

A Boston wharf, in an 1832 painting by Robert W. Salmon. "There are classes of men in the world," wrote Herman Melville, who first went to sea as a ship's boy in 1839, "who bear the same relation to society at large that the wheels do to a coach: and are just as indispensable. Now, sailors form one of these wheels."

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The Maritime World

Samuel Johnson once defined the merchant as "one who trafficks to remote countries." Seaborne "trafficking" has grown, to wide benefit. However, world trade is now a sore subject to Americans. Big trade deficits (\$170 billion in 1986) have stirred fears in Washington for U.S. "competitiveness." Congressmen seek import curbs; in April the Reagan administration placed sanctions on Japan for "dumping" microchips. What is *not* on many American minds is something vital to international trade: merchant shipping. Changes in the maritime world are part of the reason why U.S. wheat and Caterpillar tractors sell in Europe, as do European and Japanese cars in the Americas, Argentine beef in Italy, Australian iron ore in South Korea. Here, Clark G. Reynolds analyzes the great maritime nations of the past; James M. Morris traces the United States' rise and decline as a maritime nation.

TRADERS

by Clark G. Reynolds

The empire of Atlantis, wrote Plato in the *Critias* (circa 370 B.C.), gained its wealth from trading across the seas with many lands. Its merchant vessels were protected by a great fleet of warships.

But Atlantis's power, Plato emphasized, was not abused. The Atlanteans possessed "in every way great spirits uniting gentleness with great wisdom." They "were obedient to the laws." Gold and other riches "seemed only a burden to them." Not "intoxicated by luxury," they were "sober, and saw clearly that all [their] goods are increased by virtue and friendship with one another."

While Atlantis was probably mythical, the *idea* of a benevolent maritime empire was not. Most likely, Plato was idealizing his own city-state of Athens at its peak, during the fifth century B.C. Or perhaps he was reporting the story, passed on to him by the Egyptians, of the first great seagoing peoples: those of Minoan Crete and the southern Aegean islands more than 1,000 years earlier. These soci-

eties were all what Thucydides, using the Greek word for the sea (*thalassa*), called thalassocracies.

What was special about them? Their singular characteristic, Plato thought, was a sense of virtue. Its erosion brought decline.

Atlantis, Plato observed, sank beneath the waves after "human nature got the upper hand" and the people "behaved unseemingly" by trying to conquer the sea *and* the land.

As for Athens, Isocrates, a contemporary of Plato, noted that the city-state "readily obtained command of the sea." But "arrogance" bred by maritime success eventually cost the Athenians their supremacy. They "no longer kept the laws which they had inherited from their ancestors nor remained faithful to the ways which they had followed in times past."

How Athens Fell

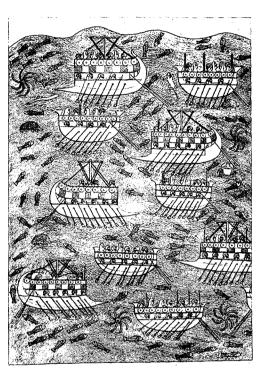
Athens's maritime era began with the leadership of the statesmen Themistocles and Pericles. After Athenian-led Greek forces repulsed a Persian invasion fleet at Salamis in 480 B.C., the Aegean Sea was ruled by the Athenians' galleys—long, slender craft, each propelled by 170 oarsmen, which were built and manned by volunteers.* Naval supremacy enabled Athenian merchants to create a sophisticated maritime trading network. Colonies and enclaves arose along Mediterranean shores from Iberia to the Nile. Traders aboard Athens's squat, sailing round-ships bought (and sold) grain and oil from Iberia, lead, salt, and ivory from North Africa, and fruit, cattle, and copper from the Levant. From Black Sea ports they brought wheat and alluvial gold from the Russian rivers.

Trading profits built temples and financed the arts. Philosophers gravitated to the thriving Athenian democracy, bringing with them new ideas from Persia, Egypt, and even more remote Western Europe. "Our city is open to the world," proclaimed Pericles, who proudly declared that Athens stood as "an education to Greece." Recalled Isocrates: "We helped the common people and were declared enemies of narrow oligarchies, for we thought it monstrous

*Galley "slaves" did not appear in significant numbers until the mid-15th century A.D., when the French, short on manpower, forced war prisoners, criminals, and other *misérables* to pull ships' oars. Such crews appeared only on Mediterranean galleys, which were last rowed into combat in 1717. The Spanish employed galleys on the Mississippi River as late as 1804.

