from War in the Early Modern World, 1450–1815
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Chapter One

Introduction

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How wars are won is the central question in military history. However, as with the question of why wars break out, where it is easier to account for one war starting than for a number, it is difficult to provide a general account of success. In part, this reflects the multifaceted cultural assumptions, both past and present, in which notions of success are embedded. Success, like victory, defeat and loss, is culturally conditioned, and it is as dangerous to assume a Eurocentric definition of these concepts as it is to offer a Eurocentric account of world history.

Three interrelated issues will receive particular attention in the Introduction. First, the global dimension of power and, specifically, the "rise of the West"; secondly, the nature and role of technological change; and, thirdly, the relationship between military developments and state-building.

The rise of the West

The early modern period was one which saw both greater interaction between different parts of the world and the rise of European influence and power. The two were linked. It was through the projection of European power that the "Old World" and the "New World" were connected, and indeed that the "New World" was created as an idea as, first, Spain and Portugal and, later, England, France and the Dutch conquered and settled important portions of North and South America. It was through the projection of Portuguese naval power from the 1490s that European trade and military strength began to make its impact in the Indian Ocean.

The result was a major shift in global power. For much of the fifteenth century the Europeans had been relatively inconsequential on the world stage; indeed,

they were unable to prevent the advances of the Ottoman Turks into the Balkans, a process that led to the dramatic fall of Constantinople, the capital of the Byzantine empire, to Mehmed II in 1453. No European state matched Mehmed's power, and the Ottoman empire became the most important state in Europe. At the same time, it was the Chinese, not the Europeans, who were the leading power in Asian waters; indeed, in the first half of the century, the Chinese sent fleets into the Indian Ocean that were far larger than any European fleet.

By the late sixteenth century the situation was very different. The Ottomans had made significant advances in Europe and the Mediterranean, capturing Belgrade in 1521, defeating Hungary in 1526 and conquering Cyprus in 1570–1, although their invasion of southern Italy in 1480 had been repelled in 1481 and they had been held at Vienna (1529), Corfu (1537) and Malta (1565). It was further afield, however, that the shift was dramatic. When Spanish forces began to take control of the Philippines in the 1560s, Philip II of Spain, after whom the islands were renamed, became the first ruler with an empire on which the sun never set. Spanish forces had already overthrown the Aztecs of Mexico and the Incas of Peru, a process greatly aided by divisions among Spain's opponents and by the impact of European diseases. Portuguese warships in the Indian Ocean had destroyed the leading Indian fleets of Calicut and Gujarat – and also those of Egypt and Turkey.

However, over most of Asia the European impact was far more limited. In East Asia the crucial struggle was between Japan and China for control of the continental littoral, a struggle that focused on Korea in the 1590s. Although European adventurers had an impact in coastal Southeast Asia, especially in Burma and Cambodia, they played little role in the ebb and flow of power in such states as Siam. In India, the decisive political change was the destruction of Lodi power by that of the Mughals in the 1520s, and the subsequent defence, consolidation and expansion of Mughal power in northern and central India. In Persia, another dynasty relying on cavalry, the Safavids, successfully invaded and established control in the 1500s. Although they were affected by the Portuguese presence in the Persian gulf, their foreign policy, and methods of warfare, were dominated by repeated wars with their neighbours, the Ottomans and the Uzbeks.

The dynamic of transoceanic European maritime activity and territorial control was to be maintained throughout the period. In the seventeenth century the English and French took over much of the eastern seaboard of North America, while the Dutch, defeated there by the English, had already taken over some of the crucial spice-producing regions of the East Indies. Meanwhile, Russian power spread across Siberia to the Pacific, ensuring that China acquired a land frontier with a European state.

In the first three-quarters of the eighteenth century, European power continued to expand in the New World, with the Portuguese pressing into the interior of Brazil, the Spaniards expanding into coastal California and the English and French competing for supremacy in the Great Lakes region. Native American resistance was frequently successful in individual engagements, as in the case of Pontiac's War against the British in 1763, but it proved difficult to sustain military operations. This reflected the nature of native American society, politics and economic practices. In addition, the British were greatly helped by their growing demographic weight, a product both of emigration and of the impact of disease on the natives.[1] This was not only a general preponderance, but also a preponderance at the point of contact. Natives, such as the Apaches, had greater success in stemming Spanish expansion north from Mexico, although such expansion was not central to the purposes of Spanish power in Mexico.[2] In India, the British took over Bengal and became the leading power on the Carnatic (southeast) coast, although in each case not until the 1750s, and in mid-century the most important challengers for control of northern India were not European, but, rather, Nadir Shah of Persia, who invaded in 1739, the Afghans, who invaded in 1761, and the Marathas of western India.

The only serious and lasting defeat that the Europeans were to experience occurred in North America, where the Thirteen Colonies fought their way into independence from Britain in 1775–83. Yet, it is significant that this defeat was at the hands of people of European descent, armed with European weapons and fighting with the direct land and sea assistance of a European state – France – while they also benefited from Britain's conflict with two other European states: Spain (1779–83) and the Dutch (1780–3).

It would be misleading to imply that the Europeans were everywhere victorious. Their impact in Africa and the Pacific was very limited, and in East Asia the most expansive state in the eighteenth century was China. In the eighteenth century, the Russians found it difficult to make lasting headway against the Persians, while, after major defeats in 1683–1717, the Ottomans displayed great resilience against Austria, regaining Belgrade in 1739.

However, the world was increasingly one where the crucial links between distant parts were controlled or created by Europeans. This helped to ensure that a "world economy" developed and that distant regions traded, so that the British shipped Indian tea to North America or the Dutch moved Chinese porcelain to Europe. This trade was to the profit of the European maritime powers that controlled it, and helped to ensure that Britain was well placed for rapid economic growth in the eighteenth century.

