INTRODUCTION

THEORIES OF NAVAL POWER: A. T. MAHAN AND THE NAVAL HISTORY OF MEDIEVAL AND RENAISSANCE EUROPE

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ONE of the interesting phenomena in naval historical study during the twentieth century was the curious way in which ideas attributed to the American naval officer, Alfred Thayer Mahan, permeated, for a time, nearly every aspect of Anglo-American writing on naval history. His thought even influenced historical thinking about the medieval and Renaissance periods, eras that he never even considered in his own writing. Thus, in thinking about the previous literature on maritime and naval affairs in Europe between the tenth and seventeenth centuries, one needs to start with a clear understanding of Mahan's place in the development of naval thought, to see both its contributions and its limitations, while understanding that interpretations of Mahan's work have also changed.

Mahan was certainly the most widely influential naval writer and theorist of the past century. In the years between the mid-1880s and his death in 1914, he wrote the fundamental books and articles that clearly established a distinctly Anglo-American theory of naval power, or in the words that he popularised, 'sea power'. Over the past century, his work has had immense influence on naval scholarship around the globe. With Britain's Royal Navy and the United States Navy as the successive and dominant superpower navies of the twentieth century, it is not entirely surprising that scholars have used Mahan's writings as a benchmark in their understanding of naval power and maritime conflict. Many of his 20 books, 161 journal articles, and numerous other pieces have been reprinted.[1] His most famous book, *The Influence of Sea Power upon History, 1660–1783*, has had more than fifty printings and been translated into at least six languages. It has never gone out of print since it was first published in 1890. Some writers have considered it to be one of the most influential books in history. Certainly we can trace references to Mahan's thought as far a field as the development of the German navy before the First World War, in the imperial Japanese navy in the years up to and including the Second World War and in

[1] John B. Hattendorf and Lynn C. Hattendorf, compilers, *A Bibliography of the Works of Alfred Thayer Mahan* (Newport: Naval War College Press, 1986; reprinted 1990).

Latin American navies.[2] In the past thirty years we have made significant strides in establishing a research basis for understanding Mahan and his ideas more thoroughly. His correspondence has been published;[3] there is also a major biography,[4] a guide to an important collection of his manuscripts,[5] a full bibliography of his works,[6] and, most recently, a new analysis and interpretation of his thinking.[7]

In examining Mahan's influence, however, we face a number of analytical problems. In some circles, he has been treated as a kind of distant oracle, unfathomable, and too complex to approach directly. Many use his name and quote a line or two from him, but few among this group have read his work in any depth. Others have disregarded Mahan completely, dismissing him as a commentator on things irrelevant, long past, and now forgotten. A third group, in commenting on his work, has attributed to Mahan thoughts and ideas that distort his contribution. Some have selected and exaggerated his ideas, using him as a kind of bogeyman in naval affairs so that one completely misses the careful nuances by which he actually saw issues. Such misperceptions about his thought have gained so much currency that, today, we are faced with a false ghost as well as the nineteenth-century man and what he actually wrote.

One can find all of these approaches among those that have thought and written about the practical applications of naval strategy in the twentieth century. Yet, Mahan has had influence with another group and in another context: historians and historical literature. One can find among them the same categories as I have described among naval strategists, but with some additional ones. First, there are historians who have taken out of context Mahan's analysis of the Anglo-Dutch and the Anglo-French naval wars in the period 1660–1815 and applied it to regions and periods that he never studied or thought about in any depth. Thus, one can find questionable applications of Mahan's ideas in

2 See Roger Dingman, 'Japan and Mahan', Holger Herwig, 'The Influence of Mahan upon German Sea Power', and Guillermo J. Montenegro, 'The Character and Extent of Mahan's Influence in Latin America', in John B. Hattendorf, ed., *The Influence of History on Mahan* (Newport: Naval War College, 1991), 49–80, 87–98.

3 Robert Seager II and Doris Maguire, eds., *The Letters and Papers of Alfred Thayer Mahan* (Annapolis: Naval Institute Press, 1977).

4 Robert Seager II, *Alfred Thayer Mahan: The Man and His Letters* (Annapolis: Naval Institute Press, 1971) and the author's reflections nearly twenty years later, 'Alfred Thayer Mahan', in James C. Bradford, ed., *Admirals of the New Steel Navy: Makers of the American Naval Tradition, 1880–1930* (Annapolis: Naval Institute Press, 1990), 24–72.

5 John B. Hattendorf, compiler, *Register of the Alfred Thayer Mahan Papers*, Manuscript Register Series 15 (Newport: Naval War College Naval Historical Collection, 1987).

6 See note 2 above.

7 Jon Tetsuro Sumida, *Inventing Grand Strategy and Teaching Command: The Classic Works of Alfred Thayer Mahan Reconsidered* (Washington: The Woodrow Wilson Center, and Baltimore: The Johns Hopkins University Press, 1997). For the most important earlier analysis, see Herbert Rosinski, *Commentaire de Mahan*, préface de Hervé Coutau-Bégarie (Paris: Economica, 1997). Originally written during the 1940s and 1950s in English by a German, it has been published only in French. Rosinski's manuscript is in the Naval Historical Collection, Naval War College, Newport, Rhode Island.

interpretations of such periods as ancient and medieval European history, the early modern history of the Baltic and the Mediterranean states, or even Asian history. Second, there are historians increasingly in a position to challenge Mahan's understanding of seventeenth and eighteenth-century British and French history. With all the advances that have been made in historical scholarship over the past hundred years, the accuracy of Mahan's conceptions about the nature and the character of warfare at sea in the very period that he studied are open to question. Mahan wrote at a time when modern historical scholarship was very much in its early stages. His first sea power book on the period 1660–1783 was based largely on even earlier secondary works in both French and English. Although his later studies on the years 1793–1815 were increasingly based on manuscript sources, he nowhere matched the range and depth of monographic studies that others have since written. There has been a tremendous outpouring of new scholarship on naval warfare in the last half of the seventeenth century and over the full range of the long eighteenth century. Only now are scholars beginning to synthesise and to analyse it in terms of the questions that Mahan posed about naval warfare.[8] There is a continuing long and arduous research effort, to which many scholars are contributing directly and indirectly, to evaluate Mahan's interpretation of this period in history. As yet there is no full answer as to how much the new research changes Mahan's ultimate conclusion.

