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European Warfare 1453–1815

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Problems in Focus

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4. Naval Warfare 1453–1815

RICHARD HARDING

Between the fall of Constantinople in 1453 and the end of the Napoleonic Wars in 1815 the sea assumed an unparalleled importance to Europe. The political and economic impact of maritime commerce and war altered out of all recognition. The purpose of naval war is to secure the advantages of free passage across the sea. In 1453, this was of little consistent interest to anyone outside the city states of Italy or the Hanseatic League, but by 1815 naval warfare was built into the calculations of statesmen across Europe. European navies were capable of operating in all the world's oceans and having a major effect upon societies across the globe.

The means by which this was achieved is vital to our understanding of the emergence of the modern world. Many questions remain unanswered. The relationship between technological development and organisational change is obscure and technological diffusion across Europe is unclear. The social and cultural impact of naval war has only been partially explored and its economic significance to various states is imperfectly researched. As each generation adds to the questions it asks of the past, the list of queries grows rather than diminishes. The purpose of this chapter is to put some of these questions into the context of the broad development of naval warfare.

The Mediterranean has the longest history of organised naval warfare. From 3000 BC, the Egyptians used galleys to transport soldiers to Asia Minor.¹ Mediterranean civilisation, which depended so much upon maritime trade links and coastal states, with urban infrastructures of crafts and capital, quickly developed a specialised warship – the oared war galley. A galley fleet could not exercise distant or sustained sea control. Its large complement of oarsmen and soldiers and its small cargo capacity made long voyages impossible. Very seldom did galley fleets sail

out of the sight of land. They relied upon local port facilities to refresh the crew and their main function was to support armies or defend merchant vessels along the coastal trade routes.

The gradual collapse of Muslim commercial and political power between the eleventh and thirteenth centuries enabled Christian powers to dominate the trade routes, although they were always exposed to both Christian and Muslim pirates.² The great Venetian trading empire was essentially a series of bases that dotted the coastline down the Adriatic and into the Levant. The crusades left a legacy of militant orders, such as the Knights of St John, that nominally protected the pilgrim routes to the Holy Land. The critical event that upset this balance of power was the fall of Constantinople in 1453. The study of Turkish naval power is still in its infancy. Somehow, this nomadic society organised and absorbed the skills of the Anatolian shipwrights and united them with a practical knowledge of artillery and the maritime fighting traditions of the corsair communities. Between 1453 and the 1560s Turkish naval forces supported the expansion of the Ottoman empire. The Turkish–Venetian War of 1499–1502 left the Turks astride the main Venetian trade routes. By 1503, the Turkish fleet numbered over three hundred vessels – enough to overawe all the Christian states of the Eastern Mediterranean. The conquest of Egypt in 1517 confirmed Turkish command of the Levantine trade routes.³ This success was not achieved by technical superiority over the Christians. The key factor was the Sultan's ability to convert the diverse maritime resources of his empire into an overwhelming number of vessels. How it was achieved remains an important unanswered question. Equally important is the question of the decline of Turkish naval power. The reverse at Malta in 1565 and defeat at Lepanto in 1571 were not self-evidently decisive moments, yet they illustrate the difficulty of maintaining a maritime empire by galley forces. The length of the communication lines from Gallipoli and Constantinople to the Central Mediterranean, and the weakness of the Sultan's political control over his North African vassals, presented the Ottomans with precisely the same problems the Christian powers had faced in the Levant during the Middle Ages. The dominant galley technology and mechanisms of political control could not sustain maritime power over long distances in the face of local opposition.⁴

Long before this, the Venetians had come to rely upon Turkish protection of the trade routes, particularly the vital grain route from Alexandria. For the Venetians it was their fellow-Christians – Tuscans, Spaniards and particularly the English and Dutch, who were the greatest threat to their prosperity. In northern Europe, the nautical conditions of the Eastern Atlantic, with its strong tidal races and gales, made the galley unsuitable for trade or war. The sailing ship, or round ship, with its high freeboard, large cargo capacity and sail power, was ideal for both.³ The evolution of these ships is critical to the development of naval might. From clumsy, single-masted vessels, they gradually developed into three-masted ships called carracks. They provided an efficient means of bulk cargo-carrying and they could easily be converted for military purposes. The principal naval tactic was to take the enemy by boarding. The high structure of the ship, which could be built up fore and aft by additional castles, was good for firing arrows into the enemy from above and descending on them in a boarding operation. It also made the defence of the vessel much easier. When monarchs required naval forces, ships could easily be mobilised from the maritime community. In England, the Cinque Ports on the South Coast periodically provided the monarch with ships for his purposes in exchange for local freedoms. Expensive arsenals on the Venetian or Turkish model were unnecessary. Occasionally, a more formal naval establishment came into being, such as the French king's yard, Clos des Galées, at Rouen in 1293, or the English roadstead in the River Hamble in the early fifteenth century, but they did not lead to large-scale investment in naval forces.

In the Mediterranean and northern waters, the basic skills required for war at sea were those of the soldier. Archers supported the decisive clash of infantry in boarding. Galley oarsmen did not require specialist nautical skills and the sea routes were overwhelmingly coastal. The ship required skilled men to handle the sails effectively and there was need for some navigational skills in the less predictable Atlantic waters, but naval warfare in both regions was predominantly a variant of land warfare in the confined conditions of ship-to-ship combat. However, major changes occurred between 1470 and 1570.