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Phoenician galleys, circa 700 B.C. Those with pointed bows are warships. The others are transports. When the Phoenician traders developed "sail power," they continued to favor beamy, rounded hulls. The best known of their merchantmen was called a gaulos—a tub.

that the many should be subject to the few."

Yet the strategic burdens of empire finally undermined the Athenian state. Its allies revolted against the tribute it levied for the defense of the Aegean. Athens moved to crush the rebel island- and city-states one by one. Eventually, Sparta, Athens's oligarchic rival, began the Peloponnesian War (431–404 B.C.). Athenian leaders undertook major campaigns by sea and by land; they rejected their own long-standing laws and customs and appointed dictators to head the state. Finally, after 27 years of conflict, warships of the painstakingly created Spartan navy surprised and destroyed the Athenian fleet of 180 galleys at Aegospotami near the Hellespont.

Despite this traumatic defeat, Athenian mariners and ships continued to engage in trade and to fight for various masters. And Athenian ideas survived. They transformed the conquering empires of Alexander the Great and Rome into Hellenized societies and, indeed, shaped Western civilization. No other society would so combine the advantages of maritime trade, democracy, and intellectual élan until an upwelling of interest in both classical culture and seaborne commerce began in Italy nearly 2,000 years later, a phenomenon now known as the Renaissance.

Seen through modern eyes, Athens had a special advantage:

insularity. Isolated on a mountainous peninsula, Athenians enjoyed what historian C. Vann Woodward called "free security." Athens had little need of a costly standing army, or of authoritarian rule. The city-state, perhaps 55,000 souls in all, spawned free institutions—not perfect, but unique in the ancient world. Democracy could mature in safety, a prerequisite of all democratic states since then. And free enterprise—as opposed to royal monopoly—led to the rise of a trading class virtually unknown in the authoritarian, agrarian oligarchies and kingdoms (e.g., Sparta, Macedonia, Persia). These societies of landed aristocrats and peasants had exposed borders to defend; to survive, they required warrior-rulers. By contrast, the thalassocracy of Athens was a civilian enterprise.

Looking Beyond Land

Rome, founded as a republic, developed from a warrior state into a far-flung empire because of the threat of enemies on its land frontiers. Rome's conquest of the Mediterranean by the mid-first century B.C. was wrought not by war fleets but by the legions. They seized ports by advancing overland and waged infantry battles at sea, boarding enemy ships for hand-to-hand combat. As historian Lionel Casson noted, the Romans were "an anomaly in maritime history, a race of lubbers who became lords of the sea in spite of themselves." Like the Spartans, they built a navy reluctantly. Rome's warriors suffered grievous disasters on open water, especially at the hands of the Carthaginians, before they made the "middle sea" a *mare nostrum* at the time of Christ. Thereafter, Rome left maritime pursuits to the empire's seafaring subjects, notably the Greeks.

Rome's landowning aristocrats disdained engaging in commerce on land *or* sea. Ordinary citizens saw service on merchantmen or warships as beneath their dignity. For centuries, the fleet's main role was to transport the army. Even when special anti-pirate squadrons had to be deployed after the first century A.D., these forces were controlled by the army.

Yet Rome maintained its power at sea as an imperial necessity. Wrote Vegetius: "None will attack or insult" a state known to be ready at sea "to avenge any affront."

Late in the Middle Ages, new maritime city-states emerged, this time on the Italian peninsula. By the end of the 12th century, the ships and merchants of republican Venice, Genoa, and Pisa (and, later, Florence) were competing for the growing trade of the Mediterranean world. Despite religious differences and costly wars, Italian ships carried goods as well as armed crusaders throughout the flourishing trade triangle of the European Christian West, the Byzantine Christian East, and the Islamic Ottoman Empire.

Why these people, these few Italian city-states, and not others?

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Fernand Braudel (1902–86), the great French dean of the *Annales* school of "total history," observed that the Mediterranean shores did not inevitably spawn a "chosen country of seafarers." Far from being "inhabited by the profusion of seagoing peoples" found in northern Europe, such as the Dutch and the English, the middle sea produced mariners only "in small numbers and in certain regions." The Mediterranean was agrarian, "overwhelmingly a world of peasants, of tenant farmers and landowners." But the Italian city-states, notably Venice, looked beyond the land—for the greater challenges and rewards that only the sea offered.

Their maritime proclivities were crucial to the evolution of the West. "Without the economic underpinning and the artistic and intellectual stimuli arising" from seaborne trade, observed historian William H. McNeill, "the flowering of city-state culture in Italy which we call the Renaissance could not have occurred."

Florence and Genoa pioneered in credit, insurance, and the creation of large business firms. Yet only Venice became a full-fledged thalassocracy. Why?