European maritime control also had crucial demographic consequences. It made possible a major emigration of Europeans and of African slaves to the New World, and permanently altered the demography of the latter. The population of

Europe expanded in the sixteenth century, and, after a period of protracted stagnation, from the 1740s, and this provided the people to settle Pennsylvania and to move the frontier of settled agriculture south across the Russian steppes.

An emphasis on European expansion might appear misplaced. Much of the world had never seen a European. European maps of central Asia or of inland Africa were either blanks or full of errors, and remained so until the nineteenth century. To talk of European power would have been curious in Tibet, conquered by China in 1720, or in Mombasa, whence the Omani Arabs had expelled the Portuguese in 1698, or in West Africa, where the Kingdom of Dahomey dominated European coastal trading posts from the 1720s, or in Angola and Mozambique, where Portuguese expansion was held in the sixteenth and seventeenth centuries.

Nevertheless, however limited their political or military impact might have been, it was a case of Europeans off the coast of Asia, not Asians off the coast of Europe. It was Europeans who charted the oceans, who explored their dark side of the world – the Pacific – and thus acquired the knowledge that helped them to profit from their strength.[3] The world was increasingly renamed by the Europeans, its spaces organized in and by their maps and projections[4]; although the consequences of this were not to be apparent in much of the world until the nineteenth century. European products became sought after, and European self-confidence was enhanced. Many of the consequences of European ambition were unattractive, most obviously the slave trade, a process that reflected an ability to plan and execute long-range economic exchanges. We can now consider the rise of Europe without applauding its consequences. Yet, it is difficult to challenge its importance. The Europeans remoulded the world, creating new political, economic, demographic, religious and cultural spaces and links that still greatly affect the world in which we live.

Technological change

Across most of the world in the early-modern period, explanations of success in periods of warfare focused on leadership, individual bravery, collective prowess in the use of weaponry and discipline. An emphasis on technology as the motor of military change and success developed most of all in Europe. It can be seen in the writings of commentators such as Edward Gibbon[5], although the emphasis became most pronounced from the nineteenth century, as the pace of technological change grew. Gunpowder was also seen as instrumental in the demise of medieval feudalism, and thus as crucial to the onset of modernity.[6] Robert Fulton, a pioneer of submarine warfare, placed past, present, and future change

in a continuum: "It does not require much depth of thought to trace that science by discovering gunpowder changed the whole art of war by land and sea; and by future combination may sweep military marines from the ocean".[7] Differences in weaponry were seen as crucial to operational effectiveness and success, and weaponry thus became the central issue in military capability. This was especially the case if the warfare in question was between different types of society, particularly between Western and non-Western societies.

Weaponry serves as an obvious indicator of military capability. It is where soldiers, tactics, organization and economic strength intersect. Weapons appeal to military enthusiasts. Furthermore, there are major attractions concentrating scholarly and popular attention on weapons. They appear to exist outside cultures and to offer ready comparisons across space and time: it is not necessary to know the language of a society in order to measure the thickness of its town walls, the length of its spears, or the calibre of its guns. It is attractive to see capability and success in military history as a function of weaponry, not least because discussion of contemporary warfare often concentrates on such questions as the ability of one plane to outfly another. The atomic bomb is a potent symbol of the ability of technology to create weaponry that decisively altered the course of events. Although only used twice in actual warfare, atomic weapons have had a huge impact on preparations for war, deployments, force structure, etc., and have indeed revolutionized the role of the military and of war itself. There is also an extremely vigorous discussion of the current RMA (Revolution in Military Affairs) based on stealth, "smart", space and computer weaponry.

Nonetheless, the emphasis on weaponry can be misleading. The atom bomb draws attention to the crucial dimension of contexts, the role of political, cultural, social and economic assumptions and requirements in affecting the use of weapons. Indeed, it is at this point of assumptions and requirements that the notion of measuring weapons across societies and outside their contexts is least helpful. At the very basic level, the length of a spear or the calibre of a gun provides little information about tactics – still less about strategy. It also tells little about the willingness to take and to inflict casualties. The possession of the atom bomb did not enable the USA to secure victory for its allies in the Chinese Civil War of 1945–9, when no other power had such a bomb.

These introductory points are of importance because of the role that military technology takes in explanations of the rise of the West, and specifically in the question of why a minority of the world's population was able to take control of so much population and territory, and to do so as a continuous process for over 400 years. The standard answer has been presented in terms of weaponry on both land and sea. Ocean-going, cannon-firing warships are seen as giving Europeans a decisive advantage at sea from the 1490s onwards. One very important result of the introduction of efficient gunpowder weapons at sea was that capital was,

in part, substituted for manpower. This increased dramatically the operational radius of seaborne fighting forces, as only a limited number of men had to be fed on long travels. On land, the European utilization of steel and gunpowder weapons against societies that knew nothing of them are generally seen as playing a crucial role in the Spanish overthrow of the Incas and Aztecs in the early sixteenth century, and in the Russian conquest of Siberia starting in the 1560s.

Thus, firepower at land and sea, including major gaps in capability among forces armed with firearms, can be seen as the crucial multiplier that allowed relatively small numbers of Europeans to defeat and conquer far larger numbers of non-Europeans; in general, the Europeans deployed only a small portion of their military resources outside Europe. The argument from the specific case of European success to the general can thus provide an explanation that can be used to account for other specific cases.

