

Warfare and History



SEAPOWER
AND
NAVAL WARFARE
1650–1830

Richard Harding

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For Anne, Rebecca and Hannah

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Maps

1. The Baltic region



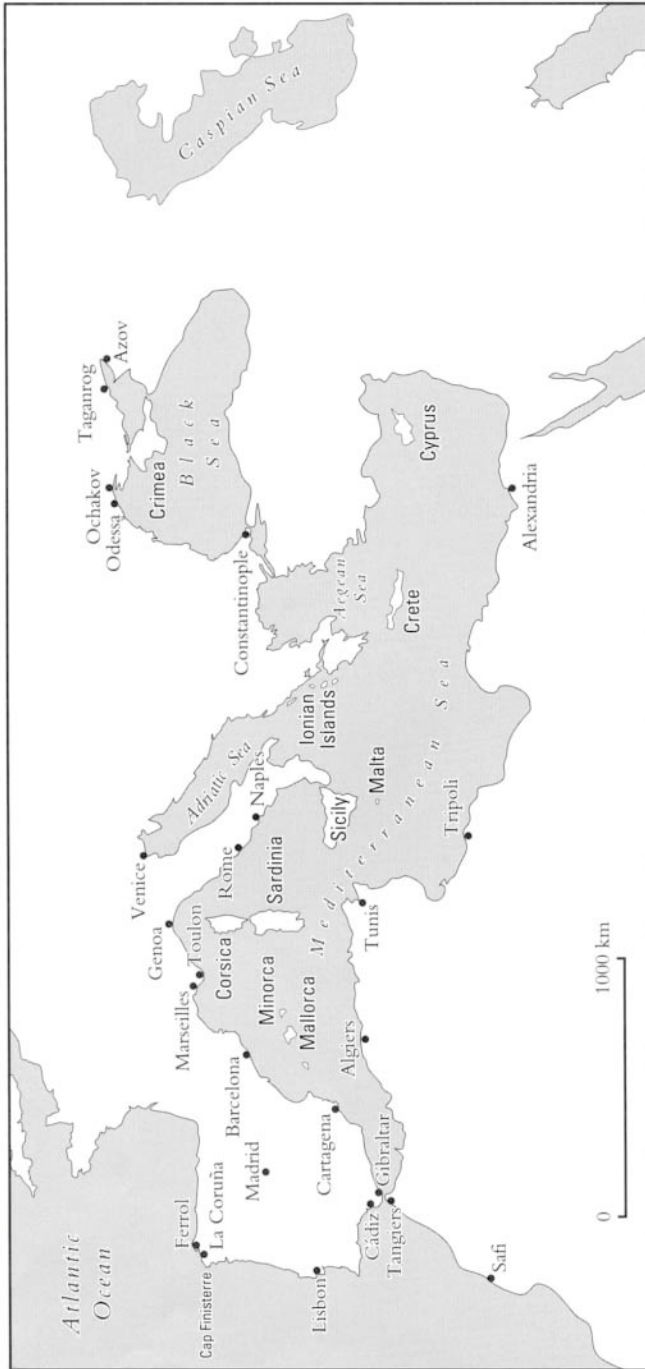
MAPS

2. The North Sea region

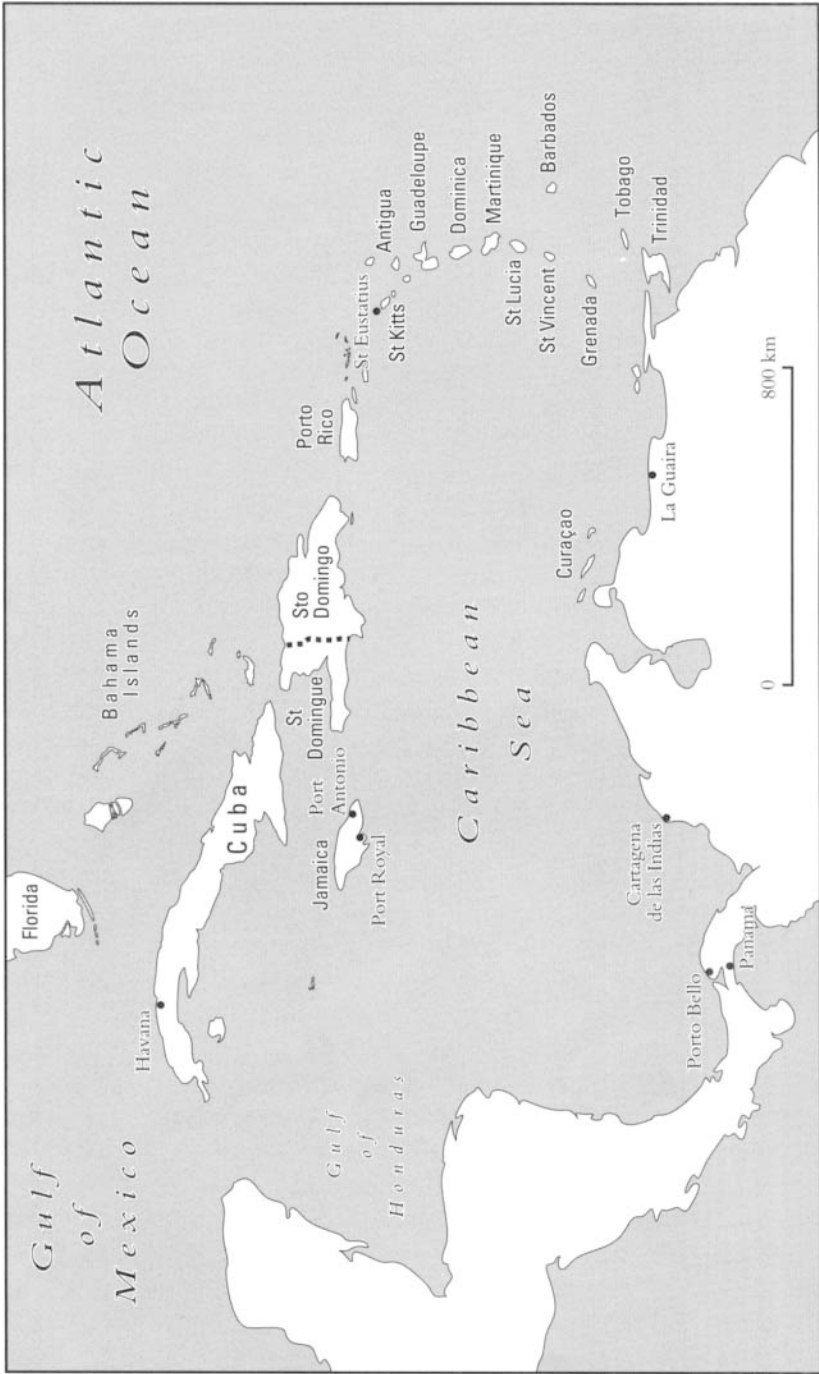


MAPS

3. *The Mediterranean and Black Sea region*

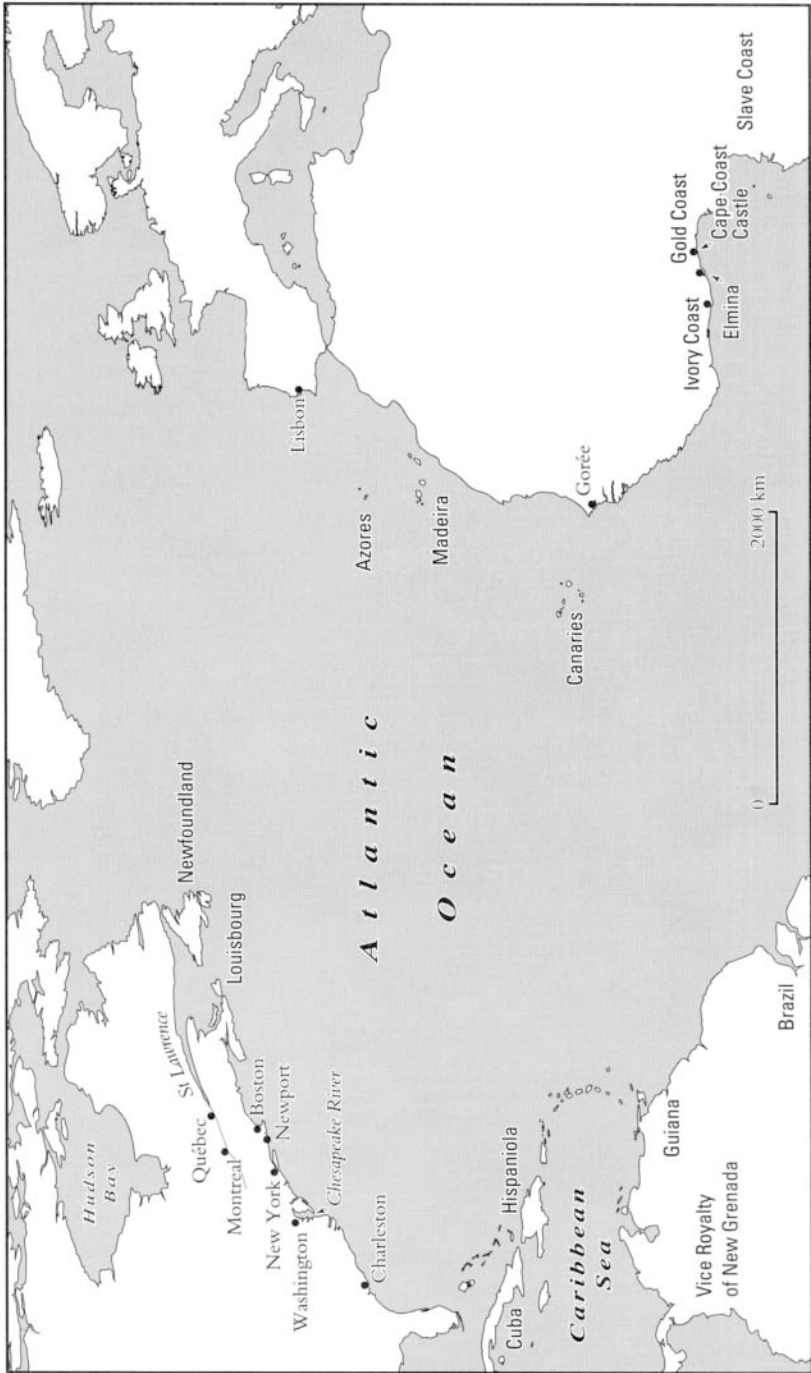


4. *The Caribbean*



MAPS

5. The North Atlantic region



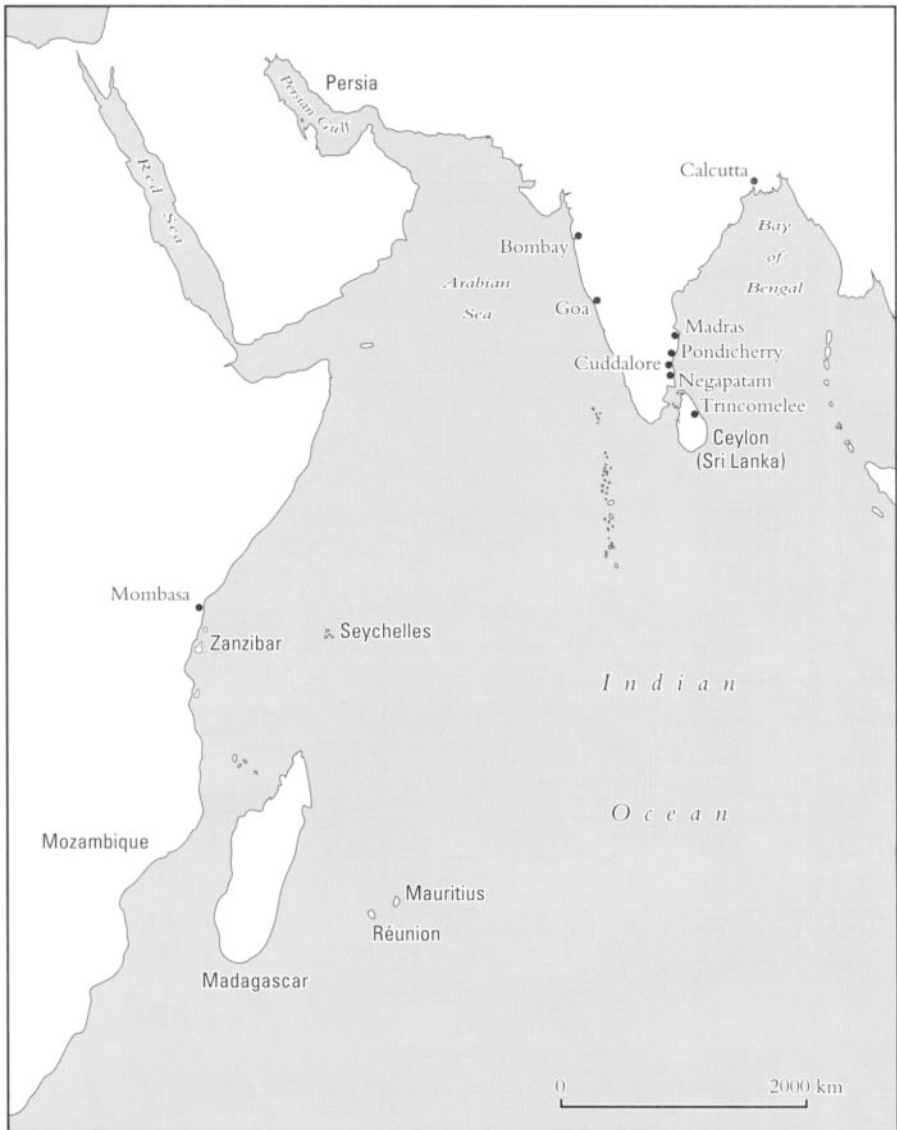
MAPS

6. *The South Atlantic region*



MAPS

7. *The Indian Ocean*



Preface

Seapower in global military affairs has a long and well documented history. Today, for most people, seapower is synonymous with navies, and particularly the technological sophistication of the nuclear-powered submarine and aircraft carrier. The ability of these vessels to patrol the world's oceans and project their fearsome weaponry to land and sea targets, large or small, is the basis of contemporary seapower strategy. To earlier generations, the central role was carried out by the battleship, whose strategic function was a little different. At the turn of the century, the battleship was perceived as the weapon that drove rival forces from the sea, crippled an enemy's seaborne commerce and destroyed its resistance by "noiseless, steady, exhausting pressure". The battleship's power to project military force beyond the coast was limited and its ability to dominate battle at sea was the focus of attention. In the drive to convince politicians and the tax-paying public of the importance of this role the history of the battleship and the battlefleet was presented as a vital unchanging principle from the wooden sailing ships of the line to the steel and steam giants of the modern navies.