The first of these changes was the growth of oceanic navigation from the 1470s. Alongside the carrack, another type of ship, the

caravel, was evolving. Originally a fishing boat, the caravel was lateen rigged, carrying fore and aft sails, and highly manoeuvrable in coastal waters. Portuguese caravels and carracks voyaged down the African coast in the last quarter of the fifteenth century, and, later, into the Indian Ocean. Eventually, the square-rigged sail plan of the round ship was merged with the lateen rig of the galley and caravel, creating a fairly standard pattern of square-rigged fore and main masts with a lateen-rigged mizzen mast. The development of the spritsail gave added manoeuvrability to the carrack. By the end of the century the Spanish voyages to America, and Portuguese voyages to the Indian Ocean, placed new demands on seamen. Oceanic voyages required much greater seamanship. Over time, the demands placed upon the men and ships brought about changes in the vessels and attitudes to life at sea. Voyages could last for years and men were confined to the vessels for months at a time. Very little is known about how the seamen responded to this change in their working environment, but it might have created new regional variations in how seamen viewed their lives. Atlantic seamen's lives were dictated by their lengthy absence from home and new social ties focused on the ships they sailed.⁶ On long-distance trades, the distinction between peaceful commerce and piracy was inevitably blurred, as more ships meant unwelcome competition on established routes or newly discovered markets. The collapse of Mediterranean cloth production in the mid-sixteenth century encouraged English and Dutch vessels to enter the area. The grain shortage at the end of the century provided a further stimulus for Dutch, German and Scandinavian ships to trade there. These northern sailing ships played an important part in the legitimate commerce of the region, encouraged by the Grand Duke of Tuscany's decision to open up Leghorn to them in order to rival Venice as a North Italian entrepot.

The second important change was the introduction of cheap iron cannon on to ships from the 1570s. Cannons had been mounted on ships since the fourteenth century, but it was not until the 1470s that Venetian galleys began to carry powerful, heavy cannons in the bows. This gave the galley both firepower and manoeuvrability that the sailing ship could not match. Ships employed heavy guns at the bow or stern for protection, but it was not until the second half of the sixteenth century that cannon

were cheap enough for the average private merchantman to be formidably armed to deter attackers. The development of naval gunnery placed a greater emphasis upon the skills of the professional seaman gunner. The ability to work the guns to deter boarding began to be valued as highly as skills in infantry combat. Whereas the latter could be exercised by any soldier, the gunnery skills could only be learned at sea.⁷

Third, an increasing role was played by the state or crown in providing finance for naval activities. During the sixteenth century, Sweden, Denmark, England and France, and later, the United Provinces of the Netherlands, all began to channel significant funds into the maintenance and development of naval forces. It is not easy to generalise about the reasons for this. The motive of the Baltic powers may have been the profit that could be extracted from control of the lucrative trades in grain, fish and naval stores. For Portugal the decision to maintain a royal monopoly of the Far Eastern spice trade might have been significant. For England the reason might have lain in her inability to compete with France on land, whilst for France, the only way that England could be attacked was by crossing the English Channel.⁸ Whatever the causes of this development, the result led to a gradual, but significant change in the nature of navies. Permanent shore facilities, run by people experienced in sea affairs, were established. They were responsible for expanding royal fleets, the effective use of hired merchantmen and managing an increasing investment in maritime enterprises. They created a vital link of interest and knowledge between the royal court and the maritime community.

The combined impact of these three factors slowly changed the balance of power at sea. The city states and the crusading maritime orders, which had exercised significant economic power, were increasingly challenged. Denmark and Sweden overwhelmed the naval power of Lübeck, the dominant Hansa town, during the 1530s.⁹ In the 1560s English naval power also wrung concessions from the Hansa.

In the Mediterranean, Spanish royal ships, predominantly galley forces, dominated the seas between Spain and the Habsburg Kingdom of Naples. Venetian trade fell prey to Spanish, Maltese and Tuscan ships, which swept through the Mediterranean. The defeat of the Turkish fleet at Lepanto in 1571 further weakened

the Venetian economy, which depended on Turkish sea forces to control piracy in the Eastern Mediterranean. The final blow to the prosperity of the Venetian trading empire came from the well-armed square-rigged sailing ships from England and Holland, the *bertone*. They revictualled and traded at Leghorn and on the Barbary Coast, before travelling on the Aegean and the Levant to trade or plunder. The Venetian authorities believed the galley was a match for the *bertone*, but events proved them wrong.¹⁰ Likewise, Turkish maritime domination of the Levant declined in the face of these interlopers. Although both Venice and Turkey built sailing warships at the end of the seventeenth century, neither power could reassert the domination of Levantine waters. The reasons for this still need serious investigation.¹¹

By 1600, oceanic navigation by well armed, financed and supported sailing ships had created a distinct maritime community which had a major impact on European diplomacy. Habsburg Spain had become the most powerful state in Europe, largely owing to the wealth of American silver. The Dutch revolt (1567–1609) was financially sustained by maritime commerce. England, whose continental power had collapsed between 1453 and 1558, had re-established itself as a major force at sea. The English crown was able to mobilise an effective defence at sea against the Spanish Armada in 1588. English vessels, under men such as Sir Francis Drake, preyed upon Spanish shipping and settlements from the 1560s. Although by no means as decisive or damaging to Spain as the English often believed, the dramatic raids in the Caribbean during 1571–73, 1585–86, and on Cadiz in 1587, had a major impact on English thinking. By 1600, Spain had greatly improved her maritime defensive systems, but it was partly her failure to deal with foreign interlopers that led to bankruptcy in 1596. By 1609, several states had shown the ability to put large forces to sea by uniting royal and merchant vessels as common fleet. They had found ways to sustain offensive operations for long periods over great distances. Underpinning all these developments was maritime commerce. The customs duties and financial liquidity created by commerce were essential to many states.