However, this explanation has to be qualified by noting European numerical superiority in particular areas, such as the zone of contact in North America, and, more generally, the ability of Europeans to gain local allies. Furthermore, the account can be modified in a number of other respects. First, the European advantage in military technique and infrastructure should not be exaggerated, although, in comparison with many other societies, there was such an advantage, especially in naval terms, from the start of the sixteenth century. It rested on the foundations of centuries of European economic, technological, social and institutional change. Secondly, technology can be seen not as an independent variable, but, in part, as the product of a more wide-ranging set of developments. Thirdly, it is important when discussing the rise and fall of powers to move from a concentration on warfare. In many respects, the most interesting battles were those that did not actually take place.

This was certainly the case with naval warfare. In the 1430s the state with the greatest global-reach capability, in terms of the distant deployment of substantial naval forces, was China. A century later, especially after its victory over the Ottoman fleet off India in 1538, it was Portugal. It is all too easy in drawing attention to Portuguese victories in the Indian Ocean to neglect the battles that did not occur, in particular major engagements with the naval powers of East Asia: China, Japan and Korea. None of these states challenged Portuguese maritime expansion, in large part because none had distant naval interests in the sixteenth century, while the Portuguese sensibly accommodated themselves to the regional powers, pursuing trade at Macao and Nagasaki, rather than territory. Whereas the Spaniards had exploited local divisions in Mesoamerica, and the Portuguese likewise in India, there was no comparable intervention in the divided politics of Japan.

Similarly, Spanish expansion in the Philippines from the 1560s and Russian along the Sea of Okhotsk from the 1630s were not contested by any of the major East Asian naval powers. This did not reflect any lack of naval strength, although, without heavy guns, Far Eastern ships might have fared badly had the Portuguese been able to deploy a sizeable fleet. Indeed, the Japanese mounted a major and sustained amphibious assault on Korea in the 1590s, an operation that, at least initially, was more successful than the Turkish attack on Malta in 1565 or the Spanish on England in 1588, both of which commonly attract far more attention in naval history.

Early modern East Asian maritime history demonstrates three problems with military history as commonly presented. First, there is the downplaying or ignoring of any occurrence that did not involve Europeans. This is true of the Japanese invasion of Korea in 1592. Another good, non-maritime example comes from eighteenth-century India. Major battles, such as Karnal (1739), when Nadir Shah of Persia defeated the Mughals north of Delhi, and the third battle of Panipat (1761), when the Afghans, under Ahmad Shah Abdali, defeated the Marathas nearby, receive far less attention than Robert Clive's victory at the head of British East India Company troops over Surajah Dowla, the Nawab of Bengal, at Plassey (1757), a shorter struggle in which fewer troops were engaged and total casualties were less than 600, and one in which dissension among the Nawab's forces was crucial.

The second point to emerge from East Asian maritime history is the lack of attention devoted to struggles involving Europeans, if the latter failed. Thus, in 1661 the Dutch were driven from Formosa (Taiwan) by the Ming loyalist Cheng Ch'eng-Kung (known to Europeans as Coxinga). This is not a struggle that receives much attention, any more than the Russian failure in the 1680s to retain their positions in the Amur valley against Chinese pressure. More generally, an account of military history that focuses on the rise of the "West" commonly devotes insufficient attention to contra-indications, or explains them by reference to the failings of the particular Western force – for example, poor generalship, rather than more general Western deficiencies and the strengths of their opponents.[8]

Thirdly, there is a general failure to consider the implications of clashes that did not occur, and to ask how far they indicated differences in military priorities. The Chinese were scarcely pacific in the sixteenth century: they fought against the Mongols, sent a large army into Korea, fought off Japanese pirates and launched campaigns against indigenous people in Southwest China. However, there was no war with Portugal. Had there been so, the Chinese would have had large numbers of warships, although they were lightly gunned. Nevertheless, a Chinese naval squadron, employing cannon, defeated a Portuguese force off

Tunmên in 1522. Chinese ships were more strongly constructed than their Indian counterparts. Yet, this defeat simply highlights the issue, for Tunmên is near Macao. There was no attempt to challenge the Portuguese at a greater distance, for example off Malacca. The Chinese had an inshore naval capability, but they no longer deployed distant fleets.

Battles, campaigns and wars that did not occur are important both in counterfactual terms and in trying to assess relative capability. They, therefore, help to complicate any emphasis on weaponry which, by its very nature, concentrates on clashes that did occur. A consideration of conflicts that did not occur, and in which territory did not, therefore, change hands, also limits the temptation to treat military activity in terms of a zero-sum game in which European transoceanic activity was the central theme and territorial expansion was at the expense of non-Westerners.

The reality was far more complex. First, most transoceanic European military activity between 1550 and 1815 was directed not against non-Europeans, but against other Europeans – for example, the first "world war", the struggle between the Portuguese and the Dutch in the seventeenth century in Brazil, West Africa, India, Sri Lanka and the East Indies. Secondly, most non-European military activity was at the expense of other non-Europeans. Thirdly, so much was this the case that the group of expanding states was not restricted to European and European-American until the late nineteenth century, and even then Ethiopia expanded considerably after its victory over the Italians at Adowa in 1898.

Thus, in 1680–1795 China made significant territorial gains, especially in Mongolia and Xinkiang, as well as acquiring Formosa (Taiwan), driving the Russians from the Amur and sending expeditions to Burma and Nepal. To neglect these gains, and the successes for the Chinese military system that they represented, is to adopt a misleading perspective. By 1870 China was clearly less successful militarily than the European powers, but this is not necessarily a helpful perspective to employ when considering the situation which existed over a hundred years earlier. The same argument can be made in the case of the Ottomans. It can be argued that the roots of later problems can and should be traced back, but such an approach can be teleological and lead to a failure to understand a given period on its own terms.