Over the last 50 years, historians have examined many other aspects of seapower in the period of the sailing navy—its purpose, the economic and political factors in societies that depended on seapower, the forces that exercised it and its impact upon various societies. Their work has not always formed part of an explicitly "naval" history, and the histories of the sailing navies themselves no longer command the attention that they used to. This work is an attempt to re-examine the idea of seapower during the period of the sailing battlefleets, to present a picture of how the battleship fitted into the overall exercise of seapower and how the relationship evolved between 1650 and 1830 to the point when the battlefleet could be seen as the ultimate expression of a global force.

PREFACE

It is hoped that readers will be interested to follow up the issues discussed in this work. The bibliography and notes are not intended to be comprehensive, but to provide accessible additional reading. Foreign language publications, manuscripts and unpublished papers have only been cited where accessible published works in English are unavailable or to alert readers to debates that are relatively new and will shortly be reaching publication.

Up to 1752, Britain used the Julian calendar, which most of Europe ceased using after 1582. English dates were ten days behind Europe in the seventeenth century and 11 days after 1700. The New Year commenced on 25 March in England. For this work, the new year is always deemed to have started on 1 January, but dates are indicated as either “old style” (o.s.) or “new style” (n.s.) in the text.

The opportunity to write on such a broad topic is an uncommon privilege and I owe a great debt to Professor Jeremy Black both for his advice and accepting the proposal. Progress would have been impossible without the generous help of other historians. Professor Geoffrey Till, Professor Craig Symonds, Mr Evan Davies, Commander A. J. W. Wilson, Mr J. D. Brown