The Military Revolution Military Innovation And The Rise Of The West 1500
1800

"The origins of this book lie in the vision, advice, and acumen of Peter Richards, who died of cancer in 2009, aged fifty-eight. Peter invited me to edit a volume on warfare in a series of Illustrated Histories that he was developing for Cambridge University Press, and in 1993 he attended (and funded) a meeting of the contributors at which we thrashed out the overall framework of the volume and the common denominators for our chapters. Subsequently, Stuart McCready put together the images and designed the spreads. The result was The Cambridge Illustrated History of Warfare: The Triumph of the West, first published in 1995. A decade later, Eric Crahan of Cambridge University Press proposed and oversaw a new edition that extended the original text, which ended with the Gulf War of 1991. It appeared in 2009. Karen Anderson, Rachel Blaifeder, Nicola Chapman, and Deborah Gershenowitz have co-ordinated production of the present volume, which updates the previous version and takes the story down to March 2019. The contributors and I are very grateful to all of them for their enthusiasm, expertise, and hard work--

? From the Crimean War through the Second Boer War, the British Empire sought to solve the "Great Gun Question"--to harness improvements to ordnance, small arms, explosives and mechanization made possible by the Industrial Revolution. The British public played a surprising but overlooked role, offering myriad suggestions for improvements to the civilian-led War Office. Meanwhile, politicians and army leaders argued over control of the country's ground forces in a decades-long struggle that did not end until reforms of 1904 put the military under the Secretary of State for War. Following the debate in the press, voters put pressure on both Parliament and the War Office to modernize ordnance and military administration. The "Great Gun Question" was as much about weaponry as about who ultimately controlled military power. Drawing on ordnance committee records and contemporary news reports, this book fills a gap in the history of British military technology and army modernization prior to World War I.

This volume explores the importance of technology in war, and to the study of warfare, during the past millennium, across several continents. Authors discuss interactions between politics, strategy, war, technology, and the socio-cultural implementation of new technologies in different contexts.

Hybrid warfare has been an integral part of the historical landscape since the ancient world, but only recently have analysts - incorrectly - categorized these conflicts as unique. Great powers throughout history have confronted opponents who used a combination of regular and irregular forces to negate the advantage of the great powers' superior conventional military strength. As this study shows, hybrid wars are labor-intensive and long-term affairs; they are difficult struggles that defy the domestic logic of opinion polls and election cycles. Hybrid wars are also the most likely conflicts of the twenty-first century, as competitors use hybrid forces to wear down America's military capabilities in extended campaigns of exhaustion. Nine historical examples of hybrid warfare, from ancient Rome to the modern world, provide readers with context by clarifying the various aspects of conflicts and examining how great powers have dealt with them in the past.

This ebook is a selective guide designed to help scholars and students of Islamic studies find reliable sources of information by directing them to the best available scholarly materials in whatever form or format they appear from books, chapters, and journal articles to online archives, electronic data sets, and blogs. Written by a leading international authority on the subject, the ebook provides bibliographic information supported by direct recommendations about which sources to consult and editorial commentary to make it clear how the cited sources are interrelated related. This ebook is a static version of an article from Oxford Bibliographies Online: Renaissance and Reformation, a dynamic, continuously updated, online resource designed to provide authoritative guidance through scholarship and other materials relevant to the study of European history and culture between the 14th and 17th centuries. Oxford Bibliographies Online covers most subject disciplines within the social science and humanities, for more information visit www.oxfordbibliographies.com.

This volume explores the importance of technology in war, and to the study of warfare, during the past millennium, across several continents. Authors discuss interactions between politics, strategy, war, technology, and the socio-cultural implementation of new technologies in different contexts.