The Venetians tended to regard themselves as the new Romans. In fact, they were the new Athenians. Located on an archipelago of islets within a great coastal lagoon, their city was largely protected from landward intruders. Their huge war galleys policed the Adriatic Sea and in 1204 captured Constantinople. Thus the Byzantine Aegean came under Venetian jurisdiction.

Pepper, Cotton, Grain

Gradually, between the late 14th and the late 16th centuries, Venice wrested markets and colonies from Genoa, Pisa, and Florence. It became the complete commercial state. Its republican government rested upon a capitalist system. Unique in its time, it was run by patrician merchants from a group of 150 noble families. Though Venice, like Athens, was not democratic in the modern sense, its leading citizens—the Contarini and Tiepolo families, among others—did not abuse their power. They passed laws to protect all citizens and thereby enjoyed the tacit consent of the governed. Said a motion before the ruling council during the 15th century: "The principal foundation of our city and its singular ornament is justice." Philippe de Commynes, the French ambassador in 1494–95, hailed Venice as "the most triumphant city I have ever seen." It "governs itself with the greatest wisdom."

The trust and esteem Venice enjoyed stemmed from its union with the sea. Each Ascension Day the ruling *doge* (duke) tossed a gold ring into the crowded lagoon and proclaimed: "We wed you, o sea, as a sign of true and perpetual dominion." This dominion, commercial rather than military, extended to England and Flanders in the

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WHY THE EUROPEANS WERE FIRST

The Age of Discovery—of Columbus's ventures to the New World (1492– 1504), Da Gama's voyage to India (1497–99), the circumnavigation begun in 1519 by Magellan—gave Western Europeans a preeminence in long-distance maritime conquest and commerce that endured for centuries. Historians have long pondered the causes and effects. There were many able mariners around. Why did the Europeans alone seek mastery of the seas?

Technology played a role. The caravel, the small (50 tons or so), threemasted sailing craft dating from about 1430 that enabled Portuguese captains to venture down Africa's coast and far into the Atlantic, combined the features of two European designs. From the ships of northern German traders came the centerline rudder, which allowed nimble maneuvering and precise coursesteering. From the Mediterranean came the lateen rig; its triangular sail, first developed in India, could do what the square sail could not: propel a craft into the wind. Thus variously equipped, Europeans were able to utilize the patterns of winds and currents of the Atlantic and other oceans.

But Europeans were not the only sailors, as they saw when they reached China and Japan. Many theories were advanced as to why Oriental seamen seemed to stay close to home. A Spanish cleric concluded in 1577 that the Chinese were "afraid of the sea, being people not accustomed to take risks." An Englishman wrote that the capacious but squat, flat-bottomed junks suffered "the inconvenience of falling much to leeward with a side wind"—i.e. they could not sail across or into a breeze as well as deep-draft European craft.

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In truth, non-Europeans accomplished striking feats. The Chinese had compasses by the 11th century, and by the 14th had junks with four decks and six masts. A 15th-century admiral, Cheng Huo, led seven long voyages, the last a two-year expedition to Hormuz in the Persian Gulf. Venetians told of an Arab ship that probed the "Sea of Darkness," as the Arabs called the Atlantic, sailing out 2,000 miles "between sea and sky" in 40 days. Japanese junks crossed to Acapulco, Mexico, three times during the 17th century.

Yet the Europeans, as historian Fernand Braudel noted, "remained alone in the race" to rule the seas. The reason, he suggests, was need. China and the Islamic world were self-sufficient and rich; they even had colonies. "The West, by comparison, was still 'proletarian." But after the 13th century, pressures for a better material life transformed the West's psychology:

"What historians have called the hunger for gold, the hunger to conquer the world or the hunger for spices was accompanied in the technological sphere by a constant search for new inventions and utilitarian applications utilitarian in the sense that they would actually serve mankind, making human labor both less wearisome and more efficient. The accumulation of practical discoveries showing a conscious will to master the world and a growing interest in every source of energy was already shaping the true face of Europe and hinting at things to come, well before that success was actually achieved."

One major result, Braudel concludes, was "victory over the ocean."

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Atlantic and inland via the Po Valley rivers to the Alps.

In 1423, when Venice's population was about 100,000, the city boasted nearly 3,500 merchant vessels, both galleys and sailing craft. Often these vessels were accompanied by armed galleys, whose oarsmen were drawn from a pool of free Venetians, all doing their citizen's duty. Those who built the ships at Venice's vaunted Arsenal, perhaps the largest industrial establishment anywhere in its time, were skilled freemen, not slaves.