However, the wars of the second half of the sixteenth century did not produce a clear blueprint for future development. It was

still unclear how best to organise and develop maritime resources for war. There were two distinct trends – the more frequent mobilisation of the merchant community, and the growing numbers of specialised warships owned by the crown or state. The mobilisation of well-armed merchant ships enabled the state to maximise the number of ships it had in its fleet. The Dutch and the English, who possessed the world's largest mercantile sailing fleets, were particularly favoured. Although fragile compared to the specially built warship, merchant ships were manoeuvrable and available in large numbers. While boarding tactics dominated, sheer numbers in a *mêlée* could be more important than specialist fighting vessels. However, their particular value lay in their role as privateers. Dutch, French and English privateers played a more consistent part in the maritime war against Spain than did the regular navy. They damaged trade and fractured the Spanish supply lines. As privateers, coastal raiders and convoy escorts, the merchant fleet played an important part in naval affairs well into the nineteenth century, but its role within the battlefleet became more uncertain after 1650.

Many questions remained unanswered about royal warships. The growing number of cannons at sea led to questions about the design of ships. Some favoured the carrack-type vessel, with its high fore and aft castles, to provide an advantage to gunners and boarders in a hand-to-hand battle. Others favoured the lower 'race-built' galleons, without the castles, which were more manoeuvrable, thus making it possible to bring the cannons to bear from all parts of the ship.¹² By the 1620s, the galleon dominated orthodox thinking across Europe, but the size of ships was another issue. The English had a preference for large, heavily gunned vessels. Peter Pett's *Sovereign of the Seas*, carrying over ninety cannons, was completed in 1637. Its power, size and decoration made it a magnificent expression of royal power at sea. In France, the *Grand Saint Louis* (1627), and the *Wasa*, in Sweden (1628), made similar statements. Against this there were still serious questions about their value. Their sailing qualities were not impressive. The *Wasa* was lost on its maiden voyage, before it had even sailed out of Stockholm harbour, and the *Sovereign* had to be modified in the 1650s before it was considered to be a satisfactory warship. Apart from the propaganda value, which must not be discounted, the major significance of

these large warships was to fight similar ships or to act as floating batteries at particular economic or political pressure points. The Sound was the principal point of this pressure between 1600 and 1650. All the valuable trades of the Baltic had to pass through this narrow stretch of water. Heavily armed warships could not be avoided for miles on either side and they could only be driven off by similar warships. Early on, therefore, Denmark became 'battleship dependent'. Elsewhere there was less call for such large vessels. The main threat to trade came from smaller, fast and very manoeuvrable 'frigate'-type ships. Spanish privateers cruised from Flemish ports. Barbary corsairs ventured as far north as the Irish Sea and Dutch warships infested waters as far apart as the Caribbean, Biscay and the Mediterranean. There were few harbours in northern Europe that could accommodate deep-draughted warships. Spain occasionally sent some of her larger galleons as escorts to troops and money destined for Flanders, but they never remained there for long.

The operational range of the large warships was also limited. Their power to interdict traffic was important and, in exceptional circumstances, could be decisive. Threats to blockade London in 1648 and 1660 were important features in English politics.¹³ However, the supply bases for these fleets were only a few miles away in Kent. Likewise, the Danish and Swedish battleship control of the Western Baltic had local supply sources. Even fairly short sea distances made lengthy operations impossible for battlefleets. Irregular victualling and store replenishment and the threat of being caught on a leeshore made sustained operations very difficult. In 1653 and 1673 the English could not maintain their fleet off the Dutch coast. Likewise, the Dutch could not remain in the mouth of the Thames in 1667.¹⁴

The large warship was also vulnerable in confined situations. Loading and reloading cannon at sea was time-consuming and smaller merchant warships could approach, fire their cannon, retire and allow their companions to press home a similar attack, whilst the large warship was struggling to reload. In October 1639, a Spanish Armada of over seventy ships was confronted by over one hundred Dutch ships in the Downs. The Dutch cut in among them, boarding and capturing many. On several occasions during the First Dutch War (1652–54), powerful English warships were isolated and threatened by more numerous Dutch

opponents. In these battles, the weight of metal fired by the two sides was not as different as a crude count of guns on given ships would imply. Large warships were also vulnerable to fireships. Restricted by large numbers of smaller enemy vessels, the large battleship could be entrapped by a fireship and burned. In 1638, the Spanish fleet was caught at anchor by the French at Gueterias, and suffered heavily from fireships.¹⁵ In 1672, at the battle of Southwold, the Earl of Sandwich's flagship the *Royal James* was trapped by smaller Dutch ships and destroyed by a fireship. This *mêlée* tactic of charging into the enemy fleet was well suited to a fleet of converted merchantmen or light warships. It maximised the advantage of the lighter vessels and minimised the need for complex signalling and lengthy training. It relied upon the vigour of the seamen to press home the attack by boarding and was suited to the contemporary feeling that boarding and infantry combat were the honourable and effective way of warfare.