All of these problems and issues show that Mahan is still very much with us. Those of us working on naval history have a large research agenda lying before us that involves Mahan and we are only part of the way along its path. In order to understand Mahan, we first need to locate him properly within the context of his own time and to understand what he was trying to do. Second, we need a clear analysis and careful understanding of what Mahan has said and how he modified his views over his career. Third, we need to compare and contrast his understanding of the seventeenth and eighteenth centuries with modern scholarship and see how accurate are the conclusions that he drew. Closely related to this point, we need to ask whether or not any altered conclusions merit a fundamental change to strategic theory based on Mahan's original historical analysis. Fourth, when all this is done, one hopes that naval strategists will have a better understanding of naval power and historians can be more sensitive in showing the characteristics, differences, and similarities involved in maritime conflict in various historical periods, cultures, and geographical areas.

These are things that will come in the future, but, given the current state of our knowledge, what can we say about Mahan's theories today? How can we summarise the current state of our understanding of his thought and use it as an entering hypothesis and as a foil to set off, to complement, and to contrast a new

8 The most recent study in English on the first portion of the period 1660–1815 is J. R. Jones, *The Anglo-Dutch Naval Wars of the Seventeenth Century* (London: Longmans, 1996). The author of this article is undertaking a study of the Anglo-French Naval Wars, 1688–1815.

understanding of Europe and the sea in the Middle Ages and in the Renaissance?

First, let us go back and read his work in a new light, looking at him as neither deity nor devil, but as a classic writer, working within the context of his own times. We read a variety of other old authors and find value in their work, even if newer writers expand our knowledge in other directions. In doing this, we appreciate classic writers by putting them in a larger context, understanding that they are not the only lights we cherish. To do this with Mahan, we need to develop a little patience with Victorian writers and attitudes. We need to have some grounding in the world in which they lived and the naval scene that lay around them. Most of all, we need to accept the fact that Mahan wanted his historical writings to have direct relevance in his own time. At the same time, we need to be sensitive to the fact that naval theory is not dogma, but rather a constantly evolving process by which broad understanding of historical events is constantly changed and interpreted in the light of new insights, new dimensions, and new evidence.

For a significant part of the nineteenth century, Britain's navy was without a rival, as the pre-eminent force afloat. By the time that the term *Pax Britannica* came into use after 1886, it was already becoming a thing of the past.[9] Great Britain had never forced this situation upon the world through the operations of a large navy. It was merely created by the fact that no other nation had yet developed the industrial and economic capacity to challenge Britain with a rival navy. For the moment, other nations accepted the situation and were willing to accept her ideas of free trade, peace, and prosperity. The situation could only exist while others did not challenge it. The age of the *Pax Britannica* was over when nations other than Britain began to industrialise, produce steam machinery, lay iron railroads, construct iron and steel ships from the products of their own factories, and develop their own technological applications.[10]

In Mahan's time, the technological basis of navies had already begun to change in the long-term conversion from wood to iron and steel, from sail to steam, from round shot to shells. These revolutions in naval affairs and in industrial production began to take place at the same time as there was a fundamental change occurring in both the structure of international relations and the way governments were managing their armed forces. All this combined to bring a new approach to naval tactics and to naval strategy.

These manifold changes struck directly at traditional thinking about navies. Previously, naval leaders developed their strategy and tactics in terms of common sense and long professional practice, evaluating the capabilities of their ships and equipment in the light of the goals they wished to achieve. Of course, they still do, but it is done in a quite different way. The rapidly changing nature

9 Barry M. Gough, '*Pax Britannica*: Peace, Force and World Power', *The Round Table*, 314 (1990), 168.

10 Gerald S. Graham, *The Politics of Naval Supremacy: Studies in British Maritime Ascendancy* (Cambridge: Cambridge University Press, 1965), 120–1.

of international politics and of naval technology in the late nineteenth century brought everything into question and seemed to sweep all previous thinking away. Up to this point in naval affairs, there had been no real need to intellectualise the subject. Little professional naval literature existed. Mahan, and the others who may be counted among the earliest leaders of the movement to promote the study of naval history, Sir John Knox Laughton and Vice-Admiral Sir Philip Colomb of the Royal Navy and Rear Admiral Stephen B. Luce of the US Navy, all looked for a means to find some enduring and steady guide amidst the flux that surrounded them. Like these others, Mahan turned to Britain's experience as the pre-eminent naval power and sought to find guidance in its rivalry with France. This was neither an antiquarian pursuit of remote and forgotten technical details nor an academic enterprise to understand an important dimension of human experience, but quite differently: it was a search for understanding about the nature and character of naval power for Mahan's own times.

Mahan, like so many others in his era, shared a broad interest in the period from 1660 to 1815 during which Britain had successfully acquired a global empire. Understandably, Mahan was particularly interested in the naval wars of 1793–1815. Not only did those years mark the culmination of naval warfare under sail, but also they were, for his generation, as the Second World War is for ours, those of the last great, sustained naval war.

We realise today that these historical examples, which Mahan found so interesting, do not have universal validity, but a century ago they did seem relevant to aspiring nations, such as the United States, in a new age of imperial rivalry. In choosing this subject, Mahan focused on maritime conflict between two highly organised, great-power navies, that had extensive naval infrastructure, a relatively large bureaucratic establishment to manage the industrial support, manpower, and financial resources involved. This period was one of a relatively stable level of technology in navies, not one of massive and dramatic change. At the same time, the naval wars between England and France involved the repeated employment of naval forces in successive wars in the context of geostrategic issues that remained largely the same from war to war. Mahan focused his thought on understanding some broad aspects in the strategic relationships and battles between modern, great-power navies, but he never attempted to come to grips with the impact of advanced industrialisation on naval power and its dependency on the successful management of technological change and financial resources. To many of us today, Mahan's ideas seem quite inappropriate to small- and medium-sized navies in the context of contemporary affairs, particularly in terms of the current concerns of coastal navies. Today, we are much more wary of drawing universal conclusions based on too small an analytical base.

To be fair, we must not forget that Mahan himself also looked at some other, very different contemporary naval actions in his own time. These included the American Civil War, the Spanish American War, and the Russo-Japanese War. It is worthwhile to re-read his thoughts on these wars to see how he understood

them as a contemporary. Yet, the very contemporaneousness of his observations creates problems for us when we are evaluating his historical judgements. This is something that presents a further problem in understanding Mahan's contribution today.

This is not the only problem; in general, it is very difficult to grasp what Mahan said. There are several reasons for this. First, there was Mahan's own reluctance to summarise his thought in any abstract form, along with the large quantity of material he wrote that needs to be compared and collated to find out how his ideas changed over his career. At the end of his career, he did not hold entirely to all of the things he had said in his first book. Like all of us, his ideas evolved and grew over time, with further experience and insight.

Second, along with Mahan's immense production, it is difficult to grasp his complete argument due to the very methods that he used. He worked with two approaches in a manner that we might today think are the conflicting methods of the historian and the political scientist. On the one hand, he was interested in historical narratives that explained broad aspects of the past and, on the other, in concepts that could be applied to formulating strategies for future situations. Different as these two are, Mahan found them closely tied, in fact essential, to one another.

