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THE RISE AND FALL OF THE GREAT POWERS

Economic Change
and Military Conflict
from 1500 to 2000

BY PAUL KENNEDY



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The Rise of the Western World

Intro

In the year 1500, the date chosen by numerous scholars to mark the divide between modern and pre-modern times,¹ it was by no means obvious to the inhabitants of Europe that their continent was poised to dominate much of the rest of the earth. The knowledge which contemporaries possessed about the great civilizations of the Orient was fragmentary and all too often erroneous, based as it was upon travelers' tales which had lost nothing in their retelling. Nevertheless, the widely held image of extensive eastern empires possessing fabulous wealth and vast armies was a reasonably accurate one, and on first acquaintance those societies must have seemed far more favorably endowed than the peoples and states of western Europe. Indeed, placed alongside these other great centers of cultural and economic activity, Europe's relative weaknesses were more apparent than its strengths. It was, for a start, neither the most fertile nor the most populous area in the world; India and China took pride of place in each respect. Geopolitically, the "continent" of Europe was an awkward shape, bounded by ice and water to the north and west, being open to frequent landward invasion from the east, and vulnerable to strategic circumvention in the south. In 1500, and for a long time before and after that, these were not abstract considerations. It was only eight years earlier that Granada, the last Muslim region of Spain, had succumbed to the armies of Ferdinand and Isabella; but that signified the end of a regional campaign, not of the far larger struggle between Christendom and the forces of the Prophet. Over much of the western world there still hung the shock of the fall of Constantinople in 1453, an event which seemed the more pregnant because it by no means marked the limits of the Ottoman Turks' advance. By the end of the century they had taken Greece and the Ionian Islands, Bosnia, Albania, and much of the rest of the Balkans; and worse was to come in the 1520s when their formidable janissary armies pressed toward Budapest and Vienna. In the south, where Ottoman galleys raided Italian ports, the

popes were coming to fear that Rome's fate would soon match that of Constantinople.²

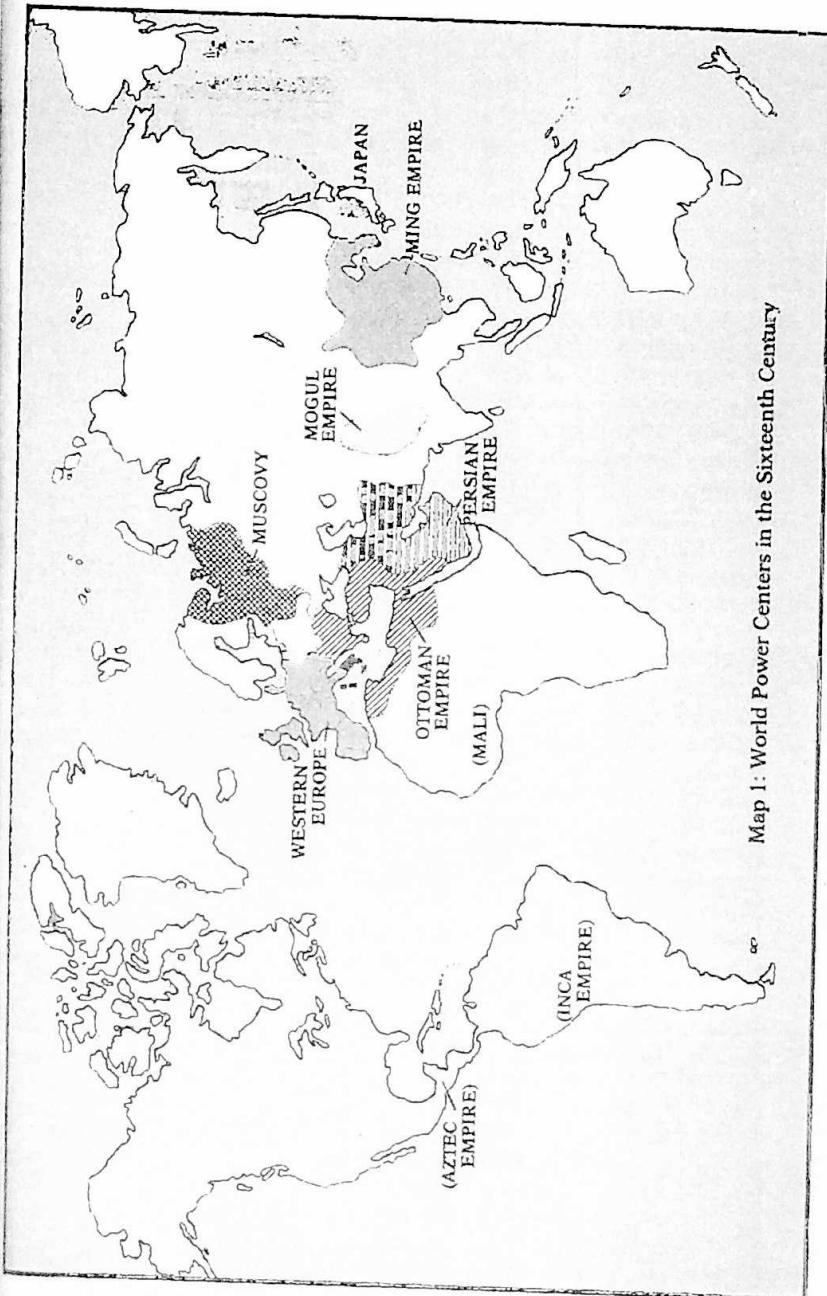
Whereas these threats seemed part of a coherent grand strategy directed by Sultan Mehmet II and his successors, the response of the Europeans was disjointed and sporadic. Unlike the Ottoman and Chinese empires, unlike the rule which the Moguls were soon to establish in India, there never was a united Europe in which all parts acknowledged one secular or religious leader. Instead, Europe was a hodge-podge of petty kingdoms and principalities, marcher lordships and city-states. Some more powerful monarchies were arising in the west, notably Spain, France, and England, but none was to be free of internal tensions and all regarded the others as rivals, rather than allies in the struggle against Islam.