For three centuries, Venetian ships carried the bulk of the cargo of the Mediterranean world. Ships not privately owned were leased out by the state. Later, as the need arose, the government granted construction and freight subsidies to patrician shippers. Cargo-laden galleys moved in annual convoys along prescribed routes; larger armed sailing cogs journeyed alone to markets of opportunity. The captains visited Venetian trading posts (e.g., Corfu, Crete, and other Aegean islands) and foreign ports. Even among the infidel Turks, their agents abroad enjoyed a privileged status.

Venice became an emporium. Venetian merchants did not necessarily have to travel to European markets, because other Europeans came to *them*. Germans, for instance, would deliver to Venetian traders bars of iron, textiles, and ever-increasing amounts of silver. In exchange, the Venetians would supply the Mediterranean commodities they controlled—pepper, spices, Syrian cotton, grain, wine, salt.* The German goods, in turn, were bartered through the Venetian trading network; in Tunis, silver was exchanged for African gold.

An Aversion to Risk

The Venetians invested their immense profits in inland trade, which brought Venice dominion over northern Italy. And they committed their earnings—"sparing no expense," boasted a government report—to gild their city. Palaces like the Contarini family's 15th-century Ca' d'Oro rose along the Grand Canal to complement opulent basilicas like the one in the Piazza San Marco. Rich patrons made Venice the center of Renaissance painting. Though devout Catholics, the Venetians kept their government secular. They could trade with the Turks, and even subjugate the Byzantine Christian empire, without qualms. Restless Venetians like Marco Polo (1254?–1324) journeyed as far as China in search of new trading opportunities.

This freest and most joyous of Italian city-states experienced a decline only after its resources were drained by wars against the Turks and by resistance to invasions of Italy by continental powers, beginning with Charles VIII's France in 1494. The plague took its toll

^{*}A key food preservative in pre-refrigeration days. Venice's rulers controlled salt-marsh acreage on the Adriatic Sea and in Cyprus so vast that each year more than 40,000 horses were brought in from Hungary, Croatia, and Germany just to load salt aboard Venetian vessels.

of shipbuilders and crewmen. And, as time went on, it seemed that investments in property ashore required less work and risk than the sea trade; private commercial banks disappeared. After the 1570s, the ships and agents of merchants in northern European cities like Amsterdam opened new markets in the Far East and the Americas, geographically removed from the Mediterranean-based Venetians.

By 1610 Nicolò Donà, one of the leading patrician merchants, was wistfully recalling the days when "all was grandeur, utility, emolument, commodity, honor," when all Venetians were "interested in sea voyages, in business, in everything appertaining to the . . . greater good of the fatherland."

The Venetian thalassocracy had become a minor power. Even so, it never suffered a tyrant or a popular revolt. It never fell victim to conquest until 1797, and then only to Napoleon's armies.

The employment of Italian bankers and seafarers by the rising new continental power, Spain, contributed to one of the great accidents of historical timing. Located at the confluence of the Mediterranean and northern European sea routes, and without serious maritime competitors, Spain hired skilled foreigners, notably Christopher Columbus of Genoa, to explore new trade routes abroad. These great



Long after her great days of commerce and empire, Venice's wealth and physical splendor attracted artists. Canaletto's 18th-century painting Sta. Maria Della Salute and the Grand Canal hangs in the Louvre in Paris.

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navigators found the New World, whose riches—gold, silver, spices—Spain's financial councillors placed in the royal coffers. Neighboring Portugal used its own modest maritime population to reach the Far East and to establish a trading monopoly—spices, tea, textiles—over the Indian Ocean.

But neither Spain nor Portugal developed a maritime commercial base. Typical 16th-century continental states, they encouraged no middle class of businessmen to invest the gains from their overseas domains in local trading or manufacturing enterprises. The gold and silver from the Americas and profits from the Eastern spice trade were variously squandered by the aristocracy, consumed by the Spanish army in continental campaigns, and spent on manufactured goods from northern Europe.

Gradually, Spain's Italian financial advisers, shippers, and sailors were replaced by Dutchmen. By the end of the 16th century, an Englishman, Sir Walter Raleigh, was noting just how much King Philip II depended upon the Netherlanders: "Were it not for them he were never able to make out such armies and navies by sea."

Less than a century after Columbus opened America to Spanish exploitation, the Renaissance reached the Netherlands and England. First Amsterdam and then London became the financial and trading centers of a new northern European capitalism, linked closely to the individualistic spirit of the Protestant revolt against Catholicism and Spain. Dutch and English warships and armed merchantmen repelled the Spanish Armada in 1588 and then attacked Spanish and Portuguese trading monopolies around the world.