> Formulated principles, however excellent, are by themselves too abstract to sustain convinced allegiance. The reasons for them as manifested in concrete cases, are an imperative part of the process through which they enter the mind and possess the will. On this account the study of military history lies at the foundation of all sound military conclusions and practice.[11]

Later, he expanded on the reciprocal method of using statements of principles with detailed historical narratives.

> Each is a partial educator; combined, you have the perfect instructor. Of the two, History by itself is better than formulated principles by themselves; for in this connection, History, being the narrative of actions, takes the role which we commonly call practical. It is the story of practical experience.[12]

Noting the need for greater professional understanding in the naval service, Mahan went on to say,

> We all, I trust, have advanced beyond the habit of thought which rates the rule of thumb, mere practice, mere personal experience, above practice illuminated by principles, and reinforced by knowledge, developed by many men in many quarters. Master your principles, and then ram them home with illustrations, which History furnishes.[13]

[11] A. T. Mahan, 'The Naval War College', *Armaments and Arbitration* (Boston: Little Brown, 1912), reprinted in John B. Hattendorf, ed., *Mahan on Naval Strategy*. Classics of Sea Power series (Annapolis: Naval Institute Press, 1991), 350–1.
[12] A. T. Mahan, *Naval Strategy Compared and Contrasted with the Principles and Practices of Military Operations on Land* (Boston: Little Brown, 1911), 17.
[13] Ibid.

By and large, this duality of understanding is very wise advice and we can gain much from Mahan's pioneering efforts and ideals. However, the last sentence might give us pause. Our modern eyes see very differently from this; at least, we would express it differently. As historians, we certainly do not want to promote the idea that it is sensible to use arbitrary principles or that we should ravage history and take examples out of context to prove a political point. Today, I suspect many of us would probably prefer to proceed by inductive observation of many detailed instances to create a changing, general understanding rather than to deduce our understanding of a particular instance from a decreed principle.

Mahan was always careful to point out that there were only a very few leading considerations of importance. Using them in an extensive study of detailed cases, he believed, gave firmer grasp of the central points, deeper understanding, and allowed one to sort out the critical features in naval strategy from the less important details. Nevertheless, he was uneasy about emphasising principles, even when he used them.

Mahan dealt with several broad areas of interest. Sometimes, he was talking about the broad effect of navies in history with naval historians in mind. At other times, he was talking about the basic character of naval strategy with naval officers and future strategists in mind. Between the two areas, there are some differences in the principal considerations. Since we are considering Mahan in the context of his historical interpretations, it is important to emphasise that Mahan's purpose was to educate naval officers for the future. Here he was dealing with the problem of how human cognition and learning relate to purposeful action. He believed that those who conducted naval warfare needed to balance the conflicting propensities of art and science, with art as the dominant factor. As Jon Sumida put it, 'Mahan therefore insisted that the study of history serve as the primary agent of advanced education for those charged with the task of directing what was technologically and bureaucratically the most complex institution of his time, and ours'.[14]

Many readers of Mahan's work have tended to concentrate on the first chapter of *The Influence of Sea Power upon History* and the argument that Mahan made there for the political-economic basis of sea power.[15] In fact, this chapter was not an original one, but an afterthought, built partially from ideas that he obtained from other writers, most notably through an essay by a young officer, Ensign William G. David, in the US Naval Institute *Proceedings* in 1882.[16] Mahan's political-economic argument was fundamentally based on his basic assumption that 'Notwithstanding all the familiar and unfamiliar dangers

14 Sumida, *Inventing Grand Strategy*, 117.

15 A. T. Mahan, *The Influence of Sea Power upon History, 1660–1783* (Boston: Little Brown, 1918), chapter 1, 25–89.

16 Ensign W. G. David, 'Our Merchant Marine: The Causes of Its Decline and the Means to Be Taken for Its Remedy', US Naval Institute *Proceedings*, VIII (1882), 151–86, quote from 157. William Glenn David (d. 1934) was appointed to the Naval Academy from New York

of the sea, travel and traffic by water have always been easier and cheaper than by land'.[17]

As Jon Sumida has summarised Mahan's arguments, they had three aspects.[18] First, there were the maritime economic elements, specifically production, shipping, and colonies, which Mahan saw as the key to prosperity and the prime motivators behind the policies of coastal states.

Second, he argued that supremacy in organised armed force at sea, in other words naval supremacy, was essential to the protection of the maritime economic elements. This was something that he believed was critically important in conflicts between major powers. Third, sea power was the combination of both the naval and maritime economic factors. In Mahan's view, the capacity to develop sea power was determined by six conditions: geographical position, physical conformation including natural resources and climate, extent of territory, size of population, national culture, and political structure.

Closely tied to Mahan's political-economic argument is his argument about the need for a government to pursue a strong maritime and naval policy. In all of this, Mahan's general line of reasoning has several presuppositions. The first results from Mahan's choice of historical period. In the years 1660–1815, it a maritime state, Britain, that dislodges a land-based power, France, as the world's leading power. It is this particular development that Mahan is trying to explain and which he uses as the basis for his generalisations. Second, Mahan represents the 'navalist' school of thinking that found its justification in selected aspects of the broad outline of post-sixteenth-century global economic and political developments. Here Mahan was thinking of the shift from the Mediterranean to the Atlantic and the great profits and empires that resulted from colonial and commercial enterprise across the world's oceans. As some of Mahan's critics have shown, this interpretation tends to overlook the importance of domestic production and to exaggerate the importance of overseas trade. In the specific case of Britain in the long eighteenth century, it tends to ignore the complementary economic, political, and military 'continental' dimensions of British power.[19] Third, Mahan's argument about the importance of government policy is specifically designed to be a lesson to the American government. In Britain's case, Mahan argued, her geographical and economic conditions required emphasis on naval power rather than on land power. France, however, with both her land and maritime power, had mistakenly failed to institute aggressive and effective policies that supported the national, maritime dimension.[20]

In addition to these insights into Mahan's thought, modern historians working

and graduated third in the class of 1877. He resigned his commission in August 1884, but served again briefly during the Spanish–American War, May–September 1898.

17 Mahan, *The Influence of Sea Power upon History*, 25

18 Sumida, *Inventing Grand Strategy*, 17

19 Paul M. Kennedy, *The Rise and Fall of the Great Powers: Economic Change and Military Conflict from 1500 to 2000* (New York: Random House, 1987), 96–7.