Nor could it be said that Europe had pronounced advantages in the realms of culture, mathematics, engineering, or navigational and other technologies when compared with the great civilizations of Asia. A considerable part of the European cultural and scientific heritage was, in any case, "borrowed" from Islam, just as Muslim societies had borrowed for centuries from China through the media of mutual trade, conquest, and settlement. In retrospect, one can see that Europe was accelerating both commercially and technologically by the late fifteenth century; but perhaps the fairest general comment would be that each of the great centers of world civilization about that time was at a roughly similar stage of development, some more advanced in one area, but less so in others. Technologically and, therefore, militarily, the Ottoman Empire, China under the Ming dynasty, a little later northern India under the Moguls, and the European states system with its Muscovite offshoot were all far superior to the scattered societies of Africa, America, and Oceania. While this does imply that Europe in 1500 was one of the most important cultural power centers, it was not at all obvious that it would one day emerge at the very top. Before investigating the causes of its rise, therefore, it is necessary to examine the strengths and the weaknesses of the other contenders.

Ming

Ming China

Of all the civilizations of premodern times, none appeared more advanced, none felt more superior, than that of China.³ Its considerable population, 100–130 million compared with Europe's 50–55 million in the fifteenth century; its remarkable culture; its exceedingly fertile and irrigated plains, linked by a splendid canal system since the eleventh century; and its unified, hierarchic administration run by a well-educated Confucian bureaucracy had given a coherence and sophistication to Chinese society which was the envy of foreign visi-



Map 1: World Power Centers in the Sixteenth Century

tors. True, that civilization had been subjected to severe disruption from the Mongol hordes, and to domination after the invasions of Kublai Khan. But China had a habit of changing its conquerors much more than it was changed by them, and when the Ming dynasty emerged in 1368 to reunite the empire and finally defeat the Mongols, much of the old order and learning remained.

To readers brought up to respect "western" science, the most striking feature of Chinese civilization must be its technological precocity. Huge libraries existed from early on. Printing by movable type had already appeared in eleventh-century China, and soon large numbers of books were in existence. Trade and industry, stimulated by the canal-building and population pressures, were equally sophisticated. Chinese cities were much larger than their equivalents in medieval Europe, and Chinese trade routes as extensive. Paper money had earlier expedited the flow of commerce and the growth of markets. By the later decades of the eleventh century there existed an enormous iron industry in north China, producing around 125,000 tons per annum, chiefly for military and governmental use—the army of over a million men was, for example, an enormous market for iron goods. It is worth remarking that this production figure was far larger than the British iron output in the early stages of the Industrial Revolution, seven centuries later! The Chinese were also probably the first to invent true gunpowder; and cannons were used by the Ming to overthrow their Mongol rulers in the late fourteenth century.⁴

Given this evidence of cultural and technological advance, it is also not surprising to learn that the Chinese had turned to overseas exploration and trade. The magnetic compass was another Chinese invention, some of their junks were as large as later Spanish galleons, and commerce with the Indies and the Pacific islands was *potentially* as profitable as that along the caravan routes. Naval warfare had been conducted on the Yangtze many decades earlier—in order to subdue the vessels of Sung China in the 1260s, Kublai Khan had been compelled to build his own great fleet of fighting ships, equipped with projectile-throwing machines—and the coastal grain trade was booming in the early fourteenth century. In 1420, the Ming navy was recorded as possessing 1,350 combat vessels, including 400 large floating fortresses and 250 ships designed for long-range cruising. Such a force eclipsed, but did not include, the many privately managed vessels which were already trading with Korea, Japan, Southeast Asia, and even East Africa by that time, and bringing revenue to the Chinese state, which sought to tax this maritime commerce.

