could bring great rewards, including access to the resources of the vanquished.⁴² From the Balkans, Alexander and his father could rely upon forces from Thrace, and since Alexander’s crushing defeat of them, from the

Triballians as well. It has already been mentioned that Alexander established educational institutions to produce the future soldiers of the army. As a result of this policy, in 330 Alexander received 300 Lydian cavalry and 2,600 Lydian infantry. The following year he received a further 1,000 cavalry and 8,000 infantry from Lycia and Syria.⁴³ Bosworth reports that by the time of the invasion of India Alexander had incorporated a host of foreign cavalry forces into the army. These included Dahae horse archers and Bactrian and Sogdian cavalry. It is worth remembering that before their introduction into the army Alexander had spent eighteen long months fighting these same men in a bitter counterinsurgency campaign. In addition to these cavalry forces, in 324 Alexander received a newly formed Bactrian infantry phalanx, which had been trained in one of Alexander's military colleges.

In India Alexander's army swelled to 120,000, and included only a small Macedonian core. In fact, the Macedonian mutiny at Opis against Alexander appears to have been partially a protest against the increasing role of Persians in the Companion cavalry. There were eventually four *hipparchies* made up exclusively of Orientals, and another in which Orientals served alongside Macedonians.⁴⁴ Towards the end of his life, when he had returned to the centre of the empire, Alexander took the amalgamation of Macedonian and Persian forces even further. Persian infantry were incorporated directly into the Macedonian phalanx, armed with their own javelins and bows. This may have been primarily motivated by the need to spread the experienced and loyal Macedonian veterans throughout the army, without diminishing the size of the phalanx formation.⁴⁵ In general, the motivations behind Alexander's increasing use of foreign fighters appear to be twofold. The longer the campaigns lasted, and the further they moved away from Greece, the more difficult it became for Alexander to receive reinforcements from home. However, merely to cite this purely resource-based rationale is to undersell Alexander's astute grand strategy, with its aim of stability and consolidation of the empire. Bringing the forces of his defeated enemies into the army, including the privileged position of the Companion cavalry, was a method to knit the new empire together, and give the conquered territories a stake in the new future.

There is an important postscript to this analysis of Alexander's political restructuring of the empire, and it has significant implications for the later section of this chapter on 'control'. Despite the apparent advantages of maintaining existing political arrangements, this approach was not entirely successful. By the time Alexander returned to the centre of the empire upon his return from India, fourteen of the twenty-three provinces were subject to varying degrees of revolt. The rebels and their causes were varied. In certain places it was Greek mercenaries who had seized local power; in others the Persian elite had tried to regain or expand their traditional positions of authority. For example, Alexander had retained the Persian Satibarzanes as satrap of Areia, but soon regretted the decision when he rebelled, destroyed the local Macedonian contingent, and joined the usurper Bessus in his campaign against the young king. Lane Fox presents an interesting summary of Alexander's problem in this respect: 'The

experiment with the native satraps of the past four years had been convenient but risky, and by disappearing eastwards Alexander was inviting rebellion from those who still remained behind him'.⁴⁶

Although the scale of rebellion in the empire may suggest a general failure of Alexander's chosen policy, that would be too simplistic an analysis. Indeed, at times Alexander's chosen Persian satrap helped to quash native uprisings, such as when a pretender led a rebellion and proclaimed himself king of the Medes. In fact, as Lane Fox's comment indicates, we can conclude that the main problem was not necessarily Alexander's political organisation of the empire. Rather, it was the absence of Alexander and his main army that seemed to encourage thoughts of rebellion. Proof of this can be seen in the fact that once Alexander or a substantial part of his army returned to a province, order could be restored through a swift campaign and ruthless justice. For example, upon returning to both Persepolis and Susa Alexander had the Persian satraps executed for abuses of their power, which included plundering royal tombs. In the final analysis, only four Persians continued to hold satrapal positions in Alexander's empire. Many were replaced by Europeans, who on the whole remained loyal to the Macedonian cause.⁴⁷ Thus, as important as political structures were to maintaining stability, the presence or absence of substantial military force appears to have been the key ingredient, certainly in the absence of loyal political elites.

When Alexander moved to restore order in rebellious areas, he was conscious not to be seen just punishing the misdeeds of the natives. In response to evidence of crimes (including rape and the looting of temples) committed by his garrison in Hamadan, Alexander had 600 of the troops and two commanders executed.⁴⁸ To gain legitimacy, the ruling power must be seen as just and egalitarian in its treatment of the people. This is especially important if the ruler is trying to foster a shared sense of investment in the political order amongst the various peoples of the empire. This is not to suggest that it must never engage in acts of brutality. Indeed, as we will see, Alexander often resorted to brutality for strategic purposes. However, in order to maintain stability and legitimacy, the ruling power must enforce justice on all those who transgress, without good strategic cause, regardless of who they are. On this occasion, the Hamadan garrison appear to have committed crimes purely for their own pleasure and gain.

Lesson 2: harmonise actions throughout the levels of strategy

The relationships amongst the different levels of strategy are complex and subtle. Advantages at one level can be negated by disadvantages at another, and vice versa. For example, Luttwak notes that a technological advantage may be negated by misuse at the tactical level, or indeed rendered irrelevant by failures at the grand strategic level. Likewise, advantages gained through clever grand strategy may be squandered by poor battlefield performance. Thus, those wishing to succeed in strategy should, in the first instance, strive for competence in all of the levels. However, even if competence is established in each level independently,

this may not be enough. The practitioner must seek to harmonise his performance across the levels of strategy. His actions at every level must be mutually supportive of each other. Should this be the case, the strategist can be said to have achieved a harmony amongst the levels. However desirable this may be, Luttwak notes that moderate disharmony is the norm in strategic practice.

In order to illustrate the above point, Luttwak provides a number of historical examples. An obvious case of disharmony is provided by Nazi Germany. During the early campaigns of the Second World War, Germany enjoyed striking success at the tactical and operational levels. However, failures in German grand strategy (especially in diplomacy) meant that it would be difficult to translate these lower-level advantages into a war-winning outcome. Put simply, it was extremely difficult for battlefield success to have a positive impact at the level of policy. Failures in grand strategy had left Germany facing an array of well-resourced enemies, who could better afford the long attritional war ahead. As Luttwak notes, 'sideshow', such as North Africa, proved more useful to the Allies, as they drained German resources.⁴⁹ However, the Second World War does reveal an interesting caveat to the above. Even in the face of disharmony, outstanding performance at one level can sometimes override this disharmony and ensure success. Despite Germany's failures in grand strategy, tactical and operational victory could have brought overall success. This was especially the case on the eastern front, where a few more significant German victories could have knocked the Soviet Union out of the war. This notion fits nicely with Clausewitz's idea that the enemy can change everything with a successful battle.⁵⁰ In addition, success at the lower levels enabled Germany to capture vast economic resources, and thereby reduced the Allies' advantage in this respect. However, the resources captured could not be put to full effect; certainly not enough to counteract the basic flaws in Germany grand strategy.

How does harmony manifest itself? This is best demonstrated through Luttwak's example of the North Vietnamese during the American war. Due to a substantial imbalance in resources, the North Vietnamese could not hope to achieve success through tactical victory alone. Thus, they realised that limited tactical victories had to be harmonised with the higher levels of strategy. Since the main United States centre of gravity was the will and support of the public and body politic, the North Vietnamese had to exploit their limited tactical success through diplomacy and propaganda at the grand strategic level. Luttwak argues that this shows that seemingly small tactical events can have disproportionate outcomes, if they are in harmony with the higher levels.⁵¹ In fact, we can go further and suggest that even tactical defeat can bring positive results if it is in harmony with the other levels. The obvious example in this respect was the Tet offensive in 1968. Despite early tactical success, Tet was a disaster for Viet Cong forces. In essence, Tet destroyed the Viet Cong. However, in relation to the higher levels of strategy, the advantage gained from Tet was the fact that it could be launched at all. Thus, this (at best) partially successful campaign was substantially supportive of, and in harmony with, the higher level goal of undermining confidence within the US.

How does Alexander perform in relation to harmonising the levels of strategy? On balance Alexander's strategy was in harmony more often than not. A fine example of the harmonisation of the levels of strategy is Alexander's early campaign in Greece to establish his hegemony. As noted previously, having just pacified the Balkan tribes Alexander was faced with rebellion in Greece. Fearful of what Macedonian hegemony would mean for Persia, Darius III had been supplying and bribing the enemies of Alexander with gold. A rumour had been started that Alexander had been killed in the Balkans. This fortified those wishing to free themselves from Macedonian hegemony. The city of Thebes took the lead in the rebellion and besieged the Macedonian garrison in the Theban citadel of Cadmeia. At Athens, Demosthenes persuaded the city to assist Thebes in its action, although the city never provided material support in the form of troops. When news of this uprising reached Alexander he was still near the fortified city of Pelium, some 300 miles from Thebes. As was so often the case for Alexander, speed would be his greatest weapon.⁵² He force-marched his army and within thirteen days had reached Boeotia, the territory dominated by Thebes. The rapid pace of his advance prevented any other forces coming to the aid of Thebes. The Thebans stood isolated with the forces of Alexander outside their city. As has already been noted, the Thebans fought hard, but finally paid the ultimate price for their actions.

In this brief campaign Alexander's rapid operational manoeuvres, and successful tactical attack on Thebes, produced a strong coercive effect at the military strategic level. The fate of Thebes both compelled and deterred the Greeks in equal measure – certainly until the limited Spartan rebellion four years later. The continued potency of this effect was supported by the presence of Antipater and his forces. These events were mutually supportive of actions at the grand strategic level. As noted, the League of Corinth both established Alexander as hegemon and legitimised his position as leader of the community of Greek states. These two points were firmly supported by his treatment of Thebes and Athens. His power, codified in his role as hegemon, was demonstrated at Thebes. However, the legitimacy of his position was enhanced by Alexander's move to ensure the participation of others in the sack of Thebes. In addition, the leniency showed to Athens promoted Alexander's desire for legitimacy amongst the Greeks and a sense of Macedonian unity with Greek culture. This act showed that Macedonia was not a brutal, external oppressor of the Greeks but rather that it was a member of the Greek community of states, albeit the dominant power.

An even greater demonstration of Alexander's harmonisation of the levels can be seen in his neutralisation of the Persian fleet. Vastly outnumbered, Alexander wisely chose not to engage the Persian fleet in a decisive Mahanian battle. He not only feared the consequences of the loss of his fleet but also understood that his land forces would be depleted in their role as marines in a naval battle. Alexander's decision not to engage the Persian fleet was influenced by a famous, if perhaps mythical event. It is recorded that an eagle was spotted on the beach alongside the Greek fleet. For such a superstitious man as

Alexander, this was interpreted as a sign from the god Zeus. Alexander declared that because the eagle was seen on land, that is where he would defeat the Persian fleet – not at sea. The strategic rationale behind this declaration was a logical assessment of the current situation. Aware of his naval inferiority, Alexander played to his strengths. Rather than risk his fleet against the well-trained forces of the Persian navy, Alexander would neutralise them by capturing their naval bases with his land forces. This was sea denial via the application of land assets. A Persian fleet without bases and ports could make little impact on the land campaign in Asia: ‘Like all warships in the ancient world, the Persians’ men-of-war were like “glorified racing-eights” and had so little room on board in which to store provisions that they were forced to remain in daily touch with a land base’.⁵³

At the tactical and operational levels Alexander’s goal of neutralising the Persian fleet would be primarily achieved via the capture of key ports through sieges, such as those at Halicarnassus and Tyre. Most obviously, these tactical actions established physical control over certain ports. However, other ports simply capitulated to Alexander based on their assessment of the changing political realities in the region. Alexander gained substantial coercive effect from his seven-month siege of Tyre, and especially its brutal end for the inhabitants. This was supplemented by the effects of Alexander’s victory over Darius at the battle of Issus. The combined effects of these successes made it clear to the local rulers that Alexander was the rising, and increasingly unchallenged, power in the region. Thus, Alexander achieved his goal of reducing Persian naval superiority by slowly gathering elements of the Phoenician fleet to his cause. The rulers of cities such as Sidon and Byblus began to return from sea with their fleets. On arrival they accepted the new political reality, and gave their galleys over to Alexander. The Macedonians’ growing naval strength in the Eastern Mediterranean received a significant boost with the addition of 120 galleys from the kings of Cyprus. The decision of these rulers also seems to have been based on a reading of the political situation after Darius’ defeat at Issus. The strategic map of the region was changing, and they were eager to fight on the side of the rising power. As envisaged by Alexander, his victories on the coast paid significant dividends at sea. As the coastal ports fell to his armies, the rulers of the Phoenician fleet were compelled to hand over their fleets to the young Macedonian king. Thus, Alexander’s tactical and operational successes were producing significant results at the higher levels of strategy.

Nonetheless, as noted earlier in relation to Nazi Germany, it is possible for failures at these higher levels to negate tactical and operational prowess. As Darius fled the battlefield after his defeat at Issus, it must have been tempting for Alexander to pursue the Persian monarch into the centre of empire and attempt to neutralise this important centre of gravity. Had Alexander taken such a course of action he would have risked substantial disharmony amongst the levels. Suddenly shifting his focus at the strategic level could have negated much of the progress made with his recent victories on the coast. In turn, this would have had implications for consolidation of his rule in the western

provinces, as well as undermining his campaign against the Persian navy at a crucial moment. As it was, Alexander understood the need to maintain focus at the military strategic level. It is important to remember that Alexander was attempting to establish a new empire, not just inflict a rapid defeat on the existing political system. His control needed to be established in the western provinces before he could penetrate into the centre of the empire. At this stage of the campaign Alexander did not try to outreach himself at the higher levels of strategy. Instead, he was content with consolidation. This is particularly important if we also consider that his journey south down the coast would eventually bring him to Egypt. The conquest of Egypt was motivated by a number of factors. Politically and psychologically its capture represented the final act in the conquest of the western part of the Persian Empire. Hammond notes that the capture of Egypt also gave Alexander the opportunity to complete important sea communications that encompassed the entire Aegean and Mediterranean coastlines.⁵⁴ These would help stimulate economic interaction in the region. In particular, Egypt was a large producer of grain. Gaining control of this resource would enable Alexander to import grain back to Greece: a net importer of this foodstuff.

Whilst praising Alexander's efforts to harmonise the levels of strategy, it is important to note that his record is not one of unremitting success. In particular, the campaign of Gaugamela and the Indian expedition both reveal differing examples of disharmony. Gaugamela may seem like a strange choice, since the culmination of this campaign was Alexander's second defeat of Darius and the final destruction of the Persian army. However, it will be argued here that Alexander's tactical prowess saved him from errors at the operational level, and thereby ensured that his battlefield actions served the overall objectives of the campaign. At the strategic level Alexander was correct to seek a third and final battle with the Persian army. Having failed on the battlefield of Issus, the Persian ruler attempted to save his empire through diplomatic channels. In the summer of 331 he offered Alexander a treaty of friendship. In return for the safe handover of his family (whom Alexander had captured at Issus), Darius offered Alexander all of the territory west of the Euphrates and 30,000 talents. However, Alexander was a young man brimming with confidence, and with goals that stretched much further than just the conquest of the western portions of the Persian Empire. In this sense, it is unlikely that Darius could ever have diverted Alexander away from his chosen methods and goals. As it was, in the aftermath of two decisive military defeats, Darius' offer was far too late. Thus, Alexander began his march into the heart of his enemy's territory, seeking a final decisive clash of arms.

Should Alexander have accepted the offer from Darius? Although Alexander had twice defeated Darius' forces, this gave him no guarantee that he would succeed again in battle. Although a well-trained professional army, in the hands of an excellent tactician, drastically helps to minimise the chances of defeat, war is always something of a gamble. The uncertainties in war, many of which come from the fact that war is a human activity, produce a degree of unpredictability in

the outcome. Taking this truism into account may lead us to criticise Alexander's decision to continue the war. However, there were also dangers in accepting Darius' offer. Leaving Darius in power may simply have given the Persian ruler the time he required slowly to undermine Alexander's position. As it stood, Alexander clearly had the upper hand. His enemy was obviously demoralised, and Alexander had the instrument at his disposal to put an end to Darius' rule. In these circumstances, Alexander made the correct strategic decision to maintain the momentum of the invasion. Military campaigns eventually reach what Clausewitz described as 'the culminating point of victory'.⁵⁵ This is the point at which a military overstretching itself and begins to incur diminishing returns on its efforts. Alexander's campaign had not yet reached that point.

So, the strategic level decision to engage Darius was correct; it was the means by which this would occur that deserve critical analysis. One of the functions of the operational level is, through manoeuvre, to ensure favourable circumstances for battle. At Gaugamela Alexander appears to have begun to suffer from victory disease. As a result, he fought Darius at a place that had been chosen and prepared by the Persian king. In particular, the Persians had flattened the ground to facilitate the deployment of their chariots and cavalry. In addition, unlike Issus, Gaugamela was fought on a wide plain, which enabled Darius to outflank Alexander's forces with his vastly superior numbers. And although the final outcome of the battle suggests that Alexander's self-belief was well placed, this still does not excuse his operational error of failing to manoeuvre Darius away from his chosen site of battle. In Alexander's defence it is worth noting that, as Lane Fox concludes, Alexander may have underestimated the size of army Darius could muster for Gaugamela.⁵⁶ Also, Alexander's operational level performance before Gaugamela was not without its merits. As Donald Engels points out, Alexander's route and the pace of his advance ensured that his army could be supplied.⁵⁷ Rather than head south down the Euphrates valley, Alexander headed east to take advantage of the fertile lands of northern Mesopotamia. The army force-marched 215 miles in just fourteen days to reach the Tigris before Darius could oppose the crossing. The speed of Alexander's arrival at the Tigris also ensured that the Persians had insufficient time to destroy the stores of supplies in that area. As Alexander and the army approached the Tigris, they had anticipated that Darius would contest the crossing of the river. However, the Macedonians had chosen to cross much further north than Darius had predicted. Indeed, the Persian ruler was waiting for the young Macedonian at Gaugamela. Due to the inaction of his enemy, Alexander was able to rest his men for a few days and reconnoitre the disposition of Darius' forces at Gaugamela. Thus, the situation arose in which Darius had chosen and prepared the site of battle; yet the initiative was left to Alexander. As it was, Alexander was so dominant at the tactical level that he made the operational level all but irrelevant in terms of the final outcome.

Where Alexander's slight disharmony in the Gaugamela campaign may have been easily rectifiable through one tactical event, his problems in India were far more telling. If we examine Alexander's performance throughout the levels of strategy, it becomes clear that, much like Nazi Germany, the problems began at

the higher levels. Most significantly, Alexander does not seem to have possessed a clear overall objective for his campaigns in India. Aside from the rather broad objective of finding the eastern ocean, by which to mark the frontier of his empire, Alexander simply appears to have been campaigning as an end in itself. Alexander's court had become inextricably linked with warfare, and he seemed incapable of escaping from that reality. In fact, Alexander only began his return journey to Babylon when the army mutinied at the river Beas. Without a clear policy goal it is extremely difficult to establish harmony amongst the levels. Actions at the lower levels have to have a measure or goal by which they can be judged.

What is clear is that Alexander continued to perform effectively at the tactical level in India. Therefore, his lack of strategic focus did not condemn him to final defeat as it had in the case of Nazi Germany. Alexander's famous assault on an isolated fortress in the Indus valley will suffice to illustrate how his tactical genius continued to rescue his campaigns from the potentially debilitating effects of constant activity. Refugees fled before Alexander's army as it marched through the Swat valley, and sought refuge where they could. A large group of the Assacenians must have felt secure in their seemingly impregnable rock fortress of Aornos in the Indus valley. The fortress stood atop a steep and craggy rock face over one and a half kilometres high. On the top there existed a fertile plateau with its own supply of spring water, which ensured that the fortress could hold out for a substantial period of time. A frontal assault was out of the question. Nevertheless, this was the sort of tactical challenge that Alexander relished and had become so adept at over the years. The rationale for taking on such a challenge was most likely to demonstrate the futility of resistance in the face of Alexander's military prowess. However, there were equally powerful personal egotistical forces at work within the young king. Legend had it that Alexander's hero, Heracles, had failed to capture the fortress. Thus, *pothos* (a longing) equally drove Alexander to attempt the seemingly impossible and capture the rock.

With a frontal assault unlikely to succeed, Alexander displayed an acute understanding of the indirect approach mixed with inventive and careful siege work. Local intelligence was crucial in identifying a winding, rocky path that would outflank the natural frontal defences of the fortress. An arduous two-day march along this path, during which the enemy had to be cleared, brought Alexander's forces to a position that overlooked the plateau across a ravine. The Macedonians had outflanked the enemy defences, but still faced the problem of crossing the ravine, which was approximately 500 metres wide and thirty metres deep. Whilst the enemy was pinned down by suppressive fire from Alexander's catapults, an artificial causeway was constructed to bridge this gap. From the causeway, an audacious raid captured a peak close to the enemy. Faced with the inevitability of a Macedonian assault on the fortress, the Indians attempted to sue for peace, and then attempted to escape during the night. Alexander deliberately removed guards from one possible escape route, and thus tempted the Indians into a trap. As the enemy tried to escape they were ambushed and some were massacred. Alexander's brilliant tactical accomplishment had brought success once again.

However, at times, as Alexander's tactical actions became ever more brutal, they began to have the negative effect of fanning the flames of resistance, and thus working against the need for stability at the higher levels. The fighting in India resembled that in Bactria and Sogdiana, in which decentralised command and control facilitated mobile search and destroy operations. In addition, local centres of population would be taken and garrisoned to act as stabilising bases of operation. What is also evident in these campaigns is the continuation of a more brutal form of warfare. For example, Alexander met stubborn resistance from the Assaceniens at Massaga. When 7,000 mercenaries fighting in the service of the Assaceniens surrendered and asked for safe passage from the city, Alexander granted this to them. However, having camped near the Macedonians, the mercenaries, along with their families, were taken by surprise and massacred at night by Alexander's men. In his earlier campaigns Alexander was certainly capable of brutal acts, as testified by the events at Thebes and Tyre. However, in most instances such acts represented only part of a well-balanced strategic approach. As the resistance to his rule had increased the further east he travelled, Alexander became much less subtle in his use of terror as a coercive tool of strategy. This merely increased the will to resist. If you are too brutal you give potential enemies little choice but to resist. A conqueror must offer rewards and clemency to those who capitulate without too much of a struggle. If your presence too often results in slaughter, you give the locals little choice but to try and pre-empt their impending doom. It is fair to speculate that as Alexander became increasingly paranoid about plots to undermine him in the later campaigns, his military strategy may have been increasingly influenced by personal feelings for revenge on those who resisted. The great military genius seems to have been increasingly motivated by emotional forces, and was thus losing his strategic touch and the loyalty of his men. In this respect, we see Alexander unusually operating in a manner contrary to the advice of Sun Tzu: 'It is the business of a general to be serene and inscrutable, impartial and self-controlled'.⁵⁸ A strategist should be guided by prudence, not by emotions.⁵⁹

In many respects, in India Alexander's actions at all of the levels were in a state of disharmony. He possessed no clear end state. Consequently, it was difficult to establish an appropriate military strategy that would bring lasting political success. Without a workable military strategy any hope of constructing brilliant operational art is removed. Finally, although his tactical prowess staved off overall disaster, his increasingly brutal actions merely exacerbated difficulties at the higher levels. And, although his tactical victories prevented the above failures from overwhelming the campaign, it is difficult to extract any real sense of lasting achievement from the Indian campaign.

Lesson 3: there may be various centres of gravity

Centre of gravity is a concept that has both practical and academic value. From a practical perspective it acts as a useful planning tool, helping the strategist to understand the nature of the enemy, identifying strengths and weaknesses. For

similar reasons it acts as a useful tool for strategic analysts, helping to improve our understanding of the structure of a conflict and the nature of the belligerents involved. Nonetheless, the whole notion of centre of gravity requires examination. By bringing together centre of gravity analysis and a study of Alexander's campaigns, our understanding of both should increase. In order to test the centre of gravity hypothesis, and to use this concept to better understand Alexander's strategic performance, we will keep five questions in mind. What was the Persian centre of gravity? Could Alexander identify it and get at it? If so, via what instrument could he put pressure on the centre of gravity? Did Alexander manage to exert sufficient pressure? Did this pressure produce the desired results?

An obvious centre of gravity in Persia was Darius III, and the successors who usurped him in the aftermath of his defeat at Gaugamela. In a highly centralised and hierarchical political system such as the Persian Empire, the man at the centre was of vast symbolic significance. In an age of heroes, Alexander recognised the need to defeat and replace such an important centre of political power. As was noted on page 55 in relation to *Proskynesis*, Alexander went to great lengths to be regarded as the legitimate lord of Asia. His position would not have been so secure if an alternative centre of power had been still present in the empire. Hence, when Bessus (satrap of Bactria under Darius) usurped Darius in 328 Alexander pursued him also, until he was handed over by his associates Spitamenes and Dataphernes (who would become significant figures in the insurgency in Bactria and Sogdiana). Indeed, Alexander was so intent on capturing Darius that during the pursuit from Ecbatana (the last of the Persian capitals) men and horses died of exhaustion, such was the pace that the king insisted upon.⁶⁰ However, as noted, earlier in the campaign Alexander had passed an opportunity to pursue Darius after the battle of Issus. The battle of Issus in November 333 was the first tactical clash between Alexander and Darius III. On this occasion, after the substantial Persian defeat, Alexander chose not to pursue the reigning Persian monarch. Instead, the young Macedonian continued on his march down the Mediterranean coast capturing the key seaports, thereby slowly neutralising Persian naval power. This action implies that Alexander did not see the power of the Persian Empire resting solely in Darius. In addition, by focusing on neutralising Persian naval power Alexander was protecting one his own centres of gravity – the Greek homeland.

This leads us to question as to whether Persian naval power also represented a centre of gravity in the empire. It is clear that Alexander exerted much energy and resources to ensure the neutralisation of this element of Persian power. The sieges of the ports of Halicarnassus and Tyre were costly affairs. In addition, from March to June 333 Alexander, at great expense, raised another fleet to defend Greece from the threat of the Persian navy. However, this last point helps to answer the bigger question on the significance of the Persian navy. This element of Persian power was perhaps a less significant centre of gravity for the empire, but it did represent a threat to one of Alexander's own centres of gravity. Nonetheless, the very fact that the Persian navy could potentially exert

war-winning power against Macedonian interests does imply that at some level it had the potential to become a very significant element of Persian power and freedom of movement (critical elements of Clausewitz's definition). As noted previously, through military campaigns, garrisons, and a political alliance Alexander had established a degree of stability back home. Yet, as the Spartan rebellion illustrates, threats to Macedonian hegemony existed in Greece, especially if supported or emboldened by a Persian maritime expedition. When judging the value of Persian naval power we can conclude that its neutralisation, through the capture of the main Phoenician ports, did not lead to the collapse of the empire. Persian naval power did not represent a centre of strength upon which the empire depended for survival. It seems that Alexander regarded the Persian fleet as a threat to his home base, and therefore it had to be neutralised before he could strike deep into the centre of Persia. Destruction of Persian maritime power also enabled Alexander to make better use of his own maritime-based logistics apparatus.

As Alexander led his army into the interior of the Persian Empire, his advance was partially aimed at the capture of the three capitals: Persepolis, Susa and Ecbatana. Do these represent centres of gravity as Clausewitz theorised? Capturing the capitals presented Alexander with a number of opportunities. Financially, he benefited substantially from capturing the treasuries of the Persian Empire. This in itself suggests that the capitals had great significance for the ability of Persia to defend itself; they were a great source of economic power. This was a zero-sum game. By capturing the treasuries Alexander not only deprived these resources to his enemy (it is worth remembering that Persia relied quite heavily on Greek mercenary forces, who needed paying), but of course thereby ensured that he could continue to pay for his ambitious campaigns. There was also a degree of symbolism to the capture of these three great cities, much of it for consumption back in Greece. Acts such as the returning of the Athenian treasures from Susa, the burning of the palace in Persepolis, and the capture of the final capital at Ecbatana, all met with approval in Greece. Indeed, Hammond notes that the capture of Ecbatana symbolised the end of the Greek war of revenge. After this event Alexander sent home the forces of the League of Corinth, and paid them a bonus for their service.⁶¹ We can assume also that by occupying the very buildings associated with the Persian monarchy, Alexander was again cementing his position as lord of Asia. In this sense there were both practical and symbolic reasons for occupying the capitals. Susa represented the administrative centre of the empire, whereas Persepolis was very much the ceremonial heart.⁶² By taking these cities Alexander was establishing his rule: 'Gradually, the king was moving towards a permanent empire, and an Emperor could not be content with a Greek campaign of revenge'.⁶³ However, it is difficult to judge the true value of the Persian capitals because by the time they had fallen Darius was on the run and his army lay in tatters on the field of Gaugamela. Nonetheless, they clearly had great financial and symbolic significance. Population centres in general are the centre of political and economic life in most countries.

In order to apply pressure to Darius and his successors, as well as to capture the imperial capitals, Alexander had a substantial obstacle to overcome: the Persian army. Due to the vast manpower resources of the Persian Empire it took Alexander three great battles (Granicus, Issus and Gaugamela) to finally destroy this instrument and thereby destroy the ability and will of the enemy to resist. Had Alexander merely outmanoeuvred the enemy forces, his conquests would always have been vulnerable to recapture. This latter dilemma became a problem for Hannibal during his invasion of Italy. After the crushing defeats at Cannae and Lake Trasimene, the Roman Republic adopted the Fabian strategy, which was designed to avoid battle in all but the most favourable conditions. Thus, the centres of population that Hannibal's army were able to capture as it marched through Italy were soon lost once the Carthaginian forces left the area. The significance of the Persian army is also exposed when we consider that it was the main instrument available to Darius to end the Macedonian invasion. Each time Alexander engaged in battle he was risking the entire campaign. With such limited forces relative to his enemy, a significant tactical defeat could easily have ended the war. Darius appears to have appreciated this fact, which may explain his decision on two occasions to seek out Alexander (at Issus and Gaugamela). As an empire centred on a large landmass, Persia's power was very much reliant on its army.

The final candidate centre of gravity is often described as the will of the population, but more accurately we are talking about the acquiescence of the population, including the body politic. In any empire on this scale control cannot be exercised in the face of outright and widespread rebellion. Also, control of the various provinces brought with it resources from taxation and manpower to man the armed forces. This latter point can be seen in relation to the significance of the Phoenician ports to Persian maritime power; their defection to Alexander's cause slowly emasculated the Persian navy. In this sense, the Persian population and body politic does indeed represent a source of Persian power and freedom of movement. However, it was a centre of gravity that took a substantial amount of time to put pressure on. Over time, the cumulative effect of this depletion of resources weakened the other Persian centres of gravity, especially the armed forces.

So, what was Persia's centre of gravity? In such a monarchical political system Darius and his immediate successors were clearly vitally important. Thus, their removal was essential if Alexander was to secure his claim to be lord of Asia. In this sense they represented alternative centres of power, which could not be tolerated. Hence, Alexander did not rest for long after his final defeat of the Persian army at Gaugamela. In fact, Alexander always feared that Darius or Bessus would raise another army from the eastern provinces. Similarly, gradually depleting the resources under Persian control (population and economic potential) aided Alexander by denying these resources to his enemy. In this sense, population centres in general, rather than just the capitals, were a significant element of Persian power. This can be seen in the significance of ports to Persian maritime power. Alexander clearly understood the significance of cities.

This can be seen in his own city-building projects, and also in the number and intensity of his sieges. This is in direct contrast to the advice of Sun Tzu, who thought sieges were a waste of effort.⁶⁴ However, just as important to Persian power, and therefore clearly a centre of gravity, was the Persian army. The defeat of this instrument of power enabled Alexander to apply pressure on the other centres of gravity. As noted, an intact Persian army could have continued to challenge Alexander's control over the population and cities. Alexander's battlefield victories over Darius also weakened the symbolic power of the Persian ruler. Note that after his defeat at Issus, Darius offered Alexander control of the provinces up to the Euphrates. Overall, we can conclude that an enemy as substantial as the Persian Empire had multiple centres of gravity, all of which had to have pressure applied to them. Nonetheless, it is also difficult to disagree with Clausewitz's comment that 'the defeat and destruction of his fighting force remains the best way to begin, and in every case will be a very significant feature of the campaign'.⁶⁵

The discussion above reveals that Alexander, over a period of time, was able to apply pressure to all of the Persian centres of gravity. In large part this was made possible by the army at his disposal, and the proficiency with which he used it. Alexander was able to expose Darius, the population, and the cities to pressure. Obviously, Alexander's most potent instrument in applying pressure to the centres of gravity was the army. It was the army that defeated its Persian counterpart, besieged the cities of the empire, and, with Alexander, hunted Darius in the aftermath of Gaugamela. However, as noted in relation to Alexander's objective of stability, the army alone could not ensure the acquiescence of the population. In this sense, Alexander had to use other tools. Particularly worthy of note are Alexander's political measures, and his economic and social development policies.

Of the candidate centres of gravity discussed, the Persian navy was potentially the most difficult to apply pressure to. This was a result of Alexander's lack of sufficient naval resources. In this sense, he could not engage the Persians in a decisive naval battle to wrest command of the sea from them. Instead, Alexander again relied upon his army to apply pressure indirectly. It is not always easy to apply pressure to the enemy's centre of gravity. In the Second World War Germany, like Persia, had a number of centres of gravity. From the perspective of the western front, her population and economic centres could be got at through the strategic bombing campaign. However, until D-Day it was difficult to exert any real pressure on Germany's key source of power, the Wehrmacht. Elements of the army could be engaged in places such as North Africa and Italy. Yet, the main body of the Wehrmacht was beyond effective reach until the Allies could get their own forces into Europe. Of course, it is important to note that the German army had been under substantial pressure before D-Day on the eastern front. Indeed, the majority of the pressure applied to the Wehrmacht was applied by the vast manpower resources of the Soviet Union.

The final issue we must address in relation to centres of gravity is whether or not applying pressure to the various centres brought the desired results. This

analysis will shed some light on the significance of the centres of gravity hypothesis. The analysis will begin with an assessment of Alexander's campaign against the Persian maritime threat. As noted, by itself the defeat of Persian naval power did not bring the empire to its knees. However, it did help to ensure stability back in Greece and thereby enabled Alexander to move inland with confidence of a secure rear. In order fully to appreciate the significance of the maritime environment it will be necessary briefly to discuss the key concepts in maritime strategy. On the basis of this conceptual understanding it will become apparent that the Persians did not make effective use of their maritime forces during this period. They seemed to lack a coherent maritime strategy. Similarly, Alexander made some significant mistakes, although in general he made better strategic use of his joint operations (operations that combine land and naval forces). Neither side seemed to have an effective grasp of the role maritime forces could play in this theatre of operations. However, Alexander's overall strategy was more tolerant of mistakes and bad luck than that of his enemy's. This is usually an essential ingredient of any successful strategy.⁶⁶ It is said that the winner of a chess game is the person who makes the second to last mistake. It can often seem to be the same in strategy.

Sir Julian Corbett, a British naval theorist, describes maritime strategy thus: 'By maritime strategy we mean the principles which govern a war in which the sea is a substantial factor'.⁶⁷ However, to conduct an effective maritime strategy one's naval forces must have the 'ability to affect events on land, and [the] ability to control use of the sea'.⁶⁸ For naval forces, gaining control of the sea has to be the first priority. Control of the sea connotes a situation 'that exists when one has freedom of action to use an area of sea for one's own purposes for a period of time, and if necessary, deny its use to an opponent'.⁶⁹ To achieve this, it is often necessary to neutralise the enemy's naval forces. This can be achieved by various methods, the most common of which include destroying the enemy's assets in a surface action or by blockading said assets in port. Of course, not every actor is blessed with, or requires, substantial naval forces. In these situations the methods of gaining sea control just described may not be applicable. However, in such instances the objective of the inferior naval power may simply be to deny the superior force the use of its naval assets. Corbett described such a strategy as Sea Denial.⁷⁰ Again, sea denial can be achieved via a number of means. In the modern environment submarines, mines and shore-based batteries are just some of the technologies that can be utilised to deny a naval force the freedom it requires to attain sea control. Alternatively, as we have seen, an actor can be so dominant on land that its opponent's naval forces become essentially irrelevant to the wider war.

Why is the maritime environment significant? The most appropriate method by which to answer this question is to describe the characteristics of maritime power. Perhaps the dominant characteristic of maritime power is its flexibility, both in terms of where it can be used and how it can be used. By definition of its physical characteristics, the maritime environment provides its user with global reach, without the political or physical obstacles associated with travelling great

distances on land.⁷¹ In this sense, the maritime environment is essentially a highway, by which supplies and men can be transported.⁷² Thus, those with sufficient maritime capabilities are potentially able to shift the focus of their operations, or indeed to open up a new front in a conflict. In the case of Alexander's invasion of the Persian Empire, it must always have been of concern to him that Persia could potentially have launched a seaborne invasion of the Greek homeland. As a highway the maritime environment is ideal for the transportation of equipment and supplies. The maritime environment is also flexible in relation to the range of operations that can be conducted within it and from it. Maritime forces can conduct raids, blockades and invasions to name just three. In addition to such operations, with their obvious physical manifestations, maritime forces are also able to poise and maintain sustained presence in an area of operations. The presence of naval forces, even if they remain essentially inactive, can produce strategic effects. These effects include such things as an expression of political commitment, deterrence and compellence. To this list we should also mention Corbett's concept of a 'Fleet in Being'.⁷³ In such circumstances the knowledge that the enemy fleet is in the area will have an impact on the actions of one's own forces. In this sense, one's own freedom of action may be curtailed as a portion of one's capabilities may have to be committed to keeping the fleet in being under observation.

Despite these many positive attributes of the maritime environment and the forces that operate in it, maritime power has some significant limitations. The most significant of these is Corbett's assertion that sea power only has relevance in relation to how it affects the main area of human dwelling – the land.⁷⁴ In addition, like all of the geophysical environments of strategy, the nature of the maritime environment itself imposes limitations. For example, the weather can obviously play an enormous role in one's ability to utilise maritime power. Also, despite the global reach of the seas, there are physical limitations to where naval vessels can operate. This was more prominent during Alexander's time as a result of the technological limits of the vessels.⁷⁵ Some limitations are relative, depending upon the time period one is considering. For example, in the modern period sea power is regarded as a slower form of transport, certainly in relation to air power. However, during the ancient period 'the ships ... moved much faster and ranged much further than any army could'.⁷⁶ Thus, during Alexander's time, sea power provided a relatively rapid form of transportation. Also, as in the modern period, it acted as a means of transporting bulky equipment, such as siege engines.

Alexander's strategy to defeat the Persian fleet has been questioned in some of the historical literature. Bosworth makes what on the surface seems a fairly convincing claim that the rocky coastline in this area made it impossible for Alexander to deny the Persian fleet safe harbour.⁷⁷ Thus, should Alexander capture all of the main ports along the coast the Persian fleet would still be able to land and thereby disrupt Alexander's communications and undermine his conquered territories. Whilst there is an element of logic and truth in Bosworth's assessment, it is not based on the whole story. Naval forces require much more than just a sheltered beach to operate effectively. Even the basic fleets of this

period required a degree of infrastructure to remain operationally effective. Ships need to be supplied and maintained at regular intervals. By capturing the main naval bases along the coast, Alexander would deny these crucial services to the Persian fleet. For the vessels of this period it was 'essential for the maintenance ... that they were regularly taken into dock and dried out'.⁷⁸ Indeed, F. E. Adcock goes as far as to describe the ships of this period as 'frail': 'The ships themselves rapidly deteriorated unless they were well housed whenever they were not on active service, and they had much to fear from bad weather when they were. For they were frail...'⁷⁹ The conquest of the coastal populations would also deny the Persians access to manpower reserves. Nonetheless, even in such circumstances where Alexander had captured many of the ports, the Persian fleet could still act as a nuisance to Alexander if used correctly (for limited raids or harassing lines of communication for example).

We now reach one of Alexander's most questionable strategic decisions, and one that still divides the historical literature to this day. With the Persian fleet still posing a threat, Alexander sent the bulk of his fleet back to Greece. The vessels that remained were to be used for logistical purposes.⁸⁰ There is disagreement in the literature over what exactly happened to the fleet. Bosworth declares that it was demobilised, whereas Hammond states that it was returned to Greece but ready for recall.⁸¹ The latter seems more likely. The Persian fleet could potentially launch an invasion of the Greek homeland, so it would seem an act of strategic negligence to disband what little naval forces were available to defend against such an eventuality. The decision to send the fleet home was based on a number of factors. In the first instance, Alexander wanted to shift the cost of maintaining the fleet to the Greek states. More importantly, Alexander quite rightly understood that he could not defeat the Persian navy in an open battle. In which case, his fleet would prove more useful defending the Hellespont against a Persian invasion. However, retaining the fleet along the Aegean coastline would have also served some useful strategic purposes. It could have helped protect crucial land and supply operations from the Persian fleet, as it had at Miletus. It could also have performed the aforementioned strategic function described by Corbett as a 'fleet in being'. This was one of those occasions when it was a challenge to find a useful strategic purpose for an inferior navy. In theory, had Alexander maintained his forces as a fleet in being the Persian fleet would have had to maintain a close watch on Alexander's navy to prevent it from operating along the coastline conducting raiding operations and the like.

So, was Alexander right to send his navy back to Greece? On balance the answer is probably yes. To achieve his longer-term goals Alexander had to focus his resources and efforts on the land campaign. The real threat for the Persians came from Alexander's land forces. Although it was a strong naval power, the Persian Empire could not lose the war at sea. Alexander understood that the success he desired would only come on land by defeating the Persian army and conquering Persian territory.⁸² And although operating in Asia without a fleet left him somewhat vulnerable to Persian maritime operations, his conquest of the coastal cities would over time reduce the effectiveness of this threat. Also, if

he could achieve victory on land against the Persian army, the naval theatre of operations would become redundant. In the meantime, Alexander had to do what he could to defend Greece from Persian operations. A Persian expedition to the Greek mainland represented the greatest threat from the Persian fleet. However, as if to illustrate what a difficult decision this was, Alexander had to commission a new fleet in 333. Bosworth claims that this supports his criticism of Alexander's decision to send the fleet home.⁸³ However, it may be more accurate to suggest that in his original decision to send the fleet home Alexander had merely chosen the lesser of two evils. In the following year he made a slightly different assessment of situation.

On balance then, it seems that Alexander made the correct strategic judgement about the use of his maritime forces. What of the Persian navy? Judgement concerning the use of Persia's naval forces by Memnon (a Greek mercenary general) is a close call. At one level, the most obvious choice for Memnon would have been to lead an expedition to the Greek homeland as Alexander feared. The objective of such an operation would have been to encourage some of the Greek city-states to once again rebel against Macedonian hegemony. However, at this time Memnon decided to hold the port of Halicarnassus. The decision not to attack Alexander's homeland appears to have been an error by Memnon. After the victory at the Granicus, and the subsequent capture of many significant cities along the coast, the initiative was clearly with Alexander. It is precisely when facing such circumstances that one should attempt to put the enemy off balance and regain the initiative for oneself. A successful expedition to Greece would have at least diverted Alexander's attention, maybe some of his resources, and ultimately may have required him to return home to deal with the threat. The Roman Republic managed to draw Hannibal away from Italy in 203 when it invaded North Africa and threatened Carthage itself.⁸⁴

However, in Memnon's defence it can be argued that he may simply have been attempting to stem the tide of Alexander's coastal conquests. Alexander's campaign down the Aegean coast had already built-up something of a momentum. By holding Halicarnassus Memnon could delay Alexander, and perhaps even inflict a small defeat upon him. The latter could have significant ramifications on the cities further down the coast in Alexander's path. A setback would show that the Macedonian was not invincible, and that perception could inspire greater levels of resistance to his conquest. Also, Memnon may have been thinking for the longer term. Holding Halicarnassus might not prove decisive in the short term, but it offered the best opportunity to maintain a well-fortified base of operations for later campaigns, including an attack on Greece. The Persian navy needed a safe base of operations; Halicarnassus might be it. The city was also the home of a substantial Persian weapons store. For the man who had advised against fighting Alexander at the Granicus, the decision to hold Halicarnassus seems in character. However, despite the logic of this decision, an expedition to Greece seemed to offer the most promise. Even if Halicarnassus could be retained, Memnon would still have to go on the offensive with the Persian fleet; why not do so now? Whilst a strategy of a fleet in being has much to recommend

it (especially for a smaller naval power), the Persian Empire really needed to make more offensive use of its naval supremacy. In the first instance, it was inadvisable to allow Alexander and his invading force to retain the initiative. All the while Alexander was left relatively free to operate he could continue to weaken the imperial grip of Darius. Also, such an expensive and superior force as that under Memnon's command could be exploited for so much more than just a fleet in being. A small setback in Asia could interrupt Alexander's schedule, but a successful rebellion in Greece could end his campaigns altogether. From Alexander's perspective, Halicarnassus represented another objective in his quest to control all of the main naval bases along the Aegean coast, and he also understood that it was an ideal point from which to launch an attack on Greece. Thus, by putting pressure on Persian maritime capabilities Alexander could deny a particularly potent freedom of action to Darius.