The English had an advantage in the maintenance of the large battleship. Their deep-water ports and well-developed maritime infrastructure made the building of these vessels practicable. They had been experimenting with ship designs that united the lower, finer lines of the frigate with the size of the old carrack-type Great Ship. The result was a long and heavily armed warship, with relatively good manoeuvrability. Ship for ship, these vessels were more than a match for the Dutch warships, frigates and converted merchantmen during the First Anglo-Dutch War (1652–54). The main danger was that the *mêlée* tactics eliminated the advantage of the more powerful gun batteries as the warships were brought to hand-to-hand combat by the Dutch. The large battleship would only realise its full potential when its superior strength and firepower could be exploited fully throughout the battle, rather than just in the approach.

The point at which these two trends – the mobilisation of merchant warships and the building of large specialised state vessels – were brought into sharp relief was in the three Anglo-Dutch Wars (1652–54, 1664–67 and 1672–74). The English had more of the large specialised warships, but both sides mobilised private warships and converted merchantmen. During the First War, both sides recognised the advantages and disadvantages of their fleets and tactics. The Dutch found that they could not

overwhelm their more powerful opponents by numbers and bravery. They also recognised that merchant masters did not have the courage or interest to charge unconditionally with their weaker ships into the English. The English also saw that merchant masters could not be relied upon. Each side had come close to major disaster because their ships had been cut off or unsupported in *mêlés*. Both sides knew that a military discipline had to be imposed. One method was to replace merchant masters with naval officers. Another was to reduce reliance in combat upon merchant vessels. The Dutch also began a programme of building stronger and more heavily armed warships, which, for the first time, belonged to the Estates General, rather than the individual local admiralties, who might sell them off after the conflict.

The most important change to emerge from this war was the development of the single line ahead formation. Ever since heavy cannon had been put on ships it had been recognised that effective cannon fire could cripple an enemy vessel, if not sink it. Spanish galleons had used cannon fire effectively against smaller privateers. The problem was that the slow rate of fire might enable swifter enemy vessels to get around the warship to divide its fire and guncrews. With ships moving in line ahead, the vulnerable stern area was protected and the disciplined line presented the enemy with a long line of gun batteries. The line ahead was used in battles between anchored and attacking fleets in the 1630s, but may have been first used by two fleets under full sail, by accident, at the battle of the Gabbard in June 1653. Light winds made it impossible for the Dutch to come up from leeward to grapple with the English, who were satisfied to stay upwind, firing into the struggling Dutch force. A few weeks later, the line was used more aggressively at the battle of Scheveningen (August 1653). The English squadron, in line ahead, drove into the massed Dutch fleet, firing into the enemy on either side of it. It made three passes through the Dutch *mêlée*, keeping formation and making the superior firepower of the ships pay. The Dutch recognised that they needed to close with the English quickly, but were held off by cannon fire.¹⁶

At the outbreak of the Second War, the Dutch had built more powerful warships, and by 1666 they had adopted the line of battle as the basic tactical formation for approaching to the

enemy. The ultimate objective of both sides was still to board their crippled enemy, but instructions prohibited falling out of line to achieve this while other enemy ships remained a danger. The major battles of the war, off Lowestoft, on 3 June 1665, the Four Days Battle, on 1–4 June 1666, and the St James Day Fight, on 25 July 1666, were not fought in strict fleet line of battle, but rather, squadrons moving behind each other in line. During the Third War, similar tactics were employed. However, the importance of the line was evident and it was not long before both theory and practice focused upon perfecting the line of battle. The merchant warships were gradually eliminated from the line as too small or weak to maintain themselves in the firefights that developed. At a time when officers' skills had not been honed by experience, the line was a simple tactic that required minimal signalling or initiative on behalf of the captains in the confused conditions of a battle at sea. It promised a sound defence for the fleet as a whole, presented the maximum firepower towards the enemy and still made possible the ultimate victory by boarding the enemy ships. Instructions for captains became more precise. The independence of junior flag-officers and captains, which had been jealously guarded in the days of the *mêlée*, was curtailed by stronger codes of discipline. The emphasis was on discipline in the approach, gunnery skills in the clash, and, if the admiral judged, vigorous boarding in the final stages.

Between the 1670s and 1690s, naval warfare became a more specialised form of military activity. The sailing battleship had become a vital part of the naval arsenal. Its use in large numbers required the discipline and some of the skills of the soldier, but many other skills that were unique. Around these ships, a whole social, technical and economic structure was gradually emerging. Precisely why the battleship became the dominant type of vessel at this time is unclear. Factors such as technology, the prestige of monarchs and the impact of war on the maritime community are involved. Since the sixteenth century, privateers and pirates had forced merchants to use convoys, escorted by light warships which were capable of combating the predators. These convoys presented tempting targets as they converged on the choke-points of the trade lanes – the Sound, the North Sea and the Straits. The large warship could push aside the escorts and devastate the convoys. Only similar battleships could combat

their firepower and defend the merchantmen. The battles of the Anglo-Dutch Wars and the Danish–Swedish wars (1643–45, 1652–60 and 1675–78), around these choke-points, were the testing grounds for the new tactics and ship designs that created the line of battle.