The most famous of the *official* overseas expeditions were the seven long-distance cruises undertaken by the admiral Cheng Ho between 1405 and 1433. Consisting on occasions of hundreds of ships and tens of thousands of men, these fleets visited ports from Malacca and Cey-

lon to the Red Sea entrances and Zanzibar. Bestowing gifts upon deferential local rulers on the one hand, they compelled the recalcitrant to acknowledge Peking on the other. One ship returned with giraffes from East Africa to entertain the Chinese emperor; another with a Ceylonese chief who had been unwise enough not to acknowledge the supremacy of the Son of Heaven. (It must be noted, however, that the Chinese apparently never plundered nor murdered—unlike the Portuguese, Dutch, and other European invaders of the Indian Ocean.) From what historians and archaeologists can tell us of the size, power, and seaworthiness of Cheng Ho's navy—some of the great treasure ships appear to have been around 400 feet long and displaced over 1,500 tons—they might well have been able to sail around Africa and "discover" Portugal several decades before Henry the Navigator's expeditions began earnestly to push south of Ceuta.⁵

But the Chinese expedition of 1433 was the last of the line, and three years later an imperial edict banned the construction of seagoing ships; later still, a specific order forbade the existence of ships with more than two masts. Naval personnel would henceforth be employed on smaller vessels on the Grand Canal. Cheng Ho's great warships were laid up and rotted away. Despite all the opportunities which beckoned overseas, China had decided to turn its back on the world.

There was, to be sure, a plausible strategical reason for this decision. The northern frontiers of the empire were again under some pressure from the Mongols, and it may have seemed prudent to concentrate military resources in this more vulnerable area. Under such circumstances a large navy was an expensive luxury, and in any case, the attempted Chinese expansion southward into Annam (Vietnam) was proving fruitless and costly. Yet this quite valid reasoning does not appear to have been reconsidered when the disadvantages of naval retrenchment later became clear: within a century or so, the Chinese coastline and even cities on the Yangtze were being attacked by Japanese pirates, but there was no serious rebuilding of an imperial navy. Even the repeated appearance of Portuguese vessels off the China coast did not force a reassessment.* Defense on land was all that was required, the mandarins reasoned, for had not all maritime trade by Chinese subjects been forbidden in any case?

Apart from the costs and other disincentives involved, therefore, a key element in China's retreat was the sheer conservatism of the Confucian bureaucracy—a conservatism heightened in the Ming period by resentment at the changes earlier forced upon them by the Mongols. In this "Restoration" atmosphere, the all-important officialdom was concerned to preserve and recapture the past, not to create a brighter

*For a brief while, in the 1590s, a somewhat revived Chinese coastal fleet helped the Koreans to resist two Japanese invasion attempts; but even this rump of the Ming navy declined thereafter.

future based upon overseas expansion and commerce. According to the Confucian code, warfare itself was a deplorable activity and armed forces were made necessary only by the fear of barbarian attacks or internal revolts. The mandarins' dislike of the army (and the navy) was accompanied by a suspicion of the trader. The accumulation of private capital, the practice of buying cheap and selling dear, the ostentation of the *nouveau riche* merchant, all offended the elite, scholarly bureaucrats—almost as much as they aroused the resentments of the toiling masses. While not wishing to bring the entire market economy to a halt, the mandarins often intervened against individual merchants by confiscating their property or banning their business. Foreign trade by Chinese subjects must have seemed even more dubious to mandarin eyes, simply because it was less under their control.

This dislike of commerce and private capital does not conflict with the enormous technological achievements mentioned above. The Ming rebuilding of the Great Wall of China and the development of the canal system, the ironworks, and the imperial navy were for *state* purposes, because the bureaucracy had advised the emperor that they were necessary. But just as these enterprises could be started, so also could they be neglected. The canals were permitted to decay, the army was periodically starved of new equipment, the astronomical clocks (built c. 1090) were disregarded, the ironworks gradually fell into desuetude. These were not the only disincentives to economic growth. Printing was restricted to scholarly works and not employed for the widespread dissemination of practical knowledge, much less for social criticism. The use of paper currency was discontinued. Chinese cities were never allowed the autonomy of those in the West; there were no Chinese burghers, with all that that term implied; when the location of the emperor's court was altered, the capital city had to move as well. Yet without official encouragement, merchants and other entrepreneurs could not thrive; and even those who did acquire wealth tended to spend it on land and education, rather than investing in protoindustrial development. Similarly, the banning of overseas trade and fishing took away another potential stimulus to sustained economic expansion; such foreign trade as did occur with the Portuguese and Dutch in the following centuries was in luxury goods and (although there were doubtless many evasions) controlled by officials.

In consequence, Ming China was a much less vigorous and enterprising land than it had been under the Sung dynasty four centuries earlier. There were improved agricultural techniques in the Ming period, to be sure, but after a while even this more intensive farming and the use of marginal lands found it harder to keep pace with the burgeoning population; and the latter was only to be checked by those Malthusian instruments of plague, floods, and war, all of which were very difficult to handle. Even the replacement of the Mings by the more

vigorous Manchus after 1644 could not halt the steady relative decline.