Turning our attention to the capture of the Persian capitals, and other centres of population, it is clear that this did not bring an immediate and absolute end to the fighting. As we have seen, rebellion and disobedience flared up in Alexander's rear as he advanced further east. Also, the collapse or capture of the Persian centres of power did not prevent insurgency in Bactria and Sogdiana. Nor did it lead to the capitulation of the Indian provinces. In fact, one can argue that the collapse of the Persian power structure encouraged ambitious local rulers to try their hand at challenging the new, immature political system. Nonetheless, these imperfections in Alexander's control should not undermine the significance of the collapse or destruction of the Persian centres of gravity. Alexander had to dismantle the foundations of Darius' power in stages. Over time, Alexander's enemies had their resources depleted, whilst his often grew proportionally. And, although new power structures emerged following the fall of Darius' monarchy, for example under Spitamenes in Sogdiana, Alexander turned his attention to these new centres of gravity and dealt with them in turn.

Without doubt, applying pressure to the Persian army brought the most significant and obvious results. Alexander's campaigns clearly exhibit the value of destroying the army of a land-based power. Persian maritime power may have provided them with an instrument to threaten Greece, but it was the army that acted as the true guardian of the empire. Removing the enemy's physical ability to resist presents the strategist with so much more freedom of action. The opposite is also largely true. In many cases it is simply naive to leave your enemy with any substantial capability. An enemy so endowed can protect other potential centres of gravity and may also represent an offensive threat to your own capabilities. This seemingly obvious point is not accepted by significant sections of the defence community. In recent years the RMA/Military Transformation/Effects Based Warfare literature has trumpeted the notion of disruption over destruction as a favoured methodology. In simple terms, this idea promotes the notion that the will of the enemy can be broken with minimal force. Whilst this may on occasions be true, normally it is profitable to aim at the physical destruction of the enemy's forces. As Clausewitz noted, the destruction of the enemy's forces is the key to destroying his ability to resist.⁸⁵

What are the implications of the above discussion for the centre of gravity hypothesis? This conceptual tool clearly is a useful aid to planning. The process of identifying enemy centres of power and key capabilities can only help to achieve a better understanding of the enemy system and how it functions. Acquiring this knowledge, although it is unlikely to ever be complete, is an important step when going about dismantling an enemy system. In addition, centres of gravity can be used in a self-reflective manner, with the aim of identifying one's own strengths and vulnerabilities. Having an appreciation of where the enemy's centres of gravity may be can help create and maintain focus for a campaign. However, it would be a mistake to perceive a centre of gravity approach as somehow providing the tools to identify an easy route to success – against an enemy with a substantial scale and diversity of power there may not exist a key vulnerability or key nodes. As Alexander realised, pressure had to be applied constantly and in many directions to undermine slowly the ability of the Persian Empire to resist. This latter point is not incompatible with the notion that in most cases the enemy's armed forces represent a key asset that must be neutralised. Theoretically, it could be the case that another centre of gravity is so vital (popular will) that going after enemy forces may be counterproductive. For example, perhaps the level of force required to defeat the enemy may be so great that it could alienate a local population. However, such instances must be very rare. Even in those instances when popular will is important and fragile, destroying the enemy's capability helps to increase one's power and authority, and/or protect the local populace from the enemy's influence.

Lesson 4: control is based upon complex grand-strategic relationships

Admiral J. C. Wylie, in his often overlooked work *Military Strategy: A General Theory of Power Control*, established that a central idea in strategy is 'control'. Whilst Wylie's notion of control is an important conceptual aid to understanding the aim of strategy, it requires some further development. Wylie's basic assumption is that 'the aim of war is some measure of control over the enemy'.⁸⁶ This is achieved by controlling the pattern of the war, which in turn is achieved by manipulating the enemy's centres of gravity. At the heart of control is the physical presence of armed men, or the potential for that presence: 'The ultimate determinant in war is the man on the scene with the gun. This man is the final power in war. He is control'.⁸⁷ This control is not an absolute condition. Rather, Wylie notes that it can be 'direct, indirect, subtle, passive, partial or complete'.⁸⁸ Finally, when describing the more indirect examples of control, Wylie is happy to use the term 'influence' instead.⁸⁹

There is little to disagree with in Wylie's description of control. Perhaps the only substantive point of contention would be that Wylie limits his discussion to military strategy as a distinct activity. In the conclusion to his work Wylie does note that the concept of control can be applied beyond the military world: 'some form or degree or extent of control [can be] exercised by one social entity over

another ... a general theory of strategy must, I believe, be a theory of power in all its forms, not just a theory of military power'.⁹⁰ This extension of control is more satisfactory, since it conceptually integrates the military instrument with the other tools of grand strategy. This allows us to discuss the significance of the man on the scene with a gun as an integral part of grand strategy. However, it would have been useful if Wylie had expanded on this thought somewhat.

In addition, a broader definition of control is required even when discussing just military strategy. For, although a dynamic and competitive relationship with the enemy is often at the heart of strategy, strategy is concerned with much more. It is fundamentally about the use of force for policy objectives. Thus, because these objectives are so varied, the notion of control must be applied beyond interaction with the enemy to include the use of military force more generally. The aim of war may not be, strictly speaking, to exert control over the enemy. For example, the aim may be to control a certain piece of territory, resources or the population. Admittedly, to achieve this aim some control over the enemy may be required; or it may not. Either way, control over the enemy is a means to an end, not an end in itself. Wylie is on safer ground when he declares that detailed descriptions of control are unhelpful, since the strategist finds himself in too many varied situations to codify them all. Thus, a detailed description of what control actually refers to would be overly restrictive.⁹¹ In this sense, it is better to have a more fluid and general definition.

When thinking about control, we must consider that it may not always be possible to have a man on the scene in every circumstance where control is required. How does one exert control in such circumstances? Thankfully, the campaigns of Alexander shed some light on this issue. Since Alexander invaded the Persian Empire with a relatively small force of 40,000, he was not able to exert control solely through the continued physical presence of his forces. Therefore, Alexander had to devise a method by which he could ensure control in an efficient manner.

In support of Wylie's basic position, Alexander did garrison many of the towns and cities he conquered. Lane Fox notes that this was a technique Alexander had learned from his father: 'Alexander naturally followed his father's example and strengthened Sogdia, like Philip's Macedonia, with improved towns and military colonies ...'⁹² In a similar approach to that which he took for political administration, when garrisoning a town Alexander often preferred a mixture of loyal Macedonian veterans and local forces. This was the approach taken during the Sogdian rebellion when Alexander garrisoned his new city, Alexandria the farthestmost. Some of the locals had volunteered for the role, but some were prisoners who bought their freedom in return for service.⁹³ Through the use of such garrisons Alexander's forces were able to maintain a physical presence across the vast swathes of the Persian Empire.

However, the garrisons were sometimes insufficient to compel the locals into obedience. For example, the garrison at Herat failed to deter a local rebellion, and as a result Alexander had to send 6,000 troops to support his beleaguered veterans.⁹⁴ The threat of a local garrison being overwhelmed was an ongoing

problem for Alexander, especially considering the pace of his campaigns. Whenever the main army left an area, ambitious local forces could be tempted to challenge the new king's control. As noted earlier, Alexander faced such a problem in Greece whilst campaigning in the Balkans. With the Macedonian forces absent, and Alexander rumoured to have died, the Thebans and their allies rebelled. It was only with the return of Alexander and his army that control could be re-established.

To exercise control, armed men do not have to be physically present or in actual use. The mere threat of their presence may be enough. The effects of deterrence and coercion can be felt well beyond the place where the forces that underpin them are located. Nonetheless, forces that exert control in this manner do not do so existentially. Rather, their power is based upon an assessment of what would occur should they be used. An example of this is Alexander's first battle on Persian soil at the river Granicus. An early battle with the Persian army suited Alexander, as it presented him with an opportunity to establish his military credentials in the region, and thereby exert control beyond the battle itself. In this sense, after the battle control was based on this earlier demonstration of force to some degree. In addition, the battle had the added bonus of removing the main threat to Alexander's control in the western provinces of the empire. Had Alexander failed to engage or defeat the Persian army, his freedom of movement and the potency of his threat would have been compromised.

This element of control is in harmony with Clausewitz's theory on the use of military force. Clausewitz noted that even when no combat takes place, and one side is therefore coerced or deterred, the decision is made based upon an estimation of what would happen if combat did occur. Luttwak argues that such an approach underpinned Roman strategy in the earlier centuries of the imperial period. The legions were deployed back from the frontier, but their potential presence was often enough to deter local rebellion or invasion.⁹⁵ However, potent though this use of force may be, Alexander's experience does suggest that it is preferable to exert control through the actual presence of a substantial force. An enemy may take a chance on the fact that distant troops may not be able to be redeployed before a *fait accompli* is established.

Events in Greece are instructive in our efforts to better understand the complex nature of control. Before he left for Persia Alexander ensured control through a number of means. In the first instance he left Antipater with 15,000 troops (with the potential for additional resources from Macedonia's League allies), hence ensuring some level of physical control. The controlling power of these forces was enhanced by Alexander's previous actions against Thebes and Athens in the aftermath of their failed rebellion. The treatment of Thebes in particular was a stark warning to those contemplating future challenges to Macedonian hegemony. Thus, Alexander could also exert control through deterrence – a more psychological form of control, albeit one based on the capabilities of physical force. This latter point is particularly important for those who must exert control but have limited resources. It may be that available resources are not sufficient physically to manipulate the centres of gravity

required for control. Thus, control may have to be exerted through the threat of punishment or denial. In this respect, control may be, at least to some degree, a complex psychological phenomenon.

Beyond the effects of military force, the League of Corinth gave a degree of legitimisation to Alexander's hegemony and thereby established a political element to Macedonia's control of Greece. This was an essential ingredient of that control. Although Antipater's forces were significant, they would have been woefully inadequate had enough of the Greek states joined forces against Macedonia. The unity of the League was primarily maintained by the common purpose of the war against Persia. Alexander promoted this cause by certain actions, including the reclamation of stolen Greek treasures from Persia and the burning of the Persian royal palace at Persepolis in an act of revenge.

Alexander's methods of control in Greece were severely tested during the Persian campaigns. In 331, whilst Alexander was preparing for the campaign of Gaugamela, King Agis of Sparta finally managed to raise a substantial rebellion against Macedonian hegemony in Greece. Agis had been presented with an opportunity when unrest in Thrace compelled Antipater to redeploy the army. Sparta had never been a member of the League of Corinth, and always represented a potential source of problems to Macedonia. However, although they were receiving funds from Persia, alone the Spartans could not muster sufficient forces to end the Macedonian hold on Greece. Thus, Alexander's main preoccupation was to prevent an alliance between Sparta and other powerful states.

Sparta initially gained the allegiance of League members Arcadia and Elis. Alexander moved to neutralise Spartan activities and efforts to gain more support. He sent money to Antipater to resource any forthcoming military action. In addition, he moved a fleet into the Aegean to confront the Spartans and the remnants of the Persian fleet around Crete and to combat pirates and raiding parties. In support of this military presence, Alexander placated certain political grievances in the region. Chios and Rhodes had long resented the presence of their Macedonian garrisons, so Alexander showed trust in them and had them removed. During the Persian maritime expedition to Greece in 333, Mytilene, on the island of Lesbos, had resisted the Persians fiercely. To secure their loyalty, Alexander compensated them financially for their losses. As hegemon, he also used his authority to extend their landholdings.

These were important moves for Alexander. However, Athens was the key state. If Sparta gained Athenian support other states would follow. The Athenians debated the issue on whether to take this opportunity to throw off Macedonian control, and decided not to support the Spartan rebellion. Although long-standing distrust of Sparta played a part in the Athenian decision, Macedonian diplomacy was also significant.⁹⁶ Those who rejected the Spartan alliance pointed to Alexander's lenient treatment of Athens after the failed rebellion in 335. However, Alexander did not just benefit from his earlier behaviour. To sway the Athenians, he released prisoners who had been held since the rebellion. The Athenians may also have been conscious of what would happen when Alexander returned from Persia. Macedonia had displayed its military

dominance over the Greek states on a number of recent occasions, and the destruction of Thebes was still fresh in the memory.

Without Athenian support, the Spartan rebellion lacked resources. Nonetheless, Sparta was able, partially with Persian financial backing, to raise an army of 32,000. In response, Antipater took the field with 40,000 men, taken from Macedonia, Greece and the Balkans. Alexander's deputy hegemon defeated King Agis near Megalopolis. In a repeat of 335, the League's unity was once again confirmed by being permitted to pass judgement on Arcadia and Elis. In the event, the punishment handed out was fairly lenient. An indemnity was imposed and the leaders of the two cities were arrested and tried. Sparta, not being a member of the League, was dealt with solely by Macedonia. In what seems like an extraordinary move, Alexander pardoned Sparta and made it a member of the League. Bosworth explains Alexander's seeming leniency by noting that the failed rebellion had so emasculated and isolated Sparta that they ceased to provide a compelling threat.⁹⁷

The events in Greece reveal just how complex the concept of control is in practice. Without question, Antipater's army and the Aegean fleet were vital components in establishing control over events. Indeed, control was directly enforced by Antipater's army at Megalopolis. Beyond these forces in Greece, the potential return of Alexander and the main Macedonian army was also part of the equation. However, the potency of Antipater's army relied heavily upon the political circumstances. In the face of a general collapse of the League of Corinth, Antipater's forces would, in all probability, have been inadequate to maintain control. The obvious conclusion to be drawn from the above analysis is that although the armed man on the scene is a vital component of control his presence is often vitally supported by the political situation. The reverse is also true.

4 Lessons in strategy 2

Military operations

It has been established that Alexander excelled in many of the areas of grand strategy. However, it has also been noted that his success in the non-military aspects were underpinned by the successful application of military force. At the grand strategic level Alexander performed very well, if not perfectly. However, at the tactical and operational levels Alexander's success is unambiguous. He campaigned for twelve years, during which time he never suffered a defeat. The only real setback he encountered was during the siege of the port of Halicarnassus. After a costly siege of the outer walls, the Macedonians had no will to begin another siege against the citadels. Rather than risk a setback to his conquest of the coast, Alexander decided to leave a garrison of 3,000 infantry and 200 cavalry to invest the citadels. However, the remaining Persian troops could be supplied and reinforced by the Persian navy. In essence, Alexander had failed to remove the Persian military presence from Halicarnassus, and had left them with a base of operations. It was a failure that nearly cost him dearly in the following year when the Persians launched maritime operations against the Greek homeland. In addition to this minor setback, occasionally Alexander faced the odd moment of crisis on the battlefield. Still, on each of these occasions he quickly rectified the situation with outstanding tactical and operational actions. For the purposes of this work a study of Alexander's military campaigns highlights five main lessons: the significance of professional combined arms forces, the importance of a flexible approach, the dominance of military genius, the importance of attention to detail and the value of adhering to the principles of war. The best way to illustrate these lessons is through an analysis of Alexander's tactical and operational actions.

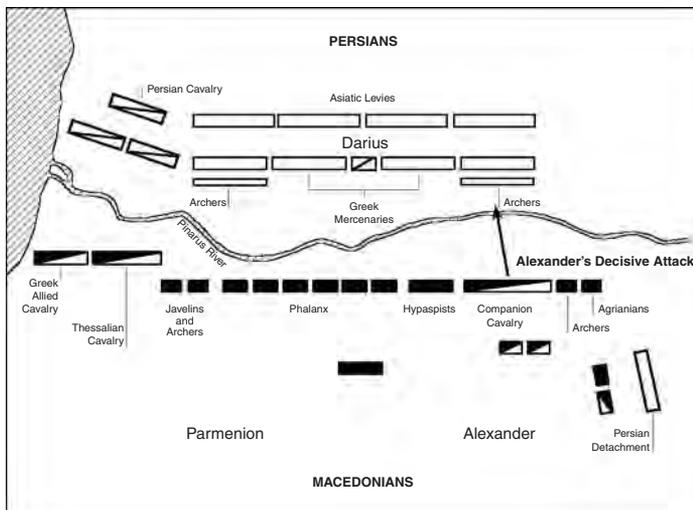
Lesson 5: professional combined-arms forces promote success

Although cavalry and light infantry forces had become more significant in Greek warfare before the rise of Macedonia, they had never been effectively combined into a cohesive tactical formation. In general, pre-Macedonian warfare looked to the hoplite phalanx to provide the decisive action. When Alexander invaded the Persian Empire he did so with a force that had the potential to be much more

devastating and total in its victories. From the perspective of the twenty-first century Alexander's tactical approach looks somewhat limited. However, when used effectively, Macedonian tactics were sophisticated enough to deliver rapid, decisive effect. Philip II and Alexander had devised a cohesive tactical instrument that could overcome the tactical and operational challenges of the day. This is reminiscent of the tactical developments that occurred in the later years of the First World War. Faced with the seemingly impregnable trench systems, both sides had to develop combined arms forces and tactics that could manoeuvre more rapidly with protection and fire support. With these elements finally in place, both sides could move from the break-in to the elusive break-out.¹ In relation to Alexander it is important to remember that his tactical approach would not have been possible, certainly not with such success, without the professionalism of his forces. The experienced, trained Macedonian core of his army was capable of a previously unseen level of tactical sophistication. This is a lesson that the Romans learned, and which the author Vegetius would remind them of.²

The significance of combined arms is evident in all of Alexander's great battles. In this sense, we could have chosen any of them to illustrate this lesson. However, the battle of Issus is especially illustrative in this respect. During the following analysis of the battle it will become evident how significant each element of the army was to the overall success. For example, we will see how the light and heavy cavalry formed an organic whole with the light and heavy infantry formations.

The battle of Issus was Alexander's second clash (after the Granicus) with the Persian army, and the first in which he would meet Darius III across the battlefield. As Alexander made his way down the coast of Asia Minor in 333, he became aware of the fact that Darius and the Persian army were heading to the Syrian coast. At this stage Alexander's dominant strategic concern was to prevent joint



operations between the Persian fleet and army. In particular, he feared that the fleet could be used to land the army in his rear and thereby cut his communications to Greece. To counter this threat, Alexander took the rational, if somewhat risky decision to divide his forces. Parmenion was sent to clear the coast of Persian satrapal forces down to the Pillar of Jonah, and then capture the Persian stronghold situated there. This would complete the Macedonians' control of the coast in the immediate area and thereby prevent the Persian fleet from gaining a port. Alexander led the rest of the army inland into Cilicia to engage Darius' army before it could unite with the fleet and coastal forces. However, in a rare operational lapse on Alexander's part Darius outmanoeuvred him. After a march of three months from Babylon, and a flanking manoeuvre to the north, the Persian army had managed to reach the coast north of Alexander and had cut his land communications with Greece without the aid of the Persian fleet. Despite this initial success, fortune was not kind to the Persian ruler. As the two opposing armies neared each other, Alexander had just reunited his forces with Parmenion's troops. Had Darius arrived in the vicinity twenty-four hours earlier, he could well have been positioned between Alexander's two armies. This would have given the Persian ruler the advantage of interior lines of communication and the opportunity to defeat each of the enemy armies in turn.³ Nevertheless, Alexander still faced the problem of having the enemy across his lines of communication.

When and where the battle would be fought was heavily influenced by the size of the respective armies, the supply situation, and the psychology of the two opposing commanders. At Issus, Alexander faced a Persian army significantly larger than his own. As is often the case, the historical sources differ greatly on the size of the Persian force. The most plausible figures come from Curtius, who concludes that Darius' army totalled 120,000.⁴ In contrast, Alexander had under his command 26,000 infantry and 5,300 cavalry. With such an advantage in numbers Darius would have preferred to fight on the open plains, and thereby have the chance to outflank Alexander. Alexander, on the other hand, sought to negate his enemy's numerical advantage by waging battle in the coastal narrows. Importantly, Darius could not simply wait for Alexander to come to him. With the harvest long over, Darius' large army could not sustain itself indefinitely; the battle would have to be fought sooner rather than later. Just as significant was the political psychology of the situation. As a proud ruler Darius was compelled to seize the initiative against such an inferior force. And, with such superior forces Darius must have been confident of ending the Macedonian's invasion in the coming battle. Thus, Darius began to move south to engage Alexander. However, before he had the chance to move through the coastal narrows and into wider terrain beyond, Alexander rapidly marched north and trapped the Persian king on narrow ground.

With battle imminent, the Persian forces took up a strong defensive position on the bank of the river Payas. The river was easily fordable, but it did provide some form of obstacle that might disrupt the mighty Macedonian phalanx, upon which Alexander's tactics would be based. More importantly, Darius' numerical advantage was in many respects negated by the narrow dimensions of the

battlefield. At only one and a half miles in width from the foot of the mountains to the sea, the site of battle was too narrow from a Persian perspective. At least on this occasion, in contrast to the Granicus, the Persians deployed their best infantry along the riverbank in a strong defensive position. In the centre of his line Darius placed his Greek mercenaries. On either side, lightly armed Persian ‘Cardaces’ and archers flanked these forces. Immediately to the rear of these front-line forces stood Darius and his 3,000 strong Royal Cavalry Guard. Any gaps in this section of the line were filled by stockades (a wooden defensive fence). To the rear were placed the lower-quality Asiatic levies. The forces thus described had a mainly defensive role in the coming battle. Their objective would be to hold and pin the Macedonian forces as they attacked. This would leave the decisive offensive action to be undertaken by the massed cavalry deployed on the Persian right. The objective for these forces was to break through the Macedonian left, and then strike the rest of the line in the flank and rear. There seems to be a great deal to recommend such a plan. Darius clearly had little hope of breaking the mighty Macedonian phalanx in the centre of Alexander’s line. It therefore seemed sensible to rest his hopes on the Persians’ most reliable forces, the cavalry, and attack the flank of the Macedonians and thereby negate the power of the phalanx.

Against this plan, Parmenion’s forces on the left would play a crucial role. Initially, Alexander deployed only the Greek cavalry on the extreme left. However, once he noticed the mass of Persian cavalry on that side of the battlefield he ordered the Thessalian cavalry to redeploy, and so reinforced the Greeks. Hoping to deceive the Persians of his intentions, Alexander hid the movement of the Thessalian cavalry with the massed ranks of the phalanx.⁵ So, at the commencement of the battle the Persian cavalry would have to engage both the Thessalian and allied Greek cavalry, a force of 2,500, in a mighty clash of cavalry. Also under the command of Parmenion on the left were Thracian javelin men, Cretan archers, and four battalions in Phalanx formation. As at the Granicus, the right of the line was to be the instrument of decision under Alexander’s control. These forces consisted of two phalanx battalions; next came two brigades of *hypaspists*, the Royal Brigade of the Companion cavalry (commanded by Alexander), the remainder of the Companion cavalry; with the line being completed by archers and Agrianians. As the forces deployed for battle, immediately to the rear of the Companion cavalry were the lancers and Paeoian light horse. Finally, to guard against a Persian detachment in the hills on his right, Alexander deployed a squadron of light horse and some Agrianian infantry. He held the Greek mercenaries in reserve.

As the moment of battle drew close, Alexander was concerned by a Persian detachment on his right, and so extended the line to the right by transferring two *ilai* of Companions and some of the reserve Greek mercenaries. In many respects, Alexander’s plan was similar to that of Darius. He intended Parmenion’s forces on the left to hold back the Persian cavalry, whilst the Companions forced their way through the Cardaces and took the Greek mercenaries in the flank and rear. The plan was classic Greek warfare, with a twist of Alexander.

As in traditional hoplite battle from the past two centuries, the phalanx of Greek mercenaries would be defeated by creating a gap in the line, breaking through, and then routing the rest of the line by threatening its rear. The great innovation at Alexander's disposal was the use of heavy cavalry to carry out this operation. As both sides faced each other across the river, in what could be the decisive battle of the campaign, Alexander rode along his lines both to inspect his forces and also to hearten the men before the clash of arms. As he rode in front of them, the young king called out the names of his officers and those men in the ranks who had gloried themselves in past actions.

Alexander's plan rested on the speed of his advance and the cohesion of his forces. He needed to cover the ground between the two forces rapidly whilst maintaining the integrity of the line. This would minimise the opportunity for the Persian archers to deplete his forces with their arrows. A rapid assault would also allow Alexander to catch some of the Persian forces in mid-manoeuve. There has been some debate amongst historians concerning the status of the Cardaces.⁶ Were they hoplites or peltasts? The evidence would suggest that they were in fact the more lightly armed peltasts, who on occasions did operate with archers to their front. Placing archers in front of infantry in this manner required careful coordination and preparation. Ideally, once the archers had fired a few rounds the infantry line behind would open to allow the archers to pass through. Clearly this was an operation fraught with risk; the timing had to be just right. If the timing were off, either the archers or infantry would be caught unprepared by the advancing forces.

Alexander, leading the Royal Squadron across the river, launched the attack. Following closely behind were the Companions, the *hypaspists*, light horse and Agrianians. It seems that the archers in front of the Cardaces were indeed caught in the open and ridden down by Alexander's cavalry. The Cardaces themselves could not stand against the Macedonian assault, and the Persian left began to crumble. All seemed to be going well for the Macedonian king, but the battle of Issus was to be a close-run affair. As already noted, speed would be key to Macedonian victory. However, it also proved on this occasion to be almost the undoing of the legendary Macedonian phalanx. As the forces under Alexander surged forward, the two battalions of phalanx under his command were dragged towards the Persians at a quicker pace than the four battalions under Parmenion, who faced the steepest banks of the river; the phalanx split. This was the sort of opportunity that any force facing a Greek or Macedonian phalanx prayed for. Such a split exposed the vulnerable flanks and rear of the phalanx. At the same time that this was occurring, the Persian cavalry was pushing the Thessalian cavalry backwards. In the centre, the Greek mercenaries grasped the opportunity presented to them and pushed the disrupted phalanx back, killing 120 Macedonians in the process. This event underlines the significance of Alexander's combined-arms approach. In the offence it was devastating, but if cohesion was lost the entire line could become vulnerable.

The battle of Issus had reached its moment of decision. If the Macedonian phalanx crumbled, then the foundations upon which Alexander's entire plan was

based would be undone. Parmenion's cavalry would be isolated on the left, and the forces attacking the Persians on the right could be struck in their flank and rear. However, at this critical juncture, with his left wing collapsing and Alexander pushing ever closer to him, Darius took the decision to flee the battlefield in his chariot. There has been some debate concerning how long Darius stood his ground. Arrian's account has him fleeing the scene of battle almost as soon as Alexander's attack began to bear fruit.⁷ In contrast, some modern scholarship indicates that Darius fought bravely and stood his ground until his own royal guard was destroyed around him and capture seemed imminent.⁸ Regardless of how bravely Darius fought, his exit from the battle sealed the fate of his army. Arrian describes how the flight of the king 'was the signal for a general rout'.⁹ With the left and centre of the Persian line now collapsing, Alexander was able to concentrate on saving the phalanx. He ordered the *hypaspists*, and the two battalions of the phalanx that had advanced, to wheel to the left and engage the Greek mercenaries in their flank. There is also evidence to suggest that elements of the Macedonian cavalry joined in this attack. This gave the four battalions of the phalanx the opportunity to regain their order and push forward against the Greeks. The sight of the Persian forces on the left and in the centre falling back gave renewed confidence to Parmenion's men on Alexander's left, and at the same time sapped the will of the Persian cavalry. In turn, they too took the decision to flee the battlefield. The cohesion of the Persian army was now completely lost.

It is at this point that we can appreciate the advantages to be gained from Alexander's emphasis on the pursuit of defeated enemy forces. In traditional hoplite warfare pursuit and attempted annihilation of the enemy were rarely undertaken. In this more formulaic form of conflict both sides recognised the decision reached on the field of battle, and, having agreed on appropriate compensation for the victors, the defeated were allowed to return to their fields. Alexander, like his father, had a much more total approach to war. For this, some modern scholars have derided him. He has been accused of brutalising the art of warfare in ancient Greece. To reiterate Victor Davis Hanson's perspective: 'The four-century evolution of Greek warfare had now come down to the mastery of murder on a grand scale'.¹⁰ Without question, Alexander was responsible for many acts of brutality against innocent non-combatants. Yet, from a strategic perspective, annihilation of enemy forces in this form of conquest seems entirely appropriate. Alexander's invasion of the Persian Empire was not a mutually agreed contest between similarly organised city-states with a common code of behaviour. It is unlikely that Darius, with a defeated but largely intact Persian army, would accept Alexander's incursion into his empire for long. It therefore made perfect sense to destroy the enemy forces when the opportunity arose. This was also a logical action, given Alexander's near-term objectives. With the enemy army eradicated as a coherent force, Alexander could concentrate on conquering the Syrian coast. If annihilation of the enemy is your objective, then pursuit is the best opportunity to achieve that goal. A routed army loses its cohesion as an organised force.¹¹ Rather than resisting as a whole,

it tends to fracture into small, or even individual components. In this particular case, the confusion and casualties were intensified by the fact that the Persian heavy cavalry was the last to leave the battlefield. As this force fled, it would have ploughed into the slower-moving Persian infantry. As it was, although heavy losses were inflicted on the fleeing Persian army, they were saved from absolute annihilation by nightfall. Nonetheless, as a functioning force Alexander had destroyed Darius' army.

As an added bonus, Alexander had also captured members of the Persian Royal family, including Darius' wife and mother. These royal prisoners were given their due respect, and in general were very well treated by Alexander. Robin Lane Fox explains this benevolence by the fact that '[r]espect for captive royalty had a long history in the ancient East, and Alexander was not the man to betray it'.¹² Interestingly, Arrian explains Alexander's actions almost in a legalistic manner, pointing out that Alexander continued to treat them as royalty 'as he had not fought Darius with any personal bitterness, but had made legitimate war for the sovereignty of Asia'.¹³ In the final assessment, one can conclude that Alexander was, as ever, thinking along strategic lines. As was noted in the previous chapter, achieving a sense of legitimacy was an objective for the Macedonian ruler. As Bosworth notes: 'In effect [Alexander] took over Darius' role, and these royal ladies were an important factor in his claim to be the proper King of Asia'.¹⁴

Although outnumbered and facing the Persian ruler himself across the field of battle, Alexander had achieved a decisive victory. How had this occurred? A number of factors ensured that Darius' reasonably solid tactical plan would fail. Firstly, for political and logistical reasons, Darius had been forced to move south to engage Alexander. In combination with the Macedonian's rapid countermove north, this meant that Darius had forgone the advantages of fighting on wide-open plains. The narrow coastal landscape negated his numerical advantage and severely lessened his chances of outflanking his foe. Perhaps of more importance than this was the inferiority of much of Darius' infantry. Aside from the Greek mercenaries, the Persian infantry simply could not stand in the face of Alexander's cavalry assault. The inferiority of the Persian infantry javelin in the face of Macedonian lances and *sarissae* was a significant factor in the outcome. Without a secure base of infantry, the excellent Persian cavalry would be isolated and vulnerable. Finally, we must look to Alexander himself. The speed of his assault, focused as it was on a weak point in the enemy line, made it almost impossible for the enemy to adapt to the rapidly deteriorating situation. For sure, the speed of attack at Issus was too rapid for the Macedonian phalanx. The splitting of the phalanx on this occasion throws up some questions regarding Alexander's pre-battle planning. Why were the four battalions of the phalanx left behind by this rapid engagement of the enemy? Nevertheless, the same mind that had perhaps overlooked this possibility also managed to recognise the impending crisis and rectify it with the redeployment of his forces mid-battle. Alexander's *coup d'oeil* was clearly evident.

From a combined-arms perspective, each component of Alexander's army had contributed to the final success. The cavalry had acted as both flank guard of

the line and the instrument of decision on the right wing. On the left, the cavalry was supported by the Thracian javelin men and Cretan archers. Similarly, the right flank was protected by light cavalry and Agrianian infantry. However, it would be wrong to think that the other various forces were there merely to protect, and thereby enable, a decisive stroke by the Companion cavalry. In fact, an isolated cavalry assault would have been less decisive had it not been rapidly followed and supported by the *hypaspists* and elements of the phalanx. In the face of a combined attack by these various forces, the enemy was presented with a complex tactical problem unfolding at rapid pace. The Persians simply could not solve this tactical problem in time, and their cohesion was irrevocably broken.

Lesson 6: adapt to war's varied forms

Alexander's forces may have performed extremely well in combined warfare in the three great regular battles against the Persian main army. However, the scale of Alexander's campaigns meant that they would encounter a wide range of enemies in many varied contexts and environments. Thus, in order to succeed, Alexander also required forces that were flexible in both capabilities and doctrine; they had to be able to adapt to the polymorphous character of war. Such adaptation is evident within the different styles of war and between them. So, for example, at the battle of the Hydaspes Alexander's favoured tactical approach, as used in his three previous battles, was inappropriate against the elephants of the rajah Porus. As will be described on p. 89, Alexander had to adapt his regular tactical methods. Beyond the great battles Alexander faced more diverse challenges in the guise of irregular opponents and siege warfare. In order to illustrate the flexibility of Alexander's forces and approach, this section will analyse the battle of the Hydaspes in India and the counterinsurgency campaign in Bactria and Sogdiana.

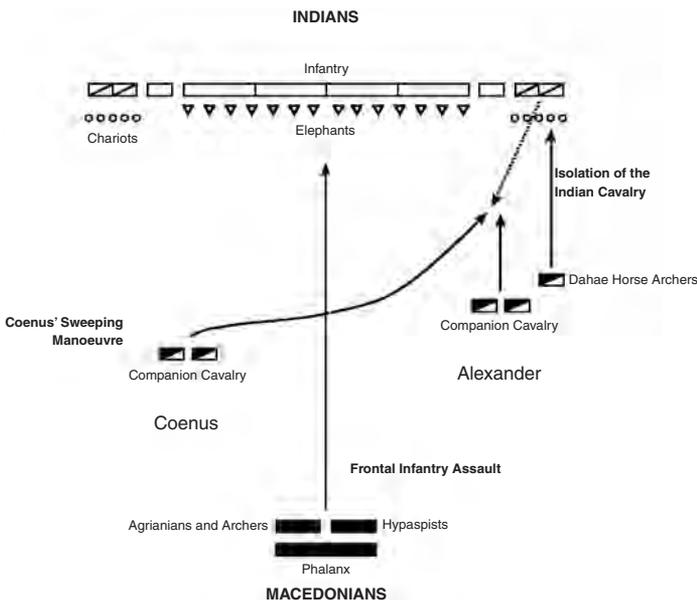
In the spring of 326 Alexander and the army crossed the Indus. Here, Alexander met with the ruler of Taxila, King Ambi, and concluded an alliance with him. This alliance brought Alexander into conflict with the rajah Porus, who ruled a kingdom on the opposite bank of the river Hydaspes and was an enemy of King Ambi. Porus intended to block Alexander's route, and was massing his army on the opposite banks of the great river. By this point in the campaign Alexander's army numbered approximately 80,000, with a core of 15,000 Macedonians. However, it seems that during the battle large sections of Alexander's army may have been absent. There are no details concerning the whereabouts of these missing forces. Bosworth reasonably speculates that a second column may have been searching for an alternative crossing point further up the Hydaspes.¹⁵ Porus deployed 35,000 troops at the Hydaspes, and although the quality of the Indian forces was questionable certain factors were ranged against Alexander. In the first instance, he had to advance quickly to the Hydaspes before the monsoon and melting snows made the river impassable. Once he reached the river, he would have to make an opposed crossing against a competent foe with local

knowledge of the terrain. The speed of Alexander's advance is remarkable, especially if we consider that the army had to disassemble the crossing boats from the Indus and carry them in sections across the land on oxcarts.

Once he reached the Hydaspes, Alexander could view the enemy that faced him. Porus had assembled approximately 30,000 foot soldiers, 4,000 cavalry, 300 chariots and 200 elephants. These forces occupied the river bank at all of the main fording points in the immediate area. Alexander's task was further complicated by the fact that his horses would not cross the river in the face of the elephants:

[the horses] would be too much scared by the appearance of these beasts and their unfamiliar trumpeting to be induced to land – indeed, they would probably refuse to stay on the floats, and at the mere sight of the elephants in the distance would go mad with terror and plunge into the water long before they reached the further side.¹⁶

Faced with these tactical circumstances, Alexander would clearly have to engineer a situation in which he could get forces across the river unopposed. This meant deceiving Porus over the position of the initial crossing point. In order to achieve this Alexander would have to perform something of a balancing act. Clearly, he could not hide the movement of his entire army. So, he would have to occupy the attention of Porus' forces in one place, whilst slipping a detachment across the river further upstream. The balancing act came from the fact that the initial crossing force would have to be small enough to go unnoticed but large enough to withstand an initial assault from the enemy and establish a bridgehead. The first force across would also have to be capable enough to



compel Porus to concentrate a substantial element of his men against it, and thereby clear some of the remaining fording points along the river bank.

To achieve this plan Alexander now set about preparing his forces for the complex operation to come. He split the army into two parts. Craterus commanded the part of the army that would occupy the attention of Porus' main force. This holding force consisted of 8,000 infantry and 3,000 cavalry. Alexander led the force that would make the initial crossing. Unsurprisingly, this section of the overall force was composed of the elite elements of the army, including the majority of the Companion cavalry, Dahae horse archers, *hypaspists*, Agrianians, archers, javelin men and two battalions of phalangites. All told, this leading force comprised 6,000–10,000 foot soldiers of varying kinds and 5,000 cavalry. The redeployment of such a considerable force required an outstanding deception campaign. A whole range of techniques were used to achieve this deception. For some time before the actual crossing Alexander marched forces along the river bank, and at the same time employed a look-alike to stay with Craterus' force seemingly planning a crossing at that point. The idea behind producing a lot of movement prior to a redeployment is simply to dull the enemy's senses to troop movements.¹⁷ Whilst these acts of deception were occurring, Alexander was slowly gathering his crossing force twenty-five kilometres upriver from his main camp. He chose a point on the river where there was a cape, behind which there existed a valley in which Alexander was able to hide his troops from the enemy. In addition, opposite this cape was a large wooded island in the river. This island would further conceal the movement of his forces.

The initial crossing took place during a thunderstorm on a May night.¹⁸ The noise from the storm helped to conceal the movement of Alexander's forces as they made their way across the Hydaspes on their rafts and in their boats. By dawn the leading troops were across the river. As Alexander's forces were completing their crossing, Porus now faced the classic dilemma of deciding whether the troops crossing the river represented the main effort or a diversionary force designed to draw his troops away from the real crossing point. Alexander had seized the initiative and placed his enemy on the horns of a dilemma.

Unsure of exactly what this initial crossing force represented, Porus dispatched his son with 2,000 cavalry and 120 large six-man chariots to drive the enemy back into the river. These troops were dispatched too late, and by the time they engaged their enemy they were outnumbered. In addition, Alexander would have had some time to deploy his forces to meet them. Finally, the rain-soaked ground provided very poor terrain for the chariots. The Macedonian cavalry engaged the helpless Indians, and routed them with losses of 400 men, including the young Porus. It was now clear to the Indian rajah that the force Alexander had brought across the river represented the main effort. Porus left a small force, including some elephants, opposite Craterus to prevent the latter from assaulting the rear of his army as it engaged Alexander. Once he found suitably firm and level ground, Porus deployed his army in its battle formation. Covering the entire front of his line were the elephants, deployed at fifty-foot intervals. For Porus the

elephants would hopefully perform two functions. In the first instance they would deter any frontal cavalry assault by Alexander. In addition, Porus hoped that the elephants would be able to disrupt the Macedonian phalanx, and hence break the cohesion of Alexander's entire line. Behind the elephants came the infantry, who were deployed so as to cover the gaps left between the elephants. Both flanks of the army were protected by a combined force of infantry and cavalry, and finally in front were the chariots. In many respects this seemed to be a sensible deployment of forces when facing Alexander.

Porus' deployment of the elephants had the desired effect, for it quickly became clear to Alexander that an attack by the Companion cavalry on any point along the Indian front was out of the question. As with the river crossing, the Macedonian horses would have been spooked by the presence of the giant and unusual beasts. Having fought three successful battles based on the same tactical formula, Alexander now had to adapt his tactical approach. Ever the aggressive and inventive commander, Alexander hatched a plan to assault the enemy's flanks with his cavalry, whilst the various contingents of infantry would bravely engage the Indian elephants and infantry. Alexander's first main concern would be to protect the flanks of the infantry from the Indian cavalry. Consequently, the first action of the battle would have the aim of neutralising the Indian cavalry before it could emerge as a threat to the Macedonian infantry.

Alexander's approach was to defeat the Indian cavalry in detail. In order to achieve this he needed to first pin the cavalry forces on Porus' right wing. He did this by deploying two *hipparchies*, under the command of Coenus, towards the Indian right. With these forces occupying the attention of the Indian cavalry on the right wing, Alexander led the remaining two *hipparchies* of the Companions and the Dahae horsemen towards the Indian left. The first contact between the two armies came when Alexander used the Dahae mounted archers to disrupt the Indian chariots on the enemy's left wing. As the enemy struggled to cope with this attack, Alexander then led the Companions in an assault on the left flank of the nearby Indian cavalry. However, this was not simply a frontal assault on the enemy. Alexander launched a series of attacks squadron by squadron. After each attack the squadrons would retreat, thus drawing the Indian cavalry away from their main line as they pursued their Macedonian prey. Once the enemy cavalry had been teased a sufficient distance from the elephants and infantry, Coenus launched the decisive stroke by sweeping across the battlefield to attack the Indian cavalry on the left wing in the rear. The result of this was that the Indian cavalry was suddenly fighting enemy cavalry to the front and rear. Faced with encirclement, the Indian cavalry attempted to retreat towards their own line. At the same time Porus ordered a general shift to the left, so that the main Indian line could come to the aid of their embattled cavalry. Alexander's cavalry were now facing the onslaught of the entire Indian line.

However, Alexander's plan had yet to unfold fully. In a pre-planned operation, the phalangites, *hypaspists*, archers and Agrianians advanced in close formation on the left of the main Indian line. In essence, the Macedonian forces were concentrating their attack on the left side of the Indian line, trapping the

enemy forces in that sector of the battlefield. The crucial point of the battle had been reached, and much revolved around how the Macedonians handled the Indian elephants. For a short while it seemed as if the great beasts might overwhelm the Macedonian forces. The elephants charged and crashed against sections of the phalanx, whilst the Macedonian horses were becoming increasingly spooked by the proximity of the great beasts. However, Alexander's men showed great discipline in standing their ground against the elephants. As at Gaugamela when facing scythed chariots, the phalanx would open its ranks and allow a charging elephant to pass through whilst attacking the beast's flanks and mahout. The infantry was slowly waging a war of attrition against the elephants. Divested of their mahouts, and assaulted by arrows, spears and pikes, the mighty beasts began to give ground and fall back upon their own forces. Confusion began to spread in the Indian ranks as the retreating elephants and cavalry compacted with their infantry troops, causing mayhem and trampling their own men underfoot. Increasingly surrounded and assaulted by the entire panoply of Alexander's combined arms force, the Indians had run out of options. The scene unfolding on the battlefield must have been one of terrible carnage. The Indian elephants, themselves being cut and slain by the Macedonian infantry, thrashed around causing terrible injuries to their own men. By this time the Macedonian forces were pushing forward and beginning to pursue those Indian troops who were fleeing the battlefield. The pursuit was enhanced by the arrival of Craterus' men, who had forced their way across the river.

Alexander had achieved yet another decisive battlefield victory. The key to his success had been his own tactical ingenuity in the command of a professional, well-trained combined-arms army that could be trusted to coordinate its operations in the face of extreme danger. Alexander's performance at the Hydaspes is particularly noteworthy for the fact that he displayed the value of neutralising the enemy's capability, before then striking a decisive blow. However, on this occasion the decisive blow was not delivered by a penetrative attack as before; instead it was achieved by confusing and compressing the enemy to a point at which they lost cohesion and ceased to be an effective military force. In this sense, Alexander had shown his ability to adapt his methods to the particular circumstances he faced. To his credit, Porus remained in the field fighting bravely on his elephant until he was persuaded by one of his own men to accept the inevitable defeat now overwhelming his forces. The defeat had been heavy indeed. Indian losses have been estimated at between 12,000 and 20,000 infantry and 3,000 cavalry killed. In contrast, Macedonian losses were again remarkably light with approximately 280 cavalry and 700 infantry lost.