and Ms Ann Coats gave up their time to discuss aspects of the work with me. Professor Black, Professor John Hattendorf, Dr Andrew Lambert, Dr Eric Grove, Dr Peter Le Fevre, Dr Jan Glete, Lieutenant Commander W. J. R. Gardner and Ms Patricia Crimmin gave me invaluable advice on drafts. Dr Glete, Dr Lambert, Dr Le Fevre, Professor Hattendorf and Professor Elena Frangakis-Syrett gave me access to important published and unpublished materials. I am particularly grateful to Jan Glete, for his advice and permission to use the figures published in his *Navies and nations*. I am also grateful to my father, James Harding, for advice on the maps. The opinions, omissions and errors that remain are my own and it is clear that many important and exciting questions about seapower in this period remain to be answered.

Chapter One

“The age of sail” and naval history

The sea is the great barrier between land masses and, at the same time, the great highway of communication, open to anyone who can traverse it. Long before 1650 the world's oceans and seas were being crossed by merchant vessels of many countries. States fought each other on the seas and used power at sea to pressure their enemies on land. However, it was in the two hundred years after 1650 that maritime affairs intruded deeply into the development of the world. By 1830 the sea was far less of a barrier than it had been in 1650. The technology of shipping, the science of navigation, the infrastructure of ports, systems for provisioning, financing and supply enabled people and goods to travel faster, further and safer than ever before. The volume and variety of world trade increased dramatically. The coastal regions of most parts of the world became familiar with trading vessels from far afield, and maritime communities based upon a cash economy had an unprecedented political, social and economic impact upon the agrarian hinterlands.