One final detail can summarize this tale. In 1736—just as Abraham Darby's ironworks at Coalbrookdale were beginning to boom—the blast furnaces and coke ovens of Honan and Hopei were abandoned entirely. They had been great before the Conqueror had landed at Hastings. Now they would not resume production until the twentieth century.

The Muslim World

Ottomans

Even the first of the European sailors to visit China in the early sixteenth century, although impressed by its size, population, and riches, might have observed that this was a country which had turned in on itself. That remark certainly could not then have been made of the Ottoman Empire, which was then in the middle stages of its expansion and, being nearer home, was correspondingly much more threatening to Christendom. Viewed from the larger historical and geographical perspective, in fact, it would be fair to claim that it was the Muslim states which formed the most rapidly expanding forces in world affairs during the sixteenth century. Not only were the Ottoman Turks pushing westward, but the Safavid dynasty in Persia was also enjoying a resurgence of power, prosperity, and high culture, especially in the reigns of Ismail I (1500–1524) and Abbas I (1587–1629); a chain of strong Muslim khanates still controlled the ancient Silk Road via Kashgar and Turfan to China, not unlike the chain of West African Islamic states such as Bornu, Sokoto, and Timbuktu; the Hindu Empire in Java was overthrown by Muslim forces early in the sixteenth century; and the king of Kabul, Babur, entering India by the conqueror's route from the northwest, established the Mogul Empire in 1526. Although this hold on India was shaky at first, it was successfully consolidated by Babur's grandson Akbar (1556–1605), who carved out a northern Indian empire stretching from Baluchistan in the west to Bengal in the east. Throughout the seventeenth century, Akbar's successors pushed farther south against the Hindu Marathas, just at the same time as the Dutch, British, and French were entering the Indian peninsula from the sea, and of course in a much less substantial form. To these secular signs of Muslim growth one must add the vast increase in numbers of the faithful in Africa and the Indies, against which the proselytization by Christian missions paled in comparison.

But the greatest Muslim challenge to early modern Europe lay, of course, with the Ottoman Turks, or, rather, with their formidable army and the finest siege train of the age. Already by the beginning of the sixteenth century their domains stretched from the Crimea (where

they had overrun Genoese trading posts) and the Aegean (where they were dismantling the Venetian Empire) to the Levant. By 1516, Ottoman forces had seized Damascus, and in the following year they entered Egypt, shattering the Mamluk forces by the use of Turkish cannon. Having thus closed the spice route from the Indies, they moved up the Nile and pushed through the Red Sea to the Indian Ocean, countering the Portuguese incursions there. If this perturbed Iberian sailors, it was nothing to the fright which the Turkish armies were giving the princes and peoples of eastern and southern Europe. Already the Turks held Bulgaria and Serbia, and were the predominant influence in Wallachia and all around the Black Sea; but, following the southern drive against Egypt and Arabia, the pressure against Europe was resumed under Suleiman (1520–1566). Hungary, the great eastern bastion of Christendom in these years, could no longer hold off the superior Turkish armies and was overrun following the battle of Mohacs in 1526—the same year, coincidentally, as Babur gained the victory at Panipat by which the Mughal Empire was established. Would all of Europe soon go the way of northern India? By 1529, with the Turks besieging Vienna, this must have appeared a distinct possibility to some. In actual fact, the line then stabilized in northern Hungary and the Holy Roman Empire was preserved; but thereafter the Turks presented a constant danger and exerted a military pressure which could never be fully ignored. Even as late as 1683, they were again besieging Vienna.⁷

Almost as alarming, in many ways, was the expansion of Ottoman naval power. Like Kublai Khan in China, the Turks had developed a navy only in order to reduce a seagirt enemy fortress—in this case, Constantinople, which Sultan Mehmet blockaded with large galleys and hundreds of smaller craft to assist the assault of 1453. Thereafter, formidable galley fleets were used in operations across the Black Sea, in the southward push toward Syria and Egypt, and in a whole series of clashes with Venice for control of the Aegean islands, Rhodes, Crete, and Cyprus. For some decades of the early sixteenth century Ottoman sea power was kept at arm's length by Venetian, Genoese, and Habsburg fleets; but by midcentury, Muslim naval forces were active all the way along the North African coast, were raiding ports in Italy, Spain, and the Balearics, and finally managed to take Cyprus in 1570–1571, before being checked at the battle of Lepanto.⁸