Mare Liberum

The Dutch were foremost. To the seven tiny United Provinces of the northern Netherlands, especially Holland and its port of Amsterdam, belonged the commerce of the 17th century. The coastal republic's insularity was provided by the Rhine, Scheldt, and Meuse estuaries and rivers. The southern Netherlands (modern Belgium) and the port of Antwerp had been vulnerable to Spanish incursions. To the east lay the fragmented German duchies. The other potential threat, France, was inhibited by its own internal strife, and by an alliance prudently arranged by the Dutch.

The Dutch created an exuberant republic, then an empire, based entirely on overseas trade. They adopted certain Venetian banking practices. However, unlike Venice, the Netherlands was dominated by a genuine nonpatrician class of urban merchants—the first modern nation-state rooted in bourgeois capitalism. The merchants formed private joint-stock companies to branch out from the close-tohome Baltic trade and North Sea fisheries and fill the commercial vacuum left by Venice and Antwerp. The same genius that enabled

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AMSTERDAM: THE ENTREPÔT SYSTEM

The Dutch sailed to maritime supremacy after 1600 with a fleet that in numbers equalled those of *all* of its European rivals, and channeled the bulk of Europe's trade in and out of a single port. Even as late as 1786, a total of 1,504 vessels—more than four a day—arrived at the busy quays of Amsterdam. The ships, all but 44 of them Dutch, bore commodities and finished goods from Prussia, Russia, Sweden, Denmark, northern Germany, Norway, Italy, Portugal, Spain, the Levant, the Barbary Coast, France, and the Americas.

The roomy, round-sided Dutch *fluyt* (flyboat) was simply built and needed only a small crew—thus lowering the costs of wages and food, the main expenses on long trips. A French study noted that while a 400-ton French ship could have 25 in crew, a Dutch craft that size might have 12. Dutch seamen made do with beer, rye-biscuit, and "a great deal of dried fish without seasoning, which costs far less than meat," but French sailors required "bread, wine, biscuit made of pure wheatmeal," fresh and salt meat, butter, peas, beans, eggs, cod, and herring (which had to "be well-seasoned, and even then they will only accept it on meatless days"). The "hotter" French had four meals a day; the Dutch with "a cooler temperament eat two or three."

The well-managed Dutch fleet, observed Fernand Braudel, served a singular entrepôt system:

"In Amsterdam, everything was crammed together, concentrated: the ships in the harbour, wedged as tight as herrings in a case, the lighters plying up and down the canals, the merchants who thronged to the Bourse, and the goods which piled up in warehouses only to pour out of them. No sooner had a fleet arrived, relates a 17th-century eye-witness, 'than through the good offices of the brokers, the entire quantity of merchandise is bought at the first meeting of merchants at the Bourse, the ships are unloaded within four or five days and ready to set sail on a new voyage.' It would certainly take a little longer to find buyers. But the warehouses ... could absorb and then disgorge any amount of goods. There was an extraordinary volume of property, materials, goods and services on the market, all available at a moment's notice. At a given command, the entire machine went into action. This was the means whereby Amsterdam maintained her superiority—an abundance of ever-ready goods and a great mass of money in constant circulation....

"Since I have become particularly acquainted with Amsterdam,' writes a contemporary in 1699, 'I compare it to a fair where merchants from many parts bring their merchandise which is sure to find a customer; as in ordinary fairs the merchants one meets there do not use the things they sell, so the

the Dutch to harness the north coast gales with windmills also produced small, unarmed, cheaply built cargo craft that sailed in escorted convoys. Larger "Indiamen" carried their own cannon to far seas, leading Dutch efforts that supplanted the Portuguese traders in South Asia and established a trading monopoly with Japan.

By 1650, the Dutch monopolized the shipping trade of most of

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Dutch, who collect goods from every corner of Europe, keep for their own use only what is strictly necessary for life and sell to other nations the products they consider superfluous and which are always more expensive'....

"Storage and warehousing lay at the heart of Dutch commercial strategy. [When in 1665 there was talk of seeking a northern passage to the Indies,] the East India Company tried to block the proposal. Why? [If] the venture were successful, the trip would be reduced by six months and the Company would not have time, before the expedition returned, to dispose of the 10 million florins' worth of goods which piled up every year in its warehouses....

"[The stockpiling of goods] was the solution to trading problems which all, or almost all, derived from the intermittent nature of arrivals and departures, from the delays and uncertainty of orders and information. [A Dutch merchant with a substantial and varied inventory was able to] react quickly to any opening on the market as soon as it appeared. And if



A Dutch flyboat

Amsterdam called the tune for European prices, as all the documents tell us, it was because of the abundance of reserve stocks which the city's warehouses could at any moment release or hold back.