At the Hydaspes Alexander had revealed that his tactical approach could be adapted to suit changing circumstances. Just as importantly, he had at his disposal forces capable of meeting the challenge set. However, against Porus Alexander still faced a regular enemy that presented itself in recognisable formations on a known field of battle. Before the invasion of India Alexander had faced more elusive foes in Bactria and Sogdiana. Having initially accepted his rule, these two provinces erupted into rebellion in 329. It would take Alexander

eighteen months to finally quash the rebellion, but during this campaign he would reveal further his ability to adapt to another of war's forms.

Alexander initially enjoyed a relatively easy conquest of Bactria and Sogdiana. He occupied the capital of Sogdiana, Samarkand, without opposition. From here, he marched to the river Jaxartes, which represented the northern boundary of the Persian Empire. In an attempt to stabilise his control of the region he entered into treaty negotiations with the Scythians, who lived both north and south of the Jaxartes. Under the terms of the treaty the Scythians would retain their independence and be treated as allies, not subjects under Alexander's rule. For the moment, this seemed a sound strategic decision by Alexander, since the Scythians were 'the most expert horsemen known to east Iran. They were mobile and dangerous'.¹⁹ However, Alexander also took this opportunity of sending a diplomatic delegation to gather intelligence on the Scythians, perhaps for the purpose of a later invasion.²⁰ In addition to these diplomatic moves, just to the south of the great river Alexander established the city of Alexandria the Farthermost.

The relative peace and stability was short lived. Alexander's garrison forces in the region were attacked as the satrapies of Bactria and Sogdiana rose in rebellion against Macedonian rule. To make matters worse for Alexander, Scythian forces began to gather in support of the rebellion. For a commander who is noted for his quick and decisive victories over Darius on the battlefield, this rebellion against his rule would prove that he was also capable of conducting protracted campaigns against irregular forces in difficult terrain. For the next eighteen months Alexander slowly managed to extinguish the fire of insurrection. The leading figure behind the rebellion was Spitamenes, who had managed to attract elements of the Bactrian cavalry to his cause.

Faced with an array of enemies across a wide area of operations, Alexander had to move quickly to prevent his forces being overwhelmed in the face of coordinated action by his foes. His first objective was to secure control of the seven fortified towns established by the Persians in the region around the Jaxartes. Gaining control of these would give his forces bases of operations, would help to stabilise the frontier against the Scythians, and would enable Alexander to show his intent to others considering joining the uprising. Craterus was sent to lay siege to Cyropolis, the largest of the seven cities, whilst others were taken relatively quickly by other detachments. In fact, Alexander's forces managed to capture five of the cities in just two days. Operations against the other two cities are not mentioned in the sources. The rapidity of this success was a result of the substantial technical and tactical superiority of the Macedonian army. The cities' defences were constructed from mudbricks, which fell easily to the siege engines and techniques of Alexander's forces. Once the cities had been captured, Alexander dealt harshly with those inside. All the men of military age were killed and the women and children enslaved. This policy had objectives in mind. In the first instance, by killing the men Alexander was steadily depleting the manpower for future uprisings. In addition, such actions could have a deterrent effect on other potential rebels in the locality.

Although the fortified cities were falling quickly, the resistance was sometimes fierce. This was particularly the case at Cyropolis, and it took an innovative response from Alexander to finally capture this city. The defences of Cyropolis were far more robust than the other cities, and so a frontal assault on the walls would not bring such quick results. However, a partially dry river bed ran through the city and provided a weak spot in the defences. So, whilst battering rams were employed against the main walls, Alexander led an elite force through the river bed to open up the defences from within. Alexander and his force of *hypaspists*, Agrianians and archers were involved in fierce fighting inside the city before the walls were breached. Although ultimately successful, the assault on Cyropolis was a costly affair. Many good troops were killed in the fighting, and both Craterus and Alexander were seriously wounded. Indeed, Alexander came close to death as a result of his wounds. He was struck heavily on the head and neck by a stone. This left him initially unconscious, and then worryingly left him without sight and speech for a period of time. However, the outcome was much worse for the Sogdians, who lost 8,000 during the fighting and received the usual punishment from the Macedonians in the aftermath of the siege.

The fall of the seven fortified cities provided only brief relief for Alexander. News soon arrived that Spitamenes had besieged the Macedonian garrison in Samarkand. Alexander was occupied preparing his move against the main Scythian forces, and so he dispatched a force of sixty Companions, 800 mercenary cavalry and 1,500 mercenary infantry to relieve those under siege at Samarkand. Alexander faced two main challenges in relation to the Scythians. Firstly, he would have to get his forces across the Jaxartes in the face of Scythian bowmen. Then, if he could create a bridgehead and establish a presence on the opposite bank, the next challenge was to bring the Scythian horsemen to battle in a concentrated fashion. The operations to achieve these goals once again reveal the superiority of a well-organised and experienced military force facing less competent foes.²¹ In order to suppress the threat from the enemy's archers on the opposing bank, Alexander had catapults deployed on boats and thereby outgunned the Scythians with firepower. With the enemy pinned down, Alexander's slingers and archers could establish a bridgehead and provide covering fire as the phalangites and cavalry disembarked.

The first objective had been achieved. Now the more difficult challenge had to be faced: how to bring a mobile and wily foe to battle. Alexander's answer to this conundrum was to offer the enemy some tempting bait in order to lure them into a trap. Alexander and his father had experience of Scythian tactics in their European campaigns.²² The Scythian horsemen tended to conduct a series of hit-and-run attacks. The chosen method to achieve this was to ride round the enemy in a circular fashion whilst attriting them with arrows. To neutralise this tactic Alexander sent forward the Greek mercenary cavalry with four squadrons of lancers. As anticipated, the Scythians took the bait and employed their traditional tactics. From the Scythians' perspective it must have appeared that Alexander's light troops, deployed in line, were merely looking on helplessly at

these events. In fact, these forces were acting as a screen for the deployment of the Companion cavalry.²³ As the enemy continued to circle the Greek cavalry and lancers, Alexander launched the Companion cavalry in three *hipparchies*. One *hipparchy* assaulted the Scythian circle head on, whilst the other two attacked the sides of the enemy's formation. Thus, the Scythians' tactical formation was thrown into confusion and they fled the field of battle. The loss of 1,000 men, compared to Macedonian losses of sixty cavalry and 100 infantry, compelled the Scythian king to submit to Alexander's rule, and indeed claim that the rebellion was not officially sanctioned. Alexander had achieved another decisive victory through knowledge of his enemy, an ingenious tactical response, and forces capable of carrying out such a manoeuvre. This again shows the relationship between the instrument and the commander. A serious deficiency in either could prove fateful. Thankfully for the Macedonians, they excelled in both elements of this equation. The subjugation of the Scythians also displays just how potent an instrument of policy military force can be in the right circumstances. One decisive battle was sufficient to subdue this dangerous enemy.

With the capture of the fortified cities and the defeat of the Scythian forces massing to the north, Alexander had pacified northern Sogdiana. However, not everything was going his way. Just as he was enjoying his victory over the Scythians, news reached him on the fate of the relief force he had sent to Samarkand. Having lifted the siege of the garrison there, the relief force had been almost wiped out when it was ambushed in the pursuit of Spitamenes. Of the original force, only forty cavalry and 300 infantry had survived. Conscious of the need to maintain the morale of his own men, and to limit the propaganda value of these losses to his enemy, 'Alexander made the prudent decision to conceal this disaster, and threatened those who had come from the battle with death if they divulged what had happened'.²⁴

Alexander took the elite of his army, composed of half of the Companion cavalry, Agrianians, archers and commando infantry, on a rapid march to Samarkand. It is reported that the force kept up a remarkable pace and covered the 278 kilometres in just over three days. As Alexander approached the besieged city, Spitamenes fled with his forces. Unable to come to grips with the enemy, Alexander set about quashing the rebellious spirit amongst the local inhabitants. His forces were now in the well-populated western part of Sogdiana, and began devastating the area. The main fortresses were captured and their populations massacred or enslaved. As Alexander had begun to face more prolonged resistance to his rule, his campaigns were becoming more brutal and less subtle in their strategies. In this instance, Alexander's actions represent the practical realisation of a truism expressed by Colin S. Gray: 'The winning of hearts and minds may be a superior approach to quelling irregulars, but ... military and police terror is swifter and can be effective. The proposition that repression never succeeds is, unfortunately, a myth'.²⁵ Alexander's actions were clearly proving this very point, either through the coercive effects of his violence or by simply killing off the resource base of his enemies. As the weather worsened towards the end of 329, the army was withdrawn into winter quarters at Bactra.

Whilst at Bactra, Alexander received much needed reinforcements with 2,600 cavalry and 19,400 infantry arriving. The majority of these troops were Greek mercenaries, but they also included cavalry and infantry from both Lycia and Syria.²⁶

Conscious of the need to prevent the spread of rebellion any further, Alexander began his operations in 328 as soon as the conditions permitted. Craterus was left with forces to garrison Bactria, whilst Alexander restarted the campaign in Sogdiana. With pockets of resistance across the satrapy, Alexander divided his army there into five mobile detachments. The king commanded one detachment, whilst Coenus and Artabazus, Hephæstion, Ptolemy and Perdikkas commanded the others. Their tasks were those of classic counterinsurgency: search and destroy missions against the rebels, with pacification of an area as the ultimate objective. What seems to have been missing from Alexander's strategy was a concerted hearts and minds policy. Throughout the summer of 328 Spitamenes continued to undermine Alexander's control of the region. He did this by engaging in hit-and-run tactics, with his Massagetae allies, against Macedonian forts and forces.

Despite these setbacks, over the year the tide began to turn in Alexander's favour. A number of Bactrian and Sogdian cavalymen elected to join Alexander's ranks. It seemed that they yearned the stability that Alexander's rule offered, rather than a continuation of the conflict.²⁷ In this sense, although Alexander had not engaged in a hearts and minds campaign, acceptance of his rule did offer certain benefits. In addition, the establishment of settlements and a series of hill forts had essentially sealed off Bactria from Spitamenes. The rebel leader was now confined to operating largely in Sogdiana. To all intents and purposes Alexander had isolated the theatre of operations. This is an important objective to achieve in a counterinsurgency campaign, as it makes the problem more manageable and contained. The United States never managed to achieve this during their war in Vietnam.²⁸

As the next winter approached, Alexander deployed Coenus to the north with a force of 400 Companion cavalry, mounted javelin men, Bactrian and Sogdian cavalry and two brigades of phalanx. Coenus was given the task of intercepting any raiding parties coming from the north. It was not long before Spitamenes presented Coenus with a golden opportunity to fulfil his mission. The rebel leader invaded Sogdiana with a force that included 3,000 of his Massagetae allies. Once again, Alexander's forces were able to bring the elusive enemy to battle, and during fierce fighting Spitamenes' forces suffered the loss of 800 cavalry, before fleeing back into the desert. Spitamenes' allies were quickly losing faith in his leadership. And, when they thought Alexander himself was leading a force against them they killed Spitamenes and delivered his head to the Macedonian king. Alexander's constant military pressure had forced his enemies to rid him of a troublesome opponent.

With the death of Spitamenes, the rebellion was rapidly losing any momentum it had left. However, a number of the rebels had taken refuge at the 'Sogdian Rock', a supposedly impregnable natural fortress atop a sheer rock face. Like the

Romans at Masada, Alexander wanted to make it clear that those who opposed him could never escape his relentless pursuit. If he could take the Sogdian Rock, the symbolism of that seemingly impossible act could extinguish the fire of rebellion once and for all. In essence, this would send a message to Alexander's enemies that resistance was futile. The Sogdians made the mistake of goading Alexander by claiming that he would need 'flying men' to be able to breach the defences of their citadel. Alexander provided the next best thing, by assaulting the Rock with 300 volunteers trained in mountaineering. Although thirty of their number fell to their deaths, the troops scaled the rock face at night and by dawn had unfurled flags on the summit. The Sogdians assumed a considerable force had breached their defences and surrendered. Military force does not always have to be used in large numbers to achieve its goals. A well-orchestrated raid by minimal forces can have disproportionate effects on the will of the enemy. In addition, Alexander had displayed an ability to overcome seemingly impassable geographic obstacles.

Alexander's approach to counterinsurgency (COIN) clearly has distinct differences from modern western doctrine. The modern approach appears to be based upon a set of principles found in Robert Thompson's seminal work *Defeating Communist Insurgency: Experiences from Malaya and Vietnam*. In particular, Thompson identified 'five basic principles which must be followed and within which all government measures must fall'.²⁹ Three of the five principles represent sensible advice for any COIN campaign. The three in question are: (1) have the clear political objective of establishing a stable and united country; (2) the government must have an overall plan, which takes account of a range of factors, including economic, social, security, administrative, etc.; (3) the government must secure its base areas. It is difficult to argue with the wisdom of these three principles. However, the remaining two principles are more problematic, and may be responsible for some of the difficulties facing modern COIN practice. In the first instance, Thompson states that the government must always operate within the law. Secondly, he argues that 'the government must give priority to defeating the political subversion, not the guerrillas'.³⁰ These two latter principles do not accurately reflect Alexander's approach, and may be out of kilter with the inescapable logic of COIN as an act of strategy.

The logic in question is constructed of two elements. Firstly, it is crucial to remember that COIN is still a form of war, and therefore operates in a strategic context. Too often, modern writings on COIN focus on the competition in governance and ignore the military dimension, whereas, in fact, the insurgent forces still represent a military foe to be defeated. If enemy forces remain, and especially if they are ceded the initiative, they can spoil much of the work aimed at creating stability. Secondly, where there is a competition between the insurgent and COIN forces, it is a competition in authority, not popularity.³¹ In contrast to this logic, modern COIN doctrine is firmly focused on the need for legitimacy and popularity.³² For example, Steven Metz notes that the 1990 doctrine manual, Army and Air Force doctrine in FM 100-20/AFM 3-20, *Military Operations in*

Low-Intensity Conflict discusses success in low-intensity conflict as emanating from ‘adherence to five “imperatives”: political dominance, unity of effort, adaptability, legitimacy, and perseverance. The pivotal concept was *legitimacy*’.³³ Whilst legitimacy is often an important element in a COIN campaign, the concept of legitimacy is too often mistaken for popularity. This can be seen explicitly in *Field Manual 3–07, Stability Operations and Support Operations* (2003), which states: ‘Success in counterinsurgency goes to the party that achieves the greater popular support’.³⁴ Whilst legitimacy and popularity may be important, although not vital, components of authority, the quest for them should not be allowed to overawe other aspects of the campaign.

In fact, rather than emanating from legitimacy and popularity, a sense of authority often emerges from military pre-eminence. The British irregular warfare theorist Charles Callwell was clear about the significance of this: ‘Prestige is everything in such warfare’.³⁵ To this end, during the successful British COIN campaign in Dhofar military force was used ‘to focus their [local population] minds. The population had to be convinced of the power of the government and of the ability of the security forces to inflict punishment if support and assistance is extended to the rebels’.³⁶ Similarly, Julian Paget, in the classic work *Counter-Insurgency Campaigning*, concludes that in order to win the support of the local population ‘the Government must demonstrate its determination and its ability to defeat the insurgents’.³⁷ Likewise, Ralph Peters convincingly claims that ‘[s]uccess breeds success. Everybody loves a winner’.³⁸ This reality is even recognised by Steven Metz in a paper generally dominated by the latest buzzwords and the concern for self-restraint based on ethical considerations: ‘it is less an assessment of a preferred future that drives insurgents or insurgent supporters than an assessment of who will prevail – the insurgents or the regime’.³⁹ In addition, as Callwell further notes, perceptions of success can have a significant effect on potential enemy recruits: ‘[Insurgent ranks] swell and contract according to the moral effect which is produced ... Irregular armies always count many waverers, there are always crowds of warriors ready to flock to the standard in case of victory’.⁴⁰ Thus, being the most obviously successful of the belligerents in a conflict will inspire support, or at least acquiescence from the local population. Equally, it may deter those contemplating adding their active support to the insurgents. On this point Peters bemoans the lack of obvious American power in Iraq: ‘in the weeks immediately following the toppling of the regime, crucial portions of the population never really felt America’s power’.⁴¹

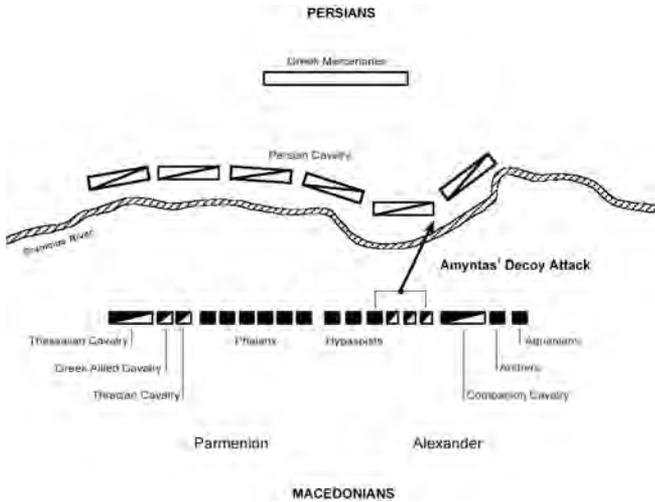
Alexander’s success in COIN can be attributed to the fact that he managed to balance a number of potentially conflicting elements. In the first instance, Alexander offered stability, security, and a degree of economic development (through his city-building projects). However, Alexander was not engaged in a popularity contest. Although he understood the benefits of achieving his objectives without resorting to military force, he was also cognisant of the role force plays in COIN. Aggressive operations enabled the Macedonians slowly to erode the insurgents’ strength and successfully break their will. This display of military pre-eminence underpinned Alexander’s claim to authority in the region, and

thereby was an important factor in the decision-making of the local populations to accept his authority. Finally, force was used to punish those who joined the rebellion, and in turn had a coercive and deterrent effect on the potential support base of the insurgency. Whilst elements of Alexander's approach to COIN may seem brutal and counterproductive from a modern perspective it clearly worked. And, although we cannot take his approach out of the context of the time, it does at least suggest that the validity of Thompson's five principles, and thereby the modern approach to COIN, requires further examination. A preliminary analysis would suggest that the modern approach to COIN ignores some of the core elements of strategy, especially those concerning defeat of the enemy forces.

Lesson 7: what military genius does is best⁴²

Thus far it has been noted that Alexander benefited from having a professional and flexible force at his disposal. However, as good as that force was, it could still be squandered if used incorrectly. Thus, when seeking to understand best practice in strategy, a great deal of emphasis must be placed on the commander. Command is not just about making the big decisions, important though they are; the details really matter in command. In many respects, the lessons we can learn from Alexander about command are rather straightforward, but crucial, and therefore worthy of attention. Whilst command is best thought of as a product of the combination of the commander and the process of command, it is difficult not to conclude that in the case of Alexander the emphasis was very much on the man himself. Alexander is the epitome of Clausewitz's military genius. Particularly worthy of note are Alexander's moral courage, his cognitive abilities, determination, and his understanding of the relationship between policy and the military instrument. Perhaps even more notable however is Alexander's *coup d'oeil*. The Macedonian's ability to perceive the decisive point at the decisive moment is outstanding. A prime example of Alexander's command abilities is the battle of the Granicus, his first great clash of arms on Persian soil.

Within three days of crossing the Hellespont Alexander was in the Granicus plain, taking with him a force composed primarily of his elite Macedonian forces numbering 13,000 infantry and 5,100 cavalry. Faced with the young king and his invasion force the Persian commanders had been considering two options. The Greek mercenary general Memnon, in the employ of Persia, proposed a scorched-earth policy. This plan seemed to hold a great deal of promise.⁴³ Alexander would soon run short of supplies, and in the pre-harvest period the burning of the crops would deny the invading Macedonian ruler an alternative source of sustenance. Understandably, the local satraps, led by Arsites (satrap of Hellespontine Phrygia), balked at the prospect of devastating their own land. There was also an element of distrust of Memnon amongst the other Persian generals. The alternative option was to risk an early pitched battle with Alexander. The problem with this option was the relative inferiority of the Persian infantry. Neither option looked especially inviting. Nonetheless, with the enemy now in their territory, a decision had to be made. However, the process of



decision-making amongst the Persian high command was cumbersome and problematic. Amongst the multiple commanders there was no clear hierarchy of authority; policy was decided on the basis of a majority vote.

The process by which strategic decisions are made is crucial. It is not only important that the right decision is made, but that the right decision is made and acted upon quickly enough. The American Second World War commander General George Patton captures this well when he stated that ‘a good plan violently executed now is better than a perfect plan next week’.⁴⁴ The Persians had a number of problems in this respect. Not only was their decision-making process slow and cumbersome, it was also liable to produce very average decisions. The nineteenth-century general and theorist Baron Antoine Henri de Jomini convincingly claims that decisions made by committee are often limited to the lowest common denominator.⁴⁵ For Jomini, the ideal was to have the decision making process centralised in the hands of a military genius like his own commander-in-chief, Napoleon.⁴⁶ The combination of mental and moral characteristics required for outstanding command is rare. This ensures that military geniuses are few and far between. Unfortunately for the Persians, they were facing one of these rare creatures in Alexander. Alexander had the ability to make the right decision and act upon it quickly. This was true at the tactical, operational and strategic levels of war.

The process by which decisions are made can be expressed through the ‘OODA Loop’.⁴⁷ This theory describes the sequence of actions through which decisions are made relative to the enemy. First comes observation of the situation; then one orientates oneself, makes a decision, and finally acts upon it. This idea was first developed by Colonel John Boyd as an analytical tool for understanding the tactical performance of fighter pilots in aerial combat.

However, it has become apparent that the OODA Loop is applicable across all of the levels of war. As we analyse Alexander's campaigns, we will see that in most circumstances his OODA Loop operated more quickly than that of his opponents, and therefore he can be said to be operating inside the decision cycle of his enemies. This produces a result in which Alexander had the initiative and therefore to a large degree was able to dictate the flow of a battle or campaign.

The Persians rejected Memnon's advice and made the decision to face Alexander in a pitched battle. It is easy in retrospect to criticise the decision to face Alexander in battle with forces of inferior quality. However, on balance it was probably worth a gamble. The Persians had never faced Alexander in the field, and therefore they had no direct experience of his qualities as a commander. In addition, the Persians had enjoyed some substantial successes against the Macedonian vanguard force in 335. The Macedonian campaign in Asia had started well in 336 during Philip's reign. The presence of Philip's forces had encouraged a series of democratic rebellions against Persian rule in the occupied Greek cities. However, towards the end of 336 Memnon, in command of mercenary forces, began to turn the tide in the war and gradually reduced the area under Macedonian influence. His successes included the defeat of a numerically superior force at Magnesia. On the back of these successes there was a mobilisation of the satrapies in Asia Minor, and so Persian forces in the region began to increase in number and concentrate their efforts. Outnumbered, the Macedonian commander Calas was forced to retreat towards the Hellespont. Thus, although the Persians understood that the arrival of Alexander's forces represented the main Macedonian invasion, the successes of 335 must have given them a degree of confidence for the coming battles. In such circumstances, it does not seem unreasonable to chance one's arm against the invading forces under the command of a young king who was something of an unknown quantity.

There was another compelling reason to seek an early battle, and that was to prevent Alexander from establishing himself in the Persian Empire. Left alone, Alexander would be able to gather local support to his cause and establish a military infrastructure such as bases of operation and lines of communication. On the other hand, an early setback for Alexander might dissuade the locals from accepting his hegemony and, more importantly, might break the cohesion of the League of Corinth in its support of the campaign. It was clear from the previous year that there was a degree of dissatisfaction with Alexander's rule within Greece. Ill-founded rumours of Alexander's death in the Balkans had been enough to inspire a rebellion amongst the Greek city-states; a defeat in battle may have the same effect. In this sense, the cohesion of the League may have represented one of Alexander's centres of gravity. It was therefore logical to attempt to place this particular vulnerability under pressure. With the resources of an entire empire at their disposal, the Persians could risk an army in an early attempt to bring Alexander's invasion to a premature end.

After concentrating their forces at Zelea, the Persian commanders decided to make their stand against Alexander on the eastern side of the river Granicus. Conscious of the inferiority of their infantry forces relative to Alexander's, the

Persians needed a strong defensive position. The Granicus was a good choice for the Persians in that it held a number of operational and tactical advantages. In the first instance it drew Alexander away from Sardis (the satrapal centre of the region of Lydia, which lay on the Royal Road that ran all the way through to the centre of the Persian Empire at Susa), blocked the approach to the Asian Gates (a pass through which the eastward road ran), and could not be turned on either flank. And, at the tactical level, although the river could be forded in places its steep banks afforded a good defensive platform to operate from. It has been estimated that the banks would have been 3–4 metres in height at the time of the battle. Such an obstacle could potentially dislocate the mighty Macedonian phalanx as it advanced on the waiting Persians. The phalanx was the foundation upon which Alexander's battle plan rested. If that solid tactical base could be broken, then the rest of his forces would become vulnerable on their flanks and in the rear.

Alexander arrived at the battlefield in mid-to-late afternoon. There then ensued a famous, possibly fictional, exchange between Alexander and his second in command Parmenion. The latter, conscious of the strong defensive characteristics of the enemy's position, advised against an attack before night-fall. Parmenion hoped that this pause would give the Persians time to withdraw. However, Alexander had noticed a flaw in the Persians' position and wished to exploit it before it was too late. At the Granicus Alexander faced an infantry force of approximately 20,000 Greek mercenaries, and a cavalry force of similar size. Whilst the infantry were not particularly renowned, the Persian cavalry was excellent. This elite force was drawn from across the empire and was commanded by members of Darius' family and entourage: 'The Kinsmen'.

The flaw that had attracted Alexander's attention related to the disposition of the Persian forces. There has been much speculation about both the dispositions of the Persian forces at the Granicus and the reasons for such a deployment. The most obvious deployment for the above forces would have been to place the heavy infantry at the top of the river bank so as to meet the Macedonian forces with a solid line of spears and take advantage of the higher ground. The cavalry should have been kept in reserve on the open plains behind the river. Their role would have been to mount a charge against any of Alexander's forces that broke through the Persian lines along the river bank. In fact, the actual deployment was the exact reverse. The elite Persian cavalry was placed on top of the bank, with the Greek mercenaries held back in reserve. One theory put forward for this decision is based on social factors. Fuller claims that a sense of social superiority compelled the cavalry to take pride of place at the front of the defensive position.⁴⁸ However, a more compelling rationale was that the Persian generals, fielding an inferior force and realising the significance of Alexander to the entire invasion campaign, focused their plan on killing the young Macedonian king. The best way to attempt to neutralise this centre of gravity seemed to be to place the best Persian forces at the front. The cavalry also seemed best able to deal with the Companion cavalry, which Alexander would inevitably lead himself. Whatever the reason for this tactical error, Alexander had noticed it and moved swiftly to take advantage of the immobilisation of the Greek mercenaries.

Across the river from the Persians Alexander drew up his forces in the following order. The six battalions of the phalanx took the centre. To the right of the phalanx were one of the central ingredients of Alexander's combined arms tactics: Nicanor's *hypaspists*. Moving further to the right, alongside Nicanor's forces, was a combined force under Amyntas. This consisted of lancers (*prodromoi*), Paeonian light horse, and an ile of the Companion cavalry. A battalion of hypaspists, the 'Royal Brigade', strengthened this force. Completing the right wing of the army were the Companion cavalry, and finally archers under Clearchus and the Agrianians under Attalus. To the left of the six central battalions of the phalanx Parmenion commanded the Thracian, Greek and Thessalian cavalry. In all, Alexander fielded a force of approximately 13,000 infantry and 5,000 cavalry. His line stretched for two and a half miles.

As the two forces faced each other across the river, the Persians expected Alexander to attack the left of their line. Instead, Alexander would focus his main effort on the Persians' centre left. However, before Alexander led the Companion cavalry in the decisive assault, he needed to deceive the Persians of his real intent and draw some of the elite Persian cavalry away from the centre. This is where Amyntas' force played its crucial and costly role. The objective given to Amyntas was to cross the river and forge up the bank towards the left of the Persian line. With this attack Amyntas would hopefully stretch the Persian line to the left and occupy the attention of the enemy's cavalry in that sector. This operation would then prevent those Persian forces engaged from interfering with the crossing of Alexander's forces towards the centre left of the Persian line. This was a crucial undertaking. Perhaps the greatest threat to Alexander's plan was that his forces could be mauled whilst trying to ford the river. Therefore, Amyntas had been given a great deal of responsibility. However, with this honour came the knowledge that he was vastly outnumbered and faced the cream of the Persian cavalry under the command of Memnon himself. In addition to these disadvantages, Amyntas was initially fighting from the river itself and up an incline towards his enemy. Not surprisingly the Persian spears inflicted heavy casualties on the Macedonians. Nonetheless, Amyntas' men had done their job, and left the way open for the main effort.

In congruence with the heroic tradition of the times, Alexander led the assault on the Persians' centre left and was bedecked in his finery.⁴⁹ The start of the attack was heralded by the blast of trumpets and shouts of 'Engalius', the Homeric Greek god of war. Alexander and his Royal Squadron led the Companion cavalry in the attack. With them were two battalions of *hypaspists* and three battalions of the phalanx. The king led his forces in an oblique charge at the enemy. Initially, as the two forces clashed the battle resembled a close infantry struggle, albeit conducted with cavalry forces. In this bloody struggle Alexander's men had the aims of pushing the Persian cavalry back from the river bank and then creating a bridgehead. In contrast, the Persians sought to force the Macedonians back into the river where they could slaughter them. Although the terrain was against the Macedonians, they had some significant compensatory advantages. Aside from Alexander himself, they had a distinct technological

edge over their foe. The Persian cavalry were armed only with short javelins, and, as Arrian describes, this gave the Macedonians ‘the advantage of the long cornel-wood spear’.⁵⁰

The battle of the Granicus provides us with an early example of both the advantages and limitations inherent in Alexander’s style of command. From a cultural perspective the young king had to risk his own life by directly leading the assault.⁵¹ This was perhaps particularly important for a Macedonian ruler who had faced early opposition in Greece to his rule. However, Alexander very nearly paid the ultimate price for his heroic leadership on that summer afternoon at the Granicus. His distinctive presence on the battlefield certainly fired the morale of his own men, but it also made him an obvious and tempting target for his foes. In classical battles the slaying of a ruler would often signal defeat. On this occasion, during the close-quarter combat Alexander had already gone through two spears before he was presented with a third by Demaratus the Corinthian. Upon receiving his new weapon Alexander noticed Mithridates (the son-in-law of Darius) leading a wedge of cavalry in his direction. Immediately, Alexander engaged, and felled him with a blow to the face. Alexander was now in the thick of the battle. As he dispatched Mithridates, Rhoesaces, another Persian leader, struck Alexander on the head with a scimitar, shearing off part of his helmet. Now fighting for his very survival, and perhaps that of the entire campaign, Alexander swiftly turned and thrust Rhoesaces through the breast with his spear. In the *mêlée*, another Persian general, Spithridates, was in the rear of Alexander and raised his scimitar to slay the Macedonian king. At that very moment, luck played its part in favour of Alexander. Seconds from death, Alexander was saved by Cleitus the Black, commander of the Royal Ile, who struck Spithridates and severed his sword arm.⁵² Not only had Alexander been saved, but also the battle had reached its decisive moment. The loss of these divisional leaders decapitated the Persian command and control, and dealt a severe blow to the entire Persian force. The Persian centre began to collapse in the face of the assault. In response, the wings of the Persian force also began to flee the field of battle.

In the original accounts of the battle there is little mention of the forces under Parmenion on the Macedonian left. However, it seems that the forces under Parmenion had successfully held the flanking Persian cavalry in that sector of the battlefield. As the battle drew to its climax, with the majority of the Persian forces fleeing the battlefield, the Greek mercenaries in Persian employ stood their ground and asked for quarter. Alexander, conscious of the need to assert his authority and deter those Greeks tempted to fight for the Persians in the future, refused their request. Instead, he ordered the *hypaspists* and phalanx to launch a frontal assault whilst the cavalry attacked the flank and rear. During this final *mêlée* of the battle Alexander’s horse was killed under him, again demonstrating the risks of his approach to leadership. Nonetheless, of the 20,000 mercenaries engaged, 18,000 were killed and the remaining 2,000 were sent to Macedonia into slavery. The records of the total losses are somewhat vague in the historical sources. However, the most reliable ones indicate that Persian

losses, aside from the Greek mercenaries, were limited due to the fact that there was no pursuit.⁵³ Nonetheless, their cavalry losses were still approximately 1,000. This compares to Macedonian losses of twenty-five Companions, sixty other cavalry, and thirty infantrymen. The most significant losses for the Persians were amongst their leadership: Spithridates, satrap of Lydia; Mithrobazarnes, satrap of Cappadocia; Mithridates, son-in-law of Darius; and Omares, commander of the mercenaries. After the battle Arsites, satrap of Helle-spontine-Phrygia, committed suicide.

In the aftermath of the victory Alexander's leadership skills and statesmanship are again evident. He made a point of visiting the wounded troops and allowed them to recount their heroic deeds to him. The Roman theorist Vegetius understood well the significance of such actions: 'an army gains courage and fighting spirit from advice and encouragement from their general'.⁵⁴ Field-Marshal Montgomery also notes the significance of the relationship between the leader and the led; for him command is fundamentally about trust.⁵⁵ In essence, as S. L. A. Marshall notes, a commander cannot just concern himself with big operational and strategic manoeuvres, he must also pay considerable attention to the welfare of his men.⁵⁶

There are a number of factors that may explain Alexander's victory at the Granicus. We can look to the initial Persian mistake of deploying their cavalry along the river bank. However, whilst there is some validity in criticising such a deployment, if the Persian plan was indeed designed to slay Alexander by facing him with their elite forces, then clearly it very nearly succeeded. Nonetheless, we can say that the chosen deployment did mean that once the first line had been breached there was no cavalry to charge the Macedonians at pace and drive them back into the river. This meant that the Greek mercenaries essentially played no role in deciding the outcome of the battle. In contrast, once the Persian cavalry had been defeated, the Greek mercenaries were left isolated and had to await their fate. On this point there seems to have been a serious lack of coordination amongst the Persian forces. Persian tactics at the Granicus were in sharp contrast to the combined-arms operations of the Macedonians.

Clearly, much of the victory can be attributed to Alexander's military genius and the forces at his disposal. Particularly worthy of note is Alexander's deception of the enemy. By stretching the Persian line to the left with Amyntas' attack, he had opened the door for the decisive assault on the centre left of the enemy's line. However, such a deception will only be profitable if you can act before the enemy can readjust and counter your main effort. For this, Alexander's forces were ideally designed. They exhibited remarkable speed at both the operational and tactical levels. On this occasion, Alexander acted with such speed that he was able to deal with the enemy's cavalry and infantry separately,; and indeed deal with different sectors of the Persian front line in turn. All of the above was only possible due to proficiency in the coordination of combined arms tactics. Obviously, the Companion cavalry could advance rapidly. However, the integrity of the Macedonian line was ensured by the *hypaspists* and the discipline of the phalanx. The *hypaspists* were able to maintain tactical

contact with both the cavalry and phalanx battalions. Together, these two infantry units ensured that the enemy were not presented with gaps in the Macedonian line that they could exploit. The result was a rapid, cohesive and continuous assault on the Persian line. Finally, we should draw attention to Alexander's *coup d'oeil*. In military terms, this refers to the ability of a general to perceive the decisive point and/or moment in a battle quickly.⁵⁷ At the Granicus Alexander had noted the vulnerability in the disposition of the Persian forces. He had also identified the decisive point in the Persian line at which his main attack would be targeted. However, in order to be able to exploit this point fully, he had to expose it with Amyntas' assault on the Persian left. Once Amyntas' men were engaged, Alexander had to choose the right moment at which to launch his own attack. Too early, and the plan would be revealed before the enemy had committed forces to the left; too late, and the enemy cavalry on the left would have time to deal with Amyntas and then rejoin in the defence of the centre. Alexander seemed to get his timing just right, for the enemy centre collapsed fairly rapidly, and with it the entire Persian line. In the first battlefield test in Asia, the commander and his army had worked effectively with each other.

The Granicus reveals how significant Alexander was in the success of the campaigns. However, like many great commanders Alexander realised that he could not shoulder the absolute responsibility for command alone. In this sense, the campaigns also highlight the significance of having trusted subordinates (such as Parmenion and Craterus), and the importance of their role within a system of mission command. Although the responsibility of command was largely centralised in Alexander, he often had to delegate responsibility to his generals. This was most clearly the case in Bactria and Sogdiana, but was also an essential element of Alexander's battle tactics. In the three great battles against the Persian army Alexander's entire plan rested upon the ability of Parmenion to hold the left of the line, often under heavy assault, whilst the king launched the *coup de grace*.

When we consider leadership, Alexander has some contradictory lessons to teach us. At times Alexander's leadership was exemplary. He led by example, shared the hardships of his men, and showed concern for their well-being. However, in line with his strategic performance, Alexander's mastery of leadership diminished as he headed further east. If, as Montgomery noted, leadership is about trust, then this central element was seriously lacking between the commander and elements of his men in India. By this time the relationship between the king and his Macedonian veterans had deteriorated. As noted in the previous chapter, this was partially due to Alexander's promotion of Persians and their manners in the army and at court. However, trust was also undermined by events such as Alexander's assassination of Parmenion following an attempted coup involving his son Philotas. These tensions finally spilled over in India at the river Beas, where sections of the army mutinied and refused to advance further.⁵⁸

Despite these later flaws in Alexander's command, in the final analysis we can conclude that Alexander's process of command was ideally suited to the

combined-arms approach of his forces. Like all great commanders he communicated his intent clearly to his subordinates. In addition, in the pursuit of successful outcomes Alexander understood the need to delegate responsibilities to these trusted subordinates. This became particularly evident during the counterinsurgency campaign in Bactria and Sogdiana. Faced by a mobile and dispersed foe, Alexander not only reorganised his forces into smaller units, he also reordered his command structure to enable even greater levels of initiative in the lower levels of command. For a warrior king operating in the heroic tradition, this may have been a culturally difficult step to take. Thus, we should not underestimate Alexander's strategic insight, which in this instance may have enabled him to break free from cultural restraints. In the final analysis, despite the undoubted significance of an appropriate command process, Alexander's career compels us to focus on the commander himself. There is clearly no substitute for military genius. Networked command structures (or the latest iteration thereof) may facilitate a more efficient flow of information and thereby enable greater levels of initiative lower down the chain of command, but, as Clausewitz so starkly wrote, what military genius does is best. It is therefore beholden upon military establishments to seek out those geniuses and nurture them.

Lesson 8: details matter

With the dashing figure of Alexander leading decisive cavalry charges at the enemy it is possible mistakenly to perceive his success primarily as a result of the fulfilment of the heroic tradition. One might be forgiven for placing too much emphasis on the motivational force of the young king leading his men on an adventure worthy of the great Greek heroes of literature. However, whilst these characteristics did play some part in the campaigns, more importantly Alexander understood that in war details matter. Alexander did not embark on some romantic, ill-planned adventure. The two related elements that display this lesson most clearly are the intelligence and logistics activities of the Macedonian forces. Alexander's intelligence services provided valuable information about a range of subjects pertinent to the success of the campaigns. These included topographical details, enemy movements, local political structures, and details pertaining to supplies of food and water, to name just four. With limited forces at his disposal, the force multiplier of intelligence was a critical asset for Alexander.

One example that most clearly illustrates the significance of intelligence to Alexander is the episode at the 'Persian Gates' (a narrow pass in the Zagros mountains), on the road to the capital Persepolis. The Gates were held by Ariobarzanes, the satrap of Persis, commanding a substantial force of 40,000 infantry and 700 cavalry. Alexander's dilemma was twofold. He had to defeat the enemy forces, but do so in such a way that they were unable to fall back to Persepolis. Alexander was intent on seizing the Persian treasury before his enemy had the chance to remove it. Therefore, a frontal assault on Ariobarzanes in the pass would not only risk heavy casualties but would also afford the

Persian commander the opportunity for a steady retreat back to the capital. There was a main road to Persepolis, but this was not an option for Alexander's approach. This route would leave him significantly further from the capital than Ariobarzanes, and once Alexander's enemy was alerted to the Macedonian's intentions he would be able to win the race to the waiting treasury. Thus, faced once again with a challenging operational problem, Alexander relied upon his guile and the speed of his forces to outmanoeuvre the enemy. However, in the event, everything relied upon an intelligence breakthrough that enabled the outflanking manoeuvre to take place effectively.

Alexander's first task was to lighten his offensive forces. To achieve this, he sent Parmenion with the baggage and some of the heavier troops, such as the Thessalian cavalry, along the main road, whilst Alexander himself took the Companion cavalry, Macedonian infantry, Agrianians and archers to outflank the enemy via a mountain path. Initially, all seemed to go well. Alexander's forces made good time and appeared to have outflanked the enemy. However, Ariobarzanes was prepared for such an eventuality and had arranged an ambush for the Macedonians. Alexander's men found themselves pinned down in a deep gorge, with their route forward blocked by a purpose-built wall defended by the enemy. Perhaps displaying an unusual degree of impetuosity, Alexander ordered a frontal assault on the wall. However, on this occasion the well-prepared enemy, armed with catapults, threw his men back. After sustaining heavy casualties Alexander withdrew his forces and camped nearby. Alexander now had to act quickly. His fear now was that Ariobarzanes would continue to hold the Persian Gates with a minimal force, whilst dispatching the majority of his army back to the capital, in which case they could seize the treasury and engage Parmenion's contingent. Thus, Alexander needed another route by which to outmanoeuvre Ariobarzanes. As Sun Tzu writes: 'Now the reason the enlightened prince and the wise general conquer the enemy whenever they move and their achievements surpass those of the ordinary men is foreknowledge'.⁵⁹ Luckily, amongst the enemy prisoners captured in the recent action was a man with shepherding experience in the local area. With the inducement of a substantial reward, the shepherd divulged information about an extremely narrow and difficult path through a densely wooded area.⁶⁰ This path would enable the Macedonian to outflank his enemy. Despite the substantial challenges of moving military forces along such a path, Alexander must have decided that it was his only real choice.