The Ottoman Empire was, of course, much more than a military machine. A conquering elite (like the Manchus in China), the Ottomans had established a unity of *official* faith, culture, and language over an area greater than the Roman Empire, and over vast numbers of subject peoples. For centuries before 1500 the world of Islam had been culturally and technologically ahead of Europe. Its cities were large, well-lit, and drained, and some of them possessed universities and libraries

and stunningly beautiful mosques. In mathematics, cartography, medicine, and many other aspects of science and industry—in mills, gun-casting, lighthouses, horsebreeding—the Muslims had enjoyed a lead. The Ottoman system of recruiting future janissaries from Christian youth in the Balkans had produced a dedicated, uniform corps of troops. Tolerance of other races had brought many a talented Greek, Jew, and Gentile into the sultan's service—a Hungarian was Mehmet's chief gun-caster in the Siege of Constantinople. Under a successful leader like Suleiman I, a strong bureaucracy supervised fourteen million subjects—this at a time when Spain had five million and England a mere two and a half million inhabitants. Constantinople in its heyday was bigger than any European city, possessing over 500,000 inhabitants in 1600.

Yet the Ottoman Turks, too, were to falter, to turn inward, and to lose the chance of world domination, although this became clear only a century after the strikingly similar Ming decline. To a certain extent it could be argued that this process was the natural consequence of earlier Turkish successes: the Ottoman army, however well administered, might be able to maintain the lengthy frontiers but could hardly expand farther without enormous cost in men and money; and Ottoman imperialism, unlike that of the Spanish, Dutch, and English later, did not bring much in the way of economic benefit. By the second half of the sixteenth century the empire was showing signs of strategical overextension, with a large army stationed in central Europe, an expensive navy operating in the Mediterranean, troops engaged in North Africa, the Aegean, Cyprus, and the Red Sea, and reinforcements needed to hold the Crimea against a rising Russian power. Even in the Near East there was no quiet flank, thanks to a disastrous religious split in the Muslim world which occurred when the Shi'ite branch, based in Iraq and then in Persia, challenged the prevailing Sunni practices and teachings. At times, the situation was not unlike that of the contemporary religious struggles in Germany, and the sultan could maintain his dominance only by crushing Shi'ite dissidents with force. However, across the border the Shi'ite kingdom of Persia under Abbas the Great was quite prepared to ally with European states against the Ottomans, just as France had worked with the "infidel" Turk against the Holy Roman Empire. With this array of adversaries, the Ottoman Empire would have needed remarkable leadership to have maintained its growth; but after 1566 there reigned thirteen incompetent sultans in succession.

External enemies and personal failings do not, however, provide the full explanation. The system as a whole, like that of Ming China, increasingly suffered from some of the defects of being centralized, despotic, and severely orthodox in its attitude toward initiative, dissent, and commerce. An idiot sultan could paralyze the Ottoman Em-

pire in the way that a pope or Holy Roman emperor could never do for all Europe. Without clear directives from above, the arteries of the bureaucracy hardened, preferring conservatism to change, and stifling innovation. The lack of territorial expansion and accompanying booty after 1550, together with the vast rise in prices, caused discontented janissaries to turn to internal plunder. Merchants and entrepreneurs (nearly all of whom were foreigners), who earlier had been encouraged, now found themselves subject to unpredictable taxes and outright seizures of property. Ever higher dues ruined trade and depopulated towns. Perhaps worst affected of all were the peasants, whose lands and stock were preyed upon by the soldiers. As the situation deteriorated, civilian officials also turned to plunder, demanding bribes and confiscating stocks of goods. The costs of war and the loss of Asiatic trade during the struggle with Persia intensified the government's desperate search for new revenues, which in turn gave greater powers to unscrupulous tax farmers.⁹

To a distinct degree, the fierce response to the Shi'ite religious challenge reflected and anticipated a hardening of official attitudes toward all forms of free thought. The printing press was forbidden because it might disseminate dangerous opinions. Economic notions remained primitive: imports of western wares were desired, but exports were forbidden; the guilds were supported in their efforts to check innovation and the rise of "capitalist" producers; religious criticism of traders intensified. Contemptuous of European ideas and practices, the Turks declined to adopt newer methods for containing plagues; consequently, their populations suffered more from severe epidemics. In one truly amazing fit of obscurantism, a force of janissaries destroyed a state observatory in 1580, alleging that it had caused a plague.¹⁰ The armed services had become, indeed, a bastion of conservatism. Despite noting, and occasionally suffering from, the newer weaponry of European forces, the janissaries were slow to modernize themselves. Their bulky cannons were not replaced by the lighter cast-iron guns. After the defeat at Lepanto, they did not build the larger European type of vessels. In the south, the Muslim fleets were simply ordered to remain in the calmer waters of the Red Sea and Persian Gulf, thus obviating the need to construct oceangoing vessels on the Portuguese model. Perhaps technical reasons help to explain these decisions, but cultural and technological conservatism also played a role (by contrast, the irregular Barbary corsairs swiftly adopted the frigate type of warship).