"The Amsterdam entrepôt trade verged on a monopoly. And if the Dutch really were 'The Carryers of the World,'... this was not, as [historian] Le Pottier de la Hestroy thought because 'all the other nations were willing to suffer it to be so,' but because they were unable to prevent it. The Dutch system was built on a network of commercial relations... which combined to produce a series of virtually obligatory channels for the circulation and redistribution of goods. It was a system that could only be maintained by constant vigilance, by a policy designed to thwart all competition, and by subordinating the whole of the Dutch economy to this essential objective....

"[Amsterdam's role in] collecting, storing, selling and re-selling the goods of the universe [came to seem] pernicious.... In 1721, Charles King, in *The British Merchant*, expresses surprise that English goods bound for France should be embarked on Dutch vessels, unloaded at Amsterdam, and from there conveyed by the Meuse or the Rhine! They would have to pay duty on the way in and out of Holland, then the tolls on the Rhine or Meuse, and finally customs duties at the French frontier. [Finally it became] clear that the diversion via Amsterdam lengthened and complicated the circuit. When, in the 18th century, Amsterdam's power to attract and divert goods towards herself had waned, the direct dispatch of merchandise would eventually prevail."

Europe, including much of Spain's. By 1680, the United Netherlands had perhaps 55,000 men at sea, out of a population that never quite reached two million. Dutch merchant ships, numbering about 2,000, were protected by the world's best-trained battle fleet. Europe's monarchies were duly dazzled. As late as 1728, English novelist Daniel Defoe was moved to comment that "the Dutch must be under-

stood as they really are, the Middle Persons in Trade, the Factors and Brokers of Europe.... The Dutch *buy* to *sell* again, *take* in to *send* out." They are "supply'd from All Parts of the World, that they may supply All the World again."

Thanks to their naval might, the Dutch were able to rewrite international law. The Iberians had closed distant seas to rival traders; the Dutch opened them. Their great jurist, Hugo Grotius (1583– 1645), argued for *mare liberum*, the right of free men to trade across free seas. Dutch armed merchantmen, and English and French too, established colonies and trading stations in the Far East and the Western Hemisphere. The trade of the colonists, like that of Spanish and Portuguese colonials, was not free. Under an exclusive arrangement that became known as the "mercantile system," goods could only be traded with the mother country or other colonies under the same flag. But the colonials did not object, as long as they prospered.

Pax Britannica

Dutch political liberalism inspired the Western world. Amsterdam became Europe's most cosmopolitan city—"an inventory of the possible," said French philosopher René Descartes. A Dutch town, Leyden, was a refuge for many of the English Puritan Separatists and other Pilgrims who in 1620 sailed on the *Mayflower* to start at Plymouth, Massachusetts, the first New England colony. Wrote Sir William Temple of the Dutch at their peak in 1672: "Men live together like Citizens of the World, associated by the common ties of Humanity, and by the bonds of Peace, Under the impartial protection of indifferent Laws, With equal encouragement of all Art and Industry, and equal freedom of Speculation and Enquiry."

Decline came only when maritime England and continental France each overcame internal quarrels and mounted separate offensives against the Dutch. After two naval wars, England and the Netherlands locked horns again during the 1670s. This time, the French attacked the United Provinces. The Dutch opened the dikes to flood the land—which stopped the invaders, but devastated the economy. Thereafter, the Dutch could no longer compete with larger rivals. Like the Venetians in their waning years, Dutch businessmen found banking and local property investments far safer than the sea trades. After 1730 the Netherlands became a minor power.

During the 1680s and 1690s, England and France vied to be the maritime successors to the Dutch. But France's King Louis XIV soon succumbed to the geostrategic straitjacket of every continental power. The continuing defense of land frontiers drained off the money and talent in this most absolute of monarchies. The French navy, merchant marine, and colonies never matched England's. France's possessions—and her merchant vessels—became British

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targets of opportunity in the many Anglo-French wars down to 1815.

France remained an autocratic state, with a regime that jailed Voltaire and drove Rousseau into exile. During the 17th century, maritime supremacy passed to the island race of England.

British activities at sea had slowly grown over the centuries, but were limited by the peculiar contradiction of a monarch ruling over and regulating a trading society. This was finally resolved by the Glorious Revolution of 1688, when the prodemocratic Whig Party transformed England into a constitutional monarchy and significant power passed to Parliament. The landed aristocracy then joined the once-reviled merchant class in joint-stock trading and colonial enterprises. After 1707, when England united with Scotland to become Great Britain, the trade-oriented Whigs led what quickly became the ultimate thalassocracy, a bastion of both democracy and capitalism.