Once established, the line of battlefleet placed new demands on states. The magnificent battleship had always been a major symbol of state power and was properly commanded only by the aristocracy in the name of the monarch. On the other hand, the handling of these ships required high levels of technical skill, not usually found in courtiers. States had to find ways of merging the social and technical requirements of the naval officer corps. Recent studies have deepened our understanding of this process in England and France. Some work has been done on the way the Russian navy managed the process, but this remains an important and much needed area of study.¹⁷

The new battlefleets needed more sophisticated and consistent infrastructures which placed fiscal pressures upon states and social tensions between the administrators and the naval officers. Louis XIV's decision to support Colbert's expansion of the French navy from 1661 led to one of the most remarkable administrative feats of the pre-industrial world. Between 1661 and Colbert's death in 1683, France created the largest navy in the world and put in place the structure of ports, arsenals and supply policies that were to support it. When the Nine Years War (1688–97) broke out, France was building a second generation of even stronger warships. In England the administration of the navy has probably received the most detailed study, partly because of the prominent role and prolific writings of Samuel Pepys. Until recently, Pepys's prominence has done a great deal to distort the history of the central administration of the navy and much more still needs to be done to clarify the workings of the yards and, particularly, the finances of the navy. Studies in English of Dutch, Spanish, Danish and Swedish administrative practices are minimal yet vital to an understanding of the diffusion of administrative ideas and the impact of local conditions.¹⁸

States developed their navies at different speeds and had to come to terms with local constraints. Traditionally, these constraints have been described as technological or political barriers. The inability of the Dutch to build the largest three-decked

warship has been ascribed to the shallowness of their country's estuaries and coastal regions. The collapse of the French battlefleet is seen as an example of Louis XIV's misguided lack of interest in his navy. The persistence of the galley fleets in the Mediterranean has also been seen as a lack of political understanding of naval power. There is a degree of truth in all these statements, but they are often based upon the assumption that by the 1690s the line of battleship had made other types of vessel obsolete. This assumption is largely based on the work of Captain Alfred Thayer Mahan, whose *Influence of Seapower upon History* was first published in 1890. Mahan's objective was to demonstrate to the American people that seapower, and particularly the battlefleet, were keys to the growth and development of the United States in the twentieth century. His importance in the development of naval historiography must not be underestimated, as he did a great deal to condition successive generations to thinking about seventeenth- and eighteenth-century naval power in the terms of the late nineteenth century. Failure to develop the battlefleet was presented as political misjudgement, rather than a response to contemporary conditions. Subsequent historical interest in technology has also placed an emphasis on mistakes or incapacity rather than choice.

Neither of these approaches is necessarily wrong, but they do not make enough allowance for statesmen and monarchs making choices that appear rational to them. In the period 1660 to 1713, the battlefleet was highly effective in those regions where it had developed to serve a clear purpose. During the Anglo-Dutch Wars, the objective of both sides was to win control of the narrow waters. When a battle was decisive, or the strategic situation was generally favourable, battlefleets could cruise off the enemy coast and sometimes cause substantial damage to enemy shipping and villages. However, they could not stay long enough, nor spread themselves far enough, to have a decisive impact on the fighting power of the enemy. The long-term damage was done by the smaller warships and privateers, whose pickings were increased by the break-up of the convoys. Likewise, in the Sound and the Baltic, the Danish-Swedish wars were fought around the convoy choke-points, while in the shoal waters of the Eastern Baltic, privateers and later galleys played a more important part in stopping maritime traffic.

The important interaction between battlefleets and a variety of smaller warships continued during the Nine Years War (1688-97), the War of Spanish Succession (1701-13) and the Great Northern War (1700-21). English and Dutch control of the Eastern Atlantic seaboard and the North Sea was established by the end of 1692. Likewise, English and Dutch squadrons in the Baltic had a significant impact on Swedish and Russian policy in the Great Northern War. This did not mean that the allies had secured for themselves the advantages of free passage across these waters or denied them to the enemy. The battlefleet ensured that specific critical points were covered, such as the North Sea. It protected communications with the army in Flanders, prevented a French landing in Scotland in 1708 and covered vital convoys through the Baltic. The battlefleet could not, however, prevent the enemy making use of the sea in all cases. The French privateering effort between 1692 and 1698 contributed to a major financial crisis in 1696 and privateers continued to inflict serious damage upon English and Dutch trade throughout the War of Spanish Succession.¹⁹ Likewise, the allies discovered that when they shifted their actions from convoy protection to attempts to hinder Russian inshore operations in the eastern Baltic, their capabilities were seriously limited.²⁰