The above remarks about conservatism could be made with equal or even greater force about the Mogul Empire. Despite the sheer size of the kingdom at its height and the military genius of some of its emperors, despite the brilliance of its courts and the craftsmanship of its luxury products, despite even a sophisticated banking and credit

network, the system was weak at the core. A conquering Muslim elite lay on top of a vast mass of poverty-stricken peasants chiefly adhering to Hinduism. In the towns themselves there were very considerable numbers of merchants, bustling markets, and an attitude toward manufacture, trade, and credit among Hindu business families which would make them excellent examples of Weber's Protestant ethic. As against this picture of an entrepreneurial society just ready for economic "takeoff" before it became a victim of British imperialism, there are the gloomier portrayals of the many indigenous retarding factors in Indian life. The sheer rigidity of Hindu religious taboos militated against modernization: rodents and insects could not be killed, so vast amounts of foodstuffs were lost; social mores about handling refuse and excreta led to permanently insanitary conditions, a breeding ground for bubonic plagues; the caste system throttled initiative, instilled ritual, and restricted the market; and the influence wielded over Indian local rulers by the Brahman priests meant that this obscurantism was effective at the highest level. Here were social checks of the deepest sort to any attempts at radical change. Small wonder that later many Britons, having first plundered and then tried to govern India in accordance with Utilitarian principles, finally left with the feeling that the country was still a mystery to them.¹¹

But the Mogul rule could scarcely be compared with administration by the Indian Civil Service. The brilliant courts were centers of conspicuous consumption on a scale which the Sun King at Versailles might have thought excessive. Thousands of servants and hangers-on, extravagant clothes and jewels and harems and menageries, vast arrays of bodyguards, could be paid for only by the creation of a systematic plunder machine. Tax collectors, required to provide fixed sums for their masters, preyed mercilessly upon peasant and merchant alike; whatever the state of the harvest or trade, the money had to come in. There being no constitutional or other checks—apart from rebellion—upon such depredations, it was not surprising that taxation was known as "eating." For this colossal annual tribute, the population received next to nothing. There was little improvement in communications, and no machinery for assistance in the event of famine, flood, and plague—which were, of course, fairly regular occurrences. All this makes the Ming dynasty appear benign, almost progressive, by comparison. Technically, the Mogul Empire was to decline because it became increasingly difficult to maintain itself against the Marathas in the south, the Afghanis in the north, and, finally, the East India Company. In reality, the causes of its decay were much more internal than external.

Two Outsiders—Japan and Russia

By the sixteenth century there were two other states which, although nowhere near the size and population of the Ming, Ottoman, and Mogul empires, were demonstrating signs of political consolidation and economic growth. In the Far East, Japan was taking forward steps just as its large Chinese neighbor was beginning to atrophy. Geography gave a prime strategical asset to the Japanese (as it did to the British), for insularity offered a protection from overland invasion which China did not possess. The gap between the islands of Japan and the Asiatic mainland was by no means a complete one, however, and a great deal of Japanese culture and religion had been adapted from the older civilization. But whereas China was run by a unified bureaucracy, power in Japan lay in the hands of clan-based feudal lordships and the emperor was but a cipher. The centralized rule which had existed in the fourteenth century had been replaced by a constant feuding between the clans—akin, as it were, to the strife among their equivalents in Scotland. This was not the ideal circumstance for traders and merchants, but it did not check a very considerable amount of economic activity. At sea, as on land, entrepreneurs jostled with warlords and military adventurers, each of whom detected profit in the East Asian maritime trade. Japanese pirates scoured the coasts of China and Korea for plunder, while simultaneously other Japanese welcomed the chance to exchange goods with the Portuguese and Dutch visitors from the West. Christian missions and European wares penetrated Japanese society far more easily than they did an aloof, self-contained Ming Empire.¹²

This lively if turbulent scene was soon to be altered by the growing use of imported European armaments. As was happening elsewhere in the world, power gravitated toward those individuals or groups who possessed the resources to commandeer a large musket-bearing army and, most important of all, cannon. In Japan the result was the consolidation of authority under the great warlord Hideyoshi, whose aspirations ultimately led him twice to attempt the conquest of Korea. When these failed, and Hideyoshi died in 1598, civil strife again threatened Japan; but within a few years all power had been consolidated in the hands of Ieyasu and fellow shoguns of the Tokugawa clan. This time the centralized military rule could not be shaken.

In many respects, Tokugawa Japan possessed the characteristics of the "new monarchies" which had arisen in the West during the preceding century. The great difference was the shogunate's abjuration of overseas expansion, indeed of virtually all contact with the outside world. In 1636, construction of oceangoing vessels was stopped and Japanese subjects were forbidden to sail the high seas. Trade with

Europeans was restricted to the permitted Dutch ship calling at Deshima in Nagasaki harbor; the others were tumbled out. Even earlier, virtually all Christians (foreign and native) were ruthlessly murdered at the behest of the shogunate. Clearly, the chief motive behind these drastic measures was the Tokugawa clan's determination to achieve unchallenged control; foreigners and Christians were thus regarded as potentially subversive. But so, too, were the other feudal lords, which is why they were required to spend half the year in the capital; and why, during the six months they were allowed to reside on their estates, their families had to remain at Yedo (Tokyo), virtually hostages.