20 Sumida, *Inventing Grand Strategy*, 28–30.

on the 1660–1815 period have begun to sharpen and recast the distinctions in Mahan's list of six specific conditions. Daniel Baugh, for example, has drawn a clear distinction between the *elements of naval power*[21] and the *foundations of sea power*.[22] The elements of naval power, he argues, include all matters relating to warships including their design, construction, guns, timber, stores, and facilities for upkeep and repair. In addition, there are the matters of the physical sustenance of sailors: food, drink, and general health issues. On top of that, there are the issues of training sufficient numbers of seamen for wartime needs and to educate and train a competent set of officers. These factors were ones that required the development of specialised administrative structures to coordinate activities and to nurture a profession. In examining the foundations of sea power as something distinct from the elements of naval power, it is clear that state-operated armies and navies were the instruments that directly carried on the contest between the rivals for global supremacy. To provide for them, the fundamental issue was state revenue. A substantial part of the taxes that created state revenue derived from maritime trade and commerce. Through this link, the success of the commercial system affected armies and navies. Additionally, when the sources of revenue were insufficient to meet the immediate demands of the state, financial credit based on the capital that merchants accumulated and the system of financial administration became matters of fundamental importance to naval and military power. In the eighteenth century, the relative successes in these areas were among the determining factors that governed overall naval success between rivals.

Mahan's analysis completely missed understanding the fundamental economic and financial basis for the creation and maintenance of a state's naval power. In this, he reflected his own explicit advice to naval officers: with Nelson's phrase in mind, that 'An officer should have political courage', Mahan repeatedly told officer students at the Naval War College,

> Political courage, to be well based, requires political knowledge as well. That you may more effectively concentrate upon this necessary knowledge, avoid dissipating your energies upon questions interior to the country; questions financial, sociological, economical, or what not. The sphere of the navy is international solely. It is this, which allies it so closely to that of the statesman.[23]

Mahan's narrow outlook here is one that more recent historians have been working to correct through their considerations of the 'The Financial Revolu-

21 Daniel A. Baugh, 'The Elements of Naval Power in the Eighteenth Century', in John B. Hattendorf, ed., *Maritime History: The Eighteenth Century* (Melbourne, FL: Krieger Publishing, 1997), 119–35.

22 'Trade and Colonies: Financial and Maritime Strength', in Hattendorf, *Maritime History*, 145–63.

23 A. T. Mahan, *Naval Strategy . . . Lectures Delivered at the U.S. Naval War College, Newport, R.I., between 1887 and 1911* (Boston: Little Brown, 1911), 21.

tion', 'The Military Revolution', the rise of the bureaucratic state, and the broader commercial and imperial aspects that comprised the Atlantic world.

It is not just the dimension of broad historical explanation in Mahan's thought that has been subjected to extensive re-examination and elaboration. The explication of the elements of naval strategy and war at sea interested Mahan as much or more and that dimension has drawn scrutiny as well. Mahan's in-depth studies of naval strategy and the conduct of naval warfare lie in works other than his *Sea Power* series.[24] In this area, in particular, Mahan stressed the importance of the art of command rather than rigid principles. Here, in particular, Mahan's followers often did heed what Mahan said. Stressing oversimplified maxims and rigid application of principles, they contributed to much misunderstanding about Mahan. The writer himself, however, had clearly cautioned that,

> the maxim [of war], rooting itself in a principle, formulates a rule generally correct under the conditions; but the teacher must admit that each case has its own features, like the endless variety of the human face, which modify the application of the rule, and may even make it a times wholly inapplicable.[25]

In analysing naval strategy, Mahan emphasised three conditions on which the strategic value of any place depends: its geographical situation in relation to essential lines for trade and communication, its offensive and defensive military strength, and its resources for survival. When all three conditions are found in the same place, one normally has a place of primary importance. A crossing point for two or more lines of travel is always a central, strategic position, as it facilitates travel in several directions. Narrow places along a main route are particularly important. Thus, places like Gibraltar, Suez, and Panama are key positions. So also are those key places where various means of trade and communication converge to serve a large area. The second element in considering strategic value is offensive and defensive military strength. In this regard, it is possible to think of a place that is ideally situated strategically, yet, in practical terms, is indefensible. The main consideration here is in maintaining defences from attack that allow the offensive portion of one's military strength to act more freely. For example, a naval base may be defended by various kinds of forces, including coastal artillery and mines, while the fleet, operating from that base, plays the offensive role, intercepting enemy forces. The third element, resources for survival, involves the ability to maintain a stream of all the necessary supplies. It means the ability to attend to all the needs of a fleet in terms of its people, relieving them as necessary. It also means the ability to repair ships and equipment expeditiously. Here, a navy's industrial repair facilities and dry-docks are key factors in maintaining its offensive power.

Mahan added a fourth interrelated area in analysing naval strategy. He called it strategic lines, the routes that connect the various places of primary strategic

24 Sumida, *Inventing Grand Strategy*, chapter 4, 57–79: 'Strategic and Professional Arguments in the Lesser Works'.
25 Mahan, *Naval Strategy*, 300.

position. At sea, these are generally the shortest practicable routes between places. These fall into two categories: open sea routes and coastal routes. The shortest route is usually an open sea route, but maintaining this in wartime requires military command of the sea. Without it, one is forced to use open sea routes evasively or, alternatively, to use whatever protected or neutral coastal routes might be available.

When one extends this thought from the lines that connect the key positions within a particular theatre of operations to the strategic lines that connect key points on a world-wide scale, one moves to the heart of a great power's naval strategy. In this context, Mahan argued that the fleet was a kind of movable, key strategic position. Organised force at sea, he said, is the determining strategic feature. Finding the way to reduce an enemy's fleet to inactivity, temporarily or (preferably) permanently, dislocates the enemy's ability to protect and to maintain its strategic lines. This is the point Mahan was making about decisive battles at sea. The obvious way to dislocate an enemy fleet permanently was to destroy it in a battle. This was the reasoning behind his emphasis on the great fleet battles that had such an objective in mind.