The battlefleet was only part of seapower. It forced an inferior enemy to break up concentrations of shipping, which made them prey to the smaller warships and privateers. For England and Denmark this was crucial, as the battlefleet made it impossible for an enemy easily to move large bodies of troops over the open seas. Thus the battlefleet was the key to their national defence. Conversely, their battlefleets enabled trade to be convoyed or armies to be transported without interference. However, as an offensive weapon the battlefleet had serious limitations. Battlefleets could position themselves off critical trade points, such as the Sound, the Texel, the Thames estuary or Cadiz. This was attempted many times between 1660 and 1713, but seldom succeeded, as the supply infrastructure was simply inadequate. The French and Dutch fleets found that their ability to influence land operations on Sicily between 1674 and 1678 were limited whilst they could not reach each other's galley forces. English naval forces gradually built up a supply network at Lisbon, Leghorn, Cadiz and Gibraltar in the 1670s and 1680s. Support

from these sources made it possible to overwinter a large fleet in the Mediterranean during 1694–95. The capture of Gibraltar in 1704 and Minorca in 1708 finally provided the English with permanent bases for cruising in the Western Mediterranean. However, as convoys became less frequent and the enemy squadrons remained in port, the significant damage to the enemy had to be done by the smaller vessels, away from the trade termini.

The allied success in building a supporting infrastructure in the Mediterranean is usually seen as confirmation of Louis XIV's folly in failing to maintain a direct challenge to the allied battlefleets.²¹ Within 50 years, the significance of this failure was apparent, but not in the 1690s or the 1710s. Battles at sea had not proved as decisive as land battles. The wars had demonstrated the power of the battlefleet in local waters and at critical points in the trade lanes. There were some important improvements to the victualling and supply administration, particularly in the Mediterranean, which had extended the operational range of these fleets. A *modus vivendi* between the emerging professional bodies of naval administrators and sea officers was emerging. However, the impact of these changes was less clear. The French victory at Beachy Head in August 1690 had not provided Louis with any significant advantage throughout 1690–91. Likewise, the defeat at La Hogue and Barfleur in 1692 did little damage to Louis's war plans in Flanders. William III's attempts to impose a blockade of France failed.²² The battle off Malaga in August 1704 prevented France from reasserting control over the Western Mediterranean, and exposed the coasts of Provence to serious raids in 1707 and 1710, but did not have a major effect upon the campaigns in Europe. In sum, the expensive battlefleet had not done a great deal for France and the allied fleets had not inflicted serious damage upon her. On the other hand, the *guerre de course*, the privateering war, in conjunction with small royal squadrons, had shown some important results for very little cost to the hard-pressed royal treasury. The squadrons acted as powerful escorts, small expeditionary forces or raiding forces. They did not need to contest control of the critical points in the sea lanes, so long as they could evade the superior enemy fleets.

Nevertheless, important shifts in the balance of seapower became apparent during the next 50 years. After 1695, the permanent presence of English squadrons in the Mediterranean changed the balance of power. They disrupted the French cam-

paigns in Catalonia throughout both wars between 1688 and 1713. They prevented Spanish attempts to recover Sicily by force in 1718. Later, they were a check on the movements of both the Spanish and French fleets in the Mediterranean during the War of Austrian Succession (1740–48). All Spanish attempts to remove the British from Gibraltar by diplomacy and force failed, but the British squadrons in the Mediterranean were never strong enough or provided with adequate numbers of small warships to maintain a presence east of Sicily or effectively interdict coastal traffic. However, they were large enough to spell the end of the galley as an effective force in the deeper waters of the northern Mediterranean coast. Along the shallower North African coast and the Aegean archipelago, galleys still had a role as cruisers, but the last galley campaign in the western Mediterranean was mounted in 1742 and by 1748, both Spain and France had abolished their galley corps.²³

In the Baltic the emergence of Russia as a naval force equal to Sweden or Denmark changed the balance of power for good. From the 1650s Dutch and English intervention had undermined Swedish and Danish control of the Baltic, but these were temporary incursions. The Russian fleet was a permanent force and, although largely untested in battle, it made Swedish attempts to revive her fiscal and economic fortunes by control of the trade routes impossible.²⁴

The third area where naval power had an increasing impact was in the Americas. Although both France and Britain toyed with the idea of a neutrality in America during the 1680s, it was impracticable. The temptation of the West Indian colonies or Spanish silver proved too much. Nine expeditions were sent to the West Indies during the Nine Years War and 19 during the War of Spanish Succession.²⁵ Two French expeditions went to Rio and one British expedition was sent to Quebec in 1711. They achieved very little, but contemporaries clearly believed that Spain's control over her American empire and their control over their own colonies was very fragile. In Britain, despite the lack of results, there was a growing feeling, partly fuelled by domestic political conflicts, that France and Spain were vulnerable in the Americas. The development of this 'Blue Water' strategy had major consequences for British foreign policy throughout the eighteenth century.²⁶ France and Spain were not convinced of the central importance of Americas, but nor were they able

to create a coherent or consistent policy with regard to Britain in the wider context of their foreign policies. Once again, Britain was favoured. Despite fears of Hanoverianism, Britain had, by the mid-1750s, a clear strategy based upon its maritime strength. Neither France nor Spain achieved this, and for both these powers, the maritime dimension of the wars from 1733 to 1763 produced only confusion and disappointment.²⁷