This imposed uniformity did not, of itself, throttle economic development—nor, for that matter, did it prevent outstanding artistic achievements. Nationwide peace was good for trade, the towns and overall population were growing, and the increasing use of cash payments made merchants and bankers more important. The latter, however, were never permitted the social and political prominence they gained in Italy, the Netherlands, and Britain, and the Japanese were obviously unable to learn about, and adopt, new technological and industrial developments that were occurring elsewhere. Like the Ming dynasty, the Tokugawa shogunate deliberately chose, with a few exceptions, to cut itself off from the rest of the world. This may not have retarded economic activities in Japan itself, but it did harm the relative power of the Japanese state. Disdaining to engage in trade, and forbidden to travel or to display their weapons except on ceremonial occasions, the samurai warriors attached to their lords lived a life of ritual and boredom. The entire military system ossified for two centuries, so that when Commodore Perry's famous "black ships" arrived in 1853, there was little that an overawed Japanese government could do except grant the American request for coaling and other facilities.

At the beginning of its period of political consolidation and growth, Russia appeared similar to Japan in certain respects. Geographically far removed from the West—partly on account of poor communications, and partly because periodic clashes with Lithuania, Poland, Sweden, and the Ottoman Empire interrupted those routes which did exist—the Kingdom of Muscovy was nevertheless deeply influenced by its European inheritance, not least through the Russian Orthodox Church. It was from the West, moreover, that there came the lasting solution to Russia's vulnerability to the horsemen of the Asian plains: muskets and cannon. With these new weapons, Moscow could now establish itself as one of the "gunpowder empires" and thus expand. A westward drive was difficult, given that the Swedes and Poles also possessed such armaments, but colonial expansion against the tribes and khanates to the south and east was made much easier by this military-technological advantage. By 1556, for example, Russian troops had reached the Caspian Sea. This military expansionism was

accompanied, and often eclipsed, by the explorers and pioneers who steadily pushed east of the Urals, through Siberia, and had actually reached the Pacific coast by 1638.¹³ Despite its hard-won military superiority over Mongol horsemen, there was nothing easy or inevitable about the growth of the Russian Empire. The more peoples that were conquered, the greater was the likelihood of internal dissension and revolt. The nobles at home were often restive, even after the purge of their numbers by Ivan the Terrible. The Tartar khanate of the Crimea remained a powerful foe; its troops sacked Moscow in 1571, and it remained independent until the late eighteenth century. Challenges from the West were even more threatening; the Poles, for example, occupied Moscow between 1608 and 1613.

A further weakness was that despite certain borrowings from the West, Russia remained technologically backward and economically underdeveloped. Extremes of climate and the enormous distances and poor communications partly accounted for this, but so also did severe social defects: the military absolutism of the czars, the monopoly of education in the hands of the Orthodox Church, the venality and unpredictability of the bureaucracy, and the institution of serfdom, which made agriculture feudal and static. Yet despite this relative backwardness, and despite the setbacks, Russia continued to expand, imposing upon its new territories the same military force and autocratic rule which was used to command the obedience of the Muscovites. Enough had been borrowed from Europe to give the regime the armed strength to preserve itself, while all possibility of western social and political "modernization" was firmly resisted; foreigners in Russia, for example, were segregated from the natives in order to prevent subversive influences. Unlike the other despotisms mentioned in this chapter, the empire of the czars would manage to survive and Russia would one day grow to be a world power. Yet in 1500, and even as late as 1650, this was scarcely obvious to many Frenchmen, Dutchmen, and Englishmen, who probably knew as much about the Russian ruler as they did about the legendary Prester John.¹⁴

The "European Miracle"¹⁵

Why was it among the scattered and relatively unsophisticated peoples inhabiting the western parts of the Eurasian landmass that there occurred an unstoppable process of economic development and technological innovation which would steadily make it the commercial and military leader in world affairs? This is a question which has exercised scholars and other observers for centuries, and all that the following paragraphs can do is to present a synthesis of the existing knowledge. Yet however crude such a summary must be, it possesses

the incidental advantage of exposing the main strands of the argument which permeate this entire work: namely, that there was a dynamic involved, driven chiefly by economic and technological advances, although always interacting with other variables such as social structure, geography, and the occasional accident; that to understand the course of world politics, it is necessary to focus attention upon the material and long-term elements rather than the vagaries of personality or the week-by-week shifts of diplomacy and politics; and that power is a relative thing, which can only be described and measured by frequent comparisons between various states and societies.