This book provides a comprehensive assessment of the global diffusion of the Revolution in Military Affairs (RMA) and its impact on military innovation trajectories in small states. Although the 'Revolution in Military Affairs' (RMA) concept has enjoyed significant academic attention, the varying paths and patterns of military innovation in divergent strategic settings have been overlooked. This book seeks to rectify this gap by addressing the broad puzzle of how the global diffusion of RMA-oriented military innovation – the process of international transmission, communication, and interaction of RMA-related military concepts, organizations, and technologies - has shaped the paths, patterns, and scope of military innovation of selected small states. In a reverse mode, how have selected small states influenced the conceptualization and transmission of the RMA theory, processes, and debate? Using Israel, Singapore and South Korea as case studies, this book argues that RMA-oriented military innovation paths in small states indicate predominantly evolutionary trajectory, albeit with a varying patterns resulting from the confluence of three sets of variables: (1) the level of strategic, organizational, and operational adaptability in responding to shifts in the geostrategic and regional security environment; (2) the ability to identify, anticipate, exploit, and sustain niche military innovation – select conceptual, organizational, and technological innovation intended to enhance the military’s ability to prepare for, fight, and win wars, and (3) strategic culture. While the book represents relevant empirical cases for testing the validity of the RMA diffusion hypotheses, from a policy-oriented perspective, this book argues that these case studies offer lessons learned in coping with the security and defence management challenges posed by military innovation in general. This book will be of much interest for students of military innovation, strategic studies, defence studies, Asian politics, Middle Eastern politics and security
studies in general.

Well before the Industrial Revolution, Europe developed the superior military potential and expertise that enabled her to dominate the world for the next two centuries. In this attractively illustrated and updated edition, Geoffrey Parker discusses the major changes in the military practice of the West during this time period—establishment of bigger armies, creation of superior warships, the role of firearms—and argues that these major changes amounted to a "military revolution" that gave Westerners a decided advantage over people of other continents. A new chapter addresses the controversies engendered by the previous edition.

In The Military Effectiveness of Post Colonial States, Barua examines the war fighting capabilities of Nigeria, Argentina, Egypt and India in the post colonial era. The seventeenth century has long been seen as a period of 'crisis' or transition from the pre-modern to the modern world. This book offers a chance to explore this crisis from the perspective of war and military institutions in a way that should appeal to those doing global history. By placing 17th century warfare in a global context, Black challenges conventional chronologies and permits a reappraisal of the debate over what has been seen as the Military Revolution of the early-modern period. The book discusses war with regard to strategic cultures, assesses military capability in terms of tasks and challenges faced and attaches styles of warfare to their social and political contexts. Genuinely global in range, this up-to-date and wide-ranging account provides fresh historiographical insights into this crucial period in world history.

This is a new edition of Geoffrey Parker's much-admired illustrated account of how the West, so small and so deficient in natural resources in 1500, had by 1800 come to control over one-third of the world. Parker argues that the rapid development of military practice in the West constituted a 'military revolution' which gave Westerners an insurmountable advantage over the peoples of other continents. This edition incorporates new material, including a substantial 'Afterword' which summarises the debate which developed after the book's first publication.

This three-volume study examines the questions raised by the performance of the military institutions of France, Germany, Russia, the United States, Great Britain, Japan, and Italy in the period from 1914 to 1945. Leading military historians deal with the different national approaches to war and military power at the tactical, operational, strategic, and political levels. They form the basis for a fundamental re-examination of how military organizations have performed in the first half of the twentieth century. Volume 3 covers World War II. Volumes 1 and 2 address World War I and the interwar period, respectively. Now in a new edition, with a new introduction by the editors, these classic volumes will remain invaluable for military historians and social scientists in their examination of national security and military issues. They will also be essential reading for future military leaders at Staff and War Colleges.

The debate about the "Military Revolution" has been one of the most controversial and exciting areas of discussion and research in the fields of early modern European history and military history. Scholars have long sought to explain the massive changes in European military techniques and technologies that took place between the end of the Middle Ages and the end of the seventeenth century. This three-volume study examines the questions raised by the performance of the military institutions of France, Germany, Russia, the United States, Great Britain, Japan, and Italy in the period from 1914 to 1945. Leading military historians deal with the different national approaches to war and military power at the tactical, operational, strategic, and political levels. They form the basis for a fundamental re-examination of how military organizations have performed in the first half of the twentieth century. Volume 3 covers World War II. Volumes 1 and 2 address World War I and the interwar period, respectively. Now in a new edition, with a new introduction by the editors, these classic volumes will remain invaluable for military historians and social scientists in their examination of national security and military issues. They will also be essential reading for future military leaders at Staff and War Colleges.

To examine the long-run origins of democracy and dictatorship, Brian Downing focuses on the importance of medieval political configurations and of military modernization in the early modern period. He maintains that in late medieval times an array of constitutional arrangements distinguished Western Europe from other parts of the world and predisposed it toward liberal democracy. He then looks at how medieval constitutionalism was affected by the "military revolution" of the early modern era—the shift from small, decentralized feudal levies to large standing armies. Downing won the American Political Science Association's Gabriel Almond Award for the dissertation on which this book was based.