Between 1713 and 1739 Britain was in an exceptionally advantageous position. The battlefleet was the foundation of national defence and deeply engraved in the political consciousness of the nation. Britain was also fortunate in that it did not have to make such stark choices as its rivals. Seapower lay in the effective combination of battlefleet, privateers and the national maritime infrastructure. Although the fleet and the privateers were complementary naval forces, they were also significant competitors for the limited pool of seamen. Britain's maritime economy expanded dramatically between 1660 and 1689, and continued to expand more slowly during the eighteenth century. There was always great tension between the Royal Navy, the merchants and the privateers over seamen, but the population base of seafarers in Britain and North America was large enough for all. This was not so in the United Provinces, France or Spain, none of whom ever possessed adequate manpower to create a battlefleet to challenge Britain, whilst at the same time exploiting those aspects of naval power which the battlefleet was ill-equipped to carry out.²⁸

Britain had both the motivation and the real maritime resources to develop her naval forces as a whole. British ministries were careful not to share their maritime conquests with their allies, the Dutch, thus laying the foundations for a permanent, national naval presence in the Mediterranean and North America. Although disputes over 'Blue Water' or 'Continental' strategies formed part of the political rhetoric of eighteenth-century Britain, the navy was never allowed to decay to a dangerous level. When war broke out again in 1739, British statesmen were not always sure in their handling of the navy, but they had the luxury of possessing a far superior force than their Bourbon enemies.

If the wars up to 1721 only hinted to the growing capability of seapower, the more peaceful years up to 1739 did not demand much spending on naval forces. The maritime economies of

Europe continued to expand, and with it there was a slow but sure development of the naval infrastructure. Tension and conflict between England and Spain in the Mediterranean and the West Indies ensured that naval facilities on Jamaica, Antigua, Minorca, Gibraltar and the Spanish cities of Havana and Cartagena de las Indias were developed. France built up a major fortress, Louisbourg, on Cape Breton Island. For the first time in nearly a century, the Spanish navy began to develop as part of Don José Patiño's strategy for recovering the Italian lands lost at the peace settlement of 1713. In the Far East, European trading companies were developing their factories to support their large armed merchantmen.²⁹

The wars between 1739 and 1815 demonstrated both the importance of seapower and its fragility. In 1739 the tensions between Spain and Britain erupted into war. The confident predictions of a rapid Spanish collapse, if Britain exerted its naval power in the Caribbean, disappeared during 1741–42. The Spanish fleet did not present a serious challenge to the British battle squadrons. However, its manoeuvrings and the movements of the French fleet did cause great anxiety. British and American privateers quickly swept up what little Spanish trade ventured to sea, but little was achieved against Spanish America. Spanish privateers hit the British merchant fleet hard. When the war finally merged into a general European war in 1744, Spain showed no signs of collapse. Naval power in the Mediterranean had played an important part in the Habsburg–Bourbon war in Italy since 1741, but British optimism concerning its naval power had been misplaced.³⁰

Naval war with France from 1744 also produced no decisive results. French trade was hit by privateers and blockade. In 1745 the capture of Louisbourg produced a great deal of British rejoicing, but had little impact on French war plans. The naval war was carried to India, but without decisive results. In 1747, two battles off Cape Finisterre provided the public with naval victories, but did little to influence peace negotiations, which were, by then, well advanced. The war in Italy, Flanders and Germany concentrated minds at the French, Dutch, Austrian and Sardinian courts more than victories at sea.³¹

Seapower might have played a critical role in preventing a French invasion of England in support of the Jacobite rising in

1745. If so, it reinforced its defensive significance to Britain, but, as an offensive weapon, the navy had not proved itself. Yet the Seven Years War (1756–63) was a dramatic expression of the potential of seapower as an offensive force. By the end of 1757 French trade had largely disappeared from the seas. During 1758–59, the French empire in India, Africa, America and the West Indies began to collapse as British land forces, supported and protected by the navy, exerted increasing pressure. Without reinforcements, the French positions were doomed. French squadrons got to sea, evading the British forces on a number of occasions, but could not maintain consistent support for the overseas possessions. Privateers damaged British trade, but were increasingly driven into port by British warships and privateers. When Spain joined the war in 1761, Manila and Havana were captured by amphibious expeditions. Unlike 1748, this was a decisive defeat for the Bourbon powers, who could not make any counterbalancing conquests in Europe.³²

The story of the war is well known, but the reasons for this dramatic change in the effectiveness of naval warfare are still not clearly understood. Britain had achieved a significant comparative advantage over its rivals. Traditionally, this was ascribed to the vision and policies of individuals like William Pitt and Admiral Lord Anson. The longer-term factors of continuous funding, parliamentary support or a clear role for the navy have received less attention. Gradual improvements in the manning, victualling and storing of ships and the accumulated expertise that led to new frigate designs gave the navy additional capabilities in cruising and inshore work. The revised privateering law and practice made the war on trade more effective. Experience also improved the strategic disposition of the fleet, the tactical handling of the ships and the fleet's ability to work with the army in amphibious warfare. Most of all, its officers experienced a run of unbroken successes. The confidence with which they could engage the enemy gradually changed their outlook. In 1756, during the trial of Vice-Admiral John Byng, after the battle of Minorca, a great deal was made of the instructions to keep to the line of battle, but by 1759, Hawke's dramatically successful chase of the French squadron into Quiberon Bay revealed a confidence in the decisive advantages of close action that superior seamanship and numbers engendered. The line of battle had become

less relevant to the British, and the decisive results provided the background to debates over the following decades as French, British and Spanish naval thinkers tried to interpret the tactical lessons of the war. Between 1763 and 1815, there was extensive experimentation with the line of battle for offence and defence, as navies tried to reproduce the dramatic results of the Seven Years War in very different military conditions. It culminated in the last great battle of the sailing-ship era, Trafalgar, in which Nelson broke through the Franco-Spanish line in two columns and devastated their fleets.