By focusing attention on the issue of what should receive attention, the military historian emphasizes the role of choice in the selection of battles, campaigns, wars and topics for discussion. There is, however, no clear basis for choice. To take battles as an example: are the most important those with the most advanced weaponry, the greatest number of combatants or casualties, or the most significant consequences, and how is the last to be assessed? Does this vary between different spheres of military activity, not least between land and sea

conflict? Plassey can be seen as more important than the third battle of Panipat in the long run – simply because the British, not the Afghans, became the rulers of India, but it is understandable that many Indian rulers were concerned about how best to resist invasions from the northwest.

A similar problem confronts the discussion of warfare within Europe. The French defeat of the Spaniards at Rocroi in 1643 receives far more attention than subsequent Spanish victories at Pavia (1655) and Valenciennes (1656), because the "Decline of Spain" and the "Rise of France" are central themes in seventeenth-century historiography, and Rocroi, misleadingly, appears to be both an appropriate military indication of a trend and a turning-point.

Thus, military history cannot evade the problems that, more generally, affect historical analysis and exposition, specifically those of perspective: what is the temporal distance by which things are being judged as important? If the goal is to view events at a distance of ten years, many events may seem important; but if the historian's viewing distance is to be measured in centuries, some events will indeed seem more important than others which at the time – meaning, say, within a fifty-year perspective – would have appeared just as important. However, the identification and explanation of "long-range issues" can privilege hindsight so much as to be teleological.

Methodological questions aside, it is possible to turn to the impact of technology and to query some of the claims made on its behalf. Ross Hassig looks at the Spanish success in overthrowing the Aztec empire, one of the essential first steps in making much of America "Latin", and shows that it is important to look at non-technological factors. The battle superiority of the Spaniards, which owed much to steel helmets and swords, promised those who allied with them a good chance of victory, but the availability and willingness of Mesoamericans to co-operate against the Aztecs reflected the nature of the Aztec empire, in particular the absence of a practice and theory of assimilation. Jos Gommans emphasizes the limited role of hand-held firearms and infantry in India prior to the eighteenth century.

The naval situation is also ripe for re-examination. Portuguese capability on the high seas in the early sixteenth century did not necessarily extend to inshore, estuarine and riverine waters where deep-draught sailing ships found it difficult to operate, and the Europeans only achieved technological superiority and capability with the development of shallow-draught steamships from the 1820s onwards.[9] In addition, a number of Southeast Asian states, such as Johor in Malaya and Aceh in Sumatra, developed naval forces which were able to challenge the Portuguese. Eurocentric accounts of the Portuguese Indian Ocean empire present it as being brought low by the Dutch and, indeed, in the seventeenth century the Dutch captured many of the Portuguese bases. Yet, in addition, the Portuguese had been put under great pressure – in the Persian

Gulf, on the Swahili coast of East Africa, in the Bay of Bengal and in the East Indies – by non-European states, such as Persia, Oman and various Indian and Indonesian principalities.[10]

The Portuguese military experience in the sixteenth century exemplified, more generally, the problems facing the Europeans overseas, and the variety of military tasks they confronted. In some areas, such as India, the Red Sea and Abyssinia, the Portuguese faced non-European states armed with gunpowder weapons. One such state, Morocco, was to destroy King Sebastian of Portugal and his army in 1578.

In other areas, such as Brazil, opposition came from peoples whose state organization was limited and who lacked such weapons. Elsewhere, for example in Angola, opposition came from more developed polities lacking gunpowder weaponry, at least initially, although, as John Thornton shows, that did not mean that they were militarily weak, while, as Armstrong Starkey indicates for North America, such weapons were frequently rapidly diffused. This was also the case in India. The Portuguese also faced the problem of hostility on the part of other European states, and Portugal rapidly succumbed to Spanish invasion in 1580.

Thus, the Portuguese had to develop a military capability to operate in very different military environments. This was to be a characteristic of the military systems of European powers that developed transoceanic capability, and also of Russia. However, it was not only true of such states. Powers such as Ming and Manchu China, Mughal India and Ottoman Turkey similarly fought a number of opponents in very different military environments. In the sixteenth century the Ottomans fought the Europeans on land in Europe, North Africa and Abyssinia, and at sea in the Mediterranean, Red Sea, Persian Gulf and Indian Ocean, attacked Persia and Egypt, developed Islamic states deploying large cavalry armies, and also a series of less powerful polities ranging from Bedouin Arabs to opponents in the Caucasus. Furthermore, as Virginia Aksan shows, these opponents were engaged using a military system that required a considerable measure of organization, especially in logistics.

Organizational factors, both structural and cultural, offer another approach to the question of possible contrasts between European and non-European military societies. Enhanced organizational capability was not simply a matter of financing, supplying or moving the military – of the military from outside–but was also interactive with the specific organizational nature and operational effectiveness of military units.

The Europeans moved most towards a large-scale "rationalization" of such units: they were to have uniform size, armaments, clothing, command strategies, etc. Such developments made it easier to implement drill techniques that maximized firepower. They were not dependent on a particular political

mechanism, for allied and subsidized units could be expected to fight in an identical fashion with "national" units, a marked contrast to the situation in the Asiatic empires where there was a major difference between core and ancillary troops. There was an obvious contrast between the Allied forces in battles in the War of the Spanish Succession, such as Blenheim (1704), and the situation in major engagements in Asia. In the former case, Austrian, British and Dutch forces fought in a similar fashion and combined with little difficulty. The Europeans extended this model to India, training local units to fight as they did. This ensured that the Indian military labour market could be utilized to maximum effect.