From classical times urban economies and civilization depended on maritime commerce. The technological and financial requirements of shipping were a primary force in the cultural evolution of Europe. After 1830 the new industrial factory systems in Europe and America relied heavily upon seaborne commerce for raw materials and markets, but catered for increasingly integrated continental markets.¹ Maritime industries continued to be at the forefront of technological change, but other developments such as machine tools, the telegraph and railways were the technological wonders of the age. By 1900, the railways had opened up the continental land masses for the transport of bulk goods and people. Trade overland had become cheaper and more efficient in Europe, America and to a much lesser degree Africa. From the mid-nineteenth century,

the economic and cultural impulses of the maritime world merged with those of the new factory systems.

The mid-nineteenth century was also the time when political attention swung from a maritime and world-wide to a continental focus. In both America and Europe, the opening up of the continent was not just an economic phenomenon, but a political and cultural one as well. The territorial definition of states created wars of independence, unification, expansion and secession which dominated the period 1815 to 1870. With these wars came a focus on the factors that created a national unity between the peoples that occupied a given territory. For statesmen and nationalists domestic nation-building took priority over maritime expansion.²

Some states, usually smaller states on the perimeters of the great land masses, stood outside these general mid-nineteenth century political changes. The Netherlands, Sweden, Norway and, most significantly, the United Kingdom, all had strong maritime traditions and were less driven by the need to define their position within the continent. Britain, particularly, defined itself with reference to its global maritime empire. The European wars of unification only served to reinforce Britain's global, rather than European, perspective. By the 1890s, Britain saw itself and was also seen by other states as the model of the modern thassalocracy.³

Britain's distinctive position is important to the modern writing of naval history. During the early 1880s political and diplomatic attention in Europe and America focused once again on the wider world. With European boundaries confirmed, and intense economic rivalry between states, imperial expansion overseas offered an attractive solution to growing political problems. It was during this period and the years leading up to the First World War that the modern study of naval history took shape. Underpinning the national competition of the late nineteenth century was a deep quasi-Darwinian assumption that the nations were engaged in a deadly struggle for survival. It was a struggle that demanded the energies of the whole nation, including its financial, industrial and intellectual capital. In Britain, despite strong liberal traditions, the importance of applying higher education to the needs of the state was not missed. Norman Lockyer, the President of the British Association for the Advancement of Science, noted in his 1903 address to the Association that "University competition between states is now as potent as competition in building battleships".⁴ Not just the physical and applied sciences, but history as well developed as a vital, serious study across Europe and America. Britain was the dominant naval and imperial power and it was her history that provided the focus for much of the new writing at the end of the nineteenth century. By 1914 the

“British” perspective in naval writings had thoroughly eclipsed other valuable and interesting perspectives of European naval theorists and historians.⁵

The background to this increased interest in naval history was the technical and organizational changes in warfare from the 1860s. Mass mobilization of armies and new materials contributed to spectacular and rapid victories for Prussia against Austria and France in 1866 and 1870–1, but the same factors produced a long and bloody civil war in America between 1861 and 1865. The lessons learned from these conflicts were that victory went to the power best able to produce and organize materials and manpower for war. Industrial capacity and the organizational power of nineteenth-century bureaucracy imposed the need for administrative and strategic skills upon officers which far exceeded those of only a generation earlier. On land, the changes in the technology of war itself were less dramatic than those in industry and government. Although artillery became ever more powerful and plentiful on the battlefield, and small arms more efficient and effective, the horse and human power remained the principal means of movement and combat still took place at close quarters. However, the experience of war provided plenty of information and some clues towards the education of army officers. It also confirmed that the traditional battlefield role of the officer was largely unchanged. It seemed possible to develop the professional education of the army officer with some degree of certainty. Naval officers faced much greater ambiguity. Unlike their army colleagues, there had been no recent intensive naval campaigns. The last naval battle of any scale had been at Lissa in 1866, between Austrian and Italian naval units. It had no significant impact on the outcome of the Austro-Prussian War. Anglo-French naval domination was a major element in the Russian War (1854–6), but, subsequently, became overshadowed in popular imagination by the land campaign in the Crimea. The American Civil War (1861–5) at sea was equally one-sided. The Confederate States Navy hardly existed and although a handful of commerce raiders on the high seas created a major impact on the public, the United States Navy effectively blockaded the Southern States without having to overcome a substantial enemy at sea.⁶ If anything, these limited operations had created greater ambiguity for officers interested in the future of naval warfare. The tactic of ramming the opposing vessels, employed by Rear Admiral von Tegetthof at Lissa, had an influence on ship design that ran counter to the improvements in artillery. The success of the Confederate commerce raiders and the apparent inability of oceanic battlefleets in the Baltic to influence the course of the Crimean War raised questions about the relative effectiveness of high seas battlefleets, coastal bombardment fleets and a privateering war against commerce—the *guerre de course*.⁷

Underpinning this problem were the remarkable changes in the technology of war at sea during the last half of the century. Steam power, which was used aboard warships from the 1840s was becoming increasingly efficient. The triple expansion steam engine, the screw propeller and, a little later, the turbine transformed the ability of warships to manoeuvre, travel at speed and keep at sea in hostile conditions. While steam freed the warship from the constraints of the wind, iron and later steel plate completely transformed warship design. The size of warships, their configuration and their capabilities are determined by the materials from which they are constructed. In the early years of the nineteenth century, ship designers and constructors reached the limits of wood as a material. Vessels could not be made larger or increase their carrying capacity. Iron construction in the form of cast parts assisted improvements during the 1830s, but it was the strength and flexibility of steel which from the 1880s enabled shipbuilders to increase the size and capacity of vessels beyond all previous experience.⁸

By the 1840s improved smooth-bore artillery and shell guns gave warships greater firepower than their predecessors. Rifled artillery and chemical propellants and bursting charges increased the range and destructive power of gunfire from the 1860s. These new heavy artillery pieces were restricted on land by the need to haul them by horse power over poor roads and keep them supplied with ammunition by the same means. At sea these weapons could be housed in turrets, manipulated and served by hydraulic and electric power and supplied by extensive magazines. Ships, which from the sixteenth century had become floating artillery platforms, became even more formidable weapons against land and sea targets. During the nineteenth century, naval gunfire achieved a concentration and power that land-based defences might be able to resist but few were able to counter. New weapons added to the changing environment of naval warfare. The torpedo and the mine extended the potential danger to vessels of attack from under the sea.⁹