The key to dislocating an enemy's naval power was through maritime superiority. Mahan wrote, 'the supreme essential condition to the assertion and maintenance of national power in external maritime regions is the possession of a fleet superior to that of any probable opponent'.[26] To maintain this fleet, it is necessary to have a certain number of bases, but their defence and maintenance should be balanced and not be allowed to reduce the offensive power and superiority of the fleet at sea. Most importantly, the maintenance of a system of protected, maritime stations depends ultimately upon the navy to maintain its superiority. The main threat to that superiority is an enemy naval force and, therefore, it should be the proper objective. As the enemy's fleet is essential to the enemy's own connections between its scattered strategic points, a blow at them is 'the surest blow of all'.[27]

All of these areas of consideration, strategic position, strength, resources, and strategic lines, were interconnected in Mahan's thinking. He summarised his argument this way:

> The service of the fleet and of the ports is reciprocal; but, except for the home ports, they have more need of it than it of them. Therefore the fleet should strike at the organised force of the enemy afloat, and so break up the communication between his ports.[28]

In moving on from this basic point to consider the issues involved in distant operations and maritime expeditions, Mahan emphasised that there were two fundamental prerequisites: a reasonably secure home frontier and a navy

26 Mahan, *Naval Strategy*, chapter VIII. Reprinted in Hattendorf, ed., *Mahan on Naval Strategy*, 168.
27 Ibid., 176.
28 Ibid.

adequate to dispute control of the enemy at sea. With these established, one could move forward, choosing an appropriate advanced base of operations, an objective, and a line of operations.[29] Such overseas expeditions usually involve transporting a large body of troops. In putting them ashore, the navy must seize and maintain superiority at sea in order to ensure their safety and their ability to carry out their own mission to hold a land area. When such a joint operation has successfully won its position, naval forces shift from playing an offensive role to an offensive-defensive one. At this point, the navy should be released from the expedition and the army should maintain full defence and further prosecute the campaign ashore, while the fleet resumes its natural role in charge of sea communications. The navy functions in two prominent ways in defending against an attack on one's own coastline: it can drive or draw any enemy sea force away from the critical area by a battle that defeats an enemy threat, or it can attack other areas that force the enemy to divide and, therefore, to weaken his forces.[30]

When one strips away the baggage that Mahan's critics and commentators have surrounded him with, and goes back to his own words and writings, we find in the principles and key points that Mahan made when he analysed naval history much that is fundamental and valuable to understanding naval operations. Mahan will continue to deserve our attention as the most successful and most widely recognised of the early theorists of maritime warfare. His understanding, summarised and translated into more modern terms, can stimulate some new insights. We can no longer rely on Mahan's insights alone, however, to interpret naval warfare. The experience of the past century demonstrates vividly how they have been misunderstood, misapplied, and distorted.

In examining naval theory, Mahan is not enough. One must deepen the approach and look to other writers who have since widened our vision and deepened our understanding.[31] Among Mahan's predecessors, Sir John Knox Laughton's writings provide key understanding for the foundations of the Anglo-American historical tradition of strategic study.[32] Rear Admiral Stephen B. Luce was the guiding force directing Mahan. His ideas are essential in placing Mahan in a wider context.[33] Among Mahan's contemporaries,

29 Ibid., Chapter IX, reprint 182.

30 Ibid., 219–20.

31 In general, see Hervé Coutau-Bégarie, ed., *L'Evolution de la Pensée Navale, I–VII* (Paris: FEDN and Economica, 1990–9). The works of ten key writers are included in the US Naval Institute's Classics of Sea Power series edited by John B. Hattendorf and Wayne P. Hughes, Jr. For an overview of a range of thinkers, see John B. Hattendorf, 'The Anglo-French Naval Wars (1689–1815) in Twentieth-Century Naval Thought: The Caird Lecture', *Journal of Maritime Research* (2001), http://www.jmr.nmm.ac.uk

32 On this general point, see D. M. Schurman, *The Education of a Navy: The Development of British Naval Strategic Thought, 1867–1914* (Chicago: University of Chicago Press, 1965), and on Laughton, in particular, Andrew Lambert, *The Foundations of Naval History: John Knox Laughton, The Royal Navy and the Historical Profession* (London: Chatham, 1998).

33 John D. Hayes and John B. Hattendorf, eds, *The Writings of Stephen B. Luce* (Newport: Naval Institute Press, 1975).

Vice-Admiral P. H. Colomb's 1890 work, *Naval Warfare: Its Ruling Principles and Practice Historically Treated*,[34] provides an independent and pioneering attempt to analyse naval history done at the same time that Mahan was writing. Colomb's work, in particular, influenced strategic thinking in Russia and the Soviet Union, while Rear Admiral Bradley Fiske's *The Navy as a Fighting Machine* provides a contrasting, but nevertheless an equally valuable, early-twentieth-century approach to naval thought that deals more explicitly with the context of new technology. Another who deserves to be read alongside Mahan is Charles Callwell of the British Army whose nearly forgotten classic on joint warfare written in 1905 has recently been rediscovered and is having some impact on current thinking on joint warfare.[35]

Most important of all, however, is the 1911 work of Sir Julian Corbett, *Some Principles of Maritime Strategy*,[36] which subsumes a great deal of Mahan's thought into a much more complete analytical framework and is based on more sophisticated historical research. Corbett clarified Mahan's concept of the command of the sea, pointing out its temporal nature. He directed attention to the capacity of naval power for limited warfare. He showed that there was a significant difference between warfare that centred around the struggle to use the sea and warfare when a power had won the use of the sea and so used that control for its own purposes. Most important among Corbett's contributions to the theory of naval power is his refined understanding that maritime warfare is typically characterised by being limited in its objectives, and that naval warfare involves three main categories of operations: first, securing command of the sea by preventing an enemy from posing a threat, either through obtaining a decision in a battle or through a blockade; second, disputing another power's command of the sea by maintaining a potential threat or conducting minor counterattacks; and third, exercising control of passage and communication by sea. The last category of operations is quite different from the first two and involves the spectrum of naval operations for a power that has command of the sea. In this category, one may find defence against invasion, attack and defence of commerce, attack, defence, and support of military operations.[37] Corbett understood war at sea as part of the general phenomenon and theory of warfare and argued that navies involve only one aspect of related maritime activities. Admiral Sir Herbert Richmond carried forward Corbett's work and modified it

[34] Vice-Admiral P. H. Colomb, *Naval Warfare: Its Ruling Principles and Practice Historically Treated*. See the revised third edition, with an introduction by Barry M. Gough (Annapolis: Naval Institute Press, 1988).
[35] Charles Callwell, *Military Operations and Maritime Preponderance: Their Relations and Interdependence*. With an Introduction by Colin Gray. Classics of Sea Power series (Annapolis: Naval Institute Press, 1996).
[36] Sir Julian Corbett, *Some Principles of Maritime Strategy*. See the critical edition with appendices and an introduction by Eric Grove. Classics of Sea Power series (Annapolis: Naval Institute Press, 1988).
[37] Ibid., 161–7.

with insight gained in his own studies of eighteenth-century naval warfare as well as in observing the conduct of the First World War.[38]