This book explores contemporary military innovation, with a particular focus on the balance between anticipation and adaption. The volume examines contemporary military thought and the doctrine that evolved around the thesis of a transformation in the character of war. Known as the Information-Technology Revolution in Military Affairs (IT-RMA), this innovation served as an intellectual foundation for the US defence transformation from the 1990s onwards. Since the mid-1990s, professional ideas generated within the American defence milieu have been further disseminated to military communities across the globe, with huge impact on the conduct of warfare. With chapters written by leading scholars in this field, this work sheds light on RMAs in general and the IT-RMA in the US, in particular. The authors analyse how military practice and doctrines were developed on the basis of the IT-RMA ideas, how they were disseminated, and the implications of them in several countries and conflicts around the world. This book will be of much interest to students of strategic studies, defence studies, war and technology, and security studies in general.

This book studies the impact of cultural factors on the course of military innovations. One would expect that countries accustomed to similar technologies would undergo analogous changes in their perception of and approach to warfare. However, the intellectual history of the Revolution in Military Affairs (RMA) in Russia, the US, and Israel indicates the opposite. The US developed technology and weaponry for about a decade without reconceptualizing the existing paradigm about the nature of warfare. Soviet 'new theory of victory' represented a conceptualization which chronologically preceded technological procurement. Israel was the first to utilize the weaponry on the battlefield, but was
the last to develop a conceptual framework that acknowledged its revolutionary implications. Utilizing primary sources that had previously been completely inaccessible, and borrowing methods of analysis from political science, history, anthropology, and cognitive psychology, this book suggests a cultural explanation for this puzzling transformation in warfare. The Culture of Military Innovation offers a systematic, thorough, and unique analytical approach that may well be applicable in other perplexing strategic situations. Though framed in the context of specific historical experience, the insights of this book reveal important implications related to conventional, subconventional, and nonconventional security issues. It is therefore an ideal reference work for practitioners, scholars, teachers, and students of security studies.

Major differences between the United States and Great Britain in both the development and employment of aircraft carriers and carrier aviation in the interwar years suggest how innovation was highly successful in the American case and much less so in the British. The only country with carriers at the end of World War I was Britain. It had used carrier-based aircraft to carry out the sort of missions that characterized mature operations during World War II. Royal Navy leaders supported aviation in the fleet. Yet by 1939 Britain was outclassed by America and Japan because of its obsolete carrier aircraft. How was such a reversal possible? The early 1920s found the United States with huge capital ship construction underway and approaching Britain in Mahanian splendor. A decade later, the battleship remained dominant while the battle force was far smaller than anticipated. Two carriers entered service and promised to alter naval warfare, and six months after America entered World War II carriers decisively changed the nature of the Pacific War. The most important development leading to this capability took place in an era of disarmament and severe budgetary constraints. Revolutions in military affairs are driven by the interplay of technological, operational, and organizational factors. This article describes the historical evolution of British and American carrier aviation, with emphasis on those factors. An article in the next issue of JFQ will analyze how this revolution succeeded in America, why it was less successful in Britain, and the subject of military innovation in general.

This ground-breaking study represents a new twist in the already complicated debate on military change in the early modern period. Previous writers have for the most part defined a 'military revolution' focused on the seventeenth or even early eighteenth centuries. Eltis suggests that key developments in training, organization, tactics and siege warfare occurred in the sixteenth century and, taken together, these innovations constitute a military revolution, changing the face of war. In England, these changes came later than in the rest of Europe, and in Ireland later still. English writers, in their anxiety to spur their countrymen to adopt the new methods, produced some of the most useful manuals of sixteenth-century Europe. These, together with Italian, Spanish, French and German texts, form the main basis of David Eltis's study, allowing the ideas of contemporaries to be set alongside accounts of actual military conditions in explaining one of the turning points of world military development.