As an island nation, Britain had only to maintain her fleet to insure survival, and beginning about 1650, the Royal Navy gained dominance at sea.* By the 1720s, the port of London, with more than 500,000 inhabitants, was the hub of a nation dominated by ocean commerce. Architects, artists, and literati, patronized and enjoyed by the wealthy and the humble alike, extolled the trading spirit—what poet Edward Young in 1728 called the *Universal Passion*:

While I survey the blessings of our isle, Her arts triumphant in the royal smile, Her public wounds bound up, her credit high, Her commerce spreading sails in every sky...

The ports of Europe, colonies in India and America, and entrepôts around the globe fed the British carrying trade of the 18th century. Her merchant marine swelled—to 2,300 ships by the 1770s. And by then, the British had long since traded their belief in freedom of the seas for "mercantilism." They sought and gained trade routes monopolized by British shippers—*mare clausum*. Even the successful revolt of her 13 North American colonies did not seriously diminish Britain's commercial supremacy at sea.

That supremacy was not primarily maintained by technological prowess. The basic design of the European ocean ship had not much changed since the 15th-century appearance of the carrack, a threemasted vessel with a centerline rudder at the stern. Even at the end of the 18th century, the British Indiamen that sailed to East Asia were not much larger than 1,900 tons. That is, they were about the

^{*}Largely by firepower. The problem of sailing warships, lack of punch, was first solved during the reign of King Henry VIII (1509-47), whose admirals advanced them in lines of battle so that their cannons could fire "broadsides." These ships-of-the-line grew steadily in both firing range—which reached 3,000 yards by 1800—and size. The 55-gun *Royal Prince*, built in 1610, displaced 1,330 tons; the 100-gun *Victory*, Admiral Horatio Nelson's flagship at the 1805 battle of Trafalgar, where a French-Spanish defeat ended all dispute over the Royal Navy's supremacy, was a 3,500-tonner.

size of their Dutch competitors and somewhat smaller than the giants of the 16th century, Portuguese carracks of up to 2,000 tons that carried 800 crew and passengers. (Not until about 1840 would iron frames permit larger hulls for merchant ships.)

But unlike their counterparts in Venice and the Netherlands, Britain's middle-class merchants were not simply traders. At home, they invested in the technology (e.g., the steam engine) and quantityproduction techniques that launched the Industrial Revolution in the British Isles during the 1780s, decades before the embattled and bankrupted continental states could follow. After the duke of Wellington's defeat of Napoleon at Waterloo in 1815, Britain stood alone as a creditor nation.

By the mid-19th century, the British had colonies on every continent and island outposts in every ocean. Under the Pax Britannica, Britain maintained the peaceful balance of power needed to insure her own prosperity. Her instrument for deterring general war in Europe and for policing the sea-lanes remained the Royal Navy. Thanks to its strength, the British again adopted the principle of free trade, of open competition, at which they remained masters.

Windows into the Mind

It was happenstance that oceans covered 71 percent of the earth's surface. One result, as social geographer Ellen Churchill Semple observed in her *Influences of Geographic Environment* (1911), is that man's progress over the ages has been "attended by an advance from smaller to larger marine areas... Every great epoch of history has had its own sea, and every succeeding epoch has enlarged its maritime field."

Typically, the agrarian and continental societies were closed off, tightly ruled by the kings and clergy who held power in them. One thread that linked all the *maritime* societies was the trait that Thucydides ascribed to Athens: They were "open to the world." Semple suggested that "the distinctive value of the sea is that it

Semple suggested that "the distinctive value of the sea is that it promotes many-sided relations as opposed to the one-sided relation of the land," where people knew only those of their kind, living in similar ways. "Had the proportion of land and water been reversed," Semple argued, "the world would have been poorer." As British historian J. H. Plumb observed, science and philosophy were both stimulated by the great expansion of human knowledge wrought by the seafarers: "trans-ocean trade brought more than a profit; it made windows into the mind."

The people drawn to the emerging seacoast cities in Europe were rather special. Those best able to escape serfdom and other restrictions of feudal agrarian economies were craftsmen, traders, and sailors. These were, as historian G. Krogh-Jensen described

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them, "free men, bold and wise, courageous and reliable, unimpressed and not without a sense of humour." In their drive to achieve independence, observed Frederic C. Lane, writing of Renaissance Italy, such cities spawned "new classes—merchant capitalists, shopkeepers, craftsmen, and day laborers." All shared immersion in a vigorous, rapidly changing "commercialized atmosphere" then unknown in other societies.