In the action to come, Alexander once again revealed himself to be astute at the art of deception. He left Craterus at the camp with two battalions of phalanx, cavalry and archers. Of course, it was imperative that Ariobarzanes did not become aware of the fact that Alexander was manoeuvring to his rear. Should he discern Alexander's movements, not only would he be able to disrupt the outflanking operation but he could also attempt an attack on Craterus' weakened force. Here we see the dangers involved in the bold operations Alexander so often used. There was always a danger that if it went wrong the Macedonian forces could be defeated in detail. As Alexander set off on his precipitous outflanking operation, he had effectively split his forces into three sections. To

distract Ariobarzanes from his real intentions, Alexander instructed Craterus to keep a full complement of campfires burning and to keep the enemy on their toes. The route taken by Alexander was steep, narrow, overgrown and approximately eleven miles in length. Yet, the young Macedonian king proved that neither terrain nor enemy would stand in his way. Before the forces were finally in position for the battle, Alexander detached even more of his men. He sent Amyntas, Philotas and Coenus with most of the cavalry and some infantry to bridge the river Araxes at a point between the Persian Gates and Persepolis. Why did Alexander split his forces even further? Fuller makes a reasonable guess that the motivation behind this was to ensure that if the attack on Ariobarzanes went badly, he could quickly race to Persepolis and still capture the treasury.⁶¹ Bosworth, citing Curtius, alternatively claims that this detachment's role was not to bridge the river but actually to act as another assault force to compound the confusion in the Persian camp once the attacks began.⁶²

Finally, after a long and difficult march Alexander's forces were in position to the rear of the enemy. Alexander's forces cleared three Persian fortifications before attacking the main enemy camp. A bugle signalled for Craterus to begin an assault on the wall in the gorge. This meant that the Persians would be assailed from two sides simultaneously. The enemy was taken completely by surprise; their cohesion was shattered and their morale broken. As they tried to escape many of the Persians ran into a force of 3,000 infantrymen, under the command of Ptolemy, who were guarding one of the escape routes. By all accounts, the Persians suffered enormous casualties. Although he escaped this initial assault with a contingent of his men, Ariobarzanes was eventually killed in later fighting around Persepolis. By an outstanding act of deception, and an equally remarkable manoeuvre, Alexander had inflicted a crushing defeat on an enemy who initially seemed to hold a significant advantage. To achieve this, Alexander had utilised a local source of intelligence, and was able to rely upon his subordinates to fulfil the tasks asked of them. Alexander had displayed an ability to use geography to his advantage. In addition, in this example he also displays the advantage of the indirect approach to strategy: 'Thus march by an indirect route and divert the enemy by enticing him with a bait'.⁶³

Alexander's intelligence activities also supported the remarkable logistic operations of his army. In fact, Engels proclaims that it was because of advance intelligence that 'his army [was] able to successfully cross the same regions in which other armies lost many troops through starvation and dehydration alone'.⁶⁴ Alexander and his father had created a far more mobile force than had previously been seen in Greek warfare. However, in order to maintain such a force in the vast expanse of the Persian Empire Alexander had to spend a great deal of effort on his logistics. Indeed, Engels convincingly claims that the campaigns were heavily shaped by logistical demands.⁶⁵ Routes of advance had to be carefully prepared and understood from a supplies perspective. This can be illustrated by Alexander's journey from Persepolis to Ecbatana during the pursuit of Darius. Having reached the former in early February, the departure of the army was delayed for over four months. This delay was not a voluntary undertaking,

but was dictated by the harsh weather in the Zagros mountains, which were not passable in numbers until at least April. Of equal concern was the scarcity of supplies for the 514-mile journey to Ecbatana. This part of the empire lacked any substantial cultivated land. Thus, whilst the main body of the army remained at Persepolis, Alexander took approximately 1,000 cavalry on a campaign to capture any small settlements along the route to establish bases of supply.⁶⁶

To help facilitate Alexander's logistical demands, the army was admirably served by his limited naval forces, which supplied the army's operations along the coasts and via the river network of the empire. Alexander went to great lengths to ensure this support. To this end he had a fleet built in Phoenicia, disassembled and transported across land, to be reassembled to operate on the Euphrates.⁶⁷ To give an indication of the logistical demands of the army, Engels estimates that the cavalry horses alone required 122,000 pounds of grain and forage each day. During the siege of Gaza the sandy terrain provided scarce resources for the army. In particular, water would have been difficult to come by in sufficient amounts. Again, Engels estimates that the besieging army would have required six million gallons of water over the two-month period of the siege.⁶⁸ Put simply, without foreknowledge of the areas into which they would advance, and without the support of an excellent logistics system, the Macedonians would have struggled to maintain the pace and dynamism of their conquest. So significant were the supply needs of the campaign, that Alexander had the satrap of Syria removed because he had failed to provide sufficient supplies for the army.⁶⁹

Lesson 9: Alexander applied the principles of war⁷⁰

When attempting to explain Alexander's success, and thereby learn lessons from it, the most obvious point to make is that Alexander managed to get the most significant elements correct. Alexander had inherited, and later developed further, military forces imbued with professionalism and loyalty; these forces were flexible in the face of the polymorphous character of war. He also ensured that the campaigns were supported with good intelligence and a sophisticated system of logistics. Finally, Alexander himself epitomised the concept of military genius. A fitting way to conclude this chapter on military operations is to analyse Alexander's performance in relation to the principles of war. These principles are at the heart of modern military doctrine, and are said to define sensible military practice.⁷¹ As a way of explaining Alexander's success, it is enlightening to judge his approach to warfare through the conceptual prism of these principles. The nine principles are mass, objective, offensive, surprise, economy of force, manoeuvre, unity of command, security and simplicity.

Although not entirely opposed to dividing his forces when required (as in the Anatolian Plateau and Bactrian campaigns), for the most part Alexander was astute at *massing* his forces, and more importantly massing effect, at the decisive point. Indeed, this was precisely the key to his tactical success against the Persians. Whilst holding a defensive stance on the left, Alexander would concentrate his attack on one section of the Persian line. Such a massing of

offensive energy overwhelmed the Persian forces and their commanders. The principle of *objective* highlights both Alexander's strengths and weaknesses as a strategist. Until the Indian campaign Alexander had maintained clear policy and strategic objectives. As previously noted, this was particularly important in the period following his victory at Issus. However, one of the primary flaws evident during his Indian campaign was the absence of a clear objective. Without a clear end state Alexander appeared to be lurching from one tactical engagement to the next, and thus failed to establish a harmonisation of the levels.

In his work, Clausewitz established the supremacy of the defence, but crucially concluded that every campaign should eventually become *offensive* in nature.⁷² Alexander was almost always single-mindedly offensive in his approach to war. At the tactical level, although there was a defensive element to Alexander's plan (with Parmenion holding the left), the battles were won with a swift, offensive strike. Indeed, in the spirit of the principle of offensive, at all of the levels of strategy Alexander strove to gain and maintain the initiative. The young Macedonian was certainly not a cautious commander. From this, one might conclude that his campaigns teach us to take calculated risks. Nonetheless, one might also note that at Gaugamela Alexander took too much of a risk although his offensive strike still won the day in the end. Despite Alexander's offensive style of warfare we must be careful not to portray him as a one-dimensional commander. Alexander's successes were not just based upon overt frontal assaults. When required, he could also be a master at the art of *surprise*. This attribute is most evident in instances such as the Balkan campaign, the battle before Persopolis, and the assault on Rock Aornos. In his great battles with Darius Alexander's approach was fairly predictable, but in the above-mentioned examples Alexander was often able to achieve victory more cheaply simply by catching his foes unprepared.

The principle of *economy of force* dictates that military capabilities should not be diverted to secondary objectives to the detriment of achieving the primary goals. When judging his campaigns against this principle Alexander's record seems outstanding. Alexander, with his limited resources, had to focus his efforts. Again, this can be seen in the period after Issus, when Alexander could have been tempted to divert a portion of his forces to pursue Darius inland, whilst also continuing with his campaign down the coast. Although, as previously mentioned, Alexander did divide his forces on occasions, this was undertaken to support the main effort. For example, the forces he dispatched under Parmenion on the Anatolian Plateau were tasked with protecting the flank and rear of the main force as it advanced down the Mediterranean coast. Perhaps the most controversial episode in relation to this principle is the siege of Tyre. It has been argued that the seven-month siege was an unnecessary diversion and waste of resources.⁷³ However, in truth the capture of Tyre was an essential action in support of the crucial strategic objective of neutralising Persian naval power. Tyre was a substantial Phoenician port, and thereby represented a significant base of operations and resources for the Persian fleet. In addition, the coercive affects of dealing so emphatically with Tyre's resistance encouraged the rapid subjugation of other ports along the coast. Overall, Alexander appears to have

had a clear set of objectives (especially prior to the Indian campaign), which he pursued with rigour and attention.

It is difficult to find many commanders who could surpass Alexander at *manoeuvre*. When you combine the rapidity of his manoeuvres with his ability to outflank his foes via unexpected routes, it is no wonder that Alexander often fell upon an unprepared enemy. His early campaign in Greece clearly reveals that rapid operational manoeuvre can prove decisive. The rebellious Greek states were simply unprepared when Alexander's forces arrived outside of Thebes. *Unity of command* was perhaps less of an issue in Alexander's day than in the contemporary environment. Unity of command occurred almost by default. Nevertheless, without a shared unified plan of action, even Alexander's relatively simple battleplans could have gone spectacularly wrong. Thus, it was crucial that the intent of the commander was well understood by his subordinates. In addition, it was critically important that Alexander and his generals had shared trust and confidence in the process of command.

The principle of *security* cautions that you should prevent the enemy from gaining an unexpected advantage. In essence, you should protect your forces and plans from enemy actions. Again, as with the principle of objective, Alexander has a somewhat mixed record here. More often than not, Alexander was able to execute his operations without enemy interference. However, on a few occasions, as in the Balkans and before Issus, Alexander was left at a disadvantage when he allowed the enemy to manoeuvre onto his rear. Nonetheless, in these instances Alexander was able to rectify the situation with astute counter-manoevres and battlefield prowess. *Simplicity* is often overlooked as a principle of war, yet Clausewitz identified its value amongst the complex interactions that occur in war:

It seems to us that this is proof enough of the superiority of the simple and direct over the complex ... rather than try to outbid the enemy with complicated schemes, one should, on the contrary, try to outdo him in simplicity.⁷⁴

Unfortunately, modern commentators often advocate overly complex tasks for the strategist. Note this comment on the Coalition's responsibilities in Iraq: Aside from combat operations, 'Part of the Coalition's *sociological mission* is instantiating important concepts into the Iraqi collective conscious, including mercy, restraint, proportional force, and just war [emphasis added].'⁷⁵ Although Alexander sometimes appeared to take the route less travelled, his plans and operations were rarely complicated. Indeed, his great battles are testament to this. Alexander was a skilled tactician, but his operations were built upon straightforward, rapid, offensive manoeuvres that overwhelmed the decision-making and will of the enemy. However, when faced by arguably his most worthy opponents, at Tyre, Alexander was capable of quite complex, but still brutally effective siege operations. Having analysed Alexander's performance against the criteria of the principles of war, his success becomes more explicable. Put simply, Alexander fulfilled all of the above criteria to a greater or lesser degree.

5 Lessons in strategy 3

Use of force

We have identified the main reasons that enabled Alexander to excel at the tactical and operational levels. Military force, however, does not operate in a vacuum. Rather, it exists and functions within a socio-political context. This presents both opportunities and restrictions for the strategist. Ultimately, he must use force in an efficient manner that serves the policy objective. To enable this, his strategy must be tolerant of the various factors impinging upon it, and must weave its way through these to emerge as a useful process in the attainment of policy. To illustrate how this might be achieved, four key lessons can be identified: (1) the potency of coercion; (2) how to manage ethics in war; (3) policy as the guiding force of strategy; and (4) the value of Clausewitz's theory of war.

Lesson 10: the power to hurt works

With such ambitious objectives and limited resources, it would have been difficult for Alexander to defeat or conquer every enemy force and population centre he encountered. As we shall see in this chapter, sieges in particular could be long and costly affairs. It has already been established that Alexander managed to reduce the potential for conflict through the non-military instruments of grand strategy. However, the most potent instrument at Alexander's disposal was his army. Although substantial political change could be affected through its direct destructive use, Alexander also made astute use of its coercive potential. Through demonstrations of force Alexander was able to achieve a great deal indirectly with the army, and thereby reduced the requirement to fight. To illustrate this particular lesson, this section will analyse Alexander's campaign in the Balkans and his infamous siege of Tyre.

Before engaging upon the invasion of the Persian Empire, Alexander needed to secure Macedonia in his absence. To this end, a significant area of concern was the Balkans to the north of Macedonia. The tribes that inhabited the region had often revealed themselves to be rebellious in nature. Alexander feared not only that they themselves may rebel but that they might find a willing Greek ally in Sparta. As noted, because Sparta was not a member of the League of Corinth it was somewhat outside of Alexander's sphere of domination. A rebellion that combined the Balkan tribes with an ally in Greece might prove too much for

Antipater and his army in Alexander's absence. Indeed, it was during Antipater's absence in Thrace that Sparta launched its rebellion in 331.

For Alexander, the main area of concern was the land between Macedonia and the river Danube. It was here that troublesome tribes such as the Triballions, Illyrians and Getae operated. Alexander's aim was to subdue the area north of Macedonia up to the Danube, and use the great river as a secure frontier to his empire. Consequently, in the spring of 335 Alexander headed north to subdue the tribes of Thrace. There is conflicting evidence concerning the size of the army he took with him. The figures range from 15,000 to 30,000.¹ Whatever the size of the army it contained some of Alexander's best forces, including the phalangites, *hypaspists*, Agrianians, archers and the Companion cavalry. The army was a combined-arms force, and at its core were the nationalistic and professional Macedonians.

The first resistance Alexander met came from local tribesmen and Thracian troops on a pass over Mount Haemus. The Free Thracians had blockaded the pass with wagons at its steepest point. Their plan was to release the wagons down the pass, and thereby not only inflict casualties on Alexander's men but also break up the phalanx, leaving it vulnerable. However, as was so often the case, Alexander had identified his opponent's intentions and put in place a countermeasure. As the wagons rumbled down the pass, on Alexander's orders the phalanx opened its ranks in disciplined fashion to allow the wagons to pass harmlessly through. Where this was not possible the troops were instructed to lay flat and lock their shields together, covering themselves so that the wagons might roll over them with little damage. The Thracians had played their trump card and had failed to neutralise the core unit of Alexander's force. Now came the Macedonian response. Again, there is some confusion over the details of the battle that followed. Some accounts place the phalanx as the lead unit in the advance.² In these accounts the phalanx receives supporting fire from archers on their right and support from the *hypaspists* and Agrianians on the left. In contrast, some of the literature identifies the Agrianians and *hypaspists* as the lead units, with the phalanx following close behind.³ In such terrain, and with the enemy fleeing the area of battle, it seems most likely that the more lightly armed and mobile forces, such as the *hypaspists*, would be better suited to lead the attack. In any case, whichever units led the assault, the lightly armed Thracian troops and tribesmen fled down the pass. Still, 1,500 of them were killed in the action. A number of women and children were captured and sent to Macedonia.

Having dealt with this small contingent in the pass, Alexander continued his march north to deal with Syrmus, king of the Triballians. However, as he headed towards the Danube Alexander discovered that a force of Triballians had marched onto his rear. The Macedonians effected a countermove and outmanoeuvred the Triballians, surprising them at their camp in a dense wooded glen. Despite his clever operational manoeuvre, Alexander faced a problem. The wooded glen was too dense to allow an organised and cohesive frontal attack. To bring his forces to bear, Alexander needed to draw the Triballians out into the open. This has always been a significant problem for a regular army facing

an irregular foe. As Colonel C. E. Callwell states in his classic work *Small Wars*: 'It is the difficulty of bringing the foe to action which, as a rule, forms the most unpleasant characteristic of these wars'.⁴ For the regular force the challenge is to compel an irregular enemy into an open engagement, so that the greater firepower, discipline and cohesion of the regular force can be brought to bear. In the action that followed Alexander displayed an early example of his ability to utilise a combined-arms force to great effect. He used his slingers and archers as a harassing force and bait to lure out the Triballians. The Triballians played right into Alexander's hands and came forward from the glen to deal with his missile troops. As they came into the open, Alexander led the phalanx against the enemy's centre. Whilst the centre was breached, cavalry squadrons outflanked the Triballians on both wings. This simple ruse led to the slaughter of 3,000 Triballian troops, for the loss of only forty Macedonian infantrymen and eleven cavalymen. Such outstanding kill ratios would become a telling hallmark of Alexander's campaigns.

With Alexander rapidly approaching the Danube, King Syrmus retreated with his people to the relative safety of the island of Peuce in the middle of the great river. Nonetheless, Alexander would not be denied, not even by the Danube.⁵ In preparation for his Balkan campaign Alexander had sent an advance force of warships up the Danube. Although much of his campaigning would be done inland, Alexander rarely missed the opportunity to use naval forces for logistical support. As in this case, the use of riverine craft was often included. In this sense, Alexander's appreciation of joint operations between land and naval forces has perhaps sometimes been underappreciated. Macedonian forces boarded the ships and headed for an amphibious assault on the island. However, the tide was strong and the potential landing sights were well defended by the Triballians. In these circumstances an opposed amphibious landing by such a small force as the ships could carry may have proved extremely costly. The attack was abandoned. This was a wise decision, and is illustrative of Sun Tzu's sanguine advice concerning a commander's need to know when to fight and, just as importantly, when not to fight.⁶

However, with his enemy isolated in the middle of the Danube, Alexander had been ceded the initiative by his foes. It is at this point that Alexander put into effect his campaign of coercion. An effective coercive campaign relies upon an understanding of the enemy. In particular, the important pieces of information are concerned with how to inflict pain upon him, and how much pain he can withstand before being compelled to your will. These are difficult values to judge precisely, so Alexander always played safe and opted for an overwhelming use of force. To this end, the Macedonian forces began devastating the Triballian agricultural land, and hoped to starve them into submission. The crops were almost ready for harvesting and so represented a valuable target. Again, this is a well-recognised strategy to use against an opponent who refuses to take the field. As Callwell succinctly notes, when the enemy's forces cannot be engaged 'the regular troops are forced to cattle lifting and village burning ... The destruction of the crops and stores of grain of the enemy is another way of

carrying on hostilities'.⁷ F. W. Beckett and John Pimlott present the Boer War as an example of when such a strategy proved effective: 'The Boers' support was also totally eroded by the incarceration of their women and children in "concentration camps" and the systematic destruction of their farms, crops and livestock'.⁸ In the modern political and media environment this form of coercive action would appear to be unacceptable. This is problematic for strategists in the service of modern democratic states. By denying oneself the ability to coerce an opponent through the destruction of agriculture and infrastructure, an actor may significantly reduce his strategic options and efficacy.⁹ As Alexander displayed in his operations against the Triballians, this form of coercion can have outstanding results.

Alexander's coercive plans received a welcome and significant boost with the arrival of a force of Getae on the northern bank of the Danube. The Getae had deployed 10,000 infantry and 4,000 cavalry in the hope of deterring the Macedonians from crossing the river into their territory. For Alexander, the Getae force represented both a threat and an opportunity. Their presence complicated the tactical situation, especially if they chose to support the forces on Peuce. However, a crushing victory over the Getae could add substantially to the coercive campaign by providing a devastating display of the Macedonians' military prowess.

The main military challenge for Alexander was how to cross such a wide and powerful river in the face of an enemy force of 14,000. Alexander's answer to this challenge was innovative and decisive. His forces constructed log canoes and stuffed hides for the crossing. Together with his warships, these platforms enabled Alexander to cross the river with 4,000 infantry and 1,500 cavalry – at night and away from the Getae. To further conceal his intentions, Alexander landed his forces amongst the cornfields. At dawn, the Macedonians launched their attack on the unsuspecting Getae.¹⁰ Whilst Nicanor led the phalanx along the river bank to protect the flank of the army, Alexander led the cavalry in a series of charges with the squadrons in wedge formation. In the face of this surprise assault the Getae fled the area, leaving their main settlement open to attack. The Getae town was looted and razed.

Such a decisive use of force produced outstanding results for Alexander. Many tribes from a wide area came forward and submitted themselves to Macedonian rule. More importantly, King Syrmus did the same. Alexander had pacified some of the most troublesome Balkan tribes in this one operation without the loss of a single man. However, the coercive affect did not reach everyone; Alexander's Balkan adventure was not over yet. Two Illyrian chiefs, Cleitus and Glaucias, rose to challenge Macedonian hegemony. This final point illustrates that although coercion can be a very effective tool of strategy it lacks the finality of destruction of the enemy. Put simply, neither Nazi Germany nor Carthage caused any further trouble to their respective neighbours after their final defeat and destruction.

Alexander's coercive use of force on the Danube is often overshadowed by his actions at Tyre. It is worth outlining this famous siege in some detail, not

only as an illustration of Alexander's coercive use of force but also as an outstanding example of Macedonian siege technique and joint operations. Following his victory at the battle of Issus, Alexander had essentially two choices: he could pursue Darius back into Persia, or he could continue on his quest to capture the coastal ports. Alexander chose the latter. His objective now was the conquest of Phoenicia, a region that has been described as a land of city-states. Many of these city-states, such as Sidon and Byblos, submitted to Alexander's rule without a contest. One of the most significant ports in Phoenicia was the island-city of Tyre. Indeed, Tyre was the dominant sea power in Phoenicia. Initially, it seemed that Alexander would be able to add this prize to his conquests without a struggle. The Tyrians essentially accepted Alexander's rule in the region, but sought neutral status by forbidding either Persians or Macedonians to enter the city. This declaration of neutrality was a response to Alexander's demand to sacrifice to the city god Melqart (whom Alexander associated with Heracles) in the state temple. Upon first analysis this seems something of a strange decision by the Tyrians. As was noted in the chapter on grand strategy, Alexander often displayed respect for local gods as a means to appease local concerns about their religious and cultural sovereignty. By requesting the right to sacrifice in the local temple, Alexander was honouring local gods at the same time as asserting his dominance. Perhaps the Tyrians were hedging their bets. Their declaration of neutrality may have been simply to allow time for the power struggle between Alexander and Darius to conclude. Having showed neither side favour, the Tyrians could welcome the eventual victor without fear of reprisal. However, unbeknown to them at that moment, their course of action would lead them to the worse possible outcome. Alexander would not be denied, and decided to lay siege to the city.

There has been considerable debate about both the motivations and strategic rationale in the decision to besiege Tyre. For some writers the decision seemed to be motivated by the impetuous temper of the young king. It is argued that Alexander could simply have left a garrison on the mainland to watch over this important city until it came to its senses and capitulated to his demands.¹¹ However, there were two main strategic motivations for engaging in the siege. First, if the Persian fleet had access to ports such as Tyre it could continue to threaten Alexander's communications back to Greece. The further Alexander ventured into the Persian Empire, the more important it was to have a secure base back home. A land-based garrison could not neutralise the functioning of a port such as Tyre. The city could continue to function through sea-based communications. Indeed, there is some evidence to indicate that Tyre had received promises of aid from Carthage.¹² Second, the young king recognised the importance of deterrence. An aggressive and successful response to the Tyrians' resistance would send a clear message to any other cities in his path that had similar thoughts. As noted, a successful policy of deterrence requires capability, commitment and communication. To be deterred, any potential future adversaries need to be convinced that you have the capability and will to inflict significant punishment upon them should they transgress. This ability to punish

has to be communicated to those who need deterring. What better way to communicate such a threat than to actually enact it against the unfortunate Tyrians?

Tyre, with a population of approximately 40,000, was built upon an islet half a mile from the mainland. As the siege began in January 332 Tyre was well fortified (with walls 150 feet high on its eastern side), and due to the absence of Alexander's fleet it seemed impregnable. How could Alexander enact a close siege on an island fortress? As so often was the case with Alexander, the answer was simple yet ingenious. Under the direction of his chief engineer, Diades, a mole was constructed to connect the city to the mainland, enabling the Macedonian siege engines and forces to begin the arduous task of breaking Tyre.¹³ As construction of the mole neared the city walls, the workers came under attack from both the city and Tyrian galleys at sea. In defence, the Macedonians constructed two wooden towers, each 150 feet high, which protected the workers from attack and were also used as platforms from which catapults could launch projectiles against the city and galleys. However, the Tyrians were well versed in the art of engineering and counterattacked the towers. They constructed a fire ship and sailed it into the mole. So that they could ensure the destruction of the two siege towers, the Tyrians weighed down the back of the ship so that the prow would reach onto the mole and set fire to the towers. This was not the end of their ingenious response to the towers. To prevent the Macedonians from quenching the fires they sent troops with the fire ship, who, having swum to safety, could now pin down the Macedonians. Finally, other Tyrians landed on the mole and destroyed any other siege engine not engulfed by the fire. Clearly, the siege of Tyre was becoming a fine example of the action–reaction dynamic in warfare. War is conducted against intelligent foes. Therefore, it is essential that commanders consider the potential actions of the enemy, as well as contingency plans to deal with a range of different eventualities.

The destruction of the siege towers had revealed the significance of local sea control. All the while that the Tyrians had such control they had a degree of flexibility that would enable them to launch attacks against the besieging forces. Having thus far focused on the land campaign, Alexander now realised that he needed sea power to achieve control of the sea around Tyre. Alexander achieved this goal by slowly gathering elements of the Phoenician fleet to his cause. The rulers of cities such as Sidon and Byblos began to return from sea with their fleets. On arrival they accepted the new political reality, and gave their galleys over to Alexander. The Macedonians' growing naval strength in the Eastern Mediterranean received a significant boost with the addition of 120 galleys from the kings of Cyprus. As noted earlier, the decision of these rulers seems to have been based on a reading of the political reality after Darius' defeat at Issus.

Alexander, along with most of the Cyprian and Phoenician kings, now took his new fleet out to sea. Initially the Tyrians sought a decisive naval battle. However, once they realised the size of Alexander's fleet they retreated into their two harbours. Alexander now began a blockade of these harbours. In many respects, Alexander had already achieved his main objective at sea, via a

strategy of sea denial. He had denied the Tyrians effective use of their sea-power assets. This had two main effects. First, it was much more difficult for them to molest his besieging forces operating on the mole. Second, the blockade would also prevent supplies reaching the besieged population within the city.

Now that Alexander had Tyre besieged from both the sea and land he could construct further siege engines. He had new siege towers, catapults and rams constructed. There is some evidence that some of the rams were deployed on naval vessels. Fuller speculates that this enabled Alexander to assault the city walls from a number of positions, rather than just from the mole.¹⁴ Although the tide had shifted in favour of the Macedonians, the Tyrians were still putting up a substantial fight. On the battlements overlooking the mole the Tyrians had constructed wooden towers and catapults. It is also reported that they harried Alexander's ram-ships with the use of fire arrows. Finally, large stone blocks had been sunk at the foot of the walls around the mole to obstruct anchorage of the ram-ships. However, these stones were slowly dragged clear and removed by cranes. Once this obstacle had been overcome, the Tyrians continued in their efforts to foil the ram-ships. They did this by breaking the blockade with armoured ships and using divers to cut the anchor ropes that were holding the ram-ships in place. Alexander responded with his own armoured ships and by replacing the anchor ropes with chains.

Although Alexander had seemingly overcome the best efforts of the Tyrians to break the siege, they were about to deliver one last surprise. Luck often played a part in Alexander's victories (his rescue by Cleitus at the Granicus being perhaps the most obvious to date); so it was at Tyre. Taking advantage of the fact that Alexander and the Cyprian crews retired to the shore each day for lunch, the Tyrians deceived the enemy of their intentions and launched a surprise raid with ten of their finest ships. Thankfully for Alexander, on this occasion he had not taken his usual afternoon siesta. Consequently, he was able to rally his forces and mount a counterattack. The Tyrian assault was thrown back, with the loss of only four Cyprian quinquiremes. Alexander's predictable routine suggested a degree of complacency on his part, and had nearly cost him dear. Fuller suggests that had a more sizable Tyrian force been sent out, Alexander's forces could have been dealt a serious blow.¹⁵ As it was, the Macedonian's quick reaction and leadership had limited the damage.

The siege was proving to be increasingly costly and lengthy. Alexander therefore made a concerted effort to find a weak spot in the enemy's defences. He found such a point in the wall just south of the Egyptian harbour. The wall was breached before the attackers were thrown back by dogged resistance. However, Alexander now focused his efforts on this breach. His forces attempted to enlarge the breach, and thus compel the Tyrians to concentrate their forces in that area. At that moment Alexander threw his enemy into confusion by launching assaults into the two harbours, and attacked various other sections of the walls with catapults and archers from galleys. Alexander was attempting to deceive and then overwhelm the defenders. In this sense, Alexander was intent on overwhelming the Tyrians' process of decision-making.

Initially, ram-ships led the assault in order to enlarge the breach. Once this was achieved, Admetus' *hypaspists* and Coenus' battalion of phalanx, under the command of Alexander, took up the attack. Admetus' led his men in the first wave of the assault. They managed to capture a section of the wall that flanked the breach. During the attack Admetus was felled by a spear. Nonetheless, the *hypaspists* had done their job, and Alexander led the phalanx into the breach. In bitter fighting the Macedonians pushed through the defences and on towards the royal palace. Alexander's plan was going well. At the same time that his forces were forging into the city through the breach, his naval vessels had broken into the two harbours and had landed men in the city. Eventually, the Tyrians fell back on the Shrine of Agenor to make their last stand. Alexander now led the *hypaspists* in the final attack. Once the fighting had transferred into the city, there was no real contest. The professional and well-armed men under Alexander soon defeated any coordinated resistance that remained. Once again it is worth noting the professionalism of the forces at Alexander's disposal. These men, who had performed so well on an open battlefield, seemed to have had no difficulty adapting to operations in an urban environment.

A siege that had initially seemed avoidable had lasted seven months and become increasingly bitter. As a signal to those in the future that might consider resisting Alexander's hegemony, the Macedonian king treated the citizens of Tyre with brutality: 8,000 Tyrians were killed, and the other 30,000 were sold into slavery. However, amnesty was granted to a few important Tyrians, including King Azemilk, and those who had sought sanctuary in the temple of Heracles. The leniency shown towards the Tyrian elite may have been motivated by Alexander's need for them in the local administration.

Aside from the coercive element of Tyre, it also represents the best example of Macedonian siege technique during the campaigns. It is also a classic example of the dynamic interplay between belligerents. In many respects, the Tyrians presented Alexander with some of his most competent enemies. However, although Alexander suffered a number of setbacks during the siege, the operations around Tyre further enhance his reputation as a military commander. Particularly noteworthy is Alexander's appreciation of the joint environment in this context. He came to understand the significance of local sea control. Once this had been achieved, Alexander could fully display his tactical ingenuity. The final assault on the city from a number of directions, utilising both land and sea forces, is an outstanding example of joint operations. As in his land battles, Alexander understood that by coordinating the efforts of different units he could multiply the military effect of the overall force.

Tyre had been a long and costly affair for Alexander. Nonetheless, it did have the desired deterrent affect on the cities of Phoenicia. Lane Fox notes that the cities south of Tyre – Dor, Ashdod and Straton's Tower – made terms with the Macedonian.¹⁶ Although the power to hurt can be regarded as a less direct use of force, for Alexander it was often enacted through an overwhelming use of force on the hapless victim. However, as in the Balkans, not everyone heeded the warning from Tyre. The governor of Gaza, Batis, resisted Alexander's

hegemony. As a result, after another outstanding siege by the Macedonians, the city faced the same fate as Tyre. In addition, Batis was dragged behind Alexander's chariot in the style of Hector at the behest of Achilles. The resistance of Gaza once again reveals that although coercion can be a potent instrument, it does have limitations that have to be borne in mind.

Lesson 11: do not blunt your swords in the name of humanity¹⁷

How effectively an actor can use coercion may to some degree be determined by their culture and its related social and ethical values. Anthony Coates notes that the way an actor wages war is to some degree a reflection of its culture.¹⁸ These thoughts reflect a key debate on the nature of war, and in particular whether or not it has its own internal logic that is beyond the influence of culture. On one side of the argument Coates claims that 'war is not a natural necessity, driven by its own internal and unchanging logic, but a cultural and normative reality, for if culture is a prime determinant of war, then so too is morality'.¹⁹ Such thoughts can be regarded as the intellectual basis for the optimistic visions of those in Western defence communities who think that war can be transformed into a more humane, less brutal activity. Luttwak notes that we have entered a period of post-heroic warfare. In this new epoch our distaste for casualties means that those forces, such as marines and other forms of infantry, that are more likely to take losses are less usable. Thus, Luttwak concludes that to continue as a viable instrument war must increasingly be waged by remote, stand-off forces such as air power assets.²⁰ A concept that takes these notions even further is 'humane warfare', in which the objective is to remove human suffering altogether from the act of war.²¹

However, it was identified in Chapter 1 that war has its own internal nature, and that nature, amongst other things, is competitive, violent, and acts in the service of policy. Thus, if one treats cultural and moral concerns as the prime consideration in war, then one may cede the advantage and initiative to an enemy who is in harmony with the true nature of war, rather than one artificially conceived in the minds of men.²² An example that illustrates this from Alexander's early career is the battle of Chaeronea in 338 BC. Chaeronea was the decisive event at which Macedonia defeated the Greek city-states to establish hegemony over the Greek world. To use Plato's distinction, the Greek city-states facing Macedonia thought they were engaged in a conflict of 'discord', in which the conduct and violence of operations is moderated amongst similarly minded foes. However, again in Plato's terms, Macedonia waged 'war' in which the conduct of operations is far more total. The result of this cultural, and therefore operational, mismatch was a crushing victory for Macedonia. It is worth exploring this significant battle in some depth.

In the period before Chaeronea Macedonia was quickly becoming the most powerful state in Greece. Militarily it could put into the field an army that would outnumber the forces of many of the other city-states combined. Nonetheless,

Philip had hoped to achieve hegemonic power through peaceful means. His ambitions were resisted by states such as Athens, Thebes and Sparta. Consequently, in August 338 the city-states of Boeotia, Athens, Thebes, Achaea, Corinth and Megara mustered a force of 35,000 at Chaeronea with the aim of ending Macedonia's quest for hegemony. To face this force, primarily composed of hoplites, Philip had 30,000 infantry and 2,000 cavalry. The king commanded the right wing of the army, and the young Alexander took charge of the Companion cavalry on the left. Opposite them, the Greek allies placed their strongest forces on both wings. The Thebans manned the right, whilst Philip faced the Athenian hoplites on the left wing. The inferior forces of the other city-states held the middle of the Greek line. Hanson is derisory in his description of the Greek allied forces. He describes them as reactionary, part-time militiamen.²³

Chaeronea is one of those moments in history when one side in a battle does not realise that warfare had changed. The Greek allied forces would pay for this error with their lives. Facing these part-time warriors with their anachronistic equipment, limited tactics and incompetent generals, was a professional, well-equipped, well-motivated, combined-arms force led by two innovative commanders. A similar scene could be found in the deserts of Iraq in 1991. The Iraqi army relied on Soviet equipment and doctrine, was manned largely by conscripts, and at the highest level was commanded by a man with little operational insight. They faced an opponent manned largely by professional troops, who had developed new technologies and doctrine precisely with the aim of defeating a Soviet-style army. To make matters worse for the Iraqis, the war took place in a predominately flat, open terrain that ideally suited the dominant air power of its foe.

The results for both the Greek allied forces and the Iraqis were easy to forecast. As the Athenians advanced in predictable fashion, Philip's well-disciplined phalangites enacted a pre-planned and organised feigned retreat. This manoeuvre dragged the Athenians away from the forces in the centre of the Greek line. As this was occurring, Alexander launched his attack on the Thebans at his front and broke through their line. Just as the Athenian generals were leading their men forward in a rash and false hope for glory, in a well-timed manoeuvre the Macedonian phalanx halted, lowered its *sarissae* and impaled the Athenian hoplites on their spearheads. In all, the Athenians lost approximately 1,000 men. Meanwhile, having breached the enemy's line, Alexander now turned the Companions into the rear of the Thebans and pushed them onto the oncoming pikes of the Macedonian phalanx. The Theban Sacred Band, an elite and highly motivated unit, was slain to a man.

The battle of Chaeronea provides us with a striking example of how an approach to war that is culturally restrained (on the part of the Greek city-states) can produce disastrous results when faced with an approach grounded in the brutal reality of war's true nature. Alexander and his father developed a style of warfare that was in tune with the nature of war and was driven by a strong strategic rationale. This approach ensured that the amount and type of force employed could vary, depending upon the particular objective in mind, whilst also being mindful of the fact that the enemy had to be defeated.²⁴ It is of concern

that in modern Western states undue emphasis is often given to operating within culturally driven ethical and legal constraints.²⁵ Greater significance should be given to achieving the policy objective. If an objective is important enough to warrant the use of military force (and all of the costs that entails), then surely those who make that decision are beholden to strive to achieve that objective. Brian Bond is persuasive when he writes ‘terrible and destructive as war is, victory is usually sharply differentiated from defeat’.²⁶ This is not to suggest that war has to inevitably involve brutal and overwhelming force. Indeed, the amount of force required should be dictated by the desired end state. Rather, we are merely trying to establish that success in strategy may require actions that seem inappropriate from the perspective of normal civil society. Ethical and legal concerns may have to be set aside, or curtailed, if they contradict the nature of war and severely impede success. In any future Chaeronea it is desirable to emulate the Macedonians rather than suffer the fate of the Athenians and Thebans.

And, for those ‘kind-hearted people [who] might of course think there was some ingenious way to disarm or defeat an enemy without too much bloodshed’, Clausewitz offers a clear warning: ‘If one side uses force without compunction, undeterred by the bloodshed it involves, while the other side refrains, the first will gain the upper hand’.²⁷ These are simple, but compelling ideas from Clausewitz. However, Coates’s aforementioned position can also be challenged on the basis that at times strategy may call for an approach that is at variance with one’s cultural and moral preferences. The deliberate firebombing of German civilians in the Second World War was perceived as a necessary ingredient of victory against Nazi Germany, yet it would be difficult to argue that this reflected a cultural preference of British and American society. In an attempt to prove the significance of culture, with reference to one’s vision of the enemy, Coates actually distinguishes the American approach to the war against Germany (Discord) from its approach to the war against the Japanese (War). He claims that an American preference for precision bombing in Germany reflects American cultural attitudes to the Germans.²⁸ However, the use of the term ‘precision bombing’ to describe the US bombing campaign over Germany is something of a misnomer. As a result of the technological limitations of the time, precision bombing usually, and knowingly, resulted in substantial civilian casualties. In reality, the bombing campaigns against Germany and Japan were not too dissimilar. The differences that did occur were mainly due to the differences in construction and layout of the target cities. Japanese cities tended to be composed of wooden buildings, and lacked concentrated industrial centres. Instead, Japanese industry tended to be dispersed throughout a city in small units. Thus, faced with such target characteristics it made sense to engage in area-bombing with predominantly incendiary devices.²⁹

Accepting that war sometimes may have to be fought in a manner at variance with one’s cultural preferences presents the modern strategic practitioner and theorist with a dilemma. As Murray and Grimsley argue, strategy is the art of the possible.³⁰ In a similar vein Gray correctly argues that the methods of war must not undermine the policy goals for which the war is fought.³¹ This creates a

substantial problem: how can war be waged in a manner that is in harmony with the nature of war, but that is also supportive of the policy objectives and culture of its participants?

Often, this dilemma is approached by contrasting the concepts of military necessity and ethical constraints. Some will argue that at times military success will demand actions that breach ethical and legal conventions. This is very much in the tradition of ‘necessity knows no law’. Alternatively, there are those who argue that military commanders must simply forgo certain courses of action so as to preserve normative standards. However, from a strategic perspective either approach is too simplistic, and thereby ignores the complexities of strategy. We cannot separate the military, political and cultural elements of strategy; they form an organic whole. Thus, when thinking through these issues we should reject notions of strictly military, political, ethical and legal necessity, and replace them with the concept of ‘strategic necessity’.

Strategic necessity seeks to harmonise seemingly contrasting requirements. The strategist should choose a course of action that satisfies military requirements, but is also within the realms of the possible in both political and cultural terms. Note that mention was not made of any legal requirements. This is a deliberate omission to reflect the fact that war, being a complex, emotive, uncertain, and policy-driven activity, is not compatible with a strict legalistic approach. This is not a total rejection of an approach grounded in the laws of war. War crimes are still possible within the perspective outlined here. Rather, it is to suggest that within the unique environment of war we should be careful when applying a legal framework. Laws as applied to war must be more permissive and tolerant than would be the case in civil society. Most importantly, a legal approach must not be allowed to dictate the flow of strategy. This means that at times civilian deaths should be regrettably accepted as an inevitable by-product of military action (including targeting errors). Within this category legitimate actions would include the bombing campaigns of the Second World War, nuclear deterrence, and the coercive use of force against rebellious populations. To assume that civilians are, by definition, innocent, uninvolved bystanders is naive and simplistic.

The approach presented here is not a radical and brutal departure from that which went before. Rather, it is a rejection of the recent, and naive, assumptions of the ‘humane warfare’ approach. The notion that war can somehow be sanitised is a well-meaning, if ill-conceived notion. However, we still have to deal with the problem of how to make such an approach palatable to contemporary cultural attitudes. In addition, the strategist should also recognise that acts of perceived brutality may undermine the policy objective. Steven Metz rightly recognises that a brutal approach can sometimes be counterproductive. He cites the case of Slobodan Milosovic’s Serbian regime in its campaign against the Kosovo Liberation Army (KLA).³² This latter point serves to illustrate the fact that in strategy context is everything. Thus, whether or not the power to hurt will prove effective is dependent upon the context, as well as the judgement and performance of the strategist. The point to be made here is not that coercion will work on every occasion, but that it may be effective and therefore should be on

the strategic table. From a strategic perspective, therefore, one has to ask whether at times a greater emphasis on the power to hurt should be contemplated. The quest for strategic efficacy inevitably forces us to consider such a possibility. We are starkly reminded of this point by Gray:

The winning of 'hearts and minds' may be a superior approach to quelling irregulars, but official, or extra-official but officially condoned, military and police terror is swifter and can be effective. The proposition that repression never succeeds is, unfortunately, a myth. Half-hearted repression conducted by self-doubting persons of liberal conscience certainly does not work.³³

Strategy calls for balance and judgement in the application of force. To this end, Julian Paget, writing on counterinsurgency, is correct when he argues that the stick must not be used without finesse. Rather, certain sections of the populace, described by Paget as active and willing supporters of insurgents, may well be subjected to harsh punishment and perhaps treated in the same manner as the insurgents themselves. In contrast, those who are either undecided in their loyalty, or support the insurgents out of fear, can be persuaded through collective forms of punishment such as fines, curfews and detentions.³⁴ Likewise, Callwell demonstrates an acute grasp of strategy in his analysis of how military operations against the population can contribute to success. He calls for a balance between clemency and firmness.³⁵ In his discussion of how to come to grips with an irregular enemy that refuses to fight, Callwell notes that 'the regular troops are forced to resort to cattle lifting and village burning and that war assumes an aspect which may shock the humanitarian'. He continues:

Still, there is a limit to the amount of licence in destruction which is expedient . . . Expeditions to put down revolt are not put in motion merely to bring about a temporary cessation of hostility. Their purpose is to ensure a lasting peace.³⁶

This last thought reflects the Clausewitzian notion that the influence of the object of the war (the policy goal) should reach down into all the levels of strategy and influence the nature of the campaign.³⁷

Thus, we can conclude that within a balanced campaign punishments aimed at the civilian population, and in particular those willing to support opposing forces (such as insurgents), can have a significant role to play. This can be seen in the success such measures enjoyed in the British campaign against the Malayan Communist Party (MCP). During the campaign thousands of people were detained without trial, others were deported from the country, and the death penalty was introduced for offences such as the possession of explosives. Newsinger concludes that these repressive measures were very successful in limiting the efficacy of the MCP.³⁸ Despite such historical evidence, much effort has been expended to undermine and overturn the detention without trial of terror suspects in the UK and US.³⁹

To return to Alexander, we can conclude that he displayed an astute understanding of the coercive use of force, and more importantly how it fitted with the

other instruments of grand strategy. At times, Alexander used force in a brutal and overwhelming manner. However, he also was capable of great clemency and subtlety in his grand strategy. When coercion was used, as the Balkans and Tyre illustrate, this often produced outstanding results for him in terms of compelling and deterring actors in the region. However, these two examples also reveal the limitations of coercion. Put simply, an intact enemy has to decide to be coerced. In this sense you have less control over his actions. This is the downside of the coercion. However, on the plus side, coercive operations, because they do not seek to destroy the enemy, are often less costly, and may be less controversial. Consider how less costly it would have been had the Coalition been able to coerce Saddam Hussein's Iraq into full compliance with United Nations resolutions, without the need for an invasion. However, had this been the outcome there would always have been the possibility and fear that Saddam would have reinvigorated his WMD programmes and thereby continued to constitute a threat.

The glaring problem with the coercive use of force, especially when targeted against local population, is the reaction that such an approach could engender. If 'strategy is the art of the possible', then certain coercive measures may simply be unavailable in modern campaigns. It is almost impossible to contemplate a Western power treating local populations in a manner reminiscent of the way the Alexander treated those who resisted his power. The deliberate targeting of civilians is not only illegal but is also largely regarded as socially unacceptable.⁴⁰ However, we have to be careful not to mistake a contemporary philosophical fad, based as it is on less imminent and overwhelming threat, for a permanent change in behaviour. Consider that it was only sixty years ago that the Western powers consciously firebombed women and children in German and Japanese cities. Although the events of the Second World War can be partially explained by different attitudes of the time, more significant in this respect were the circumstances and nature of the threat. It is also important to note that the lessons we learn from Alexander do not have to be direct and absolute. In this sense, we cannot necessarily apply Alexander's approach exactly. What we can do, through a study of Alexander's campaigns, is to gain a better appreciation of the dynamics of coercion and the nature of war. Alexander was neither a devil nor a humanitarian: he was a pragmatist, as all strategists should be. From the perspective of best practice, the guiding concept for the strategist should be prudence.⁴¹ This is perhaps one of the most important lessons Alexander can teach us. We all hope that our cause is just and honourable, in which case we should seek to achieve our objectives as effectively as possible.