These technological changes raised significant questions about how naval wars would be fought and what the naval officer needed to be taught. The need to understand the technical principles of the weapons and propulsion systems led to a major and controversial change in the education of Royal Navy midshipmen announced in 1902. The curriculum and pedagogy remained a matter of dispute in succeeding years. For senior officers, the tension between a curriculum that kept them up to date with the latest technical developments and the need to develop them as strategic thinkers was never resolved.¹⁰

While the services were extending and re-examining the education of their officers, history was becoming more distinct as an academic discipline. Although there were

relatively few professional historians, history was developing and growing in popularity. History has always had a place in a liberal education, but it was seldom distinguished from literary, philosophical or legal studies. The research-based approach to history, which dominated German and later American history schools by the beginning of the twentieth century, provided it with a distinctly “scientific” structure.¹¹ Science was not seen as a discipline or department of knowledge, but “the proper method of knowing and apprehending the facts in any department whatever”.¹² In France, Germany, Britain and the United States ambitious historical studies based upon primary source materials were in vogue. State and public archives were being systematically catalogued and opened up to historians. Collections were being preserved and published. Implicit within the scientific method was the belief that the knowledge discovered was useful and would contribute to improvement. The questions asked by historians were, therefore, essentially those upon which improvement was sought. The method was a training of the mind that was useful for those in public service—lawyers, administrators, statesmen, naval and military officers. The content was vital background information for those very same people. It is no surprise, therefore, that armies and navies were at the forefront of the scientific study of history. History was seen as “the most effective means of teaching war during peace” and of bringing into relief “the unchangeable fundamentals of good generalship in their relation to changeable tactical forms”.¹³ More than anything else a proper study of history distinguished between cause and effect and developed the greatest attribute of any officer—judgement.

The armed services’ need to involve themselves in the study of history clearly stemmed from the increasingly complex operational and political demands of contemporary warfare. However, neither the content nor methodologies of historical studies were ever as firmly established in the serving officers’ minds as the naval historians would have liked. Professor Sir John Laughton was a first-rate scholar who was committed to extensive primary research to educate the navy, but Captain Herbert Richmond, one of the Royal Navy’s most distinguished historians, was disgusted by the ignorance of his colleagues. On 4 April 1907 he wrote in his diary “I know only too well how ignorant we are, not only of modern war, but even of wars in history.” He recorded his despair that Admiral Durnford had never heard of Nelson’s Nile Campaign of 1798, and worse: “that was typical of ninety percent of our admirals.”¹⁴ The first professor of history (and English) at the Royal Naval College, Greenwich, Professor Sir Geoffrey Callander, was by no means a distinguished scholar and the navy did not seem to regret that fact. Since then the Royal Navy and the Royal Naval Colleges have produced some of the foremost naval historians, but to focus upon them would be to ignore the vast majority of officers for

whom history was simply part of a curriculum that had to be tolerated. Likewise in America, although the founder of the Naval War College, Admiral Stephen Luce, saw history as the keystone in the study of war, its role rapidly diminished. The post of professor of naval history at the US Naval War College was abolished in 1894 and not reinstated till after the First World War. The principal use of history was to provide the data for case studies and simulations used by officers studying tactics or strategy. Original research and wide-ranging explorations of historical situations were considered unnecessary.¹⁵

Over the period 1870 to 1914 naval history had become an established part of the intellectual development of the naval officer in Europe and America. The sources of the data were identified, the methodology of disseminating the information and extracting the lessons were established and the means of publishing it were developed. The staff histories and the research were not abstract historical investigations, but attempts to provide sound data from which to extrapolate lessons for future naval wars. More than anyone else, it was the American, Captain Alfred Thayer Mahan, who established the dominant lessons to be drawn from those historical studies.¹⁶ Mahan's views were not unique, but his *Influence of sea power upon history*, published in 1890, had the greatest impact upon the public, politicians and statesmen. Mahan was convinced that the guiding principle of sea warfare was the concentration of overwhelming firepower upon the enemy to drive him from the sea. Thus, the battlefleet of capital ships was the only way to ensure control of the sea. For Mahan the British Royal Navy had proved this thesis and his purpose in writing *Influence* was to demonstrate this historical example and the "principal considerations" upon which British seapower was built.¹⁷

The idea struck a chord in political and naval circles throughout the world, and although, as Barry Gough has pointed out, few of these people may have read beyond the first part of the book, the focus on the domination of the oceanic battlefleet became the historical orthodoxy for the public. In France, where the possibility of competing in a naval race with Britain after the disastrous war of 1870-1 was unlikely, Admiral Aube headed a powerful group of naval thinkers, the Jeune École, who looked to the new weapons of torpedo and fast light cruisers to deny the use of the sea to the enemy. Although they had influence in Europe between 1885 and 1895, Mahan's battlefleet theory of naval war had swept these ideas away by 1898.¹⁸

Subsequent historical investigations used established methodology and sources to fill chronological gaps, and fitted the narratives into Mahan's analysis of seapower. Whether Mahan was right or wrong in his predictions about future naval warfare, his views about the history of the sailing navy were unchallenged. So far as the naval

profession was concerned, history had done its job and established a permanent but limited role for itself in the professional curriculum. Since 1900 history has had to accommodate itself to other disciplines which could also throw light upon the future performance of navies in combat. Administration and management studies taken from the business world were absorbed into the military curriculum before and after the First World War. Psychology and leadership studies, international relations, economics and political sciences have taken an increasing share of study time since 1945. History, particularly that of the sailing navies, which was so prominent one hundred years ago, can still be found in the curriculum of naval colleges, but more for the continuity it demonstrates with the past—what Sir Julian Corbett called “a means of mental and literary culture”—than for the insights it provides to the modern professional navy.¹⁹

The naval history of the sailing ship era has, therefore, emerged as an identifiable subject, shaped like most disciplines, by the pragmatic requirements of its practitioners between 1870 and 1914. Its primary focus was the contemporary application of naval power. The battlefleet and the naval battle were at the centre of this power and the causes of success and failure in battle were the crucial factors to understand. The narrative was the narrative of campaigns and the reasons for particular outcomes were deduced by going backwards from the battles. By the time the First World War broke out in 1914, the period of the sailing navies had received almost 30 years of detailed attention from scholars, who produced some first-rate campaign histories and excellent collections of printed documents.