As ships became more seaworthy and trading ventures became more ambitious, that atmosphere became more common. The remarkably swift 17th-century colonization of the New World, as J. H. Elliott noted in *The Old World and the New* (1970), "gave Europeans more room for manoeuvre. Above all, it promoted movement movement of wealth, movement of people, movement of ideas, ... and a climate of thought which encouraged confidence in the possibilities of success."

Yet the Dutch maritime reign was brief. The French challenge was not sustained. (Nor was the German challenge that developed at the turn of the present century.) Blessed in its insularity, Britain, which gained thalassocratic status during the 17th century, would maintain that status well into the 20th—outdistancing the Athenians, the Venetians, and all other predecessors.

Why?

In *The Influence of Sea Power upon History* (1890), Alfred Thayer Mahan observed that the "many wants" of the British, "combined with their restless activity and other conditions that favored maritime enterprise, led her people abroad.... Their needs and genius made them merchants and colonists, then manufacturers and producers; and between products and colonies shipping is the inevitable link. So their sea power grew."

So much did it grow, in fact, that the Britons allowed a newcomer to compete freely under their strategic umbrella. The flag that the newcomer's ships carried was known as the Stars and Stripes.





TRANSITION: DOWN TO THE SEA IN

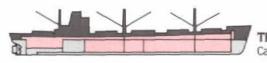
The drawings here show how, over 400 years, shipbuilders have advanced the "more is more" principle. In ships, greater size means more cargo capacity and often but not always—more speed. Sixteenth-century Portuguese caravels were slow and small. Clipper ships like *Cutty Sark*, an 1869 British adaptation of a U.S. design, were fast but short on cargo space. The 2,701 U.S.-built World War II Liberties were slow but commodious, as the cargo areas (pink-shaded) indicate. The modern ships below have carried the evolution further. Most are specialized, shuttling particular cargoes (e.g., "Roll-on/Roll-off" trailers) to designated ports. But tramps such as *Anax* remain ready, like their classic forebears, to take almost anything anywhere.



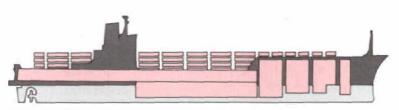
CARAVEL Portugal

feet

150



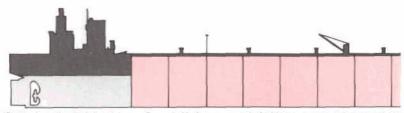
TRAMP Anax (Greece) Capacity: 14,910 tons; 15 knots



ROLL-ON/ROLL-OFF-CONTAINERSHIP Australian Emblem (Austr.) Capacity: 18,575 tons (vehicles, containers); 21 knots



BARGE CARRIER Lash Italia (U.S.) Capacity: 29,820 tons (90 barges); 21 knots



*Except where otherwise indicated, tonnage figures cited in these essays are deadweight tons, a measure of cargo capacity by weight (as opposed to, say, volume). Speed is in knots, or nautical miles per hour, a nautical mile being 5,076 feet. One knot is about 1.15 statute, or land, miles per hour.

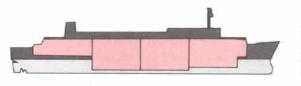
EVER BIGGER, MORE SPECIALIZED SHIPS



CLIPPER Cutty Sark (Brit.) Cargo capacity: 650 tons (of tea); maximum speed 17.5 knots*



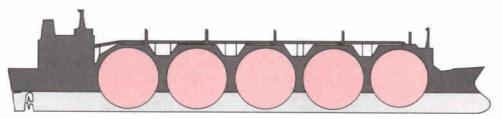
LIBERTY John C. Freemont (U.S.) Capacity: 9,146 tons; 11 knots



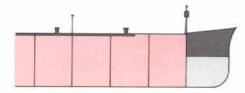
CAR CARRIER Toyota Maru (Japan) Capacity: 2,080 autos; 20 knots



CONTAINERSHIP Dart Atlantic (Brit.) Capacity: 4,500 20-foot containers; 23 knots



LNG CARRIER Hoegh Gandria (Nor.) Capacity: 128,000 cubic meters of liquefied natural gas; 20 knots



SUPERTANKER (J.S.T. Pacific (U.S.) Capacity: 372,000 tons of oil; 15.9 knots This class of Ultra Large Crude Carriers (ULCC) can carry 550,000 tons or more, and are the largest ships afloat.