We can end with two quotations from Clausewitz, who understood the nature of strategy better than most:

We can thus only say that the aims a belligerent adopts, and the resources he employs, must be governed by the particular characteristics of his own position; but they will also conform to the spirit of the age and to its general character. Finally, they must always be governed by the general conclusions to be drawn from the nature of war itself.⁴²

The fact that slaughter is a horrifying spectacle must make us take war more seriously, but not provide an excuse for gradually blunting our swords in the name of humanity. Sooner or later someone will come along with a sharp sword and hack off our arms.⁴³

Lesson 12: policy is king

At the heart of strategy is the relationship between policy and the military instrument. As noted in Chapter 1, this relationship is complex, mutually dependent, but lacks equality; policy is king. This work will now analyse Alexander's performance in terms of how well he managed this relationship. It will be shown that whilst for the most part Alexander was an astute strategist, he did not always give policy the respect it deserved. Before examining his strengths and weaknesses on this issue, we must first understand what his policy objectives were. It is only with an understanding of the objectives that we can judge his performance in acquiring them.

Alexander had broad and far-reaching objectives. These variously may have included leading the Greek war of revenge against Persia,; liberating the Greek cities in Asia Minor from Persian control, Hellenisation of Eurasia and/or cultural unification of the Greek and Persian civilisations. However, all of the above were subsumed by Alexander's quest for personal aggrandisement and his desire to be crowned lord of Asia. These, almost limitless, policy objectives meant that Alexander had no definitive end state. This may partially explain his continuing campaigns in India, which seemed to have no clear purpose except for the vague idea of finding a great eastern ocean. To some degree Alexander's court became defined by conquest and campaigning, and this became an end in itself. As if to illustrate this, once Alexander had returned to Babylon in 323 he began preparations for a campaign in Arabia.

Despite the open-ended goals of his campaigns, Alexander did put in place structures and policies that were designed to establish a stable and durable empire. This can be seen particularly in his city-building projects and the aforementioned education and integration of Asian forces into the army. In light of such examples of long-term planning, at times, and especially in India, Alexander's military campaigns appear to be somewhat removed from his long-term policy objectives. Rather than consolidate his gains in the core of the Persian Empire, Alexander continued eastwards into the vast expanses of India. A disconnect had appeared between Alexander's own policy objectives and his military operations. This may be partially explainable by another of Alexander's objectives: that of emulating the great heroes of Greek mythology. In particular, Alexander was intent on surpassing the exploits of Heracles.⁴⁴

It is worth noting that the scale of Alexander's objectives gave him a degree of freedom in his use of force. If force is being used for limited objectives, such as to support peacekeeping or nation-building activities, then it is likely that military operations in turn will have to operate within severe limits. This is even more so if the military campaign is conducted under, for example, a United

Nations mandate and in the glare of the global media. In such circumstances the political environment is more sensitive to military actions, which, if ill-conceived or poorly executed, can undermine the policy objectives. However, as Clausewitz noted, the more total the objectives, the more total are the means likely to be required.⁴⁵ In such a context, military operations can be considered to operate in a more permissive environment. There may be a greater toleration of mistakes and casualties. However, at the same time, more total objectives may limit the freedom of the strategist. In the pursuit of total objectives battlefield failure may signal disaster; this was certainly the case for Alexander. Nonetheless, regardless of the scale of the objectives, military force must always be guided by them.

Although Alexander may have lost his strategic touch later in the campaigns, throughout his career his actions were often guided by a clear appreciation of the policy objectives. In support of his goals, Alexander's grand strategy (including his use of force) was concerned with the accumulation, and display, of power. Through this accumulation Alexander could assert his authority and establish control over the empire. His military campaigns had to support these requirements. This entailed winning military victories, but also included some restrictions on the use of force. As noted earlier, Alexander was not intent on merely rampaging through the empire, pillaging as he went. He wanted to be regarded as the legitimate lord of Asia, and therefore curtailed some of the potential excesses of his men. In particular, he instructed his men not to steal from the locals. A similar approach can be seen in Mao's revolutionary war in China. Mao, clearly a disciple of both Clausewitz and Sun Tzu, regarded his forces as political actors, who through their words and deeds spread his political message. So as not to taint that message, Mao gave his men eight rules of behaviour when interacting with the locals. These included paying for any items used or broken, and to avoid bathing in front of local women so as not to create a cultural *faux pas*.⁴⁶

Thus, there is evidence that Alexander was conscious of not using force in a manner that would undermine the legitimacy of his rule. However, that rule had to be established through a series of military victories. Success at the Granicus gave Alexander the freedom required to establish a presence in the empire. In particular, it enabled him to establish a logistical support infrastructure for his forces. Just as importantly, this first battlefield victory across the Hellespont established Alexander's authority, which could only reliably be underpinned by military dominance. His annihilation of the Greek mercenaries also sent out a clear message to other potential Persian recruits. It is especially noteworthy that out of the 20,000 mercenaries Alexander spared 2,000, whom he sent back to Greece for forced labour. He could have massacred these as he had the other 90 per cent of their comrades. We can speculate that his decision to spare them may have been motivated by a desire to send back to Greece a powerful message of deterrence to those contemplating an alliance with Persia.

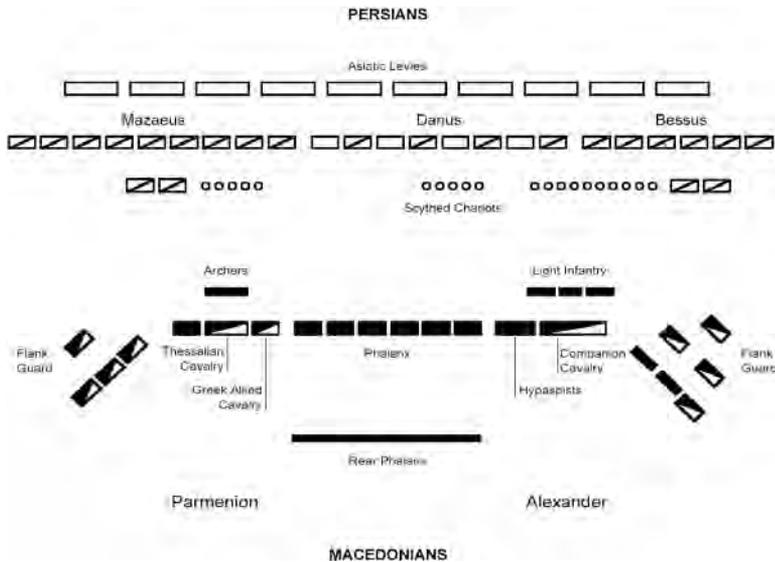
The battle of Issus offered Alexander a number of opportunities to use force to pursue his policy objectives. In the first instance it gave him another chance to deplete the forces of the Persian Empire, and thereby reduce the capability of his

enemy further. As noted, victory at Issus was also an important ingredient in establishing Alexander's authority in Phoenicia. For many of the local rulers the battlefield outcome signalled a shift in the power structure of the region; hence many shifted their allegiance to Alexander. In contrast to the Granicus, Issus gave Alexander his first opportunity to strike at Darius and thereby neutralise the main alternative centre of political power. Darius clearly represented a centre of gravity, and so Alexander was presented with an important target at Issus. However, at this stage of the campaigns Alexander was still intent on focusing his efforts on the consolidation of his conquests. This meant establishing control of the coastal regions, which at the same time enabled Alexander to neutralise the Persian fleet and secure his home base. When the opportunity arose to pursue Darius after the battle, at this stage Alexander remained focused on his long-term policy objectives, and continued his coastal campaign.

The aftermath of Issus also gives us a further insight into the extent of Alexander's policy objectives, and the means by which he would achieve them. In the summer of 331 Darius suggested to Alexander a treaty of friendship. In return for the safe handover of his family, whom Alexander had captured at Issus, Darius offered Alexander all of the territory west of the Euphrates and 30,000 talents. This would have represented a significant achievement and sizable territorial gain for Alexander. However, the three imperial capitals would have remained beyond Alexander's control, Darius would have remained on the Persian throne, and consequently the Persian Empire would have remained largely intact as a political reality. Darius clearly underestimated the scale of Alexander's ambition and strategy.

As noted in Chapter 3, at times Alexander suffered from disharmony amongst the levels of strategy. Arguably, at Gaugamela Alexander lost sight of the fact that the policy objectives should guide military operations. Whilst it is difficult to argue with the decisive nature of the outcome of the battle, it is argued here that the battle did not have to be fought when and where it was, and that through his impetuosity Alexander unnecessarily put in jeopardy his overall objectives. A similar, albeit smaller, incident occurred at the siege of Multan in India. Both of these incidents will be analysed to see how close Alexander came to throwing his gains away.

Since coming inland from the coast of Asia Minor, Alexander was seeking a final showdown with Darius. In turn, the Persian ruler was busy mustering a large army at Babylon. This time the forces were drawn from the east and north-east of the empire. Particularly worthy of note were the cavalry from Bactria and Sogdiana. These forces have been described as being on a par with Alexander's Companions.⁴⁷ In terms of quantity, this newly raised army was greater than that which had fought at Issus. Exact figures for Darius' army are difficult to come by. The historical sources vary widely in their estimates. The most realistic accounts number Darius' army at Gaugamela as being 250,000 in strength. This was approximately five times as large as Alexander's army at this final battle. However, as indicated earlier, Robin Lane Fox concludes that Alexander may have underestimated the size of army Darius could muster for Gaugamela.⁴⁸



Having received intelligence that Alexander was moving through Mesopotamia, Darius moved his vast army north from Babylon into Assyria. Having fought on his enemy's chosen battlefield at Issus, on this occasion Darius would choose the site of battle. He chose a flat, open plain near the small village of Gaugamela in the Tigris valley. Since his army was again focused around the cavalry and superior in numbers, Darius chose and prepared a site that was flat and wide. However, he was not entirely satisfied with the terrain that nature had provided, and so the battlefield was levelled-off even further. This levelling would aid both his cavalry and his new striking force of 200 scythed chariots.

Also in Darius' favour on this occasion was the fact that Alexander was increasingly stretching his lines of communication at the same time as Darius was operating nearer to his main bases. In this respect, Alexander's advance was becoming an ever-bigger gamble. A number of great invasions have come to grief on this particular point: the Nazi and Napoleonic invasions of Russia stand out as particularly vivid examples. However, as previously noted, Alexander's route and the pace of his advance ensured that his army could be supplied.⁴⁹

It is important to recognise that Gaugamela was not without merit for Alexander. Another battle with Darius presented the Macedonian with some important opportunities. Most obviously it enabled him to finish the job begun at Issus. The destruction of the Persian army in this area would open the route to the heart of the Persian Empire and important centres of population such as Babylon and Persepolis. Thus, it is important to note that a third great battle made perfect sense within Alexander's strategy. What is in question are the circumstances of the battle that Alexander allowed to develop. The Persian forces were arrayed in two lines. The first line was mainly composed of cavalry, with

the important addition of the scythed chariots, elephants, and intermingled infantry. The centre of the line was commanded by Darius, with his squadron of Kinsmen, the royal Persian Horse Guard; the remaining 2,000 Greek mercenary hoplites; the Indian and Carian cavalry; and Mardian archers. Out in front of these forces were fifty chariots and fifteen elephants. The left was under the command of Bessus (satrap of Bactria). Darius' strategy relied heavily on this section of the line, for it would face Alexander and the Companion cavalry. To this end, he deployed a range of cavalry units, including the Bactrian and Persian horsemen, and in front of these 100 chariots. The right of the line was again heavily invested with cavalry, and also had fifty scythed chariots out front. Behind this first line Darius deployed the majority of his infantry. Although large in number, this mass of ethnically diverse levies was neither equipped nor capable of disciplined phalanx warfare against Alexander's well-drilled heavy infantry. Once again, the Persian battle plan rested upon a weak foundation of infantry. Nonetheless, Darius had made some technological progress since his first meeting with Alexander at Issus. His cavalry were no longer armed with javelins, but instead wielded longer swords and thrusting spears. There had been some changes on the defensive front as well. His infantrymen were equipped with larger shields, and some of his cavalry had link-armor.

Darius' plan was necessarily focused on his cavalry. The aim was to create a situation in which the manoeuvrability and numbers of the cavalry could be brought to bear against the flanks and rear of Alexander's men. It seems that Darius had opted for an offensive plan of operations so that he could dictate the flow of the battle. By placing his cavalry in the front line on such terrain, he clearly hoped that he could outflank his enemy. The flanking manoeuvre would be aided significantly by the numerical advantage of the Persians, which meant they outflanked the Macedonian line by default. The nature of the wide flat terrain of the battlefield would also aid Darius' flanking forces. In contrast to the situation at Issus, on this occasion Alexander did not have the sea and mountains providing natural protection for his flanks. Aside from merely outflanking his opponent on the wings, Darius also hoped to break the cohesion of the phalanx in the centre. This is how the chariots would play their part. The Persian emperor anticipated a frontal assault by Alexander's men. In response, Darius' chariots would charge at the dense formation of the phalanx and break it, thereby creating gaps in the line that the cavalry could exploit. As at Issus, this plan had vulnerabilities, which again centred on the ability of the Persian forces to maintain their cohesion in the face of Alexander's assault. However, unlike the battle of Issus, Darius had a much greater opportunity to allow his cavalry to play the decisive role and outflank the enemy. In this sense, there was a greater chance that Darius could get his decisive blow in first. Quite correctly, Darius understood the need to seize the initiative against Alexander.

With his dispositions at Gaugamela Alexander stuck to his tried and tested formula. The whole line, which in comparison to the Persians' was fairly compact and rectangular in shape, was based on the Macedonian phalanx in the centre. To the right of this were the *hypaspists*, who as usual acted as the joining

force between the infantry and cavalry. On their right stood Alexander and the Companion cavalry. In front were Macedonian archers and Agrianian javelin men. Of course, Alexander was perfectly aware of the danger posed by the Persian flanking forces in such an environment. To guard against this threat, on his right he positioned a flank guard consisting of cavalry, javelin men and archers. On the left wing stood the Thessalian and Greek allied cavalry. Protecting their front were Cretan spearmen and archers. A flank guard made up entirely of cavalry protected the left flank of the army. As with the flank guard on the right, this force was deployed slightly behind and at an angle to the front-line troops. This enabled the guard to face outwards and to the front of the flank they protected. Behind these front-line forces Alexander placed a second line of phalanx infantry made up of Greek mercenaries, Illyrians and Thracians. The main role of this second line of infantry was to turn about to face any Persian attack in the rear. In all, Alexander had under his command 7,000 cavalry and approximately 40,000 infantry. By protecting his flanks and rear, Alexander hoped that the attacking Persian forces could be held at bay whilst the Companions executed their lethal blow. Fuller describes Alexander's plan as defeating an attack of double envelopment by an attack of penetration.⁵⁰

Initially, Alexander's advance was parallel to the Persian line. However, due to the Persian advantage in numbers, Alexander and the Companions (who were on the right of the Macedonian line) found themselves opposite Darius in the centre of the Persian line. This of course meant that the Persian left seriously overlapped Alexander's right wing. Consequently, as the two lines drew closer, Alexander began to shift his forces to the right. The result of this move was that Alexander's line was now approaching the Persians in an oblique movement. This now shifted the overlap to Parmenion's troops on the Macedonian left wing. As was the case at Issus, Parmenion would have to hold back the Persian right so as to give Alexander the time he needed to breach the enemy's line. The oblique movement by Alexander now gave him the initiative, and began to threaten Darius' entire plan even before it had been put into effect. As the Macedonian line moved further to the right, there was a danger that the battle would be shifted away from the levelled ground Darius had prepared for his chariots.⁵¹ The Persian ruler had to act quickly before his entire plan unravelled. Darius ordered Bessus to send elements of the Scythian and Bactrian cavalry to assault the Macedonian right flank and thereby prevent any further movement away from the prepared ground. Alexander responded with a charge by Menidas' mercenary cavalry. There ensued a fierce cavalry engagement, during which the larger Persian force threw Alexander's mercenary cavalry back. The final decisive battle between Alexander and Darius had now begun.

With this first clash of arms tipping in the Persians' favour, Darius perceived that the moment had arrived to throw the scythed chariots into the fray. His charioteers on the left launched themselves at the right of the Macedonian phalanx. If they were to be successful they would have to break the cohesion of this central element of the Macedonian line. However, even before they could reach the phalanx, Alexander's light infantrymen began bringing down the

horses with volleys of javelins. Those chariots that did reach the main phalanx did little damage. As they approached, the well-drilled phalangites simply opened their ranks to let them pass harmlessly through. Once through the main line, the chariots received their final blow from the grooms of the Companions and the rear ranks of the *hypaspists*. When one considers the patchy record of scythed chariots in past battles, it is difficult to understand Darius' faith in them. They had been successfully countered before.⁵² Their plight at Gaugamela is a stark reminder of the folly of placing too much faith on one piece of technology or tactic. Technology represents only one element of strategy. As Gray comments: 'Technology, as weaponry or as equipment in support of weaponry, does not determine the outbreak, course, and outcome of conflicts, but it constitutes an important dimension'.⁵³ This statement is in sharp contrast to Fuller, who is unequivocal about the role of technology in deciding the outcome of a battle: 'Tools or weapons, if only the right ones can be discovered, form ninety-nine per cent of victory'.⁵⁴ An enemy as well-led and professional as Alexander's army would surely find a way in which to counter such a threat.⁵⁵ Unfortunately for the Persians, the hopes vested in the chariots fell like so many of the charioteers and horses, as their enemies mauled them. In this sense, the fate of Darius' chariots illustrates perfectly Gray's assertion that 'each new generation of weapons technology has its own set of technical and tactical vulnerabilities'.⁵⁶

The sources provide precious few details of what occurred on Parmenion's flank. From the evidence that is available it seems that the Macedonian left held its ground despite coming under substantial pressure from Persian cavalry forces. The other significant event to occur on that wing of the battle was that Mazaeus (commander of the Persian right) sent a detachment of cavalry to attack the Macedonian base camp. The logic behind such a move is questionable, as the action had no real impact on the course of the battle. There is some suggestion in the sources that this detachment was charged with rescuing Darius' family from the Macedonians.⁵⁷ Whilst it seems reasonable that Darius may well have attempted such a rescue, attacking the enemy's rear and camp could have definite tactical benefits. In particular, sending forces into the enemy's rear may sow panic within their ranks and also seize the initiative by shifting the tactical focus of the enemy. As it was, there is no firm evidence that the royal family was rescued. Similarly, the small scale of the assault ensured that any significant tactical benefits were not realised. This operation was a gesture of wild hope, rather than a well-constructed element of the overall battle plan.

Whilst Parmenion was holding his position against the Persians on the left, events on the right were reaching the moment of decision. Bessus' forces were still engaged in heavy fighting against Alexander's flank guard. As Alexander committed more of his flank protection forces to this struggle, it seems that Darius also decided to throw increasing numbers of men into this section of the battle. There is some confusion as to why so much of his cavalry were sent to support Bessus, rather than launching an assault against the Companions at the same time. Fuller offers a range of possible explanations. There may have been confusion over the orders; natural impetus may have drawn the reinforcing

cavalry to ride to the aid of their fellow horsemen; or the light infantry screen in front of the Companions may have forced the charging cavalry to shift to their left and thereby into Bessus' area of operations.⁵⁸ Whatever the cause of this focus on the extreme left of the Persian line, the result could not have been better for Alexander. As the Bactrian cavalry tried to turn the advantage on the left into a decisive engagement, Bessus' forces became increasingly detached from the rest of the Persian line. A gap appeared in the Persian line almost right in front of Alexander and the Companions. Alexander and the Companions now headed a large wedge formation, with the *hypaspists* and four battalions of the phalanx making up the left side of the wedge and the right consisting of the Agrianians and infantry flank guard.

In one of the greatest examples of Alexander's tactical technique, the young king, leading the attack, now drove the wedge into the gap. From this point onwards the Persians had lost the day. The force and momentum of a wedge formation headed by heavy cavalry forced the gap in the Persian line to widen quickly. As the Companions broke through the line they now began to strike at the flanks of the Persian front line. With the enemy now at their backs, the day was about to get even worse for these hapless Persians. Just as the reality of their exposed flanks would begin spreading fear and chaos through the Persian forces, the massed ranks of the Macedonian phalanx fell upon them as well. This was classic Alexander: well-honed combined-arms tactics in which the enemy was caught between the cavalry and *sarissae* of the phalanx. With the Persian line now in disarray, Alexander drove his Companions on towards Darius and his entourage. Having failed to capture his adversary at Issus, Alexander was determined to finish the Persian ruler on this day. For Alexander, the personal defeat of the enemy commander would evoke the great heroic tradition of his ancestors. Romantic though he may have been, Alexander was also a great pragmatist and strategist. The slaying or capture of the Persian ruler would also symbolise Alexander's personal rise to glory as the new undisputed power in the Persian Empire. Indeed, in the aftermath of the battle Alexander was proclaimed king of Asia.

As the centre of his line began to fail, there came a point when once again Darius took the decision to flee the battlefield. Thus began another of Alexander's tactical hallmarks: the pursuit. As Alexander pushed his forces onwards in pursuit of his adversary, as at Issus a gap began to develop in the phalanx. The two battalions on the far left of the phalanx stayed in position, and thereby became detached from those battalions who were pushing forward with their king. This gap was exploited by elements of the Persian and Indian cavalry. However, for the Persians this was a case of too little, too late. The enemy forces that had breached the gap were easily dealt with by the rear phalanx who turned and slaughtered the Persians from the rear. This was one the great ironies for the opponents of Alexander; the moment when his line became disjointed and vulnerable was the same moment at which his own attack had acquired an unstoppable momentum. Alexander had seized the initiative, and the speed and momentum of his combined-arms attack ensured that the enemy could never

regain control of the battle. This feature of Alexander's tactical prowess also saved both of his flanks at Gaugamela. As the assault in the centre pushed forward, Menidas' flank guard was left isolated in the face of Bessus' superior Bactrian cavalry. Similarly, Parmenion's men were still vastly outnumbered and under heavy assault on the left. However, in both these sectors of the battlefield the Persian forces observed the collapse of the Persian centre and began their own retreat. Once again, as at Issus, the Persian army had lost its cohesion.

One particular event in the battle has caused more discussion than any other, and it concerns whether Alexander broke off his pursuit of Darius to rescue Parmenion's forces on the left flank. The accounts of Curtius and Arrian both record that Parmenion sent a dispatch rider to seek out Alexander and call upon his aid.⁵⁹ In these accounts it is reported that the king shifted the focus of the Companions away from Darius and crossed to the left flank to save Parmenion's men. However, it is likely that these accounts were designed to elevate the heroism of the king, and more importantly to discredit the character of Parmenion. Within the confused, dangerous and dusty environment of the battle, it is unlikely that a messenger could have found and reached Alexander that easily. It seems more plausible that, as indicated previously, the Persian right simply retreated once it had become clear that their centre had collapsed and Darius had left the field of battle. In the event, Alexander pursued Darius without success for thirty kilometres until the evening began to draw in. Indeed, Robin Lane Fox concludes that the story concerning Parmenion's call for help to Alexander was simply a means by which the historians of Alexander could excuse the king's failure to capture Darius. In this sense, they could portray a situation in which Alexander was denied his great glory by having to come to the aid of the incompetent Parmenion.⁶⁰ Even though the main action of the battle had long since ended, a final clash of arms resulted in yet further slaughter of the Persian army. As they returned from the pursuit, the Companion cavalry came across retreating Persian cavalry forces. These Persians, Parthians and Indians had been positioned on the Persian left wing during the battle. The clash that ensued once these two forces met was of great intensity, during which sixty Companions were killed.

It is difficult to estimate with any degree of accuracy the numbers of casualties that fell in the battle. This is primarily because the sources seem unrealistic in their reports of the Persian losses: some quote figures of 300,000.⁶¹ What can be said with certainty is that for the second and decisive time Alexander had defeated the main Persian army. Darius had mustered a huge army for the battle of Gaugamela, and had fought on favourable terrain. And yet Alexander had not just defeated this army but had destroyed it as a functioning force. Now, with the reputation and rule of Darius irrevocably damaged, Alexander could invade Babylonia and claim victory over the Persian Empire.

In attempting to understand why the outcome of the battle was so decisive, it is difficult to criticise much of Darius' deployment and plans. Unlike at the battle of Issus, Darius had correctly matched the terrain to the capabilities of his army. Although clearly facing a tactically adept enemy, the Persian ruler not

unreasonably hoped that his vastly superior numbers could negate Alexander's prowess as a commander. Indeed, the amount of troops Alexander committed to the defence of his right wing indicates that the Macedonian line was in danger of being undone and outflanked in this sector of the battle. With Alexander's attention drawn to the right, one wonders why Darius could not make greater gains on the Macedonian left wing. As at Issus, the credit for this should perhaps be given to Parmenion, who once again seems to have held his ground in the face of heavy and sustained attacks. Darius' forces probably came fairly close to outflanking Alexander's line on both wings. However, despite the credit Darius may be owed for these elements of his tactical plan, his futile use of the chariots reveals the limits of his competency. Forces such as these should rarely be used in such an isolated fashion. With infantry support to pin the Macedonian phalanx in place, the chariots may have made an impact on the battle. As it was, the charioteers were wasted and simply sent to their deaths.

Whilst correctly criticising some of Darius' decisions, we must remember that some of his problems were caused, or amplified, by Alexander's tactical manoeuvres. Alexander's initial deployment was an excellent response to the disadvantages he faced at Gaugamela. This, in conjunction with his oblique advance to the right, threatened to neutralise Darius' plan and forced the Persian ruler's hand. By these actions, Alexander disrupted the balance of the Persian line, and in doing so created the gap into which the Companions attacked. The events on the Macedonian right wing suggest that even under severe pressure, Alexander's *coup d'oeil* remained intact and he was able to time the decisive stroke to perfection.

The battle of Gaugamela reveals in stark detail the relationship between physical and moral forces in war.⁶² Despite being outnumbered and thereby seriously outflanked by his enemy, Alexander's crushing physical assault on the Persian centre created a war-winning effect on the morale and cohesion of the enemy army. A penetrating attack on the opposing line creates a degree of vulnerability for the advancing forces. Rapid, thrusting attacks through the enemy's front-line forces almost inevitably exposes the flanks of the advancing units to counterattacks. If such counterattacks were to occur in an organised and coherent fashion, the spearhead forces could be cut off and destroyed in detail. However, when this kind of penetrating attack works it does so because the assault dislocates the enemy's cohesion so rapidly that he is incapable of organised resistance. The sight of enemy forces in the rear tends to turn the minds of the enemy front-line forces to retreat. This effect was the basis for the success of the German operational concept of blitzkrieg. In this case, the penetration by armoured forces was so rapid that the enemy's resistance collapsed when it discovered German forces deep in its rear.⁶³ Some battles are won by devastating physical destruction of the enemy, to a point at which they simply have insufficient numbers left to resist effectively. However, in many battles, like Gaugamela, the enemy is defeated in his mind even though little actual destruction has taken place. Once this has occurred, and the enemy's cohesion is broken, then the physical destruction of his forces can occur during the pursuit.

Alexander had gambled at Gaugamela. From a strategic perspective he was correct in his desire to seek another decisive clash of arms with Darius. His grand policy objectives could not be met without destruction of the enemy's forces and the neutralisation of Darius. In the Balkans, Greece, and to some degree at Issus, Alexander had revealed an ability to maximise his tactical advantages through operational manoeuvre. However, at Gaugamela he risked everything on his tactical proficiency. Whilst most battles are something of a gamble, Alexander appears to have not made much effort to shift the odds in his favour. A more sober analysis of how best to secure his policy objectives may have resulted in a refusal of battle at Gaugamela. Another battle had to be fought, but perhaps Alexander could have stolen the initiative from Darius, either through manoeuvre and/or by threatening centres of population or supply.

Five years after his gamble at Gaugamela, and in response to the army's mutiny at the river Beas in India, Alexander began the long march home. The army may have been on the homeward journey, but there was still much fighting to be done. As the army headed south down the river Indus, some marching on foot whilst others travelled via the fleet, the brutal fighting continued. Alexander met resistance from the Mallians and Oxydracae. The nature of these conflicts mirrored those Alexander had fought since he had entered Bactria and Sogdiana. The cities of these new enemies had insufficient defences to cope with the Macedonian siege techniques. When the cities fell, the now-standard slaughter of the men and enslavement of the women and children took place. Alexander's loss of coercive subtlety was becoming increasingly evident.

During these campaigns one incident during the siege of Multan stands out as worthy of attention. It revealed both the best and worst of Alexander. From a leadership perspective Alexander's actions at Multan are exemplary. However, as far as policy is concerned, Alexander seemed more concerned with the tactical outcome of a minor siege than with the well-being of his policy goals. During the siege, the Mallians took refuge in a fortified citadel. To Alexander's dismay his forces initially made little progress. In order to spur on his forces, Alexander personally led the assault up the siege ladders. Emboldened by their commander, the *hypaspists* stormed up the ladder to join him in the attack. However, in their newly discovered eagerness they overloaded the ladder, which subsequently broke, leaving Alexander and three of his Companions isolated on the citadel wall. Reflecting his tactical style of command, Alexander seized the initiative and leapt into the citadel to continue the fight. The impetuosity of the king had left him in a precarious situation, surrounded by his enemies. As the Mallians surged forward to slay their nemesis Alexander was struck by an arrow that pierced his chest. The Companions around the king now bravely fought off the assailants until the *hypaspists* could scale the wall and rescue Alexander. The king was carried to safety whilst the army slaughtered the citadel's population in an act of revenge. Alexander's actions had certainly reinvigorated the assault on the citadel. In this respect, he had exemplified the concept of command by example.⁶⁴ This was particularly important within the cultural context of the Greek heroic tradition.⁶⁵ However, Alexander had

received a serious chest injury, perhaps a punctured lung, and had come close to death. Had he died at Multan, the army would have been left without its commander-in-chief in a distant, hostile land. Therefore, at the same time that we applaud his brave example we must also question his broader judgement concerning the overall welfare of the army and the campaign.

For the most part Alexander did use military force in the service of policy. All four of his great battles (including the Hydaspes) gave him victories that were essential ingredients in defeating his enemies, centres of gravity and moving towards his ultimate objectives. The same can be said of most of his other military operations, including the sieges at Tyre and Gaza. In addition, Alexander was also conscious of the role military campaigns could play in cementing political alliances. Until the fall of the final Persian capital Ecbatana, Alexander's military campaigns were successfully sold as acts of Greek revenge against their eastern neighbour. This helped to reinforce the League of Corinth, especially since Greek troops were sent to serve under the terms of the alliance. Throughout the campaigns Alexander also promoted his legitimacy as lord of Asia by integrating local forces into his army. In this sense, the army was a physical representation of a political and cultural objective.

For the most part Alexander was aware of how potent military force could be as an instrument of policy, and more importantly how policy must be the guiding influence on campaigns. However, Alexander was sometimes guilty of taking his eye off the policy ball and focusing too much on tactical matters or personal glory. An example of the latter can be found in his visit to the oracle at Siwah in Egypt. On a quest to follow in the footsteps of his ancestors Perseus and Heracles, Alexander and a small entourage risked their lives and trekked across inhospitable desert to visit the shrine of Zeus Ammon at Siwah. It is easy, and to some degree legitimate, to rationalise such actions by making reference to the cultural requirements of the time, and in particular the significance of mythical histories in the Greek world. Nonetheless, once again from a purely pragmatic and strategic perspective, Alexander's actions look reckless and unnecessary. Perhaps most interesting of all in this respect is the campaign in India, during which Alexander seems to have lost strategic focus. There are a number of possible explanations for this, which include Alexander's increasing sense of divinity and quest for personal aggrandisement. However, from a strategic perspective most damaging of all was the fact that after the capture of the capitals and defeat of Darius and his successors, Alexander lacked a clear policy goal. If policy is, as Clausewitz argues, the guiding influence, then the lack of clear policy objectives can easily lead to loss of focus in military strategy. It is easy to replace this missing policy objective by focusing on the tactical events and personal goals.

Lesson 13: dealing with complexity – Clausewitz was mostly right

This study began by identifying the challenges faced by the strategist. The substantive nature of these challenges emanates from the complexity of strategy.

The study of Alexander's campaigns has presented us with an insight into how these challenges can be overcome or mitigated. What has become clear is that there exists no silver bullet; no one answer to the problems faced. However, four elements to good practice do seem particularly important. Three of these are discussed by Clausewitz, and two of these elements are essential ingredients of Clausewitz's theory of war. The only one that does not receive particular attention in *On War* is the importance of having well-trained and reliable forces at your disposal. Of the remaining three elements, the importance of simplicity is evident in the Prussian's work, although as a component of his theory it is often overlooked. The final two elements of best practice will be familiar to any student of Clausewitz: the centrality of the policy objective and the role of the military genius.

When studying the campaigns of Alexander it is difficult to overestimate the significance of having a professional Macedonian core to the army, and the combined-arms approach developed by Alexander and his father. The limitations of forces organised around the amateur citizen soldiery of the hoplite phalanx had become painfully evident when faced with the discipline and ruthless professionalism of the Macedonian forces at Chaeronea. Moreover, traditional hoplite armies would have proved woefully inadequate for the lengthy and varied campaigning Alexander had planned. This would be the case both psychologically and in terms of the required military capabilities. A professional, well-trained and loyal army has a substantial advantage over less-developed and less-organised forces. This rather obvious point is primarily due to the nature of warfare. War is a chaotic, uncertain, dangerous and physically and mentally exhausting activity. In such circumstances it is invaluable for a commander to know that his army will still be able to perform its duty, both as individuals and as a collective whole. As the chaos and emotional strain of combat unfolds, a professional army is better able to maintain formation and even undertake complex tactical manoeuvres during the heat of battle. Hoplite armies were also limited because of the one-dimensional nature of their capabilities. Alexander's army required the flexibility to deal with regular combat against the Persian army, engage in lengthy sieges and brutal urban warfare, undertake rapid operational manoeuvres, make opposed rivers crossings, conduct search and destroy missions in rugged terrain against elusive guerrilla enemies, and scale seemingly impregnable mountain fortresses. The army that Alexander led across the Hellespont, and which he developed even further during the campaigns, had the training, discipline, morale and the range of capabilities required to cope with the extraordinary demands placed upon it.

Simplicity is often overlooked as a principle of war; yet Clausewitz identified its value amongst the complex interactions that occur in war: 'It seems to us that this is proof enough of the superiority of the simple and direct over the complex ... rather than try to outbid the enemy with complicated schemes, one should, on the contrary, try to outdo him in simplicity'.⁶⁶ Unfortunately, modern commentators often advocate overly complex tasks for the strategist. Although Alexander sometimes appeared to take the route less travelled, his plans and

operations were rarely complicated. Indeed, his great battles are testament to this. Alexander was a skilled tactician, but his operations were built upon straightforward, rapid, offensive manoeuvres that overwhelmed the decision-making and will of the enemy.⁶⁷ Meeting complexity with complexity will most likely ensure even greater levels of friction. The simplicity of Alexander's approach was most clearly manifest in his focus on the defeat of enemy forces. When faced with complex strategic challenges, there may be a temptation to seek out nuanced and sophisticated answers. However, whilst the other instruments of grand strategy have vital roles to play in the service of policy, Clausewitz is starkly accurate when he wrote: 'it is evident that destruction (moral and/or physical) of the enemy forces is always the superior, more effective means, with which others cannot compete'.⁶⁸ A striking example of this truism is Alexander's operations against the Uxians.

After the battle of Guagamela Alexander lightened his forces. He did this because he did not anticipate another great regular battle so soon. Therefore, he needed forces that were better suited to fight irregular enemies in difficult terrain. One of the first tests for Alexander's new mobile formations was his conflict with the Uxians. For almost two centuries the Persian rulers had failed to completely subdue the Uxians. Consequently, those travelling through their mountainous lands were required to pay a toll. This was something Alexander would not tolerate, and so by the use of military force he would compel them to accept his hegemony. Alexander's defeat of this difficult enemy relied on guile, simplicity and ruthlessness. Alexander's initial response was to feign submission to Uxian demands. He agreed to pay the toll and arranged to meet the Uxian warriors in a mountain pass to pay his dues. However, whilst the Uxian fighting men were *en route* to the meeting place, Alexander led the Royal Bodyguards, *hypaspists* and 8,000 other unspecified troops on a rapid night march to attack the Uxians' villages.⁶⁹ Having inflicted destruction on their home bases, the Macedonian force then moved swiftly to deal with the Uxian warriors in the pass. In fact, the pace of Alexander's movements was such that he was able to deploy his men in and around the pass before the enemy arrived. Whilst Alexander commanded the troops who occupied the pass, Craterus was dispatched to seize the heights that overlooked the probable line of retreat the Uxians would take if combat occurred. It soon became clear to the Uxians that Alexander held an insurmountable position in the pass. Rather than risk a suicidal assault on the Macedonian forces, the Uxians fled and sort refuge on the heights that, unbeknown to them, were held by Craterus' men. In the panic and pursuit that ensued many of the Uxians died either at the hands of Alexander's and Craterus' men or by simply falling to their deaths from the heights. The result of this crushing defeat was that the Uxians were forced to pay Alexander an annual tribute, and of course offer him free passage through their lands. As Fuller indicates, what is astonishing about this episode is that Alexander had defeated an enemy in twenty-four hours that the Persian Empire had failed to subdue in two centuries.⁷⁰ The new mobile forces had passed their first test. Indeed, Bosworth describes the operation as 'one of his most impressive displays of rapid

mobility'.⁷¹ It was also a display of how the decisive use of force can bring striking political outcomes. The Uxians clearly represented a formidable and challenging foe. Rather than try to establish a complex grand strategic relationship with them, Alexander simply broke their will and crushed their capabilities through rapid military assault.

Of course, the defeat of enemy forces is not an end in itself; it must always be guided by the third element of dealing with complexity: focus on the policy objective. Amongst all the complexities of strategy, the policy objective represents a lens that enables the strategist to focus on what is important and necessary. The policy objective is the ultimate guide and yardstick by which actions must be judged. Maintaining this focus should allow the strategist to filter out much of the noise and chaos of strategy. Since policy was dealt with in the previous section, 'Policy is King', there is little need to reiterate the evidence to support this point. Suffice to say that when Alexander maintained his focus on the policy objective, his campaigns produced more durable results at reasonable cost. In contrast, when he lost sight of the guidance of policy the campaigns inevitably lost a clear purpose and became more costly and brutal. Without a clear policy objective Alexander increasingly relied on brutal tactical actions to produce results. Evidence of the failure of this approach can be seen in the increasing resistance to his presence in India, and the mutiny of his forces at the river Beas. The core of Alexander's army had been prepared to make enormous sacrifices over the ten years prior to the Beas incident. Aside from loyalty to their king, this was partly due to the fact that they could perceive a purpose and credible and desirable end state. However, in India their sacrifices began to appear increasingly without purpose. As Gray notes, the recruitment of foot soldiers for a cause becomes more difficult if the cause appears to be losing momentum.⁷²

The final element in dealing with the challenges of strategy is the most important, but perhaps the least straightforward lesson of all. When studying the campaigns of Alexander one cannot help but be impressed by the significance of Alexander himself, and thereby Clausewitz's emphasis on the military genius. An astute commander, with the many qualities identified by Clausewitz, is better placed to be able to deal with the complexities and stresses of strategy. Of course, the problem is that military geniuses are few and far between. Thus, to reiterate, those actors engaged in strategy must codify the elements of military genius, develop means by which they can identify them in individuals, and nurture such characteristics in those future commanders not naturally endowed with such innate abilities. In the absence of military genius an actor can develop a command process that can, to some degree, compensate. However, there is simply no substitute for genius. One just has to hope that when the next big strategic challenge comes around a military genius is available and has been identified as such.

Clausewitz identifies a number of characteristics that define a military genius. These include physical and moral courage, incisiveness, presence of mind, strength of will and character, and an ambitious nature. However, Clausewitz

gives particular prominence to a general's intuitive ability, his *coup d'oeil*, and the determination to see his decisions through to conclusion. He also acknowledges the significance of leadership as being particularly evident in the task of supporting the men through the psychological trauma of battle. Finally, a Clausewitzian general must understand how military force relates to policy.⁷³ If we briefly analyse Alexander's performance on each of these characteristics we can perhaps appreciate why he was so successful.

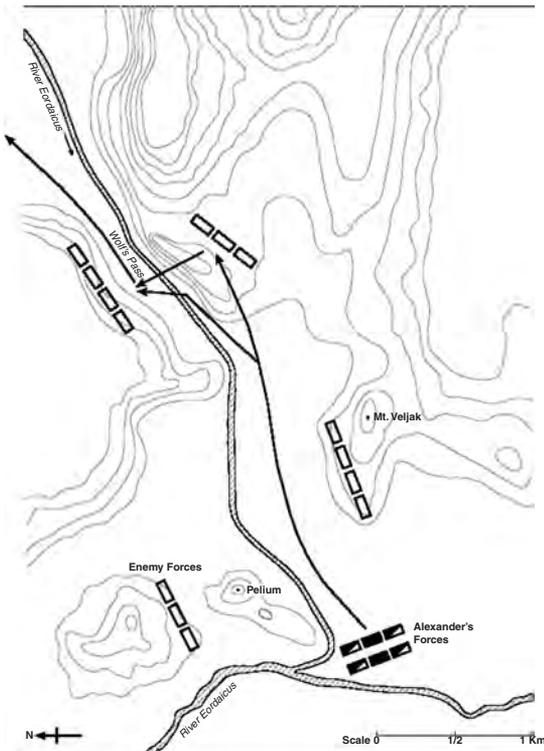
Alexander's physical courage is beyond doubt. As has been noted, Alexander exemplified the Greek heroic tradition and led his forces in battle in the decisive action. This was the case whether he was leading a Companion cavalry charge or surging through the breach at Tyre. Such an approach may have seriously endangered his life on a number of occasions, but it also acted as an essential ingredient of his leadership ability. The fact that he was seriously wounded on eight separate occasions speaks volumes about this aspect of Alexander's approach to command.

As Sun Tzu noted, war is of vital importance to the state, and can even make the difference between survival and extermination.⁷⁴ This places a great deal of responsibility on those who have to make the big strategic decisions. Taking those decisions requires great moral courage. Each time Alexander took the field against the Persian army he was risking everything: his life, the lives of his men, his reputation, the position of Macedonia, and possibly also the fate of the entire Greek world. It is conceivable that had Darius defeated Alexander he may have wished to enact revenge on the members of the League of Corinth, who had supplied forces for Alexander's campaigns. The moral courage required to take such risks is best exemplified by the battle of Gaugamela. To take the field in the face of a five-to-one disadvantage, on the enemy's chosen site of battle, thousands of miles from home, may have been strategically problematic, but it was also undoubtedly an act of great moral courage. Whilst we should always endeavour to stack the odds in our own favour, war is always a gamble.⁷⁵

Alexander rarely missed an opportunity. In this sense, incisive is a word that fits his approach to strategy well. He displayed an ability to comprehend a situation quickly. There are a host of examples to illustrate this point. At the Granicus he noted the inappropriate deployment of Persian forces, and acted accordingly. At the Hydaspes he quickly adapted and developed a plan to counter Porus' strength in elephants. At Issus, Alexander's incisiveness is evident in the redeployment of his cavalry to save the broken phalanx under pressure from the Greek mercenaries. Alternatively, one might also focus attention on his response to the arrival of Getae forces at the Danube. Rather than purely perceive them as a threat, Alexander regarded their arrival as an opportunity to enhance his coercive campaign. There are very few occasions when Alexander was caught napping. We could perhaps mention the moment during the siege of Tyre when he was caught unawares by a Tyrian counterattack when he had fallen into the routine of retiring for lunch. Alternatively, we can note that Darius was able to manoeuvre onto Alexander's lines of communication before the battle of Issus. These are moments certainly worthy of our attention. In particular, they alert us

to the inherent danger of becoming complacent in the face of the enemy. However, on each occasion when Alexander lost his incisive mind momentarily, he rectified the situation with astute manoeuvre and action. In many respects, an incisive mind is also illustrative of *coup d'oeil* – that ability to perceive the decisive moment and the decisive place for action. Again, many of the above examples are illustrative of Alexander's ability in this respect.