In light of the spectacular performance of American high-technology weapons in the 1991 Persian Gulf War, as well as the phenomenal pace of innovation in the modern computer industry, many defense analysts have posited that we are on the threshold of a revolution in military affairs (RMA). The issue has more than semantic importance. Many RMA proponents have begun to argue for major changes in Pentagon budgetary priorities and even in American foreign policy more generally to free up resources to pursue a transformed U.S. military—and to make sure that other countries do not take advantage of the purported RMA before we do. This book takes a more measured perspective. Beginning with a survey of various types of defense technologies, it argues that while important developments are indeed under way, most impressively in electronics and computer systems, the overall thrust of contemporary military innovation is probably not of a revolutionary magnitude. Some reorientation of U.S. defense dollars is appropriate, largely to improve homeland defense and to take advantage of the promise of modern electronics systems and precision-guided munitions. But radical shifts in U.S. security policy and Pentagon budget priorities appear unwarranted—especially if those shifts would come at the expense of American military engagement in overseas defense missions from Korea to Iraq to Bosnia.

"Warfare and technology predate human history. The dynamic relationship between them is timeless, echoing through human history in patterns that link the bow and arrow with the IED (improvised explosive device), the walls of Jericho with reconnaissance satellites. This book traces those patterns, from the Scheoningen spears to cyberwarfare."--Provided by publisher.

Case studies look in detail at the Chinese space and missile industry.

Using formerly classified sources - in particular, the reports of military attaches and other diplomat-officers - Thomas G. Mahnken sheds light on the shadowy world of U.S. intelligence gathering, tracing how America learned of military developments in Japan, Germany, and Great Britain in the period between the two world wars. The interwar period witnessed both a considerable shift in the balance of power in Europe and Asia and the emergence of new ways of war, such as carrier aviation, amphibious operations, and combined-arms armored warfare. American attempts to follow these developments, Mahnken says, illustrate the problems that intelligence organizations face in their efforts to bridge the gulf between prewar expectations and wartime reality. He finds three reasons for intelligence's relative lack of success: intelligence agencies are more inclined to monitor established weapons systems than to search for new ones; their attention is more likely to focus on technology and doctrine already demonstrated in combat; and they have more success identifying innovation in areas their own country is testing.

In terms of resource mobilization and devastation the wars between Russia, the Crimean Khanate and the Ottoman Empire were some of the largest of the 18th century, and had enormous consequences for the balance of power in Eastern Europe. Brian Davies examines how these conflicts characterized the course of Russian military development in response to Ottoman and Crimean Tatar threats and to determine under what circumstances and in what ways Russian military power experienced a "revolution" awarding it clear preponderance over the Ottoman-Crimean system. A central part of Davies' argument is that identifying and explaining a Military Revolution must involve examining the role of factors...
not purely military. One must look not only at new military technology, new force and command structure, new tactical thinking, and new recruitment and military finance practices but also consider the impact of larger demographic, economic, and sociopolitical changes.

China is flexing its growing military and strategic clout in the pursuit of broadening national security interests. At the same time, the country's economic and technology policies have also become more nationalistic, state-centered, and ambitious. China's defense economy has set its sights on catching up with the West by the beginning of the 2020s and is making steady progress in building up its innovation capabilities, although this is presently in the form of incremental and sustaining types of activities. More high-end, disruptive forms of innovation that would lead to major breakthroughs are likely to be beyond China's reach in the near-to medium term. This volume provides a wide-ranging and detailed assessment of the present state of the Chinese defense economy at a time of rapid change and accelerating advancement in its innovation capabilities and performance. This collection of articles has three main goals: (1) to locate China's defense innovation dynamics within broader historical, technological and methodological frameworks of analysis; (2) to assess the performance of the Chinese defense economy's six principal subsectors; and (3) to compare China's approach to defense industrialization with major counterparts in the Asia-Pacific region. This book was originally published as a special issue of the Journal of Strategic Studies.

This collection of articles represents Professor Williamson Murray's efforts to elucidate the role that history should play in thinking about both the present and the future. They reflect three disparate themes in Professor Murray's work: his deep fascination with history and those who have acted in the past; his fascination with the similarities in human behavior between the past and the present; and his belief that the study of military and strategic history can be of real use to those who will confront the daunting problems of war and peace in the twenty-first century. The first group of essays addresses the relevance of history to an understanding of the present and to an understanding of the possibilities of the future. The second addresses the possible direct uses of history to think through the problems involved in the creation of effective military institutions. The final group represents historical case studies that serve to illuminate the present.