Beyond these key writers, students of the theory of naval power need to understand, too, the contributions of writers who view naval strategy from national viewpoints outside the Anglo-American great-power tradition. There are other writers, even from Mahan's period, that have yet to be revived for modern study.[39] After Mahan's time, the experiences of the world wars in the early and mid-twentieth century have provided many new insights. For this period, no one has yet convincingly analysed the experience of the Royal Navy and the US Navy during the Second World War, using the broad analytical terms that Mahan would have employed. We certainly have the historical perspective for someone to take up that task. Yet, one can benefit from reading the work of writers dealing with smaller navies and with different national outlooks: Germans Wolfgang Wegener[40] and Herbert Rosinski;[41] a Frenchman, Raoul Castex;[42] and an Italian, Romeo Bernotti.[43] Students of naval theory are well advised to read many more historians from other countries with complementary and differing naval experiences. To do so brings into focus the point that there are different types of naval powers, whose navies serve different purposes and strive to achieve different objectives. Reflecting on a general survey of world history, one historian has identified three types of powers that have used navies, and suggested theoretical types of naval strategies. First, there are nations in which navies have been the principal strategic arm for defence and usually maintain a naval force that is relatively larger than their opponents', and tend to take an offensive naval stance. Second, there are continental powers that rely on their armies for protection and use naval power in a defensive stance and in support of their armies, depending on allies for offensive capabilities. Third, there are small powers whose armies and navies can only perform local services or deal with similarly sized powers, depending on larger allies for both land and sea defence in the event of a conflict with a major power.[44]

Since the end of the Second World War, we have come to understand clearly that navies have an important role in peacetime, and a role that Mahan did not

38 See James Goldrick and John B. Hattendorf, eds, *Mahan is Not Enough: The Proceedings of a Conference on the Writings of Sir Julian Corbett and Admiral Sir Herbert Richmond* (Newport: Naval War College Press, 1993).

39 However, we can now readily obtain a recent edition of the Russian Admiral S. O. Makarov's *Discussions of Questions in Naval Tactics*, translated by J. B. Bernadou with an introduction by Robert B. Bathurst (Annapolis: Naval Institute Press, 1990).

40 Wolfgang Wegener, *The Naval Strategy of the World War*, translated with an introduction by Holger H. Herwig. Classics of Sea Power series (Annapolis: Naval Institute Press, 1987).

41 Herbert Rosinski, *The Development of Naval Thought*, ed. B. Mitchell Simpson III (Newport: Naval War College Press, 1977).

42 Raoul Castex, *Strategic Theories*, translated with an introduction by Eugenia Kiesling. Classics of Sea Power series (Annapolis: Naval Institute Press, 1991).

43 With an introduction by Brian Sullivan (forthcoming).

44 Clark G. Reynolds, *Command of the Sea: The History and Strategy of Maritime Empires* (New York: William Morrow & Co., 1974), 'Strategic Applications of Naval Power', 12–16.

explore at all. There is a wide range of literature on this topic that has arisen in the last half-century, the most important of which have been Sir James Cable's books on gunboat diplomacy[45] and Ken Booth's *Navies and Foreign Policy*.[46] Using the methodology of a political scientist, Booth argued that:

> The functions of navies can be conceived as a trinity, the idea of three-in-one. The unity (the one-ness) of the trinity is provided by the idea of the use of the sea. . . . The character of the trinity is then defined by the three characteristic modes of action by which navies carry out their purposes: namely the military, the diplomatic, and the policing functions.[47]

Booth pointed out that states use the sea for several purposes and that navies exist to further those ends. These include the passage of goods and people, the passage of military force for diplomatic purposes or for use against targets on land and sea, and, finally, to obtain the resources in or under the sea. While military capability and character is the fundamental basis for a navy, the ability to threaten or to use force facilitates and gives meaning to its other modes of action. It is the latent capacity to fight that gives meaning to the use of naval force in connection with negotiations with other powers. This became a fairly common idea for the late twentieth century, but it has a long history in practice. Oddly, however, it came only into serious consideration as part of naval theory in recent years.

Booth identified a policing role for navies, which includes such functions as the extension of sovereignty, gaining and maintaining access to maritime resources in contiguous areas, and maintaining order. Within this category, Booth sees another function that he calls 'nation-building'. He points out that this is a role that has been particularly important to small powers and is most important in terms of internal development, while other functions tend to be involved with external affairs. It is characteristically important in periods of political turmoil when naval forces can contribute to internal stability and internal development. Booth makes an important point for us, as we attempt to widen the scope of historical investigation of navies, by emphasising that no navy will exercise all of its functions in equal measure, the proportions of military, diplomatic, and policing functions changing with the ebb and flow of development. Different powers have different purposes in providing naval forces and, therefore, they will each have different priorities, levels of capability, and strategies to achieve their purposes.[48]

In addition to what Booth and others have done to explore the foreign policy dimensions in the use of naval force there has been other work that expands our understanding of navies in wartime operations. In Mahan's day, the emphasis

45 James Cable, *Gunboat Diplomacy, 1919–1979*, 2nd edn (New York: St Martin's Press, 1981); *Diplomacy at Sea* (London: Macmillan, 1985); *Navies in Violent Peace* (New York: St Martin's Press, 1989).
46 Ken Booth, *Navies and Foreign Policy* (London: Croom Helm, 1977).
47 Ibid., 15.
48 Ibid., 24–5.

was on a navy as a separate instrument of state, but the experience of the Second World War drove home a different lesson. We understand now that navies and armies need to operate and interact much more closely than Mahan imagined. Each of us, in our own modern countries, sees this reflected today as ministries of defence have absorbed admiralties. In the 1950s, the key work of Rear Admiral J. C. Wylie was a very important extension of our understanding in this area. In attempting to find the fundamental common features in the strategic theories for continental, air, maritime, and revolutionary warfare, Wylie identified their common features in an effort to create a general theory of power control.[49] The concept behind his theoretical work involved his understanding that the entire purpose of military conflict is to gain some selected degree of control over an enemy in order to achieve one's own purpose. In illustrating his theory, he chose as his example the Carthaginian War.[50]

Turning from the general issues, Wylie made an important contribution when he identified different types of naval strategy. The traditional categorisation was based on offensive and defensive strategies, but Wylie suggested another way of thinking, based on operational patterns. For this he suggested the ideas of sequential strategy, 'visible, discrete steps each dependant on the one that preceded it' and 'the cumulative, the less perceptible minute accumulation of little items piling one on top of the other until at some unknown point the mass of actions may be large enough to be critical'.[51] While he had in mind the contrast between the American 'island hopping campaign' in the Pacific during the Second World War, and the simultaneous American submarine campaign against Japanese shipping, parallels can certainly be made with privateering and corsairing activities in the context of wars in much earlier periods.