We can consider strength of will/character and presence of mind as related elements of military genius. Amongst the chaos and stresses of battle a commander must remain calm and in control.⁷⁶ A fine example of this can be found during the Balkans campaign at Pellium, when Alexander found himself in a vulnerable position in relation to his enemies and supply situation. Two Illyrian chiefs, Cleitus and Glaucias, rose to challenge Macedonian hegemony in the region. Cleitus, the son of the old Macedonian enemy Bardylis, had allied with Glaucias, king of the Taulantii, and planned to invade Macedonia. Also, it seemed that the Autariatae, a tribe from modern-day Bosnia, had a role to play in this revolt by attacking Alexander's forces as they marched to engage the two Illyrian chiefs. To deal with this latter threat Alexander sent his ally King Langarus of the Agrinians to attack the forces of the Autariatae. This action would



protect the flank of Alexander's army as they marched to Pelium, a fortified city that Cleitus was occupying on the border with Macedonia. Pelium was to be the base of operations for the invasion of Alexander's kingdom. To the surprise of Cleitus, Alexander's army arrived at Pelium before the former had been able to join forces with the army of Glaucias. When Alexander arrived in the area the bulk of Cleitus' men were deployed on a ring of hills around Pelium. As the Macedonian forces approached the city, sections of the enemy came down from the hills and launched an attack. There are precious few details about this engagement, but it is reported that Cleitus' men received a severe mauling from the Macedonians. Consequently, the positions on the hills were abandoned, and Alexander was now able to begin his siege of the fortified city. However, war being the realm of the unexpected, Alexander had to abandon his plans for a siege when on the following day the army of Glaucias arrived in the locale.⁷⁷ Alexander's forces were insufficient to both assault the city and fend off the expected attack from Glaucias' considerable army. Consequently, Alexander had to retreat to a fortified camp he had established next to the river Eordaicus and consider his next move. Glaucias' army, with the remnants of Cleitus' men from the previous day's engagement, had reoccupied positions on the surrounding hills and therefore had the advantage of holding the high ground.

Alexander was facing a desperate, and deteriorating, situation. Heavily outnumbered, his options were also becoming increasingly limited by logistical demands. Alexander was rapidly running short of supplies for his army. He had to act quickly. To solve his supply problem he dispatched Philotas with cavalry and horse-drawn wagons to gather the required foodstuffs from the local area. Not surprisingly, Glaucias seized upon this opportunity to defeat a section of Alexander's army in detail, and manoeuvred onto the hills surrounding the plain from which the supplies would be drawn. The Macedonian king acted quickly to this threat and led a force of *hypaspists*, cavalry, archers and Agrianians to rescue Philotas and his men. Alexander's precarious position is clearly evident from this episode. In the first instance he had to risk a section of his force to gather crucial supplies despite the obvious risks. It quickly became apparent just how vulnerable Philotas' detachment was. So, Alexander was left with little choice but to rescue Philotas' force, whilst at the same time having to leave a sufficient army in place to deter the forces in Pelium from venturing out to join with Glaucias' men. In the end, Alexander managed to balance these various needs and threats. Glaucias' men did not risk an attack on Philotas' detachment. Nor did the forces in Pelium attempt a breakout. In this sense, Alexander could consider himself lucky that the two commanders had not coordinated their actions better. Yet, despite this limited success, the respite was short-lived. The episode must have made it apparent that Alexander could not risk another such move to gather supplies. He would have to devise a more permanent solution to his predicament.

One of the notable features of Alexander's three great battles against Persian forces was the offensive charge led by the Companion cavalry. However, as a commander Alexander had much greater variety to his art. As he stood outside

Pelium, short of supplies and with his enemies deployed on the hills around him, it became clear that he would have to effect a clever tactical withdrawal. Again, Alexander acknowledged the principle of knowing when not to fight. The most sensible route for this retreat presented a number of obstacles. The main danger would come from enemy forces deployed on the foothills along the route of his withdrawal. This danger increased dramatically as the route passed through the narrow Wolf's Pass, which was dominated by a steep-sided hill. This afforded his enemies an ideal opportunity to harass his forces as they retreated. To make matters even worse, the river Eordaicus ran through the pass and would have to be forded in the face of the enemy.

So, in order to achieve a successful retreat, Alexander's forces would need to complete a number of steps. In this respect, Alexander's first task was to remove the enemy from the foothills along the initial section of his route of advance. His solution to this problem was innovative. Alexander's forces were deployed on a plain, with the enemy deployed on the foothills to the north and south of his position. The Taulantii mainly held the northern foothills, in which Pelium was situated, whilst the Dardanians occupied the southern hills. The tactic Alexander utilised for this action relied primarily upon the coercive effects that a professional well-trained army could produce. He deployed the phalanx on the open plain in close formation with a depth of 120 men. Squadrons of cavalry were deployed to protect the flanks of this force. The phalangites then went through a series of well-drilled manoeuvres in clear view of the enemy. Their first movement, which they performed in the spearhead formation, was aimed towards the Dardanians on Mount Veljak. As the enemy retreated from the foothills in the face of this apparent advance, their fellow Illyrians on the northern foothills launched an assault on the rear of the phalanx. However, with great tactical precision the phalangites did an about turn, let out a battle cry and clashed their pikes against their shields. Faced with such a cohesive force of phalangites and cavalry, the Taulantians fled back to and over the northern hills.

Alexander had cleared the first obstacle to the withdrawal of his forces. He now faced the task of clearing the enemy off the hill overlooking Wolf's Pass. Having just showed an extraordinary degree of tactical finesse, Alexander now relied upon the psychological impact of a frontal assault on the enemy. The king led his seven personal bodyguards and personal Companions in an attack against the enemy on the aforementioned hill. This elite and highly motivated force of cavalry was prepared for a tough fight that could have included dismounted combat. However, in the event the enemy fled before contact could be made. Despite their relative numerical advantage, the enemy had once again proved to be no match for Alexander's men in spirit. Once he had a foothold on the hill overlooking the pass, Alexander quickly reinforced his position with 2,000 Agrianians and archers. With the hill secure, the rest of the army could begin to cross the river in Wolf's Pass. The force forded the river, with the *hypaspists* taking the lead. With the majority of his army now forming line on the far side of the river, the Taulantians moved to engage Alexander and his men who were still holding position on the hill. Once again, the enemy had spotted an opportunity

to engage a fraction of Alexander's army and attempted to defeat it in detail. Alexander acted with typical speed and attacked the oncoming enemy with his cavalry. At the same time, some of his phalangites feigned a re-crossing of the river to threaten the flank of the Taulantians. Again, the enemy did not stand in the face of this assault. In contrast to their enemies at Pelium, Alexander's forces, although not in direct contact with each other, had displayed an effective degree of coordination. Once the threat from the Taulantians had receded Alexander led the Agrianians and archers across the river. Finally, the Companions and bodyguards began to cross the river. To cover this final crossing Alexander had the archers and his field catapults pin down the remaining enemy forces. Not a single man had been lost in this tactical withdrawal.

Much of Clausewitz's theory was influenced by the career of Napoleon, a commander who displayed many of the characteristics of a military genius. One characteristic that Napoleon and Alexander certainly had in common was an ambitious nature. Conscious of the scale of his ambition, Alexander even took his own historian, Callisthenes, on the campaigns. This level of ambition, alongside his determination, certainly helped Alexander to overcome a number of potential obstacles, and is vividly displayed at the 'Sogdian Rock', a supposedly impregnable natural fortress atop a sheer rock face.

Whilst Alexander's ambition and determination were important ingredients in taking his campaigns as far as they did, these strengths may also be seen as weaknesses in that they pushed him beyond his culminating point of victory. Alexander's invasion of India and Napoleon's invasion of Russia in 1812 both appear reckless and unnecessary from a strategic perspective. Therefore, perhaps they can both be explained by the sheer naked ambition of the two commanders. In this sense, we can applaud Clausewitz's identification of determination as an element of military genius, but caveat this thought with the notion that the said determination must be tempered by continuing focus on the policy objective. This is perfectly compatible with the Prussian's theory.

Napoleon advised that aspiring commanders should study the great campaigns of the past.⁷⁸ Having studied the campaigns of Alexander through the prism of strategic analysis, we can add to Napoleon's counsel and advise that one should also carefully study Clausewitz's *On War*. For, within this text the lessons of the past are codified as accurately as is ever possible in literature. As Clausewitz himself warned, theory does not ensure victory, but it does help us understand the complexities of strategy, leaving human judgement to provide the winning ingredient.⁷⁹

6 Lessons in strategy

Conclusions

Introduction

This study began by discussing the many factors that make strategy such a complex activity. In the light of this, the career of Alexander the Great is an invaluable tool in our quest to understand best practice. With the exception of a few minor setbacks (such as Halicarnassus and the first assault at the Persian Gates), as a strategist Alexander has a record of constant success over a remarkable length of time. During twelve years of campaigning he proved himself capable of defeating a range of enemies in vastly different circumstances and environments. To all intents and purposes Alexander was never defeated and achieved most, if not all, of his objectives. This work has identified the most important lessons we can learn from this most remarkable of strategic careers.

As with any historical example of strategy, the lessons we can draw from Alexander's campaigns are numerous. Every campaign can teach us a range of important things about the complex nature of strategy. Therefore, for the sake of brevity this study has concentrated on the more obvious and pertinent lessons. The most important lessons have been divided into three groups: grand strategy, military operations, and use of force.

Grand strategy

*Lesson 1: war is rarely the final act (the limits of force)*¹

Although the success of Alexander's campaigns was underpinned by the application of military force, an explanation for this success requires reference to the other elements of grand strategy. Grand strategy encompasses all the instruments at the state's disposal: diplomatic, intelligence, military, economic. At this juncture it is worth while to remind ourselves of Liddell Hart's concise definition: 'the role of grand strategy – higher strategy – is to coordinate and direct all the resources of a nation, or band of nations, towards the attainment of the political object of the war – the goal defined by fundamental policy'.² To reiterate, the key challenge in grand strategy is choosing the right instrument, or the right balance of instruments, necessary to fulfil the policy requirements.

It can be argued that one of Alexander's key attributes was his awareness of the limits of force. As a consequence of his inferiority in manpower relative to the scale of his objectives, Alexander understood that he could not simply rely upon the physical presence of his forces to control the vast expanse of the Persian Empire. Thus, in order to cement his rule Alexander would have to complement his military victories with clever post-conflict policies. If we draw a comparison with contemporary Iraq, it is incorrect to argue that the invasion of Iraq *per se* represented a failure at the grand strategic level. As in Persia, Iraq could only be laid open by a successful military invasion. However, in contrast to Iraq, Alexander was able to go some way towards consolidating his rule with astute post-conflict policies. This did not signal an end for the role of military force in the conquered territories. Garrisons were regularly established and forces often had to be redeployed to regain control over an area. Clausewitz is largely correct when he notes that in war the result is never final. Of course, there are exceptions to Clausewitz's position. It can be argued fairly convincingly that in the case of the Punic Wars the destruction of Carthage had a finality about it.³ Nonetheless, for the most part Clausewitz's point is well taken; the use of military force is seldom sufficient to bring about an absolute resolution of an issue.

The post-conflict policies that Alexander enacted were varied, and chosen to suit local circumstances. Nonetheless, we can identify certain common features to these policies. In his quest for stability, development, and exploitation, for the most part Alexander maintained existing arrangements. In terms of political administration this often meant retaining the Persian satrapal system, or its local equivalent. However, Alexander was always careful to put in place a parallel power structure manned by loyal Macedonians or Greeks. Most importantly, Alexander ensured that the key positions of military and financial responsibility were in the hands of his men. When required, Alexander would reform or replace existing political structures. This is most obviously seen in his replacement of oligarchies with democracies in the Greek cities of Asia Minor. Yet, with stability in mind, Alexander restricted the zeal of the new regimes if they sought revenge over the old elites. To complement the above political measures, Alexander displayed a degree of sensitivity to the economic conditions for those in his new dominions. His retention of the Achaemenid fiscal system in much of his newly conquered territory indicates that, rather than simply wishing to exploit his new territories for financial gain, he understood the value of stable economic conditions. As in the political field though, Alexander was ever the pragmatist. Taxes could be manipulated to reward the loyal or to cement his image as the liberator from Persian oppression.

Alexander was not just trying to establish a secure basis for his rule, he had a mind to develop the empire as well. His city-building programme, although motivated by the need for garrison bases, was also designed to facilitate economic, social and political development. The cities brought together Macedonians and their newly conquered peoples. Of particular significance in this respect were the various educational establishments, which were designed to

produce future military personnel from local children who had absorbed a degree of Hellenic culture.⁴ As a pragmatist, Alexander could be either brutal in his treatment of his foes (as at Tyre and Gaza), or would seek some form of alliance and power sharing (note the post-conflict utilisation of Porus). In the vast and complex strategic environment of India, this decision to ‘divide and rule’ was essential.⁵

As a general rule Alexander understood the need to respect local religious beliefs, and often associated himself closely with them. The most striking example of this was in Egypt, where the young Macedonian glorified the god Apis and increased his legitimacy in the eyes of the Egyptians by association with Amun-Re. Such an approach would later be followed by the Romans, who on occasions would assimilate their own gods with the culture of their conquered territories.⁶ The Romans learned the hard way in Judaea that offending local religious sensitivities could seriously undermine the stability and control of an area.⁷

To maximise the possibilities of success in the above-mentioned policies, one must possess a solid understanding of those being dealt with. Sun Tzu’s advice to ‘know your enemy’ is straightforward but undoubtedly valuable.⁸ Spending the time and effort to establish a reasonable understanding of the areas you will operate in is seldom wasted. In this respect, Alexander’s preparation and intelligence activities in support of the campaign are worthy of praise. It is reported that even as a child Alexander took a keen interest in the Persian Empire, quizzing Persian diplomats on the geography of their homeland.

The non-military actions of Alexander’s grand strategy did not enjoy unremitting success. His rule was challenged, to varying degrees, in fourteen of the conquered provinces. Nonetheless, his status quo approach to governance helped to reduce the possibility of unrest brought about by radical change. In some respects Alexander tried to minimise the impact of his presence unless change was required for strategic reasons. However, even with minimal disturbance created by the change of rule in the empire, there were those who took advantage of the circumstances. The most striking example of this was in Bactria and Sogdiana. However, the fact that this scale of rebellion was unusual in Alexander’s empire is telling.

Lesson 2: harmonise actions throughout the levels of strategy

One of the keys to success in strategy is to harmonise your actions amongst the various levels. To reiterate, the levels in question are policy, grand strategy, military strategy, operational and tactical. Harmonisation is not easily achieved. Difficulties come in many forms, including the real danger that the commander may become distracted, or too focused on actions at a particular level. Of course, friction is always at play to further complicate the situation. The finest example of Alexander harmonising the levels of strategy can be found in his actions to neutralise the Persian naval threat. This was a vital military strategic goal. A successful Persian invasion of Greece could have destroyed the foundations of Alexander’s presence in Persia. To achieve his goal Alexander conducted a

series of tactical actions against Persian naval ports, and resisted the potential distraction of pursuing Darius after the battle of Issus. With resourcefulness and determination he overcame friction, in the form a resourceful enemy at Tyre. Operationally, Alexander linked his tactical actions together to diminish the basis for Persian naval power slowly. Meanwhile, non-military actions at the grand strategic level ensured that his forces were never overstretched along the coast. Many potential enemies accepted Alexander's hegemony without resort to battle. Finally, whilst Alexander's prudence in managing the new territories must have had a positive influence on the decisions of local rulers, his victories at Issus and Tyre were also critically important. These events provided clear evidence that a shift in power was occurring in the region; local leaders realigned themselves appropriately, and removed their fleets from Persian control. Overall, both from a bottom-up and top-down perspective, Alexander ensured that neutralisation of the Persian fleet remained the strategic focus, and that his actions at all levels worked towards this.

The most interesting example of disharmony in Alexander's campaigns was the battle of Gaugamela. Admittedly, Alexander did win an outstanding victory on the battlefield. Yet, arguably he focused too much on this one tactical action against Darius, and risked the whole campaign on a field of battle chosen and prepared by his enemy. More astute operational manoeuvres could perhaps have provided Alexander with a more favourable tactical situation, and thus ensured greater harmony with the overall objective of the campaign. Similarly, during the campaign in India (certainly after the Hydaspes) Alexander appears to have become increasingly fixated on brutal tactical engagements, and failed to balance them with clever non-military activities. In fact, there appeared to be no clear understanding of how these tactical actions would link together at the operational level.

Harmonising one's actions is about conceptually understanding how military events relate amongst themselves, as well as with the non-military instruments of grand strategy, and ultimately how all of these work together to fulfil a policy objective. The decision-making structure of an actor is an important consideration in how well this works. For Alexander, because decision-making power at every level was vested in him, this process was relatively straightforward. In a modern, complex state, achieving harmony can be undermined by the division of responsibility throughout the various levels. In Vietnam, the United States appeared to suffer from the fact that no one claimed responsibility for ensuring harmony amongst the levels. Thus, General Westmoreland focused on a tactical measurement of success (kill ratio), without understanding clearly how this related to the other grand strategic instruments.⁹

Lesson 3: there may be various centres of gravity

Centre of gravity is an extremely useful planning tool. The notion that one should examine the enemy, seeking those elements upon which his power/resistance is based, and then focusing one's efforts in that direction, is inherently sensible.¹⁰

However, in practice a number of difficulties arise. One faces a substantial intelligence challenge when trying to identify the enemy's centre of gravity. Understanding how the enemy's 'system' functions is fraught with difficulties. In addition, if there is more than one enemy centre of gravity how do you, and should you, prioritise? If the enemy's centre of gravity is unreachable or cannot be neutralised do you simply accept defeat and/or a prolonged attritional conflict?

Alexander faced an enemy with a number of candidate centres of gravity. All of the following represented significant elements in the power of the Persian Empire: Persian army; Persian navy; Darius III; the capital cities of Susa, Persopolis and Ecbatana; and the acquiescence of the local populations/rulers/officials. Alexander pursued each of these different centres of gravity. Indeed, one can argue that, with reference to the substantial policy objectives of the campaigns, pressure had to be applied to all of them because Persian power (military, political and economic) had a wide and varied base. Since strategy is such a complex, multidimensional activity, there is rarely a critical target or target set. Victory, certainly in such a large and complex war, is achieved through multiple actions operating against various centres at different levels.

Despite this, Alexander's campaigns also seem to vindicate Clausewitz's statement that 'it is evident that destruction (moral and/or physical) of the enemy forces is always the superior, more effective means, with which others cannot compete'.¹¹ To emphasise, Clausewitz further notes that 'direct annihilation of the enemy's forces must always be the dominant consideration. We simply want to establish this dominance of the destructive principle'.¹² The defeat of Persian military forces was the key that unlocked the door to the other centres of gravity. Had Alexander simply outmanoeuvred Persian forces, and thereby left them intact, his control of the capitals, ports, and indeed of the population, could have been challenged once his forces had left an area. This reality was the same when facing irregular foes. Although Alexander had to win the acquiescence of the local populations he still had to cement that gain by slowly defeating his irregular enemies. In addition, a display of military prowess was a primary means by which he could influence the locals. The will and support of a population is intangible, being difficult to quantify and manipulate. However, military dominance is a potent means by which to influence the locals when they are deciding their allegiance. If power is 'the capacity of a political unit to impose its will upon other units', then being able to inflict punishment, provide security, and physically control a locality must go a long way towards exerting power.¹³ Alexander's outstanding military success, allied to his willingness to use force in a decisive manner, engendered respect. Thus, to repeat: there may be no clear centre of gravity, but defeating the enemy's armed forces is often the best place to start.

Lesson 4: control is based upon complex grand-strategic relationships

The discussion of centres of gravity leads us to the issue of 'control', for, as Wylie noted, control is established by manipulating these centres of gravity.

Wylie famously noted that control is best exercised through the man on the scene with a gun.¹⁴ Whilst there is little to argue with in that famous statement, its realisation is not always entirely possible. This was certainly the case for Alexander with his limited forces. He did not have the numbers of men available constantly to exert control over an area directly with sufficient numbers of armed men. Thus, where control could not be directly exercised by the man on the scene with a spear, Alexander had to rely upon a combination of non-military means and the coercive effects of his forces. By non-military means we refer back to the previous discussion of grand strategy. When it came to military force it was often the potential, rather than the actual, presence of Alexander's main army that was enough to exert control in an area.

Although this coercive use of force does not appear to support Wylie's hypothesis directly, it does so in an indirect manner. As Clausewitz notes: 'Combat is the only effective force in war; its aim is to destroy the enemy's forces as a means to a further end. That holds good even if no actual fighting occurs, because the outcome rests on the assumption that if it came to fighting, the enemy would be destroyed'.¹⁵ This statement holds true for the control of a population, as much as it holds true for combat. Once again we are left to conclude that the basis for success is military power, not acting alone, but certainly underpinning the other instruments of grand strategy. For control to be exercised over an area and/or population, military force does not always have to be directly deployed there (although that may be preferable); however, its power must still be felt in the area.

Military operations

Lesson 5: professional combined-arms forces promote success

A central element of Alexander's success was the tactical prowess of his combined-arms forces. The different forces within Alexander's army were genuinely interdependent and mutually supportive. Each unit and section of the force seems to have been very clear about its role. Although the historical sources contain very little information about the training regime of the Macedonians, we have to assume that forces that performed so well, and so in unison, had been well drilled. Whilst in three of the major battles (Granicus, Issus, Gaugamela) it was clear that the decisive blow was struck by the Companion cavalry, they relied absolutely on the other units to hold the line, pin the enemy, and finally to support the attack. For the most part Alexander stuck to this tried and tested tactical formula. However, Alexander's forces were able to adapt their tactics at the Hydaspes, as well as perform effectively in sieges and irregular warfare. These are clear indications that the Macedonian army was tactically flexible. The fact that Alexander succeeded so emphatically at the battles of Issus and Gaugamela, when on both occasions Darius had constructed logical plans and deployments to counter his enemy, is testament to how well developed the combined arms tactics were.

Alexander's forces could adapt their tactical principle from the narrow confines of the Issus battlefield to the wide-open plain of Gaugamela. In the heat of battle, only well-trained forces are capable of performing their rehearsed tactics, and adapting them, so effectively.

Lesson 6: adapt to war's varied forms

One of the greatest challenges facing a commander and his forces is how to deal the polymorphous character of war. Although the nature the war is constant, its character can change dramatically. Irregular forms of war pose significantly different challenges to regular conflict.¹⁶ And, as the American War of Independence, Vietnam, and Iraq reveal, the character of a war can present a complex mixture of challenges and styles. Such difficult and varied challenges place great onus on the structure, composition, doctrine and training of forces. Again, we have little evidence of how Alexander trained his forces, but we certainly know that he understood the requirement to transform the structure and composition of his army to meet the different challenges. It is extraordinary how Alexander could take an army optimised for success in regular warfare and turn it into a light, mobile force capable of dealing with elusive foes and complex terrain. The fact that the forces were able to adapt so readily is testament to the quality and professionalism of the men under Alexander's command. However, success in the face of the polymorphous character of war is not just about moulding the correct instrument. It is equally important that the commander understands the different requirements for the various forms of war. In Vietnam, the US army and its leadership seemed incapable of adapting their style of warfare to the challenges posed.¹⁷ In contrast, like his forces, Alexander was flexible in his approach to war. However, his success was also due to the fact that he never reneged on the nature of strategy. For example, he did not become transfixed on the notion that counterinsurgency is somehow beyond the normal relationships in strategy. Counterinsurgency is still war, and the enemy still needs to be defeated; Alexander never forgot that basic fact.¹⁸

Lesson 7: what military genius does is best¹⁹

Having well-trained, professional, flexible forces certainly increases the probability of success in strategy. However, this notable advantage may be squandered in the hands of a poor, or maybe even an average, commander. For the most part, Alexander excelled in the many different facets of command. It should not be forgotten that he often had astute subordinates at his disposal, and an effective process of command through which to control and direct the army. Specifically, the campaigns highlight the significance of having trusted subordinates (such as Parmenion and Craterus), and the importance of their role within a system of mission command. Although the responsibility of command was largely centralised in Alexander, he often had to delegate responsibility to his generals. This was most clearly the case in Bactria and on the Anatolian plateau;

but it was also an essential element of Alexander's battle tactics, when enormous responsibility was delegated to Parmenion.

Despite this, it is difficult not to conclude that in the case of Alexander the emphasis was very much on the man himself. Alexander is the epitome of Clausewitz's military genius. Alexander displayed exceptional moral courage, cognitive abilities, determination, and an understanding of the relationship between policy and the military instrument. Even more notable however is Alexander's *coup d'oeil*. The Macedonian's ability to perceive the decisive point at the decisive moment is outstanding. At the Granicus, Alexander identified the vulnerable point in the Persian line at which his main attack had to be targeted. To exploit this vulnerability he had to expose it with Amyntas' diversionary assault on the Persian left. Once the Persians had engaged Amyntas' men, it was essential that Alexander should choose the right moment to launch the Companion cavalry. Too early, and the plan would be revealed before the enemy had committed forces to the left; too late and the enemy cavalry on the left would have time to deal with Amyntas and then rejoin in the defence of the centre. Alexander got the timing just right, and the centre of the Persian line collapsed rapidly.

On the subject of leadership Alexander has some contradictory lessons to teach us. On the positive side he led by example, shared the hardships of his men, and regularly displayed concern for their well-being. However, in line with his strategic performance, Alexander's leadership became more problematic as he headed further east. A significant element of this deterioration was a reduction of trust between the king and his men. Evidence of this breakdown in trust is evidenced by the assassination of Parmenion, and the mutiny of the army at the river Beas.²⁰

Despite the later deterioration in Alexander's mastery of command, in the final analysis we can conclude that for most of the campaigns his approach was ideally suited to the conditions he operated in. The conduct and outcome of his major battles indicates that he was adept at communicating his intent clearly to his subordinates. When required, the king delegated significant levels of responsibility to these trusted subordinates. This was evident during the counterinsurgency campaign in Bactria and Sogdiana. Faced by a mobile and dispersed foe, Alexander reorganised his forces into smaller units and reordered his command structure to enable even greater levels of initiative in the lower levels of command. This must have been a culturally difficult step to take for a warrior king. In this respect, ever the pragmatist, he was able to break free from cultural restraints. Overall, when considering Alexander's style and process of command, his record compels us to focus on the commander himself. There is clearly no substitute for military genius. In different hands, the army that crossed the Hellespont could have come to grief on a number of occasions. Thus, modern command concepts, such as those based upon networked command structures, may facilitate more efficient flows of information and thereby enable greater levels of initiative at the lower echelons. However, it is difficult to disagree with Clausewitz's comment that what military genius does is best.

Lesson 8: details matter

Alexander understood that attention to detail and preparation were essential ingredients of success. In this respect he is in good company. On this issue, Napoleon wrote: 'In war nothing is accomplished except through calculation. Anything that is not profoundly meditated in its details will produce no result'. He continued, 'If I take so many precautions it is because my habit is to leave nothing to chance'.²¹ During Alexander's campaigns, the two related elements that display this lesson most clearly are intelligence and logistics. Alexander's intelligence services provided valuable information on a range of subjects, including topographical details, enemy movements, local political structures, and details pertaining to supplies of food and water – to name just four. With limited forces at his disposal, intelligence was a critical force multiplier for Alexander. Not only did Alexander collect intelligence as he traversed through the Persian Empire, he sought information from literary sources such as Xenophon's account of his march through Persia with the Ten Thousand.²²

The work of Donald Engels is an outstanding contribution to the literature on Alexander. It makes clear the scale of the logistics challenge faced by the Macedonians, and the many ways in which Alexander overcame them. In this respect, it is no exaggeration when Engels claims that the campaigns were heavily shaped by logistical demands.²³ As has been identified throughout this work, many of Alexander's successes were due to the rapid mobility of his forces. This is testament to the fact that Alexander and his father had created a far more mobile force than had previously been seen in Greek warfare. Such operational mobility was built upon an advanced, but methodical, approach to logistics. Alexander had to spend a great deal of effort on his logistics. As Engels notes, routes of advance had to be carefully prepared and understood from a supplies perspective. At this point the intelligence and logistic efforts coalesce. Without foreknowledge of the areas into which they would advance, and without the support of an excellent logistics system, the Macedonians would have struggled to maintain the pace and dynamism of their conquest.

Lesson 9: Alexander applied the principles of war

It is unnecessary to reiterate the previous analysis on the principles of war. Suffice it to say that there are some valid concerns about the utility of set principles in the complexity of war. Nonetheless, when tested against the example of Alexander, it is interesting that the principles do seem to have value in our attempts to understand Alexander's success. In this respect, we may conclude that the principles of war do elucidate certain truths about the conduct of warfare. Indeed, Colin Gray regards the principles as 'overwhelmingly a guide to good practice in the conduct of warfare'.²⁴ Although Alexander may have unknowingly applied the said principles, he was a very flexible commander. Principles, or doctrine, should never be regarded as absolutes, but merely as guides to pragmatic behaviour. The final judgement should be left to the commander, who must

approach each problem with an adaptive mindset. Principles merely provide him with intellectual tools to inform his analysis of a situation.

Use of force

Lesson 10: the power to hurt works

For Alexander, with the limited forces at his disposal, achieving his objectives as cheaply as possible offered a distinct advantage. Fortunately, Alexander had an astute grasp of the coercive use of force, or, as Thomas C. Schelling describes it, ‘amongst the most impressive attributes of military force’.²⁵ The enemy, or future potential enemies, can be coerced either through the threat of punishment/destruction on lives and property, or by the prospect of military defeat. Alexander used both of these approaches to great effect. Particularly worthy of note were his operations beyond the Danube and his actions at Tyre and Gaza. Of course, coercion is not without its risks and costs. Due to the fact that coercion is aimed at the will of the enemy (an intangible quality), it lacks the reliability often associated with physical control. And, although Sun Tzu’s advice to know the enemy is sound, when it comes to judging the point at which the enemy’s will may break this represents an enormous intelligence challenge.

It is tempting to return to Clausewitz’s advice concerning the simplicity of operations. Attempting to judge precisely the will of the enemy is essentially impossible; thus, as Alexander appears to have understood, it is preferable to rely upon an overwhelming and/or devastating use of force, as seen on the Danube and at Tyre. However, in the modern environment the power to hurt can seem unpalatable to public and international opinion. Evidence of this can be seen during NATO’s Kosovo campaign, when ethical questions were raised about the bombing of targets that did not appear to be military in nature (television stations and bridges for example).²⁶ It is important to understand that if coercion is to be used (and based on its identified efficacy it should be), the targets of such a campaign will not always be clearly military in nature, although they should always be strategic. That is to say, targets should be chosen on their significance to the enemy and the degree to which their destruction would apply pressure on him. As Alexander revealed, the effective use of coercion can produce disproportionate results compared to the effort exerted, and can have effects on actors beyond the immediate target. Thus, coercion should remain a prominent instrument in the strategist’s toolkit.

Lesson 11: do not blunt your swords in the name of humanity²⁷

Anthony Coates is partially correct when he argues that the way an actor wages war is to some degree a reflection of its culture. However, the prudent strategist must be able to throw off the shackles of culture, and thereby free his strategic performance.²⁸ Since war has its own internal nature (violent, competitive, chaotic and policy driven), one should ensure that one’s approach is guided

more by this nature than by cultural preferences. As noted previously, the battle of Chaeronea provides us with a striking example of how an approach to war that is culturally restrained (on the part of the Greek city-states) can produce disastrous results when faced with an approach grounded in the brutal reality of war's true nature. Alexander conducted war in a manner that was in tune with the nature of war and was driven by a strong strategic rationale. Such an approach should ensure that the amount and type of force employed can vary, depending upon the particular objective in mind. It is also essential to be guided by the notion that, all things being equal, the enemy has to be defeated.²⁹ It is of concern that in modern Western states undue emphasis is often given to operating within culturally driven ethical and legal constraints.³⁰

In our conduct of war the policy objective must guide the use of force. Ethical and legal preferences, although not entirely ignored, may have to be set aside, or curtailed, if they contradict the nature of war and impede success. Chaeronea is a brutal lesson for all those who assume that war can be culturally restrained without cost.

Clausewitz's writings on this subject are worth reiteration: '[For those] kind-hearted people [who] might of course think there was some ingenious way to disarm or defeat an enemy without too much bloodshed', he warns, '[i]f one side uses force without compunction, undeterred by the bloodshed it involves, while the other side refrains, the first will gain the upper hand'.³¹ More starkly he comments: 'The fact that slaughter is a horrifying spectacle must make us take war more seriously, but not provide an excuse for gradually blunting our swords in the name of humanity. Sooner or later someone will come along with a sharp sword and hack off our arms'.³²

We should not conclude from the above discussion that ethics and culture are irrelevant; clearly they have a role to play in the judgement of the strategist. Since ethics may inform political judgements, a simple focus on 'military necessity' is inadequate in the world of strategy. Williamson Murray and Mark Grimsley are persuasive when they note that strategy is the art of the possible.³³ In the contemporary environment it is not possible for a Western power to wage war with no ethical constraints on behaviour. Nonetheless, for the strategist (particularly one that is trying to operate in tune with Clausewitz's theory of war) this creates a problem, which arises from the fact that what is possible must also be consistent with the nature of war. It is suggested here that the concept of 'strategic necessity' offers a method by which to better manage this problem. In essence, the strategist must devise an approach that achieves the policy objective, does not create such ethical/cultural revulsion so as to undermine this goal, whilst also being tolerant of the nature of war.

These thoughts echo those of Michael Howard who, when writing on the role of ethics in international politics, noted that 'The dimensions of power and of ethics remain stubbornly different ... [but these] ... dimensions do not contradict one another, nor can they be subordinated to one another. They are mutually complementary'. Finally, he noted that '[e]ffective political [or strategic] action needs to take constant account of both dimensions'.³⁴ This may seem to be

unhelpfully vague advice, but success in strategy is about judgement; there are no formulas for success. Gray, for many years a strategic adviser to American administrations, notes that practitioners often look to theorists for straightforward answers to complex strategic dilemmas. However, the theorist can usually do no more than provide a deeper understanding of this complexity.³⁵ Or, as Clausewitz wrote:

Theory cannot equip the mind with formulas for solving problems, nor can it mark the narrow path on which the sole solution is supposed to lie by planting a hedge of principles on either side. But it can give the mind insight into the great mass of phenomena and of their relationships, then leave it free to rise into the higher realms of action.³⁶

Lesson 12: policy is king

Alexander's grasp of strategy stands rightly in place alongside his many attributes as a commander. His ability to understand that war is a political instrument was the basis of the success he achieved. Alexander did not seek tactical victories as ends in themselves. Rather, the young Macedonian ruler was always conscious of the political effect such victories and actions would have. As Clausewitz noted, war is a true political instrument, and Alexander, like other great strategists such as Mao, understood this fully. Alexander did not slaughter the Tyrians simply as an end in itself. Rather, this action was designed to take firm control of a key Phoenician port, as well as to signal his intent to those he would encounter in the near future. Likewise, Alexander did not defeat the Persians at the Granicus merely to attrite their forces (though that was an important part of the rationale for the battle). He fought that battle in order to secure his physical and logistical presence in the empire, and as a physical representation of his power in the local area. Similarly, Alexander did not capture the Persian capitals simply to seize the finances of Darius. Rather, the military seizure of these important cities was a demonstration of Alexander's hegemony, as well as a signal to the Greeks that the war of revenge on Persia was at an end.

Alexander's acute grasp of strategy is evidenced also by the fact that, as mentioned in the section on grand strategy, he understood the limits of force in a political world, and therefore saw the need to cement his military victories with other actions. Thus, during most of his campaigns Alexander's use of military force was guided by policy rationale, and in this sense was a fine example of strategy in practice. However, as noted in relation to Gaugamela and the siege of Multan, there were moments in the campaigns when military force was used in a manner that could either scupper the policy objective or was absent of any policy rationale. The assessment of Gaugamela presented here may be a little harsh on Alexander. Often in war a commander risks everything on the field of battle. Alexander is not unusual in this respect. Thus, the point to be made is not that war should be fought in a manner devoid of risk. Rather, it is merely to note that on occasions the policy objective may be better served by refusing battle at a

particular moment. In such circumstances, hopefully more conducive conditions will appear at some point in the future, and thereby battle has more chance of promoting the policy cause. The lesson here is simple, and is the very essence of Clausewitz's advice in *On War*: ensure that every military action is guided by the policy objective, not in some general, ethereal way, but in a detailed, concrete manner.

Lesson 13: dealing with complexity – Clausewitz was mostly right

As noted, strategy is very difficult. There are many different elements to this difficulty, but taken together they produce a complex and nonlinear activity. Thus, understanding Alexander's remarkable career is invaluable since it enables us to identify those elements that are most significant when engaged in strategy. There is no one answer to the problems faced. However, four elements to good practice are prominent in Alexander's campaigns, and three of them receive attention in Clausewitz's theory of war.

In the first instance, having well-trained forces is essential to deal with the varied and stressful challenges of strategy. Alexander's job as commander was simplified by the fact that he could rely on a core of outstanding and robust men. Secondly, in the chaos and complexity of strategy Alexander benefited from the fact that he maintained a straightforward approach (simplicity). Meeting complexity with complexity will most likely only increase levels of friction. For Alexander, simplicity was most clearly manifest in defeat of enemy forces. The temptation to pursue nuanced and sophisticated answers to strategic problems needs to be tempered. Although grand strategy is a complex beast, with vital roles for all of its components, there is much sense in Clausewitz's comment that 'it is evident that destruction (moral and/or physical) of the enemy forces is always the superior, more effective means, with which others cannot compete'.³⁷

Defeat of enemy forces is not an end in itself; it must always be guided by the third element of dealing with complexity: focus on the policy objective. As previously noted, amongst the complexities of strategy the policy objective represents a lens that enables the strategist to focus on what is important and necessary. The policy objective is the ultimate yardstick by which actions must be judged. Maintaining this focus should allow the strategist to filter out much of the noise and chaos of strategy.

One of the frustrating things about strategy is that success cannot be assured through the application of simple rules or principles. This annoyance is applicable to the final element of dealing with complexity. When seeking the elements of best practice in the campaigns of Alexander, one factor stands head and shoulders above the rest: Alexander himself, the military genius. An astute commander, with the many qualities identified by Clausewitz, is better placed to be able to deal with the complexities and stresses of strategy. The glaring frustration of this conclusion is that military geniuses are rare indeed. Thankfully, Clausewitz codified the elements of military genius in *On War*. Military establishments should therefore familiarise themselves with Clausewitz's concept of

the military genius, develop means by which they can identify them in individuals, and nurture the key characteristics of genius in those not blessed by the Alexander gene. A well-designed command process can, to some degree, compensate for the absence of genius. However, there is simply no substitute for it.

Having taken Napoleon's advice and studied the campaigns of Alexander, we can complement his counsel with the recommendation that in addition to historical study one should also carefully study Clausewitz's *On War*. More than any other text, Clausewitz's work codifies the lessons of history as accurately as is ever possible in literature. Finally, without wishing to diminish the value of this work, or indeed any work of strategic history or theory, we must end with a warning, inspired by Clausewitz. The study of theory and history cannot ensure victory, but it does help us understand the complexities of strategy, leaving human judgement to provide the winning ingredient.³⁸

Notes

Introduction

- 1 As the modern strategic theorist Colin S. Gray notes, 'there is an essential unity to all strategic experience in all periods of history because nothing vital to the nature and function of war and strategy changes'. Colin S. Gray, *Modern Strategy*, Oxford: Oxford University Press, 1999, p. 1.
- 2 Bernard Brodie, 'The Continuing Relevance of Clausewitz', in Carl von Clausewitz, *On War* (trans. Michael Howard and Peter Paret), London: David Campbell Publishers Ltd, 1993, p. 62.
- 3 Carl von Clausewitz, *On War* (trans. Michael Howard and Peter Paret), London: David Campbell Publishers Ltd, 1993, pp. 203–4.
- 4 *Ibid.*, p. 732.
- 5 Colin S. Gray, *Strategy and History: Essays on Theory and Practice*, London: Routledge, 2006, p. 6.
- 6 V. D. Hanson, *The Wars of the Ancient Greeks: And Their Invention of Western Military Culture*, London: Cassell & Co, 1999, p. 183. Although critical of Alexander on ethical grounds, Victory Davis Hanson does acknowledge his tactical genius. For example, see p. 176 of the above work.
- 7 Amoral in the sense that ethical issues are dealt with in an instrumental manner. Since military force is used in the service of policy, ethically driven political responses to certain military actions are significant. Thus, the strategist must consider whether such responses will have detrimental or positive results for the attainment of his policy objective. However, it is not the role of the strategist to judge the moral worth of an action in an abstract manner.
- 8 J. R. Newman quoted in J. Baylis and J. J. Wirtz, 'Introduction', in J. Baylis, J. Wirtz, E. Cohen and C. S. Gray (eds), *Strategy in the Contemporary World: An Introduction to Strategic Studies*, Oxford: Oxford University Press, 2002, p. 8.
- 9 Gray, *Modern Strategy*, pp. 73–4.
- 10 C. Coker, *Humane Warfare*, London: Routledge, 2001; E. N. Luttwak, 'A Post-Heroic Military Policy', *Foreign Affairs*, 1996, vol. 75, no. 4; C. C. Parry, 'Some Recent and Emerging Themes in Maritime Warfare', New Dimensions: Maritime Manoeuvre and the Strategic Defence Review Conference at the University of Hull, 2 July 1999.
- 11 T. K. Deady, 'Lessons from a Successful Counterinsurgency: The Philippines, 1899–1902', *Parameters*, Spring 2005, vol. 35, no. 1, pp. 53–68.
- 12 The classic work on this subject is M. Walzer, *Just and Unjust Wars: A Moral Argument with Historical Illustrations*, Harmondsworth: Penguin, 1978. See also J. Morris with H. McCoubrey, 'Law, Politics, and the Use of Force', in J. Baylis, J. Wirtz, E. Cohen and C. S. Gray (eds), *Strategy in the Contemporary World: An Introduction to Strategic Studies*, Oxford: Oxford University Press, 2002, pp. 45–65.

- 13 The noted historian of Greek warfare, Victor Davis Hanson, likewise describes hoplite warfare as 'quasi-ritualised'. Hanson, *The Wars of the Ancient Greeks*, p. 55.
- 14 J. C. Wylie, *Military Strategy: A General Theory of Power Control*, Annapolis: Naval Institute Press, 1967.
- 15 There are a number of good historical accounts of Alexander's campaign. The reader may find the following useful: David J. Lonsdale, *Alexander, Killer of Men: Alexander the Great and the Macedonian Art of War*, London: Constable & Robinson Ltd, 2004; N. G. L. Hammond, *The Genius of Alexander the Great*, London: Duckworth, 1998; A. B. Bosworth, *Conquest and Empire: The Reign of Alexander the Great*, Cambridge: Cambridge University Press, 1988; and Robin Lane Fox, *Alexander the Great*, Harmondsworth: Penguin Books Ltd, 1986.

1 The art of strategy

- 1 This question was addressed by Colin S. Gray, in Colin S. Gray, 'Why Strategy is Difficult', *Joint Force Quarterly*, No. 22 (Summer), 1999, www.dtic.mil/doctrine/jel/jfq/_pubs/0422.pdf. See also David Jablonsky, 'Why is Strategy Difficult?', in Joseph R. Cerami and James F. Holcomb, Jun. (eds), *US Army War College Guide to Strategy* (February), 2001, <http://permanent.access.gpo.gov/lps11754/00354.pdf>.
- 2 Colin S. Gray, *Modern Strategy*, Oxford: Oxford University Press, 1999.
- 3 David J. Lonsdale, *The Nature of War in the Information Age: Clausewitzian Future*, London: Frank Cass, 2004, especially chapters 1 and 6.
- 4 Edward N. Luttwak, *Strategy: The Logic of War and Peace*, Cambridge, Mass.: Belknap Press of Harvard University Press, 1987.
- 5 Carl von Clausewitz, *On War* (trans. Michael Howard and Peter Paret), London: David Campbell Publishers Ltd, 1993.
- 6 A collection of the some of the better definitions can be found in John Baylis and James J. Wirtz, 'Introduction', in John Baylis, James Wirtz, Eliot Cohen, and Colin S. Gray (eds), *Strategy in the Contemporary World: An Introduction to Strategic Studies*, Oxford: Oxford University Press, 2002, p. 4.
- 7 See Gray, *Modern Strategy*, p. 17.
- 8 Clausewitz, *On War*, p. 146.
- 9 André Beaufre, *An Introduction to Strategy: With Particular Reference to the Problems of Defence, Politics, Economics, and Diplomacy in the Nuclear Age*, London: Faber & Faber, 1965, p. 22.
- 10 Colin S. Gray, *War, Peace, and Victory: Strategy and Statecraft For the Next Century*, New York: Simon & Schuster, 1990.
- 11 Eliot A. Cohen, *Supreme Command: Soldiers, Statesmen, and Leadership in Wartime*, New York: Free Press, 2002.
- 12 Clausewitz, *On War*, p. 98.
- 13 Basil H. Liddell Hart, *Strategy: The Indirect Approach*, London: Faber & Faber, 1967, pp. 335–6.
- 14 Luttwak, *Strategy: The Logic of War and Peace*, p. 69.
- 15 Clausewitz, *On War*, p. 215.
- 16 Michael Howard, 'The Forgotten Dimensions of Strategy', *Foreign Affairs*, 1979, vol. 57, pp. 976–86.
- 17 Gray, *Modern Strategy*, p. 24.
- 18 *Ibid.*, p. 25.
- 19 Clausewitz, *On War*, p. 209.
- 20 Luttwak, *Strategy: The Logic of War and Peace*, p. 210.
- 21 *Ibid.*, pp. 222–3.
- 22 A superior account and analysis of Hannibal's campaigns can be found in Nigel Bagnall, *The Punic Wars: Rome, Carthage and the Struggle for the Mediterranean*, London: Pimlico, 1999.