In April 1994, the Army War College and the Strategic Studies Institute hosted the Fifth Annual Strategy Conference. The theme of this year's conference was "The Revolution in Military Affairs (RMA): Defining an Army for the 21st Century." Jeffrey R. Cooper presented the following paper as the opening panel which sought to define the RMA. He urges defense planners to determine what strategic—as opposed to operational--benefits might be derived from the RMA. He contends that making the internal reforms that will be required will be as challenging as coming to terms with the operational and strategic implications of the new technologies. The first requirement is to understand the parameters and dynamics of this particular revolution in military affairs. Mr. Cooper puts the RMA in historical perspective by discussing the relationships among technology, socioeconomic, and political change, and their implications for warfare during the Napoleonic era, the mid-19th century, and World Wars I and II. He argues that, in the past, dramatic technological change affected warfare in different ways. Mr. Cooper warns that by using the RMA to define a "technical legacy" we make three errors. First, such an approach could lead to a fruitless search for a "silver bullet" technology on which to build the RMA. Second, the focus on technology could shift attention away from the critical issues of purpose, strategy, doctrine, operational innovation, and organizational adaptation. Finally, committing the first two errors will compound the problem by wasting very scarce defense resources on new programs and projects which may have little or nothing to do with the strategic situation. Military professionals and defense planners alike need to remind themselves that while technology can provide new capabilities, the strategic equation is not necessarily driven by technological innovation.

This book is a comprehensive study of the Iraq Wars in the context of the revolution in military affairs debate. The Modern American Military is composed of essays surveying the mission and character of the United States armed forces in the twenty-first century. US Defence Strategy from Vietnam to Operation Iraqi Freedom examines the thirty-year transformation in American military thought and defence strategy that spanned from 1973 through 2003. During these three decades, new technology and operational practices helped form what observers dubbed a 'Revolution in Military Affairs' in the 1990s and a 'New American Way of War' in the 2000s. Robert R. Tomes tells for the first time the story of how innovative approaches to solving battlefield challenges gave rise to non-nuclear strategic strike, the quest to apply information technology to offset Soviet military advantages, and the rise of 'decisive operations' in American military strategy. He details an innovation process that began in the shadow of Vietnam, matured in the 1980s as Pentagon planners sought an integrated nuclear-conventional deterrent, and culminated with battles fought during blinding sandstorms on the road to Baghdad in 2003. An important contribution to military innovation studies, the book also presents an innovation framework applicable to current defence transformation efforts. This book will be of much interest to students of strategic studies, US defence policy and US politics in general. This book presents a clear, readable introduction to a popular field of history. It shows that military history encompasses a wide range of perspectives on all aspects of past military organization and activity. I.A.A. Thompson, Emeritus Fellow of the Royal Historical Society, is the author of War and Government in Habsburg Spain, a seminal study of the impact of war on the development of the state in Spain in the 16th and 17th centuries. In this volume he reprints for an English readership ten essays examining the implications for government, the financial system and Spain's position in Europe of the fundamental changes in the art and practice of war, both on land and at sea, that took place during this period. This "Military Revolution" has been one of the most contentious debates among historians for the last fifty years, but little attention has so far been paid to Spain itself, despite her predominance in Europe for much of the period. These essays are designed to correct that omission, and to assist in a fuller understanding both of the Military Revolution and of the strengths and weaknesses of the Spanish state. Antologi. Sikkerhedspolitisk forskere giver deres vurdering af folgerne af informationsalderens opgør med hidtidig kendt våbenteknologi og doktriner i forbindelse med den globale spredning af know-how på området.

Like the industrial revolution before it, the information technology revolution appears to be creating a new ruling class, a new economy and a new society. Information technology is also transforming military operations and warfare. A vast literature on the revolution in military affairs (or "RMA") cites the important (indeed, dominant) role of information technology in enabling a new military revolution. This volume challenges conventional wisdom not by claiming that information's impact on military operations is not "positive" or "transformative" but by claiming its impact is not "new". Previous periods of military revolution can also be characterized as information revolutions. Through the close examination of six case studies of military transformation during the industrial age, the contributors to this volume demonstrate how the employment of emerging information systems was critical to realizing a major boost in military effectiveness. The most successful adaptations to the new environment were made by the most skillful users of
information. This volume draws upon the expertise of leading military historians, political scientists and defense practitioners to craft a set of original essays that provide the first retrospective examination of how information affects the process of military revolution. This book was previously published as a special issue of the Journal of Strategic Studies. Studies the changes that have marked war in the Western World since the thirteenth century.

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