Much more recently, an Indian naval officer, Raja Menon, has made a substantial contribution to naval thought in his study of *Maritime Strategy and Continental Wars*.[52] Elaborating on a distinction that Clark Reynolds earlier pointed out, Raja Menon shows, through his own investigation into some wars that have often been overlooked, how continental powers have used navies in quite a different manner from the maritime powers that Mahan examined. Here, he mentions as examples the Graeco-Persian wars of the fifth century BC, the Punic wars, the Islamic expansion into North Africa and Europe as well as the Crusades, and the Turko-Iranian wars that occurred in the sixteenth, seventeenth, and eighteenth centuries.[53] In wars involving continental powers he pointed out that operations involving blockade, economic warfare, and amphib-

49 J. C. Wylie, *Military Strategy: A General Theory of Power Control*, with an introduction by John B. Hattendorf and a postscript by J. C. Wylie. Classics of Sea Power series (Annapolis: Naval Institute Press, 1989).
50 Ibid., 77–8. He based his historical understanding on B. H. Liddell Hart, *A Greater than Napoleon: Scipio Africanus* (London, 1930).
51 Wylie, *Military Strategy*, 119.
52 Rear Admiral Raja Menon, *Maritime Strategy and Continental Wars* (London: Frank Cass & Co., 1998).
53 Ibid., 173–8.

ious operations have played a much larger and more important role than in wars between maritime powers.

It is clear that, today, our understanding of naval theory is far wider than Mahan expressed.[54] In many countries and in many languages, over the past century historians have found Mahan's work to be stimulating. No one has yet done a thorough and comprehensive examination of his multi-cultural impact. In this area, Mahan's legacy is a complex one, confused by the elusiveness of his own thought as well as by the varied uses to which it was put. On the one hand, Mahan's work was a positive influence that opened the way for historians in many countries to write narratives about neglected aspects of history: the broad subject of maritime affairs, the role of shipping, overseas communication, the development of nautical sciences, the lives and contributions of mariners and seamen.[55] On the other hand and in other circles of discourse, Mahan's influence merged with professional and propagandistic literature to become a political tool to promote naval growth. In Germany, for example, historians have already pointed out that the social Darwinist features of Mahan's thought merged with the legacy of von Ranke's historicism and the influence of Treitschke's political realism in a way that provided naval writers with a basis for claiming the intrinsic supremacy of the navy over the army.[56] In this, some writers went back to medieval history, looking to the German Hanse as a forerunner of modern German naval power.

Historians have been working for some time to correct the negative side of Mahan's legacy. Fernand Braudel, for example, found an entirely different focus on maritime activity in the Mediterranean, and could even suggest that attacks on trade were an indicator of good economic conditions in that region.[57] After the appearance of Braudel's work, John Guilmartin directly attacked the Mahanian legacy in his book *Gunpowder and Galleys*[58] pointing out that its Anglo-American framework obscured more than it enlightened. In particular, Guilmartin found that the concepts of sea control and sea power, implying destruction of enemy fleets in battle and linked to the vital importance of maritime trade, were dubious ones for understanding naval affairs in the sixteenth-century Mediterranean.

54 See John B. Hattendorf, 'Recent Thinking on the Development of Naval Theory', in John B. Hattendorf and Robert S. Jordan, eds., *Maritime Strategy and the Balance of Power: Britain and America in the Twentieth Century* (London: Macmillan Press, 1989), 131–61.

55 See, for example, the work on early Swedish maritime history by Arnold Munthe, *Sjömaktens inflytande på Sveriges historia* (Stockholm, 1921), vol. I: *Från äldsta tider till omkring år 1640*.

56 See the works listed in Keith Bird, comp., *German Naval History: A Guide to the Literature* (New York: Garland, 1985), 11–13, 230–1.

57 Fernand Braudel, *The Mediterranean and the Mediterranean World in the Age of Philip II* (New York: Harper Row, 1973), vol. II, 886–7.

58 John Francis Guilmartin, Jr, *Gunpowder and Galleys: Changing Technology and Mediterranean Warfare at Sea in the Sixteenth Century* (Cambridge: Cambridge University Press, 1974), 16–41.

In more recent work, there has been an effort to widen the perspective of naval historians and to move from the specialised view of the professional naval officer that Mahan represented and to see conflict at sea as a dimension of human activity within the broader context of general history. Therefore, the new work encourages examination of naval affairs at various different levels of approach and within a variety of different contexts, including economic history, social history, internal politics, technological history, and every other imaginable dimension.[59]

As new areas of research open that touch on naval issues, sometimes unexpectedly, scholars are beginning to widen our outlook through their investigations of them. For example, John R. McNeill and Carla Rahn Phillips have both touched on the influence of environmental and ecological issues on the formation and development of Mediterranean navies.[60] 'Given the varied and difficult ecological conditions of the Mediterranean region', Phillips suggests, 'political power depended upon the availability of natural resources. Without adequate timber supplies, a large navy could not be sustained. Without a rich agrarian base, neither land nor sea power could be sustained.'[61] Similarly, she suggested that only those with control of key bases and islands having essential resources could maintain effective control at sea. Because of this, sea battles were far less important than the control of the bases. Corsairing has always been a distinctive feature of the Mediterranean and Phillips argues that the ecological situation fostered its practice, while major powers encouraged, tolerated, or actively sponsored it, depending on their interests and their circumstances.

Examples such as these from the recent literature clearly suggest that some of the questions that Mahan asked about history are far more interesting and useful to us now than are the answers he reached or the model he created in his understanding of the period between 1660 and 1815:

Why did conflict at sea occur?
What were the conditions that facilitated and sustained the use of armed force at sea?
What was its function and how did it achieve its ends?
What was its nature, its characteristics, and its effects?
How did it relate to and depend upon other factors in these periods?

In the first years of the twenty-first century, the ideas of Mahan have gained renewed value through our deeper understanding of his own intent and usage,

59 See here, the variety of approaches suggested in John B. Hattendorf, ed., *Doing Naval History: Essays Toward Improvement* (Newport: Naval War College, 1995).
60 Carla Rahn Phillips, 'Navies and the Mediterranean in the Early Modern Period', and J. R. McNeill, 'Ecology and Strategy in the Mediterranean: Points of Intersection', in John B. Hattendorf, ed., *Naval Strategy and Policy in the Mediterranean: Past, Present and Future* (London: Frank Cass, 2000), 3–29, 374–91.
61 Ibid., 25.

along with our appreciation of the contributions and the limitations of his thought. While we are now clearly aware that Mahan's ideas have been inappropriately used in some quarters, particularly in regard to the naval history of Europe in the Middle Ages and the Renaissance, we also have broadened and deepened our understanding of navies in general, through new work on naval theory as well as from the results of new research in different periods, using new approaches to naval history. One can no longer merely dismiss Mahan, without understanding what he was attempting to do. One can, however, show that his thinking reflects the beginning of the mainstream in Anglo-American naval theory and comprises a reflection on Anglo-American naval experience as great powers. Over the course of the twentieth century, scholars have clarified what Mahan's ideas were while others have modified and extended his initial thoughts.