Captain Robert Stuart, commander of a *sepoy* battalion in 1773, was convinced that only discipline, or rather his firepower-linked definition of it, would allow his unit to prevail:

> As the superiority of English sepoys over their enemies, as likewise their own safety consist entirely in their steadiness, and attentiveness, to the commands of their officers, it is ordered, that no black officer or sepoy pretend to act, or quit his post without positive orders to that purpose from an European officer . . . should any man fire without orders, he is to be put to death upon the spot . . . regularity and obedience to orders are our grand and only superiority.[11]

Nevertheless, even if there thus was an organizational superiority, its impact in terms of European control over much of the world was limited by a number of factors. European organizational developments were in part diffused, especially with the formation of "new type" units, as in eighteenth-century Turkey and India and nineteenth-century Egypt. Thus, in 1882 when the British attacked Alexandria, they fought Egyptians equipped and deployed in a very different fashion to the Egyptians who had been beaten by Napoleon at the Battle of the Pyramids (1798). This process of diffusion was not easy, however, as the last Khan of the Crimean Tatars in the 1770s and Selim III of Turkey in the 1800s discovered. This was true both of specific instances and more generally, because the adoption of European-style military organization and weaponry depended in part on a wider process of Europeanization that encompassed social practices, ideological assumptions and administrative conventions. Such a process was difficult to graft on to non-European societies, although Japan in the late nineteenth century was to be a spectacularly successful example. European-style use of firearms depended on types of drill that relied on patterns of constrained behaviour that in part reflected an ethic of self-constraint and a mechanistic aesthetic that were particularly developed in European culture.[12] Apart from the issue of diffusion, European units were not always able to defeat non-European forces, whether they fought in a fashion that the Europeans were accustomed to,

or not. Spectacular defeats, such as that of the British by the Afghans in 1842, exemplified this.

Even if we allow that organizational advances cannot serve as a *deux ex machina*, it is, nevertheless, the case that such advances did play a major role in European successes and success. This was specifically the case with the organization and control of transoceanic deployment. This depended on technology, but the latter was not a sufficient cause. What was crucial was the allocation *and* utilisation of resources, so that European forces could be deployed and maintained successfully. Technical and administrative developments helped encourage a separation of European interests and commitments between an Atlantic world, with, increasingly, a struggle about transoceanic trade and colonies, and a Continental world focused on rivalry over European territories. By the eighteenth century, the major Continental states were able to deploy rapidly increasing armies over wide distances, particularly so in the case of Russia. In the Atlantic world, it was a case of expanding navies, larger fleets and army forces deployed overseas, and increasing European interest in colonies and zones of *future* expansion, visible in the crises over the Falkland Islands (1770) and Nootka Sound on Vancouver Island (1790).

In the sixteenth century the quantity of force thus deployed had been extraordinarily low in manpower terms. This reflected a number of factors, including the absence of extensive European migration to provide a local manpower basis, although by the late seventeenth century there was the basis for raising substantial local forces of "Europeans" in North and South America. European troops were most effective in co-operation with large numbers of local allies, as in Angola and Mexico in the sixteenth century and in India from the mid-eighteenth century. Otherwise, whatever the technological relationship, in the face of a major demographic imbalance the Europeans could achieve relatively little in terms of conquering large areas.

As far as South and East Asia and West Africa were concerned, however, such conquest was not the European objective. The profits of trade were sought, and this objective was seen in coercive terms, as a product of naval power and accompanying bases, but not as requiring large-scale territorial conquest. There were of course other purposes. One of the most interesting in geopolitical and military terms was the Portuguese attempt to challenge Ottoman power in the Red Sea and Persian Gulf, and associated support for Christian Abyssinia. Again, this did not entail a policy of extensive territorial conquest. Instead, the Portuguese relied on warships, bases and the dispatch of a small force to assist Abyssinia against the Islamic Sultanate of Adal. Success was, however, mixed. In particular, Aden was incorporated in the Ottoman (1538), not the Portuguese, system, thus ensuring that the Portuguese lacked both a base near the Red Sea

and one able to challenge Ottoman naval moves towards the Persian Gulf, India or the Swahili coast of East Africa.

There is little reason to believe that the result would have been very different had the Portuguese made more of a military effort in the region. However much of an effort had been made, the Portuguese would have been greatly outnumbered by the Ottomans once they had conquered Egypt. Ottoman strength was only in part countered by superior Portuguese military capability, as seen in the naval Portuguese victory at Diu in 1538. Instead, the Portuguese presence in the region owed more to alternative Ottoman commitments and, specifically, to the Portuguese role in the Ottoman–Safavid rivalry. In the sixteenth century the Portuguese provided cannon to the Safavids of Persia (as did Ivan IV, "the Terrible", of Russia), and the latter accepted their position in Ormuz. As often, in face of the demographic weight of South Asia, it is necessary to think not in terms of the West versus the Rest, but of specific Western initiatives and their interaction with the complex rivalries and relationships of local states.

This interaction generally played a smaller role in the great outburst of imperial expansion that took place in the late nineteenth century. Then the theme was not solely conquest, but, insofar as states were left outside European political control, they often played the role of buffers (Afghanistan, Persia, Siam), were brought under a measure of economic control (China), and had their frontiers defined by European imperial power.

Transoceanic territorial conquest was much more important in the late nineteenth century than hitherto, and this set new requirements and, thus, parameters for the military. The subjugation of established polities in Africa and Asia was, largely, a new task in this period, as indeed was the conquest of large areas inhabited by acephalous peoples. The conquest of the Aztecs and the Incas was not a relevant experience for the nineteenth century. The qualification "largely" above reflects some important exceptions, such as Britain and Mysore in the 1790s, and Russia and Siberia.