After the First World War, naval history and historians were drawn into the debates about the lessons to be learned from that conflict. The general disappointment that the overwhelming naval power of the allies in all waters had not produced a decisive result, or indeed a decisive naval battle, led to a re-examination of the doctrine derived from the historical writing of Mahan. The role of commerce raiding and amphibious operations had been tackled before 1914 and these aspects of seapower are more prominent in works after 1918, but the Mahanian emphasis on the battleship and battlefleet remained largely intact.²⁰

Prior to 1919, the history departments of universities had played a prominent role in the development of naval history. History as a discipline in its own right was developing rapidly at the end of the nineteenth century. Military history, including naval history, was a part of this. Academic historians like Sir John Seeley, S. R. Gardiner, J. A. Froude and Charles Oman contributed to the narrative campaign histories and to the analytical studies of military, sea and imperial power. By 1904, military history courses existed at Oxford and King's College, London. In 1909 the Chichele chair of

military history was established at Oxford. There was a fruitful influx of expertise to strengthen the study in the years before 1914—in 1885 John Knox Laughton became Professor of Modern History at King's College London and Henry Spencer Wilkinson, the journalist and expert on German military development, was the first holder of the Chichele chair.²¹

Interest in naval history tailed off after the First World War. The first postgraduate theses in naval history appeared, but numbers of students for the course at Oxford dwindled into single figures. The Laughton Lecture at King's College, London, which was intended as an annual memorial to Sir John Knox Laughton who died in September 1915, was delivered only once, by Sir Julian Corbett on 4 October 1916. The plans for a Laughton Library were quietly forgotten.²²

However, perhaps the most significant contribution of the universities to the naval history of 1650-1830, did not lie in the detailed narrative histories but in the expansion of studies on the economic and social context of the maritime world. The long stalemate on land and at sea in the Great War and the apparent success of the blockade of Germany was a theme developed by John Holland Rose, the Vere Harmsworth Professor of Naval History (1919-33) at Cambridge, and by Cyril Fayle who lectured at the Imperial Defence College. Richard Pares at Edinburgh, Gerald Graham at London and Cyril Northcote Parkinson at Liverpool began their studies into the relationship between navies and economic connections in the West Indies, North America and the Far East.²³ In America this interest was reflected in the studies of American political and colonial relationships with Great Britain rather than the military histories.²⁴ Likewise, in France, studies of colonial relationships added to our understanding of the maritime dimension of French life.²⁵ By the time war broke out again in 1939, the volume of printed source materials had grown substantial. Some new narrative histories had emerged—often with origins in research done before the First World War—but most significantly, the study of naval history 1650-1830 had been given an added dimension with some first-rate economic and political studies, which put naval history much more into contemporary social fabric.

In the world after 1945, the naval history of the period 1650-1830 has undergone further change. The major seats of learning for naval history, the senior officers' colleges and the universities, have both experienced changes in their curriculum. The purpose of studying history in the navy has always been for the insights it might provide in leadership, strategy and tactics. To a large extent the histories of the sailing navy period had exhausted their usefulness by 1914. The technological changes between 1939 and 1945 had diminished their relevance even further. Although there remained some

important contributions to the theory and practice of seapower based upon historical comparison, particularly by Stephen Roskill and Peter Gretton, history retained a very limited functional role in the training of junior officers.²⁶ In Britain, in 1987, there was a brief flutter of controversy when naval history appeared to be in danger of disappearing completely from the curriculum at the Royal Naval College, Dartmouth. However, it survives, as an eight-week narrative survey in the Defence Studies course, covering 1890–1990, to complement similar courses on international history and politics. In the United States Naval Academy, which has a very different educational history and mission, the history curriculum is very diverse, but the modern navy is a highly technical service and there are restrictions on the number of midshipmen who can major in the subject.

It has always been in the senior officers' colleges that history has had a real role to play. These colleges lost a great deal of their intellectual energy in the period following the First World War and for some decades after 1945 little emerged from them. However, during the 1970s and 1980s the mood changed. In Britain the withdrawal from empire had been effected and there was a need to clarify the role of the Royal Navy, as a medium sized force, in the Western defensive system.²⁷ The end of the Vietnam War in 1973 stimulated similar thinking in the United States. More recently, the end of the Cold War has forced even more intense reflection about what navies do and cost.²⁸ Naval history has played an important part in this reappraisal of naval doctrine. Inevitably, the focus has been on recent history, particularly post 1939. However, in the United States Naval War College, earlier history is still making a valid contribution to thought.²⁹ The reasons for this range from the need to re-establish detailed historical debate about the role of navies in a context that would not be tainted by the divisive Vietnam War, to the central role Mahan himself had played in the Naval War College, to the broad expertise and vision of the Professor of History, John Hattendorf. The reappraisal of seapower in recent studies almost all use the comparative history method employed by Mahan. This is seen most clearly in the works of Clark Reynolds, Colin Gray and John Hattendorf.³⁰ In these studies, the problems faced by the sailing navies are presented as part of a continuous struggle with the strategic problems and possibilities of the sea. The reappraisal of US naval policy in 1992 has added some force to the possible use of history for insights into the new maritime situation. Since 1990, the Naval War College has been the focus of major efforts to reappraise the role of naval history in the higher education curriculum.

The universities have also undergone changes. The expansion of higher education has been accompanied by dissolving barriers between traditional academic disciplines. Students have far greater freedom to mix subjects and disciplines within their awards.