- 23 Luttwak, *Strategy: The Logic of War and Peace*, p. 210.
- 24 *Ibid.*, p. 7.
- 25 Quoted in R. L. DiNardo and Daniel J. Hughes, 'Some Cautionary Thoughts on Information Warfare', *Airpower Journal*, 1995, vol. 9, no. 4, p. 76.
- 26 Joyce M. Hawkins (ed.), *The Oxford Reference Dictionary*, London: Guild Publishing, 1987, p. 559.
- 27 See Lonsdale, *The Nature of War*.
- 28 Christopher Bassford, 'Primacy of Policy versus the Trinity', paper presented at the Clausewitz in the 21st Century Conference, Oxford Leverhulme Programme on the Changing Character of War, Oxford, 21–23 March 2005.
- 29 Alan D. Beyerchen, 'Clausewitz and the Nonlinear Nature of Warfare', paper presented at the Clausewitz in the 21st Century Conference, Oxford Leverhulme Programme on the Changing Character of War, Oxford, 21–23 March 2005.
- 30 For a discussion of the difference between narrow and general friction, see Barry D. Watts, *Clausewitzian Friction and Future War*, McNair Paper 52, Washington, DC: Institute for National Strategic Studies, National Defense University, October 1996, especially chapter 4.
- 31 Clausewitz, *On War*, p. 120.
- 32 *Ibid.*, p. 156.
- 33 *Ibid.*, p. 161.
- 34 Ulrike Kleemeier, 'Clausewitz and Virtues in War', paper presented at the Clausewitz in the 21st Century Conference, Oxford Leverhulme Programme on the Changing Character of War, Oxford, 21–23 March 2005.
- 35 Clausewitz, *On War*, pp. 269–70.
- 36 *Ibid.*, p. 173.
- 37 Dwight D. Eisenhower, *Crusade in Europe*, London: William Heinemann Limited, 1948, p. 247.
- 38 J. C. Wylie, *Military Strategy: A General Theory of Power Control*, Annapolis: Naval Institute Press, 1967.
- 39 Clausewitz, *On War*, p. 108.
- 40 *Ibid.*, p. 96.
- 41 *Ibid.*, p. 138.
- 42 *Ibid.*, p. 138.
- 43 Watts, *Clausewitzian Friction and Future War*, p. 32.
- 44 Luttwak, *Strategy: The Logic of War and Peace*, p. 14.
- 45 Clausewitz, *On War*, p. 138.
- 46 Gray, *War, Peace, and Victory*, pp. 107–8.
- 47 H. T. Hayden (ed.), *Warfighting: Manoeuvre Warfare in the U.S. Marine Corps*, London: Greenhill, 1995, p. 38.
- 48 Gray, *Modern Strategy*, p. 97.
- 49 Clausewitz, *On War*, p. 97.
- 50 S. L. A. Marshall, *Men Against Fire: The Problem of Battle Command in Future War*, New York: William Murrow & Company, 1947.
- 51 Clausewitz, *On War*, p. 135.
- 52 Watts, *Clausewitzian Friction and Future War*, p. 30.
- 53 Martin van Creveld, 'The Eternal Clausewitz', in Michael I. Handel (ed.), 'Clausewitz and Modern Strategy', special issue of *The Journal of Strategic Studies*, 1986, vol. 9, no. 2/3, p. 46 and p. 38.
- 54 Sun Tzu, *The Art of War* (trans. Samuel B. Griffith), London: Oxford University Press, 1971, p. 41.
- 55 Baron Antoine Henri de Jomini, *The Art of War*, London: Greenhill Books, 1996, p. 344.
- 56 Clausewitz, *On War*, p. 216.

- 57 See John Keegan, *The Face of Battle*, London: Barrie & Jenkins, 1988, p. 42, pp. 46–7, and p. 62. See also Marshall, *Men Against Fire*, pp. 149–51.
- 58 Watts, *Clausewitzian Friction and Future War*, p. 32.
- 59 Charles E. Callwell, *Small Wars: A Tactical Textbook for Imperial Soldiers*, London: Greenhill Books, 1990, p. 23.
- 60 Gray, *Modern Strategy*, p. 279.
- 61 Clausewitz, *On War*, p. 100.
- 62 For more on the challenges of command, see *ibid.*, especially Book 1, chapter 3; General Sir Peter de la Billière, *Storm Command*, London: HarperCollins Publishers, 1992; Field-Marshal Montgomery, *The Path to Leadership*, London: Collins, 1961; Edgar F. Puryear Jun., in *Nineteen Stars: A Study in Military Character and Leadership*, Novato: Presidio, 1992; General William C. Westmoreland, *A Soldier Reports*, New York: Doubleday & Company, Inc., 1976; Field-Marshal Sir William Slim, *Courage and Other Broadcasts*, London: Cassell & Company Ltd, 1957; Field-Marshal Sir William Slim, *Defeat into Victory*, London: The Reprint Society, 1957; General Frederick M. Franks Jun., ‘Battle Command: A Commander’s Perspective’, *Military Review*, 1996, vol. 76, no. 3; John Keegan, *The Mask of Command*, London: Penguin Books, 1988; Martin van Creveld, *Command in War*, Cambridge, Mass.: Harvard University Press, 1985; Wesley K. Clark, *Waging Modern War: Bosnia, Kosovo, and the Future of Combat*, New York: Public Affairs, 2001; Marshall, *Men Against Fire*.
- 63 Williamson Murray, ‘Does Military Culture Matter?’, *Orbis*, 1999, vol. 43, no. 1, pp. 27–42.
- 64 See Hayden, *Warfighting*.
- 65 Colonel Dick Applegate, ‘Towards the Future Army’, in Brian Bond and Mungo Melvin (eds), *The Occasional: The Nature of Future Conflict: Implications for Force Development*, No. 36, September 1998, p. 79.
- 66 See for example Robert J. Art, ‘The Four Functions of Force’, in Robert J. Art and Robert Jervis (eds), *International Politics: Enduring Concepts and Contemporary Issues*, New York: Longman, 2003, pp. 153–65. However, this limited perspective on the use of force is not universally accepted. Thomas C. Schelling has a much broader appreciation of what military force can do. His taxonomy of what brute force can achieve is fairly comprehensive: ‘repel and expel, penetrate and occupy, seize, exterminate, disarm and disable, confine, deny access, and directly frustrate intrusion or attack’. See Thomas C. Schelling, *Arms and Influence*, New Haven: Yale University Press, 1966.
- 67 For a discussion of this issue, see David J. Lonsdale, ‘The Strategy of Pre-emption: Dealing with the Post-9/11 Security Environment’, *Defence Studies Journal*, 2004, vol. 3, no. 2.
- 68 Art, ‘The Four Functions of Force’, p. 154.
- 69 For example, this principle can be found in the Charter of the United Nations.
- 70 Art, ‘The Four Functions of Force’, p. 154.
- 71 Colin S. Gray, *Maintaining Effective Deterrence*, Carlisle: Strategic Studies Institute, 2003, p. 25.
- 72 Keith B. Payne and C. Dale Walton, ‘Deterrence in the Post-Cold War World’, in John Baylis, James Wirtz, Eliot Cohen and Colin S. Gray (eds), *Strategy in the Contemporary World: An Introduction to Strategic Studies*, Oxford: Oxford University Press, 2002, p. 168.
- 73 Quoted in Michael R. Gordon and General Bernard E. Trainor, *The Generals’ War: The Inside Story of the Conflict in the Gulf*, Boston: Little, Brown & Company, 1995, p. 56.
- 74 *Ibid.*, p. 56.
- 75 Payne and Walton, ‘Deterrence in the Post-Cold War World’, p. 163.
- 76 For example, see Colin S. Gray, *The Second Nuclear Age*, Boulder: Lynne Rienner Publishers, 1999; Keith B. Payne, *Deterrence in the Second Nuclear Age*,

- Lexington: University Press of Kentucky, 1996; and Lawrence Freedman, *Deterrence*, Cambridge: Polity Press, 2004.
- 77 Freedman, *Deterrence*, p. 5.
- 78 Rohan Gunaratna, *Inside Al Qaeda*, London: C. Hurst, 2002; Gray, *Maintaining Effective Deterrence*.
- 79 Bruce G. Blair, *The Logic of Accidental Nuclear War*, Washington, DC: Brookings Institution, 1993.
- 80 Freedman, *Deterrence*, p. 4.
- 81 Art, 'The Four Functions of Force', p. 155.
- 82 Daniel Byman and Matthew Waxman, *The Dynamics of Coercion: American Foreign Policy and the Limits of Military Might*, Cambridge: Cambridge University Press, 2002.
- 83 Schelling, *Arms and Influence*, p. 2.
- 84 *Ibid.*, p. 10.
- 85 Sun Tzu, *The Art of War*, p. 129.
- 86 For example, Madeline Albright, US Secretary of State, claimed in a television interview, 'I don't see this as a long-term operation. I think that this is something ... that is achievable within a relatively short period of time'. Quoted in Ivo H. Daalder and Michael E. O'Hanlon, *Winning Ugly: NATO's War to Save Kosovo*, Washington, DC: Brookings Institution Press, 2000, p. 91.
- 87 Schelling, *Arms and Influence*, p. 33.
- 88 Art, 'The Four Functions of Force', pp. 158–9.
- 89 For a description of defence diplomacy see *BR 1806 British Maritime Doctrine*, 2nd edn, London: Stationery Office, 1999, pp. 60–2.
- 90 Art, 'The Four Functions of Force', for example, makes this error.
- 91 Schelling, *Arms and Influence*, p. 1.
- 92 Wylie, *Military Strategy*, p. 72.
- 93 Clausewitz, *On War*, p. 115.
- 94 *Ibid.*, Book One, chapter 3.
- 95 De la Billière, *Storm Command*.
- 96 Gray, *Modern Strategy*, p. 53 and p. 108.
- 97 Van Creveld, *Command in War*, p. 143.
- 98 T. N. Dupuy, *A Genius for War: The German Army and General Staff, 1807–1945*, London: MacDonald and Jane's, 1977, p. 307.
- 99 Clausewitz, *On War*, p. 720.
- 100 I am thankful to Christopher Tuck for bringing this reference to my attention. Wylie, *Military Strategy*, p. 90.
- 101 Clausewitz, *On War*, p. 748.
- 102 *Ibid.*, p. 720.
- 103 Robert A. Pape, *Bombing to Win: Air Power and Coercion in War*, Ithaca: Cornell University Press, 1996, p. 275.
- 104 Sun Tzu, *The Art of War*, p. 129.
- 105 Beaufre, *An Introduction to Strategy*, p. 24.
- 106 Clausewitz, *On War*, p. 157.
- 107 *Ibid.*, p. 163.
- 108 Rudolf von Caemmerer, *The Development of Strategical Science During the 19th Century* (trans. Karl von Donat), London: Hugh Rees, 1905, p. 275. I would like to thank Colin S. Gray for bringing this source to my attention.

2 Ancient Greek warfare

- 1 Except where specified, the historical details for this chapter have been compiled from the following sources: F. E. Adcock, *The Greek and Macedonian Art of War*, Berkeley: University of California Press, 1957; J. K. Anderson, *Military Theory and*

- Practice in the Age of Xenophon*, Berkeley: University of California Press, 1970; A. B. Bosworth, *Conquest and Empire: The Reign of Alexander the Great*, Cambridge: Cambridge University Press, 1988; J. Cassin-Scott, *The Greek and Persian Wars 500–323 BC*, Oxford: Osprey, 1977; H. Delbruck, *Warfare in Antiquity*, Lincoln: University of Nebraska Press, 1975; A. Ferrill, *The Origins of War: From the Stone Age to Alexander the Great*, London: Thames & Hudson Ltd, 1985; J. F. C. Fuller, *The Generalship of Alexander the Great*, Ware: Wordsworth Editions, 1998; V. D. Hanson, *The Western Way of War: Infantry Battle in Classical Greece*, Berkeley: University of California Press, 1989; V. D. Hanson (ed.), *Hoplites: The Classical Greek Battle Experience*, London: Routledge, 1993; V. D. Hanson, *The Wars of the Ancient Greeks: And Their Invention of Western Military Culture*, London: Cassell & Co., 1999; W. K. Pritchett, *The Greek State at War*, 4 vols, Berkeley: University of California Press, 1971–85; N. Sekunda, *The Army of Alexander the Great*, Oxford: Osprey, 1984; W. W. Tarn, *Hellenistic Military and Naval Developments*, Chicago: Ares, 1930; J. Warry, *Warfare in the Classical World: War and the Ancient Civilisations of Greece and Rome*, London: Salamander Books, 1998; H. van Wees, *Greek Warfare: Myths and Realities*, London: Gerald Duckworth & Co. Ltd, 2004.
- 2 The literature on RMA/Military Transformation is vast. However, the following works represent a good starting point for those wishing to explore this hypothesis: D. J. Lonsdale, *The Nature of War in the Information Age: Clausewitzian Future*, London: Frank Cass, 2004; W. Murray and M. Knox (eds), *The Dynamics of Military Revolution, 1300–2050*, Cambridge: Cambridge University Press, 2001; A. J. Bacevich, ‘Preserving the Well-Bred Horse’, *The National Interest*, 1994, vol. 37; E. A. Cohen, ‘A Revolution in Warfare’, *Foreign Affairs*, 1996, vol. 75, no. 2; M. O’Hanlon, *Technological Change and the Future of Warfare*, Washington, DC: Brookings Institution Press, 2000; C. S. Gray, *Strategy for Chaos: Revolutions in Military Affairs and the Evidence of History*, London: Frank Cass, 2002; A. F. Krepinevich, ‘Cavalry to Computer: The Pattern of Military Revolution’, *National Interest*, 1994, vol. 37, pp. 30–42.
 - 3 For example, Krepinevich, ‘Cavalry to Computer’, has identified ten RMAs since the fourteenth century.
 - 4 W. Murray, ‘Does Military Culture Matter?’, *Orbis*, 1999, vol. 43, no. 1, pp. 27–42.
 - 5 Krepinevich, ‘Cavalry to Computer’, p. 30.
 - 6 A superior analysis of the development of Blitzkrieg can be found in Murray, ‘Does Military Culture Matter?’.
 - 7 H. Guderian, *Achtung-Panzer* (trans. Christopher Duffy), London: Brockhampton Press, 1999.
 - 8 Bacevich, ‘Preserving the Well-Bred Horse’.
 - 9 Van Wees, *Greek Warfare*, p. 47.
 - 10 Indeed, Anderson concludes that the principles of land warfare remained constant from the seventh to the fourth century. Anderson, *Military Theory and Practice in the Age of Xenophon*, p. 13.
 - 11 Adcock, *The Greek and Macedonian Art of War*, p. 3; J. K. Anderson, ‘Hoplite Weapons and Offensive Arms’, in V. D. Hanson (ed.), *Hoplites: The Classical Greek Battle Experience*, London: Routledge, 1993; and Hanson, *The Western Way of War*, p. 27.
 - 12 Van Wees, *Greek Warfare*, p. 48.
 - 13 Van Wees, *Greek Warfare*, pp. 47–57, and Hanson, *The Western Way of War*, p. 58.
 - 14 Anderson, *Military Theory and Practice in the Age of Xenophon*, p. 6.
 - 15 See *ibid.*, pp. 28–41. However, the description of the hoplite as heavy infantry may still be valid. This reflects the fact that, relative to light-infantry forces, hoplites were still encumbered by their shields, and continued to fight in dense formations. Thus, they lacked the mobility of the lighter forces.
 - 16 Bronze armour may have been primarily used to display wealth and status. Van Wees, *Greek Warfare*, pp. 52–3.

- 17 Hanson, *The Western Way of War*, pp. 57–8.
- 18 *Ibid.*, p. 56.
- 19 Though this statement is generally true, there were occasions when the enemy could be slaughtered in a fairly unrestricted manner. For example, there was the slaughter of the Thespians at Delion in 424, and the burning of the Argives in 494. For the former see Hanson, *The Western Way of War*, p. 201. For the latter see van Wees, *Greek Warfare*, p. 135.
- 20 Hanson describes hoplite warfare as having a ‘formalised nature’. Hanson, *The Western Way of War*, p. 198. However, as van Wees notes, some of the limitations associated with hoplite warfare may have been as a response to the relative weakness of the state and its inability to mobilise substantial resources. See van Wees, *Greek Warfare*, p. 88. From this it thus becomes apparent how significant the organisation of the Macedonian state was under Philip II.
- 21 Van Wees, *Greek Warfare*, p. 134.
- 22 *Ibid.*, p. 137.
- 23 For casualty figures see J. Lazenby, ‘The Killing Zone’, in V. D. Hanson (ed.), *Hoplites: The Classical Greek Battle Experience*, London: Routledge, 1993, p. 101; and Hanson, *The Western Way of War*, p. 209.
- 24 For example, Anderson notes Plutarch’s comments that pursuit of a fleeing enemy was forbade by tradition. Anderson, *Military Theory and Practice in the Age of Xenophon*, p. 149.
- 25 Hanson, *The Wars of the Ancient Greeks*, p. 68. For a similar sentiment, see Hanson, *The Western Way of War*, p. 223.
- 26 Hanson, *The Wars of the Ancient Greeks*, p. 68, and his *The Western Way of War*, p. 223.
- 27 Van Wees, *Greek Warfare*, p. 135, and Anderson, *Military Theory and Practice in the Age of Xenophon*, p. 149.
- 28 Van Wees, *Greek Warfare*, p. 152.
- 29 Anderson, *Military Theory and Practice in the Age of Xenophon*, p. 101.
- 30 Indeed, Hanson describes the hoplite as ‘the most cumbersome, slow – and best protected – infantryman in the entire history of western warfare’. Hanson, *The Wars of the Ancient Greeks*, p. 61.
- 31 Hanson, *The Western Way of War*, p. 146.
- 32 Van Wees, *Greek Warfare*, p. 169.
- 33 Quoted in Anderson, *Military Theory and Practice in the Age of Xenophon*, p. 94.
- 34 Van Wees, *Greek Warfare*, p. 134.
- 35 Anderson, *Military Theory and Practice in the Age of Xenophon*, pp. 1–2.
- 36 Perhaps one slight exception to this was the Theban tactical innovations under the guidance of Epaminondas. Rather than stick to columns with the usual depth of eight shields, the Thebans would operate with depths of between sixteen and fifty, and focus this strength on the left wing. The latter was used at their famous victory over Sparta at the battle of Leuctra. Although such a concentration of men risked the danger of being outflanked, it did increase the opportunity of penetrating the enemy’s line at one point. As Victor Davis Hanson indicates, the Thebans placed their chances of success on the hope that they could break the cohesion of the enemy’s line before they were outflanked themselves. Hanson, *The Wars of the Ancient Greeks*, p. 128.
- 37 Van Wees, *Greek Warfare*, p. 188.
- 38 Lazenby, ‘The Killing Zone’, p. 93.
- 39 Van Wees, *Greek Warfare*, p. 189.
- 40 Lazenby, ‘The Killing Zone’, p. 94.
- 41 For an account of hoplite battle, see Hanson, *The Western Way of War*.
- 42 Lazenby, ‘The Killing Zone’, p. 97.
- 43 Hanson, *The Western Way of War*, p. 175.
- 44 Van Wees, *Greek Warfare*, p. 189.

- 45 Han van Wees paints this convincing picture of Homeric battle, based partly upon the anthropological evidence of battle in tribal Papua New Guinea. See *ibid.*, pp. 154–8.
- 46 Anderson indicates that the Thebans may have introduced this tactic at the battle of Delium in 424 BC. Anderson, *Military Theory and Practice in the Age of Xenophon*, pp. 159–60.
- 47 Hanson, *The Wars of the Ancient Greeks*, p. 128.
- 48 C. von Clausewitz, *On War* (trans. Michael Howard and Peter Paret), London: David Campbell Publishers Ltd, 1993, p. 216.
- 49 This is a clear example of what sea control enables. By controlling an area of sea for a period of time the Persians were able to mount an amphibious operation without interference. For a full description of sea control, see J. S. Corbett, *Some Principles of Maritime Strategy*, London: Longmans, Green & Co., 1919; and E. Grove, *The Future of Sea Power*, Annapolis: Naval Institute Press, 1990.
- 50 This move is reminiscent of the Inchon landings during the Korean War. See M. Hastings, *The Korean War*, London: Guild Publishing, 1987.
- 51 Gray praises seapower for its ability ‘to function at all levels of conflict with enormous flexibility’. Colin S. Gray, *Modern Strategy*, Oxford: Oxford University Press, 1999, p. 218.
- 52 For accounts of the battle of Cannae, see N. Bagnall, *The Punic Wars: Rome, Carthage and the Struggle for the Mediterranean*, London: Pimlico, 1999; and A. Goldsworthy, *The Punic Wars*, London: Cassell & Co., 2001.
- 53 The superiority of interior lines is a dominant theme in Jomini’s *The Art of War*. Baron A. H. de Jomini, *The Art of War*, London: Greenhill Books, 1996.
- 54 For a discussion of the socio-political elements of Greek warfare, see van Wees, *Greek Warfare*.
- 55 Colin S. Gray, *The Leverage of Sea Power: The Strategic Advantage of Navies in War*, New York: Free Press, 1992.
- 56 Van Wees, *Greek Warfare*, p. 65.
- 57 S. Metz and D. V. Johnson II, *Asymmetry and U.S. Military Strategy: Definition, Background, and Strategic Concepts*, p. 5, www.au.af.mil/au/awc/awcgate/ssi/asymetry.pdf.
- 58 Anderson, *Military Theory and Practice in the Age of Xenophon*, pp. 112–25.
- 59 For a description of the role of light forces, see van Wees, *Greek Warfare*, pp. 61–5.
- 60 Anderson, *Military Theory and Practice in the Age of Xenophon*, p. 115.
- 61 Fuller, *The Generalship of Alexander the Great*.
- 62 *Ibid.*
- 63 Notable in this respect were the Roman Legions. See J. Peddie, *The Roman War Machine*, London: Grange Books, 1997; L. Keppie, *The Making of the Roman Army*, London: Routledge, 1998; and C. M. Gilliver, *The Roman Art of War*, Stroud: Tempus Publishing, 2001.
- 64 As noted in the previous chapter, the characteristics of the battlefield environment are best described by Clausewitz’s ‘Climate of War’.
- 65 Tarn, *Hellenistic Military and Naval Developments*, p. 11.
- 66 Sekunda, *The Army of Alexander the Great*.

3 Lessons in strategy 1: grand strategy

- 1 Carl von Clausewitz, *On War* (trans. Michael Howard and Peter Paret), London: David Campbell Publishers Ltd, 1993, p. 89.
- 2 Excellent accounts of Napoleon’s campaigns can be found in David Chandler, *The Campaigns of Napoleon*, London: Weidenfeld & Nicolson Ltd, 1966; and David Gates, *The Napoleonic Wars 1803–1815*, New York: Edward Arnold Publishers, 1997.
- 3 Sun Tzu, *The Art of War* (trans. Samuel B. Griffith), London: Oxford University Press, 1971, pp. 77–9.

- 4 N. G. L. Hammond, *The Genius of Alexander the Great*, London: Duckworth, 1998, p. 130.
- 5 *Ibid.*, p. 72.
- 6 As Bosworth notes, 'In general Alexander accepted the Achaemenid fiscal system as he found it'. A. B. Bosworth, *Conquest and Empire: The Reign of Alexander the Great*, Cambridge: Cambridge University Press, 1988, p. 241.
- 7 *Ibid.*, p. 73.
- 8 Robin Lane Fox, *Alexander the Great*, Harmondsworth: Penguin Books Ltd, 1986, p. 131.
- 9 Hammond, *The Genius of Alexander the Great*, p. 155.
- 10 *Ibid.*, p. 72.
- 11 For accounts of the war between England and Spain, see G. Parker, *The Grand Strategy of Philip II*, New Haven: Yale University Press, 1998; C. Martin and G. Parker, *The Spanish Armada*, revised edition, Manchester: Mandolin, 1999; R. Whiting, *The Enterprise of England: The Spanish Armada*, Stroud: Alan Sutton Publishing Ltd, 1995; J. Sugden, *Sir Francis Drake*, London: Pimlico, 1996; W. T. MacCaffrey, *Elizabeth I: War and Politics 1588–1603*, Princeton: Princeton University Press, 1992; G. Mattingly, *The Defeat of the Spanish Armada*, London: Book Club Associates, 1972; and A. Somerset, *Elizabeth I*, London: Phoenix Giant, 1992.
- 12 Bosworth, *Conquest and Empire*, p. 229.
- 13 *Ibid.*, p. 230.
- 14 *Ibid.*, p. 232.
- 15 Fox, *Alexander the Great*, p. 272.
- 16 Hammond, *The Genius of Alexander the Great*, p. 112.
- 17 Fox, *Alexander the Great*, p. 250.
- 18 *Ibid.*
- 19 Hammond, *The Genius of Alexander the Great*, p. 112.
- 20 *Ibid.*, p. 116.
- 21 Fox, *Alexander the Great*, p. 195.
- 22 There is some confusion in the sources regarding Doloaspis' origins. Arrian explicitly describes him as an Egyptian. However, Lane Fox notes that his name is Iranian. See Arrian, *The Campaigns of Alexander*, London: Penguin Books, 1971, p. 154, and Fox, *Alexander the Great*, p. 220.
- 23 Fox, *Alexander the Great*, p. 136.
- 24 *Ibid.*, p. 361.
- 25 Bosworth, *Conquest and Empire*, pp. 130–4.
- 26 Bosworth, *Conquest and Empire*, p. 238.
- 27 *Ibid.*, pp. 230–1.
- 28 Bosworth, *Conquest and Empire*, p. 190.
- 29 A detailed analysis of the League can be found in *ibid.*, pp. 187–97.
- 30 Hammond, *The Genius of Alexander the Great*, p. 35.
- 31 Another plausible explanation for the siege was that Alexander wanted to exert total control over this crucial Phoenician port, rather than accept its neutrality. Bosworth claims that the Tyrian refusal of Alexander's request could not be tolerated as it represented an affront to his sovereignty. Bosworth, *Conquest and Empire*, p. 65.
- 32 Fox, *Alexander the Great*, p. 302.
- 33 *Ibid.*, pp. 248–9.
- 34 *Ibid.*, p. 196.
- 35 Hammond, *The Genius of Alexander the Great*, p. 100.
- 36 Bosworth, *Conquest and Empire*, p. 245.
- 37 Hammond, *The Genius of Alexander the Great*, p. 100.
- 38 Fox, *Alexander the Great*, p. 318.
- 39 J. F. C. Fuller, *The Generalship of Alexander the Great*, Ware: Wordsworth Editions, 1998.

- 40 Fox, *Alexander the Great*, pp. 428–9.
- 41 *Ibid.*, pp. 320–1.
- 42 Sun Tzu, *The Art of War*, p. 77.
- 43 Hammond, *The Genius of Alexander the Great*, p. 123.
- 44 The above details were taken from Bosworth, *Conquest and Empire*, pp. 271–3.
- 45 *Ibid.*, p. 170.
- 46 Fox, *Alexander the Great*, p. 336 and pp. 403–5.
- 47 *Ibid.*, pp. 409–10.
- 48 *Ibid.*, pp. 406–7.
- 49 Edward N. Luttwak, *Strategy: The Logic of War and Peace*, Cambridge, Mass.: The Belknap Press of Harvard University Press, 1987, p. 220.
- 50 Clausewitz, *On War*.
- 51 Luttwak, *Strategy: The Logic of War and Peace*, p. 225.
- 52 Speed was so often central to Alexander's operational art. As Robin Lane Fox notes, 'as so often before, Alexander's solution lay in his speed'. Fox, *Alexander the Great*, p. 132.
- 53 *Ibid.*, p. 133. This point is echoed by H. van Wees, *Greek Warfare: Myths and Realities*, London: Gerald Duckworth & Co. Ltd, 2004, pp. 218–19.
- 54 Hammond, *The Genius of Alexander the Great*, p. 97.
- 55 Clausewitz quite rightly advises that '[w]hat matters therefore is to detect the culminating point with discriminative judgement'. Clausewitz, *On War*, p. 639. This, of course, is much easier said than done.
- 56 Fox, *Alexander the Great*, p. 229.
- 57 D. W. Engels, *Alexander the Great and the Logistics of the Macedonian Army*, Berkeley: University of California Press, 1980, p. 68.
- 58 Sun Tzu, *The Art of War*, p. 136.
- 59 In this respect, it is interesting to contrast the command styles of Elizabeth I of England and Philip II of Spain during the sixteenth century. Throughout the second half of the sixteenth century these two rulers were engaged in something of a cold war, which occasionally heated up into actual conflict. The background to this conflict was the Protestant Reformation, with Elizabeth as monarch of the largest Protestant power and Philip acting as the main Catholic political power. The main point of interest for this study is the differing command, and decision-making, styles of the two leaders. Elizabeth appears to have usually based her decisions on a pragmatic analysis of the current situation; in contrast, Philip was driven by an overwhelming sense of responsibility to defend the Catholic Church, wherever it was threatened. He was also capable of making reckless decisions, which he justified on the basis that God would intervene to ensure good fortune.
- 60 For an account of this pursuit, see Hammond, *The Genius of Alexander the Great*, pp. 120–1.
- 61 *Ibid.*, p. 119.
- 62 Fox, *Alexander the Great*, p. 254 and p. 258.
- 63 *Ibid.*, p. 177.
- 64 Sun Tzu, *The Art of War*.
- 65 Clausewitz, *On War*, p. 720.
- 66 This ingredient of strategic success was described to me by Colin S. Gray.
- 67 Sir J. S. Corbett, *Some Principles of Maritime Strategy*, London: Longmans, Green & Co., 1919, p. 15.
- 68 S. J. Tangredi, 'Sea Power: Theory and Practice', in J. Baylis, J. Wirtz, E. Cohen and C. S. Gray (eds), *Strategy in the Contemporary World: An Introduction to Strategic Studies*, Oxford: Oxford University Press, 2002, p. 114. Corbett was the first theorist to emphasise the significance of using naval forces to influence events on land. See Corbett, *Some Principles of Maritime Strategy*. Amongst modern theorists Corbett's thoughts are most clearly stated by Colin S. Gray and Eric Grove. See C. S. Gray, *The*

- Leverage of Sea Power: The Strategic Advantage of Navies in War*, New York: Free Press, 1992, and E. Grove, *The Future of Sea Power*, Annapolis: Naval Institute Press, 1990.
- 69 *BR 1806: British Maritime Doctrine*, 2nd edn, London: Stationery Office, 1999, p. 232.
- 70 Corbett, *Some Principles of Maritime Strategy*.
- 71 Of course, this is dependent on the user possessing the capabilities required to operate at great distances from the home base. During Alexander's period, although maritime powers did not possess such capabilities, their assets could give them substantial reach within their region and beyond.
- 72 Corbett, *Some Principles of Maritime Strategy*; Grove, *The Future of Sea Power*.
- 73 Corbett, *Some Principles of Maritime Strategy*.
- 74 *Ibid.*
- 75 The limits of maritime power during this period are well documented by van Wees, *Greek Warfare*, and F. E. Adcock, *The Greek and Macedonian Art of War*, Berkeley: University of California Press, 1957.
- 76 Van Wees, *Greek Warfare*, p. 218.
- 77 Bosworth, *Conquest and Empire*, pp. 49–50.
- 78 Van Wees, *Greek Warfare*, p. 219.
- 79 Adcock, *The Greek and Macedonian Art of War*, p. 38.
- 80 It has also been reported that the ships retained were Athenian. Thus, the crews of these ships could act as hostages to ensure the behaviour of their home city. See Fuller, *The Generalship of Alexander the Great*, p. 95.
- 81 Bosworth, *Conquest and Empire*, p. 47, and Hammond, *The Genius of Alexander the Great*, p. 74.
- 82 In this sense, the Persian Empire can be described as predominately a continental power, rather than a maritime one. Hence, the centres of gravity for Persia did not rest on their maritime assets. Rather, this particular enemy would have to be eventually defeated on land, through a combination of defeating its army and capturing its principle cities. The relationship between land and sea powers is analysed in Gray, *The Leverage of Sea Power*.
- 83 Bosworth, *Conquest and Empire*, p. 47.
- 84 At this stage in the Punic Wars Hannibal was still marching around Italy, capturing cities and causing damage to the Republic's resources. For details, see N. Bagnall, *The Punic Wars: Rome, Carthage and the Struggle for the Mediterranean*, London: Pimlico, 1999; and A. Goldsworthy, *The Punic Wars*, London: Cassell & Co., 2001.
- 85 Clausewitz, *On War*, p. 77.
- 86 J. C. Wylie, *Military Strategy: A General Theory of Power Control*, Annapolis: Naval Institute Press, 1967, p. 66.
- 87 *Ibid.*, p. 72.
- 88 *Ibid.*, p. 89.
- 89 *Ibid.*, p. 88.
- 90 *Ibid.*, p. 93.
- 91 *Ibid.*, p. 67.
- 92 Fox, *Alexander the Great*, p. 301.
- 93 *Ibid.*, p. 303.
- 94 *Ibid.*, p. 293.
- 95 Edward N. Luttwak, *The Grand Strategy of the Roman Empire: From the First Century AD to the Third*, Baltimore: Johns Hopkins University Press, 1979.
- 96 Bosworth simply declares that 'most states still saw the rule of Macedon as a pleasanter alternative [to Spartan imperialism]'. Bosworth, *Conquest and Empire*, p. 204.
- 97 *Ibid.*

4 Lessons in strategy 2: military operations

- 1 An outstanding analysis of these developments can be found in Paddy Griffith, *Battle Tactics of the Western Front: The British Army's Art of Attack 1916–18*, New Haven: Yale University Press, 1994.
- 2 Vegetius, *Vegetius: Epitome of Military Science* (trans. N. P. Milner), Liverpool: Liverpool University Press, 1993.
- 3 The advantages to be gained from operating along interior lines are described in detail in Baron A. H. de Jomini, *The Art of War*, London: Greenhill Books, 1996.
- 4 There appear to be no reliable figures for Darius' army at Issus. For example, Arrian presents an implausible figure of 600,000. Arrian, *The Campaigns of Alexander*, London: Penguin Books, 1971, p. 115. Equally implausible are Diodorus, and Justin's figures of 500,000. See J. F. C. Fuller, *The Generalship of Alexander the Great*, Ware: Wordsworth Editions, 1998, p. 155. However, Bosworth does conclude that the number of Greek mercenaries alone may have numbered 30,000. A. B. Bosworth, *Conquest and Empire: The Reign of Alexander the Great*, Cambridge: Cambridge University Press, 1988, p. 57. Curtius provides more realistic figures of the various units, with a combined strength of 120,000. Quintus Curtius Rufus, *The History of Alexander* (trans. John Yardley), London: Penguin Books, 2004, p. 40.
- 5 Alexander's actions illustrate Sun Tzu's statement that '[a]ll warfare is based upon deception'. Sun Tzu, *The Art of War* (trans. Samuel B. Griffith), London: Oxford University Press, 1971, p. 66. To use the language of the Information Age, one can conclude that in this instance Alexander was adept at information warfare. This supports the hypothesis that information warfare, a dominant expression in the RMA literature, has been a constant feature of conflict. Field-Marshal Slim's account of the Burma campaign in The Second World War indicates just how important information has been historically. Slim noted that a fundamental difference between the Japanese and Allied forces during the early Japanese successes was that the Japanese possessed good information, whereas '[i]t is no exaggeration to say that we had practically no useful or reliable information of the enemy strength, movements, or intentions'. R. B. Asprey, *War in the Shadows*, London: Little, Brown & Company, 1994, p. 419. Similarly, Napoleon's use of a cavalry screen and Hannibal's deception at Lake Trasimene are classic examples of information warfare. D. Chandler, *The Campaigns of Napoleon*, London: Weidenfeld & Nicolson Ltd, 1966, p. 165; and N. Bagnall, *The Punic Wars: Rome, Carthage and the Struggle for the Mediterranean*, London: Pimlico, 1999, pp. 180–3. In this sense, information warfare is merely concerned with gaining access to information whilst at the same time denying the enemy access to information. Perhaps a more accurate description of such activities would be to discuss one's ability to 'control' information or the 'infosphere' (a polymorphous environment where information exists and flows). For a more detailed analysis of these terms, see D. J. Lonsdale, *The Nature of War in the Information Age: Clausewitzian Future*, London: Frank Cass, 2004, especially chapter 5.
- 6 Arrian describes them as heavy infantry, and thereby akin to hoplites. Arrian, *The Campaigns of Alexander*, p. 115. Fuller, on the other hand, suggests that because Darius placed archers to their front they must be peltasts, for to place archers to the front of hoplites would merely impede their ability to withstand a cavalry charge. Fuller, *The Generalship of Alexander the Great*, p. 160. W. W. Tarn notes that because Alexander charged them with the Companion cavalry they were either peltasts or hoplites; if the latter then Alexander would only have charged them after their line had been thrown into confusion by the retreat of the archers into their ranks. The rationale for this being that Alexander would not have charged an unbroken line of hoplites. W. W. Tarn, *Hellenistic Military and Naval Developments*, Chicago: Ares Publishers Inc., 1930, p. 65.
- 7 Arrian, *The Campaigns of Alexander*, p. 120.

- 8 Bosworth, *Conquest and Empire*, p. 61. Quintus Curtius Rufus appears to give a similar account, describing how Darius did not flee until many of his generals around him were dead and his chariot horses had been 'pierced by lances'. Quintus Curtius Rufus, *The History of Alexander*, p. 106.
- 9 Arrian, *The Campaigns of Alexander*, p. 120.
- 10 V. D. Hanson, *The Wars of the Ancient Greeks: And Their Invention of Western Military Culture*, London: Cassell & Co., 1999, p. 183.
- 11 A modern example of this truism can be found in the 1991 Gulf War. As the Iraqi army fled Kuwait, with their stolen booty along the road north to Basra, they ceased to resemble an organised and coherent force. This made them extremely vulnerable to attack from Coalition forces; hence the road to Basra was turned into the 'Highway of Death'. See M. R. Gordon and General B. E. Trainor, *The Generals' War: The Inside Story of the Conflict in the Gulf*, Boston: Little, Brown & Company, 1995.
- 12 R. L. Fox, *Alexander the Great*, Harmondsworth: Penguin Books Ltd, 1986, p. 176.
- 13 Arrian, *The Campaigns of Alexander*, p. 123.
- 14 Bosworth, *Conquest and Empire*, p. 64.
- 15 *Ibid.*, p. 127.
- 16 Arrian, *The Campaigns of Alexander*, p. 269.
- 17 A similar technique was used in the 1991 Gulf War. Prior to the beginning of the bombing campaign against Iraq, '[t]he air-war commanders had already begun Operation Border Look, flying large numbers of planes close to the Iraq-Kuwait border so that the Iraqis would become accustomed to the presence of aircraft and would become dull to the actual attack preparations'. Gordon and Trainor, *The Generals' War*, p. 199.
- 18 This is of course reminiscent of the D-Day landings, which were launched during inclement weather to deceive the Germans. For an analysis of how significant weather can be in war, see Harold A. Winters, with Gerald E. Galloway Jun., William J. Reynolds and David W. Rhyne, *Battling the Elements: Weather and Terrain in the Conduct of War*, Baltimore: Johns Hopkins University Press, 1998.
- 19 Fox, *Alexander the Great*, pp. 301–2.
- 20 Arrian, *The Campaigns of Alexander*, p. 201.
- 21 Vegetius, *Vegetius: Epitome of Military Science*.
- 22 See N. G. L. Hammond, *The Genius of Alexander the Great*, London: Duckworth, 1998, p. 19 and p. 145.
- 23 This is a classic example of information warfare, the essence of which is to control the flow of information in the battle space. Although in the modern context information warfare is often seen as being concerned with access and denial to the products of information technology, in fact it is really about the flow and access of information *per se*. In this sense, by denying the enemy access to information about the whereabouts of the Companion cavalry, Alexander was indeed engaged in information warfare. See Lonsdale, *The Nature of War*, especially chapter 5.
- 24 Quintus Curtius Rufus, *The History of Alexander*, p. 167.
- 25 C. S. Gray, *Another Bloody Century: Future Warfare*, London: Weidenfeld & Nicolson, 2005, p. 223.
- 26 Quintus Curtius Rufus, *The History of Alexander*, p. 172.
- 27 Hammond, *The Genius of Alexander the Great*, p. 153.
- 28 H. G. Summers Jun., *On Strategy: A Critical Analysis of the Vietnam War*, Novato: Presidio, 1982, p. 88.
- 29 R. Thompson, *Defeating Communist Insurgency: Experiences from Malaya and Vietnam*, London: Macmillan Press, 1966, p. 50.
- 30 *Ibid.*, p. 55.
- 31 Noted by J. Newsinger, *British Counterinsurgency: From Palestine to Northern Ireland*, Basingstoke: Palgrave, 2002, p. 49.
- 32 S. Metz and R. Millen, *Insurgency and Counterinsurgency in the 21st Century*:

- Reconceptualising the Threat and Response*, Strategic Studies Institute, US Army War College, PA, November 2004, www.au.af.mil/au/awc/awcgate/ssi/insurgency21c.pdf.
- 33 Metz, in *ibid.*, p. 12.
- 34 Quoted in *ibid.*, p. 17. In this vein, C. M. Ford goes even further by insisting that COIN forces ‘must win the support of the people; it is simply not enough to maintain their neutrality’. C. M. Ford, ‘Speak No Evil: Targeting a Population’s Neutrality to Defeat an Insurgency’, *Parameters*, Summer 2005, p. 53.
- 35 C. E. Callwell, *Small Wars: A Tactical Textbook for Imperial Soldiers*, London: Greenhill Books, 1990, p. 79.
- 36 Newsinger, *British Counterinsurgency*, p. 144.
- 37 J. Paget, *Counter-Insurgency Campaigning*, London: Faber & Faber, 1967, p. 176.
- 38 R. Peters, ‘In Praise of Attrition’, *Parameters*, Summer 2004, p. 29, www.carlisle.army.mil/usawc/Parameters/04summer/peters.htm.
- 39 Metz, in *Insurgency and Counterinsurgency in the 21st Century*, p. 5.
- 40 Callwell, *Small Wars*, p. 76.
- 41 Peters, ‘In Praise of Attrition’, p. 31.
- 42 C. von Clausewitz, *On War* (trans. Michael Howard and Peter Paret), London: David Campbell Publishers Ltd, 1993, p. 157.
- 43 A view shared by D. W. Engels, *Alexander the Great and the Logistics of the Macedonian Army*, Berkeley: University of California Press, 1980, p. 30.
- 44 www.generalpatton.com/quotes.html.
- 45 As noted in M. I. Handel, *Masters of War: Classical Strategic Thought*, 2nd edn, London: Frank Cass, 1996, p. 155. This view is shared by General Bruce C. Clarke; see General B. C. Clarke, ‘Leadership, Commandership, Planning, and Success’, *Military Review*, 2002, vol. 82, no. 4, p. 2.
- 46 Jomini, *The Art of War*.
- 47 G. T. Hammond, *The Mind of War: John Boyd and American Security*, Washington, DC: Smithsonian Institution Press, 2001.
- 48 Fuller, *The Generalship of Alexander the Great*.
- 49 The heroic tradition is exemplified in Homer’s *Iliad*, a book of which Alexander was an avid reader and took with him on his campaigns. See also Fuller, *The Generalship of Alexander the Great*, p. 152, who describes the fighting around Alexander at the Granicus as illustrative of the heroic tradition.
- 50 Arrian, *The Campaigns of Alexander*, p. 73.
- 51 This form of leadership is reminiscent of that of Erwin Rommel. The example that illustrates Rommel’s style of leadership most clearly is the crossing of the river Meuse in May 1940. As commander of the 7th Panzer Division, General Rommel was constantly at the front, his presence designed to encourage his men to forge across the river in the face of stiff French resistance. Indeed, at one point Rommel personally took command of the second battalion of his 7th Rifle Regiment, jumped into an inflatable boat, and led the assault across the river himself. For details of this operation, see L. Deighton, *Blitzkrieg: From the Rise of Hitler to the Fall of Dunkirk*, London: Pimlico, 1993, pp. 179–245. Such incidents were generally representative of Rommel’s approach to leadership. Examples can be found in D. Fraser, *Knight’s Cross: A Life of Field Marshal Erwin Rommel*, London: HarperCollins Publishers, 1994.
- 52 In this respect Alexander would seem to fulfil Napoleon’s desire to have lucky generals.
- 53 The absence of a pursuit can be explained by two related reasons. Arrian suggests that Alexander made a deliberate decision to turn his attention to the Greek mercenaries rather than continue with the pursuit. See Arrian, *The Campaigns of Alexander*, p. 74. On the other hand, Fuller describes how the Persian forces were spared ‘because the Greek mercenaries still stood in Alexander’s path’. Fuller, *The Generalship of*

- Alexander the Great*, p. 153. The difference between these two perspectives is slight, but important. One implies that Alexander did not have a choice concerning whether or not to engage the mercenaries; the other implies that he consciously forsook the opportunity to pursue the Persians, so that he could eradicate the mercenaries and thereby send a signal to any other Greeks who may have been tempted to sell their services to the old enemy.
- 54 Vegetius, *Vegetius: Epitome of Military Science*, p. 87. Commenting on General Robert Eichelberger, who commanded American forces in New Guinea in 1942, Rosen states: 'Eichelberger himself was always at the front lines, and his example inspired his men'. S. P. Rosen, *Winning the Next War: Innovation and the Modern Military*, Ithaca: Cornell University Press, 1991, p. 32.
- 55 Field-Marshal Montgomery, *The Path to Leadership*, London: Collins, 1961, p. 9. Likewise, General F. M. Franks Jun., who commanded VII Corps in the 1991 Gulf War, notes that '[t]rust, I believe, is the basic bond of leadership'. See General F. M. Franks Jun., 'Battle Command: A Commander's Perspective', *Military Review*, 1996, vol. 76, no. 3, p. 4. Lieutenant-General Horrocks showed that an alternative morale booster was ensuring that the local nurses attended the twice-weekly dances in Tripoli during the Second World War. A. Shepperd, 'Horrocks', in John Keegan (ed.), *Churchill's Generals*, London: Weidenfeld & Nicolson, 1991, p. 236.
- 56 S. L. A. Marshall, *Men Against Fire: The Problem of Battle Command in Future War*, New York: William Morrow & Company, 1947, p. 190.
- 57 Handel, *Masters of War*, p. 156.
- 58 Montgomery, *The Path to Leadership*, p. 9.
- 59 Sun Tzu, *The Art of War*, p. 144.
- 60 *Ibid.*, in his chapter entitled 'Employment of Secret Agents', Sun Tzu describes five types of agent: native, inside, doubled, expendable, and living. This individual whom Alexander had bought off would certainly fit into the native category.
- 61 Fuller, *The Generalship of Alexander the Great*, p. 233.
- 62 Bosworth, *Conquest and Empire*, p. 91.
- 63 Sun Tzu, *The Art of War*, p. 102.
- 64 Engels, *Alexander the Great*, p. 10.
- 65 *Ibid.*
- 66 *Ibid.*, pp. 71–8.
- 67 *Ibid.*, p. 66.
- 68 *Ibid.*, p. 58 and p. 145.
- 69 *Ibid.*, p. 66.
- 70 To avoid confusion, this book uses the traditional term 'Principles of War'. However, the author is in complete agreement with Colin S. Gray when he notes that the principles in question are actually 'Principles of Warfare'; they are concerned with how to fight. To quote Gray: 'War is a relationship between belligerents; it is the whole context for warfare. Warfare is defined as "the act of making war"'. See Colin S. Gray, 'From Principles of Warfare to Principles of War', in Gray, *Strategy and History: Essays on Theory and Practice*, London: Routledge, 2006, p. 82.
- 71 For example see *British Defence Doctrine, Joint Warfare Publication (JWP) 0–01*, London: Ministry of Defence, 1996, Annex A.
- 72 Clausewitz, *On War*, p. 428.
- 73 For example, A. B. Bosworth regards the siege of Tyre as strategically unnecessary. See Bosworth, *Conquest and Empire*, p. 65.
- 74 Clausewitz, *On War*, p. 271.
- 75 Robert R. Tomes, 'Relearning Counterinsurgency Warfare', *Parameters*, Spring 2004, p. 24.