The campaigns of the 1790s indicate some of the major themes of European transoceanic conflict in the nineteenth century, not least the primary importance of achieving the deployment of troops where they were initially required, and then moving them as needed in accordance with strategic plans. Logistics was transformed as part of an organizational–industrial–technological nexus that was inherent to the process of European change in this period. For the military, this was compounded by the sustained demographic expansion that began in the mid-eighteenth century, ensuring that there were more young men, and that soldiers and sailors could be raised in greater numbers without restricting the labour force, and that at a time when economic demands for labour were rising significantly.

The bulk of this enhanced military capability was maintained and used, not in the cause of transoceanic expansion, but against other European states. This process of "internal" rivalry was taken further in the USA, where the Civil War was the major military commitment of the century and the Mexican War was the second. There was no comparable projection of American power outside the American mainland until the 1890s.

This "internal" rivalry between European and also between European–American powers led to a process of competitive military improvement that provided a basis for the projection of force at the expense of non-Europeans, although subsequent conflict in 1914–45 was gravely to weaken the psychological capability (though not the technology) for such power projection. Thus, the nineteenth century exemplifies Gibbon's observation that Europe's power *vis-à-vis* non-European polities was enhanced by the competitive military emulation of a multipolar system within Europe.[13] The rifled weapons developed, manufactured and distributed to contest the European wars of nationalism in 1858–71 were to be employed outside Europe. So also were weapons developed later in the century. That does not mean, however, that firepower alone was responsible for European conquests, nor that the European enhancement was mainly directly military. For example, the development of steam-engine railway technology within Europe enabled the European powers to operate more effectively elsewhere.

To take the argument from the technological to the cultural dimension, it is clear that in the period of European expansion there were strong cultural imperatives that facilitated the major effort that was made. The character and context of these imperatives varied: for example, the extension of the *Reconquista*, which was important to Spain and Portugal in the sixteenth century, was different to the Social Darwinism of the nineteenth. The perception of other cultures, and thus of the acceptable parameters of the European response to them, also varied. The presentation of China as decadent and deserving of conquest, or at least control, widely advanced in the nineteenth century, was not widespread earlier. There had been Spanish suggestions of conquest in the sixteenth century, but they were implausible in terms of cultural suppositions as well as military strength.

Cultural suppositions operated in a number of ways, but the most significant were to encourage bellicosity, offensive war and territorial conquest. Such tendencies are not organic, and they need to be taken into account when discussing military history, especially the history of military relations between different cultures. The variety of European suppositions in this field is readily apparent. The emphasis on territorial conquest that played such a major role in the New World was far less apparent in the Indian Ocean. There trade played the leading role, but "trade" as a factor in military activity was not without its variations.

The political and military contexts and connotations of trade in Siberia were different from those near Hudson's Bay, another fur source, let alone the Indian Ocean.

Emphasis on different constructions of the pursuit of trade serves as a reminder of the problems of reification and subsequent analysis. This is true not only of the search for causation, but also of consideration of comparative strengths. The comparison, for example, of European infantry and non-European forces in the sixteenth and subsequent centuries is more dependent on the specific context than is generally appreciated. For example, in eighteenth-century India British infantry was more effective in operations on the Carnatic coast near their base at Madras and in the marshy Lower Ganges valley than in conflict against the Marathas and Mysore in regions that favoured their light cavalry. This led to Britain's defeat by Haidar Ali of Mysore in 1769.[14]

To outline methodological and empirical drawbacks with general theses of military development and power does not, however, address the general question of explaining the military rise of the West. It is clear that technological factors do play a major role, although technology has to be understood in the widest of senses, not least to include technological factors that helped to provide Europe with a flexible economy able to utilize its natural resources and to trade widely. It is also clear that technological factors were initially more important at sea than on land. They were crucial to the ability of Europeans to deploy their power.

On land, it was arguably fortifications that were most important. Geoffrey Parker closes the second edition of his justifiably influential *The Military Revolution. Military innovation and the rise of the West 1500–1800* (Cambridge, 1996) by arguing that:

> until the late eighteenth century, thanks to their ability to mobilize and maintain enormous armies, the major Islamic states – like the empires of East Asia – proved able to keep the West at bay . . . in 1683 . . . it was the Turks at the gates of Vienna and not the Europeans at the gates of Istanbul. This perception brings us back to the true significance of the "military revolution" of early modern Europe. The sixteenth century saw a strong phase of Islamic expansion . . . so many states and societies were overwhelmed that the resistance of the West to this Islamic tide stands out as unusual . . . Only military resilience and technological innovation – especially the capital ship, infantry firepower and the artillery fortress: the three vital components of the military revolution of the sixteenth century – allowed the West to make the most of its smaller resources in order to resist and, eventually, to expand to global dominance.[15]

This is an overly schematic view, not least because it fails to position the Ottomans within their multiple commitments, including warfare with Persia,

which for many years was more important than conflict with Christian Europe. Furthermore, infantry firepower and fortresses did not save Ming China from the Manchu. However, Parker is instructive in that he directs attention to a defensive character of European military activity with regard to the outside world that it is easy to neglect if attention is devoted to naval warfare and to success against Aztecs and Incas. From this defensive perspective the role of fortifications, whether Vienna, Corfu, Malta or less famous positions, such as the Russian lines constructed to resist Tatar attacks, was certainly important. However, Parker's focus is too narrow, not least because it assumes that states will and have to expand until stopped – a questionable notion and one that underrates the constraints affecting land expansion in the sixteenth century.