Whatever the negative effects of this might be, it forms a background to new awards and courses that draw upon different disciplines, such as war studies, conflict studies, labour studies, local history and oral history. Within each of these naval history can play a part, contributing to and being enriched by other disciplines, theoretical approaches and methodologies. Naval history forms an important part of studies which are now providing a much wider understanding of the historical relationship between Europe and the rest of the world.³¹ Whereas it is unlikely that naval history, particularly of the period 1650-1830, will again see the light of day as a subject for informing and educating sailors, soldiers, diplomats and politicians, it is quite likely that it will survive as part of a wide range of studies and reinforce an already strong demand for books and information on sailing navies that exists among the general public.

The problem may be that naval history loses any coherent identity in the process and this concern has already stimulated naval historians around the world to debate the matter.³² The most significant feature of the current state of the history of the sailing navies is that some themes are deeply entrenched in our understanding of naval warfare. These are usually the themes that were of major concern to the historians of the early twentieth century. The British naval experience particularly, the strategic dominance of the oceanic battlefleet, the development of fighting tactics at sea and the role of the great naval leaders have a long historiography. The conclusions drawn from these studies are well-known. More recently, naval administration, the evolution of the warship and the sailing ship more generally have received a great deal of attention. Other aspects of seventeenth- and eighteenth-century navies are less well-known or researched. The processes of command, the workings of allies at sea and inter-service understandings in naval warfare are all areas in which more research is required or the results of that research need to be incorporated more fully into a general understanding of naval war. Equally, the role of naval warfare in the development of the early modern world is in need of exploration. There is now a case to suggest that too much emphasis has been placed upon the British experience in generalizing as to how monarchs and statesmen viewed their sailing navies. Research in diplomatic and economic history has opened up a number of questions about the conclusions made by historians at the end of the nineteenth century.

Today, the student of naval history has an extremely rich inheritance. A great deal is known about naval warfare. The archives of most maritime nations have vast collections of naval documents. Much more than armies, navies relied upon the organization of large quantities of materials and skilled craftsmen. They relied upon the maintenance of large-scale capital investments in the form of docks, storehouses and a variety of

manufacturing facilities. They relied upon effective investment and manpower planning. They required sophisticated design capability. They needed skilled seamen and officers. Most of all they required money. All these requirements necessitated the early development of effective and efficient administrators, who collected and preserved the documents that their activities produced. They have not always been carefully preserved. Decay and fire have wrought severe damage to some archives. Cataloguing is not always complete and in some archives access is difficult. It is hardly surprising that after one hundred years, these archives have not been exhausted by scholars. The chapters that follow are an attempt to present a history of seapower, particularly the role of the oceanic battlefleet, in the period 1650–1830 in the context of current research. It is hoped that the study will also encourage readers to look again at some of the traditional interpretations of naval history and research for themselves some of the issues now being raised.

Chapter Two

The changing maritime world

War at sea requires resources that are generated by maritime communities—skilled seamen, navigators, shipwrights, a variety of artisans who work in iron, hemp, canvas and wood, shipyards, and suppliers of raw materials and preserved foodstuffs. To exercise seapower a state must mobilize and organize these specialist resources. The history of seapower is very much the story of how states exerted that influence and how successful they were in achieving the ends expected of them.

To understand seapower, therefore, it is important to understand where the major maritime resources were, how they changed over time and how different states related to these resources. The major changes in the maritime world between 1650 and 1830 were not so much technological but in the scale and diversity of operations. Since the end of the fifteenth century, wealth had come across the seas from Africa, America and Asia, but Europe remained predominantly an agricultural economy with regional trading patterns. From the 1660s there was a major expansion in transoceanic shipping. The wealth generated from sugar, tobacco and other tropical produce grew disproportionately, stimulating investment in shipping and associated industries.

The figures given in Table 2.1¹ must be viewed with extreme caution. Tonnage was, broadly, a measure of the carrying capacity of a ship. Countries had different means of calculating this figure and the measures changed over the period.² Nevertheless, it is clear that there was a spectacular rise in Dutch and English shipping tonnage between 1660 and 1700. It was followed to an extent in France, North America and elsewhere. The growth before 1700 was not sustained in the first half of the eighteenth century, but accelerated again after 1750. By 1789, Britain, France, the United States and a number of lesser states all had significant merchant fleets. In 1650 long-distance shipping was largely in the hands of monopoly joint stock or regulated companies. By 1789,

Table 2.1 European merchant shipping tonnage (000s of tons)

Year	Dutch	England	Germany	France	Spain/ Portugal	Italy	Venice	Genoa	Denmark/ Sweden
1600	240								
1603		60							
1629		115							
1636	500								
1670	600	94	104	80					
1676	900	500		100					
1686		340							
1700	500								
1702		320							
1750	500								
1761		460							
1775		700							
1786		752							
1787	398	882	155	729	234	312	60	42	555
1788		1,055							
1790		1,290							
1800		1,856							

Source: R. W. Unger, "The tonnage of Europe's merchant fleets, 1300-1800", *American Neptune*, lii (1992), pp. 260-1. The blanks indicate that figures are not available.

there was a mass of smaller private companies that traded throughout the world. The expansion of trade across the Atlantic and into the Indian Ocean intensified rivalries and raised the stakes in conflict. Between 1650 and 1815, war at sea became gradually more intense as the opportunities for war and reasons for it expanded.

The North Sea

In many ways the North Sea was the focal point of the European maritime world in 1650. It was the narrow seaway which linked the two complementary maritime markets of the Baltic and the Mediterranean. In the fifteenth and sixteenth centuries, grain from Poland and herring from the Skanor and Rügen fisheries were vital foodstuffs needed by the populations of southern Europe. Timber from Norway and hemp, tar and pitch from Riga and Königsberg were important building materials. These bulky goods could be carried overland but at costs far higher than the sea route. Grain brought by sea

from Danzig to Venice was only 25 per cent the cost of grain brought overland.³ Cloth, silver and especially salt for the herring industry were the main commodities sent northward.