5 Lessons in strategy 3: use of force

- 1 For example, Nicholas Hammond suggests that there may have been 25,000 men and 5,000 horses in this force. See N. G. L. Hammond, *The Genius of Alexander the Great*, London: Duckworth, 1998, p. 34. Bosworth, however, argues that '[the army] is unlikely to have exceeded 15,000'. A. B. Bosworth, *Conquest and Empire: The Reign of Alexander the Great*, Cambridge: Cambridge University Press, 1988, p. 29. Differences of opinion such as these are commonplace amongst the literature on Alexander. This is because, as Nicholas Hammond notes, 'The narratives which survive were written between three and five centuries after Alexander's career, and their portrayals of Alexander vary widely ...' Hammond, *The Genius of Alexander the Great*, p. ix. However, by cross-referencing the primary and secondary sources, we can hopefully arrive at a reasonably accurate picture of the events. See also A. B. Bosworth, 'The Source: Introduction: Some Basic Principles', in Ian Worthington (ed.), *Alexander the Great: A Reader*, London: Routledge, 2003, pp. 7–16.
- 2 Hammond, *The Genius of Alexander the Great*, p. 34, and J. F. C. Fuller, *The Generalship of Alexander the Great*, Ware: Wordsworth Editions, 1998, p. 220, both place the phalanx in this lead role.
- 3 Bosworth, *Conquest and Empire*, p. 29.
- 4 C. E. Callwell, *Small Wars: A Tactical Textbook for Imperial Soldiers*, London: Greenhill Books, 1990, p. 38.
- 5 Harold Winters *et al.* indicate in their seminal work *Battling the Elements*, that good generalship enhances and exploits geography to one's advantage. H. A. Winters, with G. E. Galloway Jun., W. J. Reynolds and D. W. Rhyne, *Battling the Elements: Weather and Terrain in the Conduct of War*, Baltimore: Johns Hopkins University Press, 1998.
- 6 Sun Tzu, *The Art of War* (trans. Samuel B. Griffith), London: Oxford University Press, 1971, p. 67.
- 7 Callwell, *Small Wars*, p. 41.
- 8 I. F. W. Beckett and J. Pimlott, 'Introduction', in I. F. W. Beckett and J. Pimlott (eds), *Armed Forces and Modern Counter-Insurgency*, London: Croom Helm, 1985, p. 3.
- 9 It should be noted that such acts are often more potent when combined with a degree of clemency. Again, Callwell is instructive on this point: 'there is a limit to the amount of licence in destruction which is expedient ... the overawing and not the exasperation of the enemy is the end to keep in view'. Callwell, *Small Wars*, pp. 41–2. This issue will be discussed in more depth in Chapter 6.
- 10 Actions such as these, and the crossing of the Hydaspes in India, illustrate perfectly Sun Tzu's comment that 'All war is based on deception'. Sun Tzu, *The Art of War*, p. 66.
- 11 Bosworth, *Conquest and Empire*, p. 65.
- 12 Robin Lane Fox, *Alexander the Great*, Harmondsworth: Penguin Books Ltd, 1986, p. 181.
- 13 The construction of the mole is a classic example of how geography can be manipulated to one's advantage. Time and again, Alexander was able to utilise geography for strategic effect. Sometimes, as at Tyre, he manipulated the geographic environment, whilst on other occasions he would surprise his enemies by overcoming seemingly impossible geographic obstacles. Possessing the will and ability to achieve such feats is another sign of a great commander.
- 14 Fuller, *The Generalship of Alexander the Great*, pp. 211–12.
- 15 *Ibid.*, p. 214.
- 16 Fox, *Alexander the Great*, p. 191.
- 17 This comment is based upon Clausewitz's famous statement:

The fact that slaughter is a horrifying spectacle must make us take war more seriously, but not provide an excuse for gradually blunting our swords in the name of

humanity. Sooner or later someone will come along with a sharp sword and hack off our arms.

Carl von Clausewitz, *On War* (trans. Michael Howard and Peter Paret), London: David Campbell Publishers Ltd, 1993, p. 309

- 18 Coates, pp. 208–21.
- 19 *Ibid.*, p. 209.
- 20 E. N. Luttwak, 'Toward Post-Heroic Warfare', *Foreign Affairs*, 1995, vol. 74, no. 3 (May/June).
- 21 For a discussion on this subject, see Christopher Coker, *Humane Warfare*, London: Routledge, 2001.
- 22 For a detailed discussion of this position, see David J. Lonsdale, *The Nature of War in the Information Age: Clausewitzian Future*, London: Frank Cass, 2004.
- 23 V. D. Hanson, *The Wars of the Ancient Greeks*, London: Cassell & Co., 1999, p. 150.
- 24 Defeated in the Clausewitzian sense of making him defenceless, or putting him into a position that makes that probable. See Clausewitz, *On War*, p. 77.
- 25 For an indication of this trend, see 'Ethics Lessons for US Iraq Troops', <http://news.bbc.co.uk/1/hi/world/americas/5036686.stm>.
- 26 Brian Bond, *The Pursuit of Victory: From Napoleon to Saddam Hussein*, Oxford: Oxford University Press, 1998, p. 1.
- 27 Both quotes can be found in Clausewitz, *On War*, pp. 83–4.
- 28 Coates, p. 214.
- 29 For an analysis of strategic bombing in the Second World War see Conrad C. Crane, *Bombs, Cities, and Civilians: American Airpower Strategy in World War II*, Kansas: University Press of Kansas, 1993; Robert A. Pape, *Bombing to Win: Air Power and Coercion in War*, Ithaca: Cornell University Press, 1996; Kenneth P. Werrell, *Blankets of Fire: United States' Bombers Over Japan During WWII*, Washington, DC: Smithsonian Institution Press, 1996; Tami Davis Biddle, 'British and American Approaches to Strategic Bombing: Their Origins and Implementation in the World War II Combined Bomber Offensive', *The Journal of Strategic Studies*, Special Issue 'Airpower: Theory and Practice', John Gooch (ed.), 1995, vol. 18, no. 1; James Lea Cate and Wesley Frank Craven, 'Victory', in James Lea Cate and Wesley Frank Craven (eds), *The Army Air Forces in World War II*, Volume Five, *The Pacific: Matterhorn to Nagasaki June 1944 to August 1945*, Chicago: University of Chicago Press, 1953; John E. Fagg, 'Mission Accomplished', in Wesley Frank Craven and James Lea Cate (eds), *The Army Air Forces in World War II*, Volume Three, *Europe: Argument to V-E Day January 1944 to May 1945*, Chicago: University of Chicago Press, 1951; John E. Fagg, 'The Climax of Strategic Operations', in Wesley Frank Craven and James Lea Cate (eds), *The Army Air Forces in World War II*, Volume Three, *Europe: Argument to V-E Day January 1944 to May 1945*, Chicago: University of Chicago Press, 1951; and John Pimlott, 'The Theory and Practice of Strategic Bombing', in Colin McInnes and G. D. Sheffield (eds), *Warfare in the Twentieth Century: Theory and Practice*, London: Unwin Hyman, 1988.
- 30 Williamson Murray and Mark Grimsley, 'Introduction: On Strategy', in Williamson Murray, MacGregor Knox and Alvin Bernstein (eds), *The Making of Strategy: Rulers, States, and War*, Cambridge: Cambridge University Press, 1994, p. 22.
- 31 Colin S. Gray, *Strategy and History: Essays on Theory and Practice*, London, Routledge, 2006, p. 86.
- 32 Metz, S. and Millen, R. *Insurgency and Counterinsurgency in the 21st Century: Reconceptualising the Threat and Response*, Strategic Studies Institute, US Army War College, PA, November 2004, p. 32, www.au.af.mil/au/awc/awcgate/ssi/insurgency21c.pdf.
- 33 Colin S. Gray, *Another Bloody Century: Future Warfare*, London: Weidenfeld & Nicolson, 2005, p. 223.

- 34 J. Paget, *Counter-Insurgency Campaigning*, London: Faber and Faber, 1967, pp. 168–9. For example, in Malaya, villages that harboured guerrillas were collectively fined or had curfews imposed. See John Pimlott, ‘The British Army: The Dhofar Campaign, 1970–1975’, in Ian F. W. Beckett and John Pimlott, *Armed Forces and Modern Counter-Insurgency*, London: Croom Helm, 1985, p. 24.
- 35 Callwell, *Small Wars*, p. 41.
- 36 *Ibid.*, pp. 40–2.
- 37 Clausewitz, *On War*.
- 38 J. Newsinger, *British Counterinsurgency: From Palestine to Northern Ireland*, Basingstoke: Palgrave, 2002, pp. 41–6.
- 39 For example, see ‘Bishop Condemns Western Leaders’, <http://news.bbc.co.uk/1/hi/england/staffordshire/4571396.stm> and ‘Blair Defeated over Terror Laws’, http://news.bbc.co.uk/1/hi/uk_politics/4422086.stm. One of the organisations leading the fight against the detention of terror suspects is Liberty; see their <website www.liberty-human-rights.org.uk/.
- 40 As Krepinevich notes, the Roman approach of creating a desert and calling it peace ‘clearly conflicts with American values’. A. F. Krepinevich Jun., *The Army and Vietnam*, Baltimore: Johns Hopkins University Press, 1988, p. 000.
- 41 Raymond Aron, *Peace and War: A Theory of International Relations* (trans. Richard Howard and Annette Baker Fox), New York: Anchor Press/Doubleday, 1973.
- 42 Clausewitz, *On War*, p. 718.
- 43 *Ibid.*, p. 309.
- 44 Hammond, *The Genius of Alexander the Great*, p. 163.
- 45 Clausewitz, *On War*.
- 46 Mao Tse-Tung, *Selected Military Writings of Mao Tse-Tung*, Beijing: Foreign Languages Press, 1963.
- 47 Bosworth, *Conquest and Empire*, p. 78.
- 48 Fox, *Alexander the Great*, p. 229.
- 49 D. W. Engels, *Alexander the Great and the Logistics of the Macedonian Army*, Berkeley: University of California Press, 1980, p. 68.
- 50 Fuller, *The Generalship of Alexander the Great*, p. 168.
- 51 Arrian, *The Campaigns of Alexander*, London: Penguin Books, 1971, p. 167.
- 52 Bosworth notes how scythed chariots had dramatically failed against the Ten Thousand at Cunaxa. Bosworth, *Conquest and Empire*, p. 78.
- 53 C. S. Gray, *Modern Strategy*, Oxford: Oxford University Press, 1999, p. 37. Both Gray and Howard regard technology as only one of the dimensions of strategy. M. Howard, ‘The Forgotten Dimensions of Strategy’, *Foreign Affairs*, 1979, vol. 57, no. 5.
- 54 J. F. C. Fuller, *Armament and History: A Study of the Influence of Armament on History from the Dawn of Classical Warfare to the Second World War*, London: Eyre & Spottiswoode, 1946, p. v.
- 55 Luttwak’s paradoxical logic of strategy is again evident. E. N. Luttwak, *Strategy: The Logic of War and Peace*, Cambridge, Mass.: Belknap Press of Harvard University Press, 1987.
- 56 Gray, *Modern Strategy*, p. 37.
- 57 Fox, *Alexander the Great*, p. 239.
- 58 Fuller, *The Generalship of Alexander the Great*, p. 173.
- 59 See Quintus Curtius Rufus, *The History of Alexander* (trans. John Yardley), London: Penguin Books, 2004, p. 88; also Arrian, *The Campaigns of Alexander*, p. 170.
- 60 Fox, *Alexander the Great*, p. 241.
- 61 Arrian is guilty of this inflated figure. Arrian, *The Campaigns of Alexander*, p. 172.
- 62 This relationship is well described by the United States Marine Corps’ *Warfighting* doctrine publication, in which war is described as an interaction of moral and physical forces, the former having the greater effect in the outcome of a conflict. H. T. Hayden (ed.), *Warfighting: Manoeuvre Warfare in the U.S. Marine Corps*, London: Greenhill,

- 1995, pp. 41–2. Of course, this concept is very much at the heart of Clausewitz's work. Gray refines this train of thought somewhat by stating that the enemy can be defeated either physically or by breaking his will. Gray, *Modern Strategy*, p. 210.
- 63 Charles Messenger, *The Art of Blitzkrieg*, 2nd edn, London: Ian Allan Ltd, 1991.
- 64 J. Keegan, *The Mask of Command*, London: Penguin Books, 1988.
- 65 For a discussion of this issue, see E. L. Wheeler, 'The General as Hoplite', in V. D. Hanson (ed.), *Hoplites: The Classical Greek Battle Experience*, London: Routledge, 1993, pp. 121–70.
- 66 Clausewitz, *On War*, p. 271.
- 67 This is not to say that Alexander was incapable of complex operations when required. When faced by arguably his most worthy opponents, at Tyre, Alexander was capable of quite complex, but still brutally effective siege operations.
- 68 Clausewitz, *On War*, p. 111.
- 69 There is little strategic rationale for this action mentioned in the sources. Consequently, we can only speculate as to the motives behind an attack on the villages. It may simply be that Alexander took the Uxians' resistance as an excuse/opportunity to pillage the resources of the villages. This motive does receive attention in Arrian's account, who writes that Alexander's men 'carried off a great deal of plunder'. Arrian, *The Campaigns of Alexander*, p. 175. In addition, Fuller indicates that the operation probably produced intelligence regarding the topology of the pass the Uxian warriors were intending to hold. Fuller, *The Generalship of Alexander the Great*, p. 227. Aside from this, Alexander may also have viewed an attack as an opportunity to both deplete his enemy's resources and as a way to cower them into future submission. Therefore, the attack on the villages can be viewed as an act of coercion.
- 70 Fuller, *The Generalship of Alexander the Great*, p. 228.
- 71 Bosworth, *Conquest and Empire*, p. 89.
- 72 Rohan Gunaratna, *Inside Al Qaeda*, London: C. Hurst, 2002; Colin S. Gray, *Maintaining Effective Deterrence*, Carlisle: Strategic Studies Institute, 2003.
- 73 Clausewitz, *On War*, Book One, chapter 3.
- 74 Sun Tzu. If anyone has any doubt about the significance of winning and losing in war, they need only think of the Jewish population of Europe in the 1940s. The fact that the armies of the countries around Germany could not withstand the onslaught of the Wehrmacht meant that the Jews (and other undesirables from a Nazi perspective) of those countries would be led away to extermination.
- 75 Clausewitz compares war to a game of cards. Clausewitz, *On War*.
- 76 Sun Tzu, *The Art of War*.
- 77 Clausewitz, *On War*.
- 78 Quoted in David Chandler, *The Campaigns of Napoleon*, London: Weidenfeld & Nicolson Ltd, 1966, p. 139.
- 79 Clausewitz, *On War*, p. 163.

6 Lessons in strategy: conclusions

- 1 In Clausewitz's own words, 'In war the result is never final'. Carl von Clausewitz, *On War* (trans. Michael Howard and Peter Paret), London: David Campbell Publishers Ltd, 1993, p. 89.
- 2 Basil H. Liddell Hart, *Strategy: The Indirect Approach*, London: Faber & Faber, 1967, pp. 335–6.
- 3 Superior accounts of the Punic Wars, including the bloody end of Carthage, can be found in Nigel Bagnall, *The Punic Wars: Rome, Carthage and the Struggle for the Mediterranean*, London: Pimlico, 1999, and in Adrian Goldsworthy, *The Punic Wars*, London: Cassell & Co., 2001.
- 4 For a discussion of the significance of cities to Alexander's campaigns, see

- N. G. L. Hammond, *The Genius of Alexander the Great*, London: Duckworth, 1998, pp. 100–3.
- 5 The ‘client-state’ system employed by Rome utilised states and tribes on the periphery of the empire to this effect. These ‘clients’ would deal with small-scale security threats and thereby minimise the need for the deployment of legions in their region. For a detailed account on this system of security, see Edward N. Luttwak, *The Grand Strategy of the Roman Empire: From the First Century AD to the Third*, Baltimore: Johns Hopkins University Press, 1979.
 - 6 For example, at Bath in England a Roman altar has been unearthed that is dedicated to Loucetius Mars, which ‘is a combination of the Roman god of war and a Celtic name for light’. See http://www.romanbaths.co.uk/index.cfm?fuseAction=collection.disp&objectID=batrm_1986_4_6.
 - 7 For an account of Roman rule in Judaea, see Josephus, *The Jewish War* (trans. G. A. Williamson), London: Penguin Books, 1981.
 - 8 Sun Tzu, *The Art of War* (trans. Samuel B. Griffith), London: Oxford University Press, 1971, p. 84.
 - 9 For an account of the US Army’s flawed approach to Vietnam, see A. F. Krepinevich Jun., *The Army and Vietnam*, Baltimore: Johns Hopkins University Press, 1988.
 - 10 Clausewitz, *On War*, p. 720.
 - 11 *Ibid.*, p. 111.
 - 12 *Ibid.*, p. 270.
 - 13 This definition is provided by Raymond Aron, *Peace and War: A Theory of International Relations* (trans. Richard Howard and Annette Baker Fox), New York: Anchor Press/Doubleday, 1973, p. 44. The absence of a significant display of American power in Iraq is bemoaned by Ralph Peters: ‘in the weeks immediately following the toppling of the regime, crucial portions of the population never really felt America’s power’. See Ralph Peters, ‘In Praise of Attrition’, *Parameters*, Summer 2004, p. 31.
 - 14 J. C. Wylie, *Military Strategy: A General Theory of Power Control*, Annapolis: Naval Institute Press, 1967, p. 72.
 - 15 Clausewitz, *On War*, p. 111.
 - 16 This is a central argument in Charles E. Callwell, *Small Wars: A Tactical Textbook for Imperial Soldiers*, London: Greenhill Books, 1990, and is reflected in Colin S. Gray, *Modern Strategy*, Oxford: Oxford University Press, 1999, p. 276.
 - 17 See Krepinevich, *The Army and Vietnam*.
 - 18 The obvious, but often neglected fact that COIN is still war is a central element of H. G. Summers Jun., ‘A War is a War is a War is a War’, in Loren B. Thompson (ed.), *Low-Intensity Conflict: The Pattern of Warfare in the Modern World*, Lexington: Lexington Books, 1989.
 - 19 Clausewitz, *On War*, p. 157.
 - 20 Field-Marshal Montgomery, *The Path to Leadership*, London: Collins, 1961, p. 9.
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 - 24 Colin S. Gray, *Strategy and History: Essays on Theory and Practice*, London: Routledge, 2006, p. 86.
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 - 26 For an accounts of the NATO campaign in Kosovo see Benjamin S. Lambeth, *NATO’s Air War for Kosovo: A Strategic and Operational Assessment*, Santa Monica: RAND, 2001; also Ivo H. Daalder and Michael E. O’Hanlon, *Winning Ugly: NATO’s War to Save Kosovo*, Washington, DC: Brookings Institution Press, 2000.

- 27 See note 17, Chapter 5.
- 28 Coates, pp. 208–21.
- 29 Defeated in the Clausewitzian sense of making him defenceless, or putting him into a position that makes that probable. See Clausewitz, *On War*, p. 85.
- 30 For an indication of this trend see ‘Ethics Lessons for US Iraq Troops’, <http://news.bbc.co.uk/1/hi/world/americas/5036686.stm>.
- 31 Both quotes can be found in Clausewitz, *On War*, pp. 83–4.
- 32 *Ibid.*, p. 309.
- 33 Williamson Murray and Mark Grimsley, ‘Introduction: On Strategy’, in Williamson Murray, MacGregor Knox and Alvin Bernstein (eds), *The Making of Strategy: Rulers, States, and War*, Cambridge: Cambridge University Press, 1994, p. 22.
- 34 Michael Howard, *The Causes of Wars and Other Essays*, London: Temple Smith, 1983, p. 61.
- 35 Specifically, Gray comments: ‘Whereas the theorist provides better understanding of the structure of a problem, the official seeks an answer to the pressing question, “what do I do?”’. See Gray, *Strategy and History*, p. 3.
- 36 Clausewitz, *On War*, p. 698.
- 37 *Ibid.*, p. 111.
- 38 *Ibid.*, p. 163.

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Index

9/11 14

Abulites 49

Achaea 43, 120

Achaemenid 146

Achilles 119

Ada, Queen of Caria 50

Adcock, F. E. 25, 71

Admetus 118

Aegean Sea 32, 61, 71–3, 77, 78

Aetolia 36

Afghanistan 1, 18, 46

Agis, King of Sparta 77, 78

Agrianians 41, 42, 82, 83, 88, 89, 92, 93,
101, 106, 112, 132, 141–4

Alexander the Great: achievements 2, 5; in
Bactria and Sogdiana 90–7; in the
Balkans 52, 111–14; Chaeronea, battle
of 43, 119, 120; city-building 46, 54, 55,
96, 125, 146; coercion 111–19, 154,
155; combined arms *see* combined arms
warfare; command 41, 42, 83, 97–9,
102, 104, 105, 110, 135;
counterinsurgency 47, 90–7; *coup d'oeil*
85, 97, 104, 134, 152; development 54,
55; economic measures 46, 47; in Egypt
49–61; foreign troops 55, 56, 125;
Gaugamela, battle of 61, 62, 127–35;
grand strategy 126, 145; Granicus, battle
of 97–104; and Greece 51–3, 59, 65–6,
71–3, 76–8, 110, 111, 119–21, 141; and
harmony in the levels of strategy 59–64,
147; heroic tradition 29, 65, 101, 102,
105, 125, 132, 135, 140; Hydaspes,
battle of 86–90; in India 50, 51, 62–4,
86–90; in Ionia 50; Issus, battle of 80–6,
126, 127; League of Corinth 51, 52;
lord/king of Asia 47, 65, 85; maritime
strategy 69–72; military genius 21, 44,

64, 79, 97–105, 108, 139–41, 144, 151,
152, 157, 158; Multan, siege of 135,
136; objectives 125; operational art *see*
operational level; and Persian fleet
59–61; Persian Gates 105–7; and
Persian subjects 55; political measures
47–53; polymorphous character of war
86–97; principles of war 108–10, 153,
154; *Proskynesis* 55, 65; religious
policies 48, 53, 147; tactical
performance 27, 37, 39, 40, 63, 80; Tyre
53, 114–19; Uxians 138, 139

Alexandria 54

Alexandria the Farthermost 4, 75, 91

Allied Greek cavalry 40–2, 82

Al-Qaeda 16

Ambi, King of Taxila 86

American War of Independence 13, 151

Amun-Re 54, 147

Amyntas 101, 103, 104, 107, 152

Anatolia 108, 109

Anderson, J. K. 25, 26, 29

Antipater 52, 53, 59, 76–8, 112

Aorns 63, 109

Apis 54, 147

Applegate, Colonel Dick 14

Arabia 125

Araxes, river 107

Arcadia 77, 78

Areia 56

Ariobarzanes 105–7

Aristeides 34

Aristotle 28

Armenia 49

Arrian 84, 85, 102, 133

Arsites 97, 103

Art, Robert J. 14, 17

Artabazus 51, 94

Artaphernes 34, 35

- Ashdod 118
 Asia Minor 32, 47, 49, 50, 80, 99, 125, 127, 146
 Asian Gates 100
 Assaceniens 63, 64
 Assyria 128
 asymmetric warfare 36, 37
 Athens 32–6, 43, 52, 53, 59, 66, 76–8, 120, 121
 Attalus 101
 Attica 33
 Autariatae 141

 Babylon 48, 49, 54, 63, 81, 125, 127, 128
 Babylonia 48, 133
 Bactra 93, 94
 Bactria 1, 65, 94, 104, 129, 135, 151
 Bactrian Cavalry 56, 91, 94, 127, 129, 130, 132, 133
 Bactrian and Sogdian rebellion 1, 46, 47, 51, 53, 64, 65, 73, 86, 90–4, 105, 108, 147, 152
 Balkans 41, 52, 53, 55, 59, 76, 78, 99, 110, 111, 118, 124, 135, 141
 Balkh 55
 Bardylis 141
 Bassford, Christopher 9
 Batis 118, 119
 Beas, river: mutiny at 63, 104, 135, 139, 152
 Beaufre, Andre 6, 20
 Beckett, F. W. 114
 Bessus 51, 56, 65, 67, 129–33
 Beyerchen, Alan 9
 Blair, Bruce 16
 blitzkrieg 23, 24, 134
 Boeotia 27, 43, 59, 120
 Boer War 114
 Bond, Brian 121
 Bosnia 141
 Bosworth A. B. 51, 52, 56, 70–2, 78, 85, 86, 107, 138
 Boyd, John 98, 99
 Brodie, Bernard 1
 Bush, President George 14
 Byblos 115, 116
 Byblus 60

 Cadmeia 59
 Calas 99
 Callimachus 33–5
 Callisthenes 144
 Callwell, Charles 13, 96, 113, 123
 Cannae, battle of 8, 34, 67

 Cappadocia 103
 Cardaces 82, 83
 Caria 50
 Carian cavalry 129
 centre of gravity 4, 5, 19, 20, 45, 58, 64–9, 73, 74, 76, 99, 100, 127, 136, 148, 149
 Chaeronea, battle of 4, 42, 43, 51, 119–21, 137, 155
 chariots 62, 87–90, 128–31, 134; Indian 87–90; Persian 128–31, 134
 Chios 77
 Cilicia 81
 Clausewitz, Carl von: centre of gravity 19, 64–74; complexity of strategy 7–13; culminating point of victory 62; definition of strategy 6; destructive principle/significance of battle 10, 73, 76, 149, 150; ethics 121, 124; friction 11; limits of force 45, 146, 156; military genius 18, 105, 139; nature of war 9–13; simplicity 110, 137–8; value of Clausewitz's work 136–7, 157–8; value of history 1
 Clearchus 101
 Cleitus, Illyrian chief 114, 141, 142
 Cleitus the Black 102, 117
 Cleomenes 49
 Coates, Anthony 119, 121, 154
 Coenus 42, 89, 94, 107, 118, 170
 coercion 4, 47, 76, 111, 113, 114, 119, 122, 124, 154
 Cohen, Eliot 6
 Cold War 15, 16
 combined arms warfare/operations 4, 38–40, 43, 44, 79–86, 90, 101, 103, 105, 112, 113, 120, 132, 137, 150
 Companion cavalry 40, 41, 56, 82, 86, 88, 89, 93, 94, 100, 101, 103, 106, 112, 120, 129, 130, 133, 140, 142, 150, 152
 compellence 5, 14, 16, 17, 70, 111–19
 Confederates 9
 control 4, 10, 18, 19, 45, 56, 74–8, 149, 150
 control of the sea 69, 116, 118
 Corbett, Sir Julian 69, 71, 166, 168, 169
 Corinth 43, 120
 Corinthian helmet 26, 30
 counterinsurgency 1–4, 56, 86, 94–6, 105, 123, 151, 152
coup d'oeil 19
 Craterus 88, 90–4, 104–7, 138, 151
 Cretan archers 82, 86, 131
 Cretan spearmen 130
 Crete 77

- Curtius 81, 107, 133, 170, 171, 176
 Cyprus 32, 60, 144
 Cyropolis 91, 92
- Dahae horse archers 56, 88, 89
 Danube, river 2, 112–14, 140, 154
 Dardanians 143
 Darius I 32
 Darius III 14, 48, 49, 51, 54, 59–63, 65–8,
 73, 80–2, 85, 91, 100–3, 107, 109, 115,
 116, 127–36, 140, 148–50, 156
 Dataphernes 65
 Datis 33–5
 D-Day 10, 68
 Deady, Timothy K. 3
 defence 3, 5, 14, 16, 17, 22, 25, 37, 48, 62,
 72, 104, 109, 116, 119, 134, 152
 Dekas 42
 De la Billiere, General 19
 Demaratus the Corinthian 102
 Demosthenes 36, 59
 Desert Shield, Operation 15
 deterrence 5, 14–17, 70, 76, 115, 122,
 126
 Dhofar 96
 Diades 116
 Dionysius 37
 diplomacy 17, 32, 58, 77
 Doloaspis 49
 Dor 118
 Dupuy 19
- Ecbatana 65, 66, 107, 108, 136, 149
 Egypt 49, 50, 54, 61, 136, 147
 Eisenhower, General 10
 elephants 86–90, 129, 140
 Elis 77, 78
 Elizabeth I of England 48
 Engels, Donald 62, 107, 108, 153, 168,
 172, 173, 176, 178
 Eordaicus, river 142, 143
 Ephesus 50
 Eretria 32
 ethics in war 3, 4, 111, 119–25, 155
 Euphrates, river 61, 62, 68, 108, 127
 Europe 10, 15, 16, 68
- Fabius Maximus 8, 9
 ‘Fleet in Being’ 70, 73
 First World War 24, 80
 France/French 24, 44
 Freedman, Lawrence 16
 friction 5, 11–13, 16, 21, 138, 147, 148,
 157
- Fuller, J. F. C. 37, 100, 107, 117, 130, 131,
 138
- Gaugamela, battle of 41, 42, 48, 61, 62,
 66–8, 77, 90, 109, 127–35, 140, 148,
 150, 151, 156
 Gaza 108, 118, 119, 136, 147, 154
 Getae 112, 114, 140
 Gettysburg, battle of 9
 Glaucias 114, 141, 142
 grand strategy 4, 6, 7, 16, 20, 45, 46, 53,
 56–8, 75, 79, 111, 115, 124, 126, 138,
 145, 147, 148, 150, 156, 157
 Granicus, battle of 67, 72, 76, 82, 97–104,
 126, 140, 150, 152, 156
 Gray, Colin S.: deterrence 16; dimensions
 of strategy 8; ethics in strategy 3, 93,
 121, 123; strategy defined 5–6; value of
 history 1
 Greek warfare *see* hoplite warfare
 Grimsley, M. 121, 155
 Guderian, Heinz 24
 Gulf War (1991) 19
 Gunaratna, Rohan 16
- Halicarnassus 50, 60, 65, 72, 73, 79, 145
 Hamadan 57
 Hammond, N. G. L. 47–9, 53, 54, 61, 66,
 71
 Hannibal 2, 8, 67, 72
 Hanson, V. D. 2, 25, 27, 30, 32
 harmony in levels of strategy 4, 8, 45, 58,
 59, 63, 76, 119, 122, 148
 Hector 119
 hellenisation 53, 55, 125
 Hellespont 45, 71, 97, 99, 126, 137, 152
 Hellespontine-Phrygia, satrapy of 97, 103
 Hephaestion 110
 Heracles 63, 115, 118, 125, 136
 Herat 75
 heroic tradition 29, 65, 101, 102, 105, 125,
 132, 135, 140
hipparch 41
hipparchy 41
 Hippias 33
 Homeric warfare 31, 101
 hoplite warfare 4, 22, 25–33, 79, 83, 84,
 137; decline of 35–44
hoplon 25–7, 30, 39
 Howard, Michael 7, 155
 humane warfare 3, 119, 122
 Hussein, Saddam 46, 51, 124
 Hydaspes, battle of 50, 51, 86–90, 136,
 140, 150

- hyaspists* 39, 42, 82–4, 86, 88, 89, 92,
101–3, 112, 118, 129, 131, 132, 135,
138, 142, 143
- ilarch* 41
- ile* 41
- Illyrians 41, 112, 114, 130, 141, 143
- India 2, 3, 6, 48, 50, 53, 56, 61–4, 73,
86–90, 104, 109, 110, 125, 127, 135,
136, 139, 144, 147, 148
- Indian cavalry 89, 129, 132
- Indian cavalry (Macedonian) 129
- Indian cavalry (Persian) 132, 133
- Indus, river 63, 86, 87, 135
- Ionia 32, 50
- Iphicrates 37
- Iraq 1, 15, 18, 43, 46, 51, 96, 110, 120,
124, 146, 151
- Issus, battle of 42, 60–2, 65, 67, 68, 80–6,
109, 110, 115, 116, 126, 127, 130,
133–5, 140, 148, 150, 151
- Japan 8, 121, 124
- Jason of Pherae 37
- Jaxartes, river 91, 92
- Jomini, Baron Antoine Henri de 12, 98
- Judea 147
- Kinsmen, The 100, 129
- Kosovo 17, 122, 154
- Kosovo Liberation Army (KLA) 122
- Krepinevich, Andrew 23
- Kuwait 15
- Lake Transimene, battle of 8
- Lane Fox, Robin 47–9, 53–6, 62, 75, 85,
118, 127, 133
- Langarus, King of the Agrianians 141
- Lazenby, John 30
- League of Corinth 41, 51, 52, 59, 66, 77,
78, 99, 111, 136, 140
- Lesbos 77
- Liddell Hart, Basil H. 6, 145
- lochagos* 42
- lochos* 42
- logistics 7, 8, 23, 66, 105, 107, 108, 153
- Luttwak, Edward 7–9, 11, 57, 58, 76, 119
- Lycia 51, 56, 94
- Lydia 47, 56, 100, 103
- Macedonia 22, 37, 38, 41, 42, 52, 53, 59,
75, 77, 111, 119
- Macedonian army: at battle of Gaugamela
127–35; at battle of Granicus 97–104; at
battle of Hydaspes 86–90; at battle of
Issus 80–6; combined arms tactics
79–86; equipment 37–42; intelligence
105–7; logistics 107, 108; organisation
37–42; reinforcements 94; tactics 39–42
- Macedonian Revolution in Military Affairs
4, 22, 25, 36, 37, 39, 40, 43, 44
- McNamara, Robert 14
- Malaya 95, 123
- Mallians 135
- Mao Tse Tung 126, 156
- Marathon, battle of 32–5
- Mardian archers 129
- maritime operations 66, 67, 69–73, 77, 79;
see also fleet in being; sea denial
- Marshall, S. L. A. 11, 103
- Massaga 64
- Mazeus 48, 49, 131
- Medes 57
- Mediterranean 60, 61, 65, 109, 116
- Megalopolis 78
- Megara 43, 120
- Memnon 72, 97, 99, 101
- Memphis 54
- Menidas 130, 133
- Mesopotamia 62, 128
- Metz, Stephen 36, 95, 96, 122
- Miletus 32, 60, 71
- Military Assistance to Civil Authorities
(MACA) 18
- military culture 13, 14
- military genius 5, 18, 19, 21, 44, 64, 79,
97–105, 108, 137, 139, 141, 144,
151, 152, 157, 158
- Milosovic, Slobodan 122
- Miltiades 33–5
- Mithridates 102, 103
- Mithrines 49
- Mithrobazarnes 103
- Montgomery, Field-Marshal 103, 104
- Mount Haemus 112
- Mount Veljak 143
- Multan 127, 135, 136, 156
- Murray, Williamson 13, 121, 155
- Mutually Assured Destruction (MAD) 16, 87
- Napoleon 2, 6, 21, 45, 98, 144, 153
- NATO 15
- nature of war 5, 9, 10, 11–14, 20, 119–22,
124, 155
- Nazi Germany 20, 23, 44, 58, 60, 62, 63,
114, 121, 128
- Nicanor 42, 101, 114
- nuclear strategy 14

- OODA Loop 98, 99
 offence 5, 14, 83
 Omares 103
 operational level 7, 20, 34, 35, 61, 62, 148
 Opis 56
 Oxydracae 135
- Paget, Julian 96, 123
 Panzer division 24
 Pape, Robert A. 20
 paradoxical logic of strategy 5, 9
 Parmenion 42, 81–3, 100–2, 104, 106, 109, 130, 131, 133, 134, 151, 152
 Patton, General George 98
 Payas, river 81
 Payne, Keith B. 14
 Pearl Harbor 8
 Pelium 40, 52, 59, 141–4
 Peloponnesian War 22, 25, 26, 35, 36, 44
pelta 37
 peltast 37, 83
 Perdiccas 94
 Persepolis 47, 57, 66, 77, 105–8, 128
 Perseus 136
 Persian army *see* Gaugamela, battle of; Granicus, battle of; Issus, battle of
 Persian Empire: centres of gravity 65–8; invasion of Greece (490 BC) 32–5
 Persian Gates 105–7, 145
 Persian navy 59–61, 66, 67, 69–73, 77; *see also* maritime operations
 Persian Royal Road 100
 Persis, satrapy 105
 Peters, Ralph 96
 Petisis 49
 Peuce 113, 114
 phalangites 39, 42, 43, 53, 88, 89, 92, 112, 120, 131, 143, 144
 Phaleron, Bay 34
 Philip II of Macedonia 22, 36, 37, 42, 43, 80
 Philip II of Spain 48
 Philotas 104, 107, 142
 Phoenicia 48, 60, 108, 115, 118, 127
 Pickett, General George 9
 Pillar of Jonah 81
pilos 26
 Pimlott, John 114
 Plataea 33–6
 Plato 119
 polymorphous character of war 20, 86, 108, 151
 Porus 50, 51, 86–90, 140, 147
 post-heroic warfare 3, 119
 posturing 5, 14, 17
pothos 63
 principles of war 4, 79, 108, 110, 153
prodromoi 40, 41, 101
proskynesis 55, 65
 Prussian General Staff 19
 Ptolemy 94, 107
 Punic Wars 146
- quinquiremes 117
- Revolution in Military Affairs (RMA)/Military Transformation 22–5, 36, 38–40, 43, 44, 73
- Rhodes 77
 Rhoesaces 102
 Rock Aormos 199
 Roman Republic 8, 67, 72
 Rome 8
 Royal Bodyguards 41, 138
 Russia 128, 144
- Samarkand 91–3
 Sardis 32, 47, 49, 100
sarissa 39, 40, 43, 44, 85, 120, 132
 Satibarzanes 46, 56
 Saudi Arabia 15
 Schelling, Thomas 17, 18, 154
 Schwarzkopf, General Norman 15
 Scythians 91–3
 sea denial 60, 69, 117
 Sekunda, Nick 40
 Serbia 122
 Sidon 60, 115, 116
 simplicity 108, 110, 137, 138, 154, 157
 Siwah 54, 136
 slingers 37, 92, 113
 Sogdian Rock 94, 95, 144
 Sogdiana 1, 46, 47, 49, 64, 65, 73, 86, 90, 91, 93, 94, 104, 105, 127, 135, 147, 152
 Soviet Union 16, 24, 58, 68
 Sparta 31, 33, 36, 43, 59, 66, 77, 78, 111, 112, 120
 Spitamenes 54, 65, 73, 91–4
 Spithridates 102, 103
 strategic necessity 3, 122, 155
 Strategic Studies 3, 7, 36
 strategy: and complexity 7–14; definition 5, 6; friction 5, 11–13, 16, 21, 138, 147, 148, 157; levels of 4–9, 20, 45, 57–64, 109, 123, 127, 147; multidimensional 7, 8; nature of war 12; paradoxical logic 9; role of policy 125–36
 Straton's Tower 118

- Sun Tzu 12, 46, 64, 68, 106, 126, 140
 Susa 47, 49, 55, 57, 66, 100, 149
 Swat valley 63
 Syria 56, 94, 108
 Symus, King of the Triballians 112
- Tarn, W. W. 39
 Taulantii 141, 143
 taxes/taxation 47–50, 67, 146
taxis 42
 Ten Thousand 37, 38, 153
 Tet offensive 58
tetrarch 41
tetrarchiai 41
 Theban Sacred Band 43, 120
 Thebes 32, 43, 52, 59, 64, 76, 78, 110, 120
 Themistocles 34
 Thessalian cavalry 40, 41, 82, 83, 101,
 106, 130
 Thessaly 27
 Thompson, Robert 95
 Thrace 55, 77, 112
 Tigris, river 62, 128
 Triballians 56, 112–14
 Tyre, siege of 3, 53, 60, 64, 65, 109–11,
 114–19, 124, 136, 140, 147, 148, 154
- United Nations 124
- United States 3, 8, 13, 14, 16, 25, 58, 94,
 148
 United States Marine Corps (USMC) 11,
 13
 use of force 14–18
 Uxians 138, 139
- Van Creveld, Martin 12, 19
 Van Wees, Hans 25, 27, 28, 31, 36, 37
 Vegitius 80
 Viet Cong 58
 Vietnam War 13, 94, 95, 148, 151
- Walton, C. Dale 14
 Watts, Barry D. 11, 12
 Wehrmacht 20, 68
 Westmoreland, General 148
 Wolf's Pass 143
 World War II 8, 20, 23, 58, 68, 98, 121,
 122, 124
- Xenophon 153
 Xerxes 54
xyston 40
- Zagros mountains 105, 108
 Zelea 99
 Zeus Ammon 54, 60, 136