A concentration on the Ottomans is, nevertheless, valuable because it serves as a reminder that gunpowder weaponry was not only possessed by the Europeans, indeed the term "gunpowder empires" was coined to describe Muslem states: those created by the Ottomans, Safavids, Mughals, and Sa'dids of Morocco.[16] Recent work has corrected the earlier view that the Ottomans concentrated on large cannon, rather than larger numbers of more manoeuvrable, smaller cannon, and has, instead, emphasized that their ordnance was dominated by small and medium-sized cannon.[17] The ability of the Ottomans to manufacture an adequate supply of gunpowder has also been emphasized.[18] The same range of use was also true of sophisticated fortifications. The Ottomans built fortresses – for example, a large one in Tabriz when they seized it from the Safavids in 1585. Major Skelly of the British army, campaigning against Tipu Sultan of Mysore in 1791, recorded of the fortress of Nundadroog:

> two complete ramparts . . . each flanked with ample circular bastions, well furnished with artillery, and a projecting work, which forms a reentering angle at the north extremity, flanks all the approaches to the front wall . . . the rampart was of such excellent materials[19]

that it took a while for the British cannon to breach it. Another British commentator, however, was less complimentary about Tipu's artillery:

> old fashioned things taken from the enemy's works, and mounted on their crazy carriages, they are European made it is true, but in the style, and hardly to be trusted. There is no certainty of hitting with these pieces, cast with the vacant cylinder, and not bored solid. We had a 24 pounder of this description in the battery against Bangalore, and no skill could make it throw twice the same way.[20]

Similarly, the Safavids had relatively few cannon and displayed limited skill in their use. More generally, the Safavids failed to match Ottoman use of muskets

and cannon. The widespread availability of gunpowder weaponry underlines the need to contextualize "technology" in order to understand why "advances" were made in particular societies and what factors affected patterns and practices of military diffusion.[21] The importance of differences in military ethos in the various "zones of military entrepreneurship" in India[22] is of wider applicability.

Military developments and state-building

Peter Wilson's essay directs attention to the role of states, specifically to their ability to consolidate and legitimate monopolies of violence and taxation. These spheres were clearly related. Military forces and war were expensive, whether or not they involved military–technological change, such as the European developments of the *trace italienne* system of fortification and of fleets of ocean-going warships, or the acquisition of European weaponry by non-Europeans. These costs could be borne in a variety of ways. Standing (permanent) forces involved continuous expenditure and this could not be provided by the fruits of offensive warfare – land and plunder – because such forces were not always engaged in war. On the other hand, societies and states that relied, in whole or part, on forces that only served during campaigns did not have to adopt the financial and governmental techniques necessary to provide for standing forces. This divide was more like a continuum; nevertheless, there were significant sociological and operational consequences. These were revealed where different military systems clashed, as in North America, which is discussed by Armstrong Starkey.

A common military theme and sociology of power underlay many of the wars of the period – for example, those between China and the Mongols in the sixteenth century and the 1690s: the struggle between the forces of relatively organized, settled agrarian societies and nomadic or semi-nomadic peoples. The agriculture of the former supported larger populations and, thus, the resources for substantial armed forces and also, thanks to taxation, for developed governmental structures. The North American Thirteen Colonies that rebelled against Britain in 1775 created a standing force, the Continental Army, funded by taxation. This army, and its needs, served as a centralizing element in the political debates and governmental problems of the fissiparous state.

Nomadic and semi-nomadic peoples generally relied on pastoral agriculture, were less populous and their governmental structures less developed. They did not therefore tend to develop comparable military specialization, especially in fortification and siegecraft. While the agricultural surplus and taxation base of settled agrarian societies permitted the development of logistical mechanisms to

support permanent specialized military units, nomadic peoples generally lacked such units and had a far less organized logistical system: in war they often relied on raiding their opponents.

This organizational divide, which owed much to factors of terrain and climate, was linked to one in methods of warfare. Nomadic and semi-nomadic people exploited mobility and generally relied on cavalry, whereas their opponents placed more stress on numbers, infantry, and fortifications.

These cavalry forces could be devastating. The early sixteenth century is generally seen in terms of the triumph of gunpowder forces, most obviously with the Spanish and Portuguese victories, but also with a series of spectacular Ottoman victories over Persia, Egypt and Hungary in 1514–26. Yet, it is also, necessary to give due weight to the triumphs of cavalry forces. Cavalry provided mobility, and that was crucial for strategic, logistical and tactical reasons. It enabled forces to overcome the constraints of distance, to create equations of numbers, supplies and rate of movement that were very different to those of infantry, and also to form the battlefield in a very different fashion. Cavalry was not incompatible with firepower. The horse archers of Central Asian origin had shown this effectively in the twelfth and thirteenth centuries in combating the Crusades and the Mongols. Mounted archers remained important in the sixteenth century, as in the Mughal victory over a larger insurrectionary force at the Second Battle of Panipat in 1556.[23] Mounted archers were also effective in co-operation with foot musketeers and artillery, as at the Ottoman victories of Chaldiran (1514) and Mohacs (1526), that of the Mughals at First Panipat (1526), Kanua (1527) and Haldighati (1576), and of the Safavids at Jam (1528). As Peter Lorge shows, Ming Chinese advances against both Mongols and Manchus were defeated by the mobile mounted archers of their opponents. Jos Gommans also demonstrates the continued role of horse archers.