The impact of the Seven Years War on the contestants and naval warfare generally is also in need of further exploration. Although the French navy was bankrupt by the end of 1759, the remnants of the fleet were maintained. Furthermore, by 1764, the French court had begun a major rebuilding programme. The French economy does not appear to have suffered significant long-term damage as a result of the war. By 1778, the French navy was in an excellent condition to challenge Britain again.³³ Likewise, Spain suffered no permanent damage as a result of the war, revived its building programme and made its fleet one of the most powerful and well constructed in Europe.³⁴

The war sharpened political, strategic and tactical ideas about the operation of seapower. It had also led to important administrative changes within European navies. Britain's advantage, built up over 50 years, made other nations aware that naval power could be important and that the skills and resources required substantial, long-term investment. It was a lesson that coincided with opportunities emerging from the revival of long-distance maritime commerce and was underpinned by new economic theories about free trade and fiscal policy.

Under the combined stimulus of commercial opportunity and belief in the efficacy of naval power, naval competition grew significantly during the last 30 years of the century. France, Spain, Portugal, the United Provinces, Denmark, Sweden, Russia and Turkey, besides Britain, developed their naval forces.³⁵ The investment was large, but naval power remained as elusive and fragile as ever. Britain's advantage vanished very quickly. By the early 1770s it proved impossible to convince Parliament to fund a superiority in naval forces over potential enemies that had been decisive in the 1750s and had averted war over the Falklands in

1770. After 1776, the need to finance a large army in America and maintain a constant cruising war against the small American warships and privateers necessitated the laying up of the larger battleships. France entered the war in 1778, Spain in 1779 and Holland in 1780. The British navy was overstretched across the globe. Although victories in the West Indies restored the balance and the crisis was weathered by 1782, it was too late to prevent the loss of the American colonies and Minorca.³⁶

The French and Spanish revival proved as ephemeral as the British domination. By 1785, the French navy was again bankrupt. By 1791, the Revolution had destroyed the officer corps, so that by the time war broke out with Britain in 1793, the French navy was a shadow of the force it had been ten years earlier.³⁷ By 1798, and Nelson's victory at Aboukir Bay, the French battlefleet had all but collapsed. The rebuilt Spanish navy gradually wasted away until its main strength was defeated at Trafalgar in 1805. The Dutch fleet was effectively reduced after the battle of Camperdown in 1797. This rapid collapse of naval power experienced by Britain, Spain, France and Holland in the last 30 years of the century was also experienced by Sweden and Turkey. Sweden had gradually built up its naval forces in the second half of the century, only to see them broken in a war with Russia between 1788 and 1790.³⁸ Turkey had built up a sailing fleet to support its operations in the Balkans, but in June 1770 a Russian squadron destroyed their main force at Chesme.³⁹

By 1815, only the British navy remained as a major world force. Since 1756 naval warfare had had an unprecedented impact on the world. Events at sea had a major impact on the collapse of the British North American empire between 1778 and 1782 and British seapower had a great influence on the independence movements of South America up to 1825. Seapower was only one of many factors that shaped the wars of 1792 to 1815, but its significance cannot be neglected. British naval power exercised in the Baltic, Mediterranean and Atlantic had been important factors in Europe's relationship with Revolutionary and Napoleonic France. It formed the basis of an expanded British empire in the Far East. It secured the trade receipts of the Americas, India, and the Mediterranean, which enabled Britain to act as paymaster of the coalitions against France.⁴⁰

Naval power remained extremely fragile and its cost was still excessive. It required a consistent minimum expenditure even in peacetime, which few powers were willing to maintain. In wartime the cost could be prohibitive. The complexity of maintaining a balanced fleet was also a major task of administrative and strategic foresight. The battlefleet was the symbol of seapower, but much of the effective work of using the advantages of free passage across the seas had to be carried out by smaller, often private vessels. Besides what appeared to be uncontested control of the seas exercised by the mighty battlefleet, there raged the *petit guerre* between privateers, merchantmen, hired ships and small warships. Only Britain, for a short time in the 1750s and again, more permanently, from the late 1790s, possessed the maritime resources to maintain the battlefleet and the smaller warships simultaneously. Without this interaction between battlefleet and the rest of the maritime resources of the state, seapower was a very weak and limited tool. Attrition also rapidly took a cumulative toll of maritime resources. In the 1750s and 1790s the French maritime community was rapidly depleted by losses to British action. The greater the losses, the weaker were the replacements and therefore the quicker they perished. Spain and Holland suffered from a similar debilitating process.

Between 1453 and 1815 naval warfare came to play a major role in military events across the world. Many issues remain to be investigated. Although the belief in the predominance of the battlefleet as the source of seapower is no longer as strong as it was, much remains to be done to explain how seapower was exercised at different times, in different parts of the world and by different navies.