The Dutch, occupying the eastern shores of the North Sea, were ideally placed to take advantage of this important seaway. The Dutch fishing industry was highly developed by the late Middle Ages. The *buis*, a capacious fishing vessel equipped with nets and curing facilities, dominated the Icelandic cod fishery. They had a thriving whaling industry, centred around the island of Spitzbergen. When the herring shoals began to move out of the Baltic into the waters off Norway between 1500 and 1550, Dutch fishermen were well equipped to exploit the opportunity.⁴ The technical advantage of Dutch commerce was reinforced by the invention of the *fluyt* around 1590. These cargo vessels were both cheap to build and easy to sail. Their design was such that they also minimized the duties for which the merchants were liable. They were cheap to maintain and, consequently, safer and more reliable than other vessels on the trade routes in Northern Europe.⁵

Dutch advantage did not just lie in ship technology. The dunes and estuaries around the Zuider Zee were the centre of the wood trade. Wood brought from Norway was prepared in the yards for the European markets. The concentration of capital, mercantile experience, expertise in exploiting wind power, labour-saving devices and manipulating wood were easily transferred to the shipyards. By the early seventeenth century Dutch builders were able to produce vessels 40 to 50 per cent cheaper than it was possible in England.⁶ From the 1630s the shipbuilding industry expanded dramatically along the banks of the Zaan river, just north of Amsterdam. There were 25 wharves along the river in 1650, and 60 by 1669. The yards produced the large cargo vessels and whalers for oceanic trades. The prosperity of the Zaan yards peaked in the first years of the eighteenth century, but as Amsterdam and Rotterdam took a greater share of the market, Dutch shipbuilders remained an important force throughout the period of the commercial wooden ship.⁷

The experience of the Dutch in European coasting trades also provided them with a network of merchants along the trade routes.⁸ Amsterdam was ideally placed within a network of inland waterways to act as the distribution centre for northern Europe's inbound and outbound trade. It took English woollens and was the centre for Baltic goods. The city became the entrepôt for Asian spices brought back by the Portuguese Carreira da Índia and their own East India Company (Vereenigde Oostindische Compagnie (VOC)). The capital market was highly developed, providing the silver

required to finance the Baltic trades. The city experienced enormous growth in the early seventeenth century, rising from a population of about 50,000 in 1600 to 200,000 by 1650.⁹

A further advantage enjoyed by the Dutch merchants was the unambiguous support of their governing body, the States General. The importance of trade was vital both for foodstuffs and to finance the war against Spain. The advantage of the *fluyt* was that it was lightly armed, allowing maximum space for cargo. This was only possible thanks to the States General organizing armed convoys, paid for by duties levied on the merchants. While other states remained weak at sea, this expression of maritime power by the Dutch was enough to preserve the bulk of its merchant marine from destruction by privateers and pirates. The longer-distance trades, to the Mediterranean, the West Indies and the East Indies, were organized by companies who, protected by monopoly profits, were responsible for arming their own vessels.¹⁰

By 1650, the Dutch could underprice and outperform any other merchant carrier for almost any trade in Europe. However, their pre-eminence was vulnerable. They depended on free access to the markets of Europe, the Americas and Asia. They also depended on free and peaceful navigation between these markets. Ultimately, they depended on their military and naval capacity to enforce this freedom of access and navigation. The doctrine of *Mare Liberum* was fundamental to Dutch prosperity, but during the next fifty years this capability was dramatically reduced by France and England in a series of wars. By 1713, the Dutch had to recognize that their military and naval security was dependent upon England or France. Their commercial advantage had diminished, but the Dutch merchant fleet still exceeded that of both England and France together. It was not until the 1750s that British shipping tonnage exceeded that of the United Provinces.¹¹

Throughout the period 1650-1830, the United Provinces remained a highly sophisticated maritime economy. Its influence on maritime warfare was substantial because its position, bordering on the North Sea, was a threat to that commercial waterway and to England. It possessed a highly diverse and experienced maritime industry which, together with its vast world wide trading networks, made it an important factor in the evolution of war at sea.

On the other side of the North Sea stood another state whose impact on the evolution of naval warfare was to be considerable-England. The foundation of English maritime commerce was in bulky, low-value goods like cloth, fish and coal. All these trades required efficient bulk carriers. English ships also traded extensively in Mediterranean and American waters which required large vessels capable of defending

themselves in distant waters. England possessed a highly diverse maritime economy by 1650 and the significance of English competition could not be ignored by the Dutch. The coastal regions of England were alive with activity. In 1500 90 per cent of English trade had been concentrated in London. The growth of the Baltic, Mediterranean, African and American trades had stimulated growth in Hull, Southampton, Chester, Bristol and later Liverpool. The market for cloth in France and the Newfoundland cod fishery had created a major growth in the West Country shipping industry, while the Icelandic fishery expanded the east-coast fishing fleet. Cloth made up about 90 per cent of English exports as late as 1600, but by 1650 there had been a major growth in colonial produce. In the years that followed, the trade in colonial produce like tobacco, sugar, indigo and dyewoods was to expand greatly as England became a major entrepôt for the re-export trade to Europe. Some of the ships that plied the trade across the Atlantic were small vessels of less than 100 tons, but most of the ships were between 100 and 200 tons working to and from North America and around 200 tons for those ships engaged in the West Indies trades. In the last half of the eighteenth century the size of vessels in the Caribbean trades grew significantly, reaching 400 tons.¹² Thus, these relatively high-value bulk trades created a fund of experience in maintaining large vessels over long distances. The value of these trades was recognized in Holland and England. While England and the United Provinces were united by a common religion and had been faced with a common threat from Catholic Spain, they were increasingly divided by their vital maritime interests.

Like the Dutch, the English government gave increasing support to its merchants. The English Commonwealth (1649–60) introduced the first of what was to be a complex series of legislation that was collectively known as the Navigation Laws.¹³ These laws, which were not finally repealed until 1849, formed the legal and diplomatic basis of a sustained policy of vigorous government support of maritime commerce. Although England, like every other European country, was politically dominated by a landed aristocracy, the links between the political elite and maritime interests were so much more effective than her rivals. The consequence of political support and finance was to have an important impact over the period.

Given the significance of the North Sea to European sea-borne commerce and the importance of maritime trade to England and the United Provinces, this region became the focal point of naval conflict in the years after 1650. In 1650 neither country could exclude the other from its markets by commercial advantage, diplomacy or force. In both countries, the credit facilities provided by a thriving merchant community were vital to state finances. The expanding maritime communities of merchants, seafarers and