It is all too easy to concentrate on infantry gunpowder weaponry and to ignore the continued role of cavalry, whether armed with bows or with muskets. Such forces could make the transition to gunpowder weaponry, although that was not necessary to their power in the sixteenth and seventeenth centuries. At Alcazarquivir (1578), Abd al-Malik of Morocco defeated the Portuguese in part by making effective use of arquebusiers trained to fire from horseback.[24] The Baluchis used firearms from the early eighteenth century. Mounted musketeers played a major role in the Afghan victory at Third Panipat (1761), as did their heavy cavalry.[25] Cavalry also continued to be important in large areas of Africa, especially the savanna belt to the south of the Sahara.[26]

It is, therefore, misleading to see cavalry as anachronistic and likely to fail. Such a reading reflects twentieth-century assumptions about cavalry and also, in part, a Eurocentric extension of the situation, for, indeed, although it could still be decisive in battle, as in the Anglo-Austrian victory over the French at

Blenheim (1704), cavalry became proportionately less numerous in European armies in the seventeenth and eighteenth centuries. In contrast, north Indian rulers had to remain able to repel cavalry forces invading from Persia or Afghanistan, while on their northern and eastern borders the Safavids of Persia faced opponents in the sixteenth and seventeenth centuries whose cavalry made little use of firearms, ensuring that there was little pressure for any development in weaponry or tactics. This was even more the case because of a protracted period of peace with the Ottomans after the Peace of Zuhab of 1639.[27]

If cavalry is not seen as necessarily anachronistic, this has consequences for assumptions about whether particular governmental–social systems were better suited to military success. These issues and, more generally, the military dimensions of state-building and the governmental and social contexts of military change[28] again return us to the question of military purpose. Clearly, some systems were not suited to the maintenance of substantial standing forces. Such systems succumbed in the eighteenth and, still more, nineteenth century, most obviously with the Russian conquest of peoples such as Crimean Tatars, Kazakhs and Uzbeks. Yet, to read back from that failure to the early modern period is problematic. It is not simply that it entails a nineteenth-century perception of infantry and artillery firepower, and of the attendant relationship between disciplined, well-drilled and well-armed permanent firepower forces and those that were not so armed. There is also the related perception of the governmental dimension – namely, the increased effectiveness of states able to mobilize and direct resources, and to support permanent forces. In the European context, this is seen most clearly with the arguments employed to explain the partitioning of Poland in 1772–95: Poland lacked the strong government of the partitioning powers, Austria, Prussia and Russia. Thus those states that were able to organize, control and direct their populations appear more potent.

Again, this approach faces problems. Methodologically, it fails to address adequately the controverted and contingent nature of governmental strength. There is also the problem of extrapolation: the degree of organization required to create and support a large, permanent, long-range navy, or large, permanent armies, was not required to maintain military forces fit for purpose across most of the world. In addition, there is a problematic empirical dimension. In the early modern period administrative sophistication did not suffice, as the Chinese discovered with their defeats at Mongol and Manchu hands.

Fit for purpose was a matter not only of military success but also of the internal dynamics of sociopolitical systems. If war was a forcing house of change, it was also designed to prevent it, both in terms of changes in territorial power and the prevailing political, social and ideological practices and norms. Armies suppressed rebellions and maintained or strengthened social and spatial patterns of control.[29] Thus, in Europe, states came to monopolize organized, large-scale

violence, but with the co-operation of their social elites who monopolized command positions. The social elite was willing to co-operate with military change, including the organization of armies around a state-directed structure, and the downgrading of cavalry, processes that elites elsewhere were more reluctant to accept.[30] Such a monopolization of violence could not be sustained in the Ottoman or Mughal empires. The former was as much weakened by internal warfare as by foreign attack, and control over Egypt proved an intractable problem.[31] However, comparison with the situation in individual European states has to make allowance for the very great difference in scales. Christian Europe in, for example, 1580–1604, 1618–59, 1688–1714, 1739–63 and 1792–1815 was more violent and wracked by as much, if not more, warfare, than was the case with the Ottoman and Mughal empires, but the multipolar nature of Europe ensured that this warfare was largely controlled by reasonably well-established states, rather than directed to their overthrow. The comparable polities within the Ottoman and Mughal empires were more inchoate.

Political–social revolutions in Europe, most obviously the English republic (1649–60) and the French Revolution (1789–95), were, in part, characterized by substantial changes in the composition and ethos of the officer corps, and this helped to make them threatening forces. In general, however, armies did not act as revolutionary forces; instead, it was the need to provide for them and to retain their capacity to resist territorial, political and social change that caused political pressures and governmental change. This was not only true of Europe. Indeed, insofar as land warfare is concerned, it would be misleading to suggest that the relationship between military demands and governmental change was restricted to Europe, although much of the literature has been about that continent.[32] Other important examples include the Songhay Empire on the middle Niger under Askia Muhammad (1493–1528), Persia under Abbas I (1587–1629) and the kingdom of Dahomey in the eighteenth century.[33]

However, only European powers had to decide how best to organize, control and support transoceanic land and sea operations, and these became more important in the mid-eighteenth century as Britain and France developed *sepoy* forces in India, that were larger, more effective and more dynamic than those of Portugal, and also sent appreciable numbers of regulars to North America. This led to a range of multiple military capability that no non-European power possessed, a range that was to be of great importance in helping to channel the products of nineteenth-century technological change and economic and demographic growth to European military and political advantage elsewhere in the world.

The unique European experience of creating a global network of empires and trade was based on an equally unique type of interaction between economy, technology and state formation. China, Korea and Japan were relatively centralized states; they knew how to build large ships and manufacture guns and their economies and levels of culture were not obviously below early-modern European standards; they wished to import little from Europe. However, there was hardly any interaction between these three factors which might create development and change. Economic gain was a very important factor behind European maritime power projection: the possibility of profit acted as a powerful stimulus to technological development and improved organization for war, trade and colonization. These were to frame the nineteenth-century world.

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Further reading

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