The broad aspects of current naval theory can suggest some alternative interpretations to historical questions. In addition recent developments in both theory and in historical research provide us with a new opportunity. A new look at the medieval and Renaissance periods, eras in history that were quite different from those Mahan studied, provides a convenient opportunity to challenge and to modify theory. The developments in the theory of naval power since Mahan's time may also suggest alternative interpretations of history as research uncovers new information. At the same time, since the theory of naval power has been derived largely from a study of a historical period in which war at sea was quite different from what it was like during the Middle Ages and the Renaissance, we may well discover that a new look at the historical evidence challenges theory as it presently stands and provides the basis for modifications to it. From the tenth to the sixteenth century war at sea was not primarily a monopoly of states, but it saw the beginnings of the transition toward that development. Why and how this occurred as well as the nature of war at sea both before and after this development are fundamental features for consideration. Scholars may well determine after examining the evidence that alternative theories are required as a sound basis for interpreting naval force in the period.

By comparing and contrasting naval activities in northern Europe with those in southern Europe in the light of naval theory, we have an opportunity to see well-known events in a new and different light. This conference volume has been designed specifically to be an opportunity to make a substantial contribution to historical knowledge in raising new questions about the origins, development, and practice of naval warfare. Our purpose here is to search for new and alternative interpretations of naval history through a multi-pronged approach that uses comparative history, tests theoretical propositions, and promotes new historical research.

Many of the chapters that follow provide a distinct contrast with the theoretical discussion in this introduction. This contrast and tension helps to illuminate, on the one hand, our understanding of the applicability and limitations of current naval theory and, and on the other, our appreciation of the historical development in the Middle Ages and the Renaissance. The juxtaposition of

theory based on 350 years of naval experience from 1650 to 2000 with detailed studies of the earlier 650-year period from 1000 to 1650 underscores the fundamental fact that Mahan's naval theories, and their subsequent modification by Corbett and other writers, describe European great-power navies that operated within the context of a similar geostrategic framework. Within this context, war at sea was largely funded and nearly fully controlled by bureaucratic states, sometimes within the context of coalitions of states, for the purpose of achieving national, political aims in periods of declared warfare against states or coalitions of states with navies of similar characteristics. Taking a longer term and larger view of European history that stretches back to the year 1000, this type of naval warfare is a distinctive and dominant feature limited to the modern period.

Our exploration of the Middle Ages and Renaissance emphasises that Mahan's modern naval warfare was unusual during earlier periods, although there are some interesting similarities and a foreshadowing of later characteristics in naval warfare that emerged in the context of the Mediterranean wars between Genoa and Venice in the thirteenth and fourteenth centuries as well as in the naval wars in the Baltic in the sixteenth century. The broader vision of the period from 1000 to 1650 shows war at sea occurring more commonly with a much wider variety of characteristics and types than it does in the period after 1660. These include plundering raids and robbery at sea by individuals, small groups, or warlords who were independent of governmental authorities, local or regional naval defence forces in use in peacetime to maintain order and safety of seagoing activities against such raids and robberies, conflicts at sea between rival groups undertaking such activities, joint activities of merchants and governments using armed force at sea to control or to suppress attacks on peaceful commerce. By and large, seagoing forces that were not navies undertook most of such activities. It took the larger and parallel development of state formation in early modern Europe to create the entities that we now call navies, organisations fully financed and maintained by a government to fight at sea with specialised types of vessels. In this regard, it is necessary to understand war at sea in the broadest terms, not merely in terms of the strict definition of a navy. In early-seventeenth-century France, for example, the administrative language of the day made a great distinction between *marine* (navy) and *galères* (galleys). Although both were fighting at sea, the word 'navy', as used during that period, applied only to sailing ships operating in the open seas, not to galley warfare.[62] We have necessarily set aside that distinction here to come to a broader understanding of our subject. The distinction, like many medieval categorisations of naval forces, was abandoned as modern navies emerged after 1650.

A theoretical understanding of navies in the medieval and Renaissance

62 G. Lacour-Gayet, *La Marine militaire de la France sous les règnes de Louis XIII et de Louis XIV,* vol. I: *Richelieu, Mazarin 1624–1661* (Paris, 1911), 19.

periods requires an appreciation of the historical context in which they operated in order to see that all aspects of warfare at sea were experiencing change and development. First, we see separate and independent developments in northern and southern Europe that gradually merge into a single general trend in European history, although not all European navies became great-power navies. In the conclusion to this volume, Richard Unger identifies three periods in this broad pattern in both northern and southern Europe. The first runs from the late tenth century to the thirteenth century and is characterised by naval activity carried on by militias and local figures, including individual ship owners and merchants. The second period runs from the thirteenth century to the seventeenth century and is characterised by entrepreneurial navies, the parallel development of states, and a gradually increasing governmental interest in controlling and using force at sea. The third and final stage in the middle of the seventeenth century is an era of transformation to the characteristics of large navies typical of the late seventeenth and early eighteenth centuries.

Several historians in this volume point out that the period from 1000 to 1650 was one of great technological change and development for navies and properly contrast it with the period from 1650 to 1815, during which there was little technological advance. The great technological changes for navies that followed in the late nineteenth and early twentieth centuries, and the uncertainty that they posed for naval thinkers of that time, are the reasons why Mahan and his intellectual godfather, Rear Admiral Stephen B. Luce, chose to look to that more stable period as providing a 'norm' for modern theory. They wrote at a time when great-power navies operated in a relatively similar geostrategic context to their eighteenth-century counterparts, and the realities of the world in the twenty-first century are now very different. Today's navies operate in an atmosphere of seemingly perpetual and ever-accelerating technological change, while the geostrategic context in which they operate today is also no longer comparable to the eighteenth century or even to the late nineteenth and early twentieth centuries when modern naval theory was written.

A new examination of the deeper origins of naval power and the broader nature of war at sea is now appropriate; scholars need to consider such issues as the impact of changing technology, the development of state bureaucratic systems for finance and administration, the domestic politics of interstate warfare, the interrelationship of war at sea with other forms of warfare, and the conduct of war by those beyond the immediate control of a state system. The following essays provide a starting point for this wider agenda and take steps toward a general history of medieval and Renaissance sea power. In addition, the following chapters clearly suggest that there were several alternative models for warfare at sea in the Middle Ages and the Renaissance: for example, the practice of piracy and its suppression, the protection and extension of commerce, and state and local employment of both private and publicly owned warships as an extension of and complement to military operations on land. The nature and extent of war at sea in the Middle Ages and the Renaissance is far more complex

and varied than has heretofore been understood. If nothing else this volume shows that no one model, as that proposed by Mahan or as is explained by modern naval theory, is sufficient for understanding the nature and extent of sea power in medieval and Renaissance Europe.