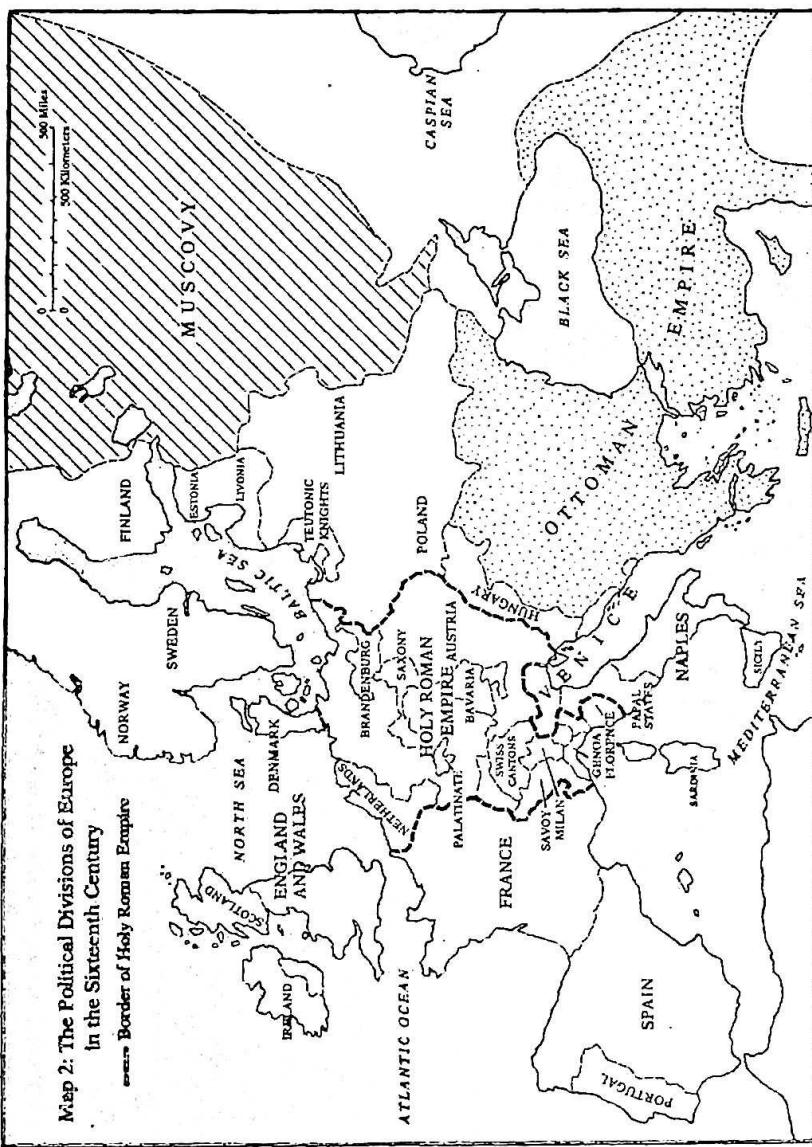
The one feature of Europe which immediately strikes the eye when looking at a map of the world's "power centers" in the sixteenth century is its political fragmentation (see Maps 1 and 2). This was not an accidental or short-lived state of affairs, such as occurred briefly in China after the collapse of one empire and before its successor dynasty could gather up again the strings of centralized power. Europe had always been politically fragmented, despite even the best efforts of the Romans, who had not managed to conquer much farther north of the Rhine and the Danube; and for a thousand years after the fall of Rome, the basic political power unit had been small and localized, in contrast to the steady expansion of the Christian religion and culture. Occasional concentrations of authority, like that of Charlemagne in the West or of Kievan Russia in the East, were but temporary affairs, terminated by a change of ruler, internal rebellion, or external invasions.

For this political diversity Europe had largely to thank its geography. There were no enormous plains over which an empire of horsemen could impose its swift dominion; nor were there broad and fertile river zones like those around the Ganges, Nile, Tigris and Euphrates, Yellow, and Yangtze, providing the food for masses of toiling and easily conquerable peasants. Europe's landscape was much more fractured, with mountain ranges and large forests separating the scattered population centers in the valleys; and its climate altered considerably from north to south and west to east. This had a number of important consequences. For a start, it both made difficult the establishment of unified control, even by a powerful and determined warlord, and minimized the possibility that the continent could be overrun by an external force like the Mongol hordes. Conversely, this variegated landscape encouraged the growth, and the continued existence, of decentralized power, with local kingdoms and marcher lordships and highland clans and lowland town confederations making a political map of Europe drawn at any time after the fall of Rome look like a patchwork quilt. The patterns on that quilt might vary from century to century, but no single color could ever be used to denote a unified empire.¹⁶

Europe's differentiated climate led to differentiated products, suit-

plurality
and
fragmentation

tough
geography
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THE RISE AND FALL OF THE GREAT POWERS

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able for exchange; and in time, as market relations developed, they were transported along the rivers or the pathways which cut through the forests between one area of settlement and the next. Probably the most important characteristic of this commerce was that it consisted primarily of *bulk* products—timber, grain, wine, wool, herrings, and so on, catering to the rising population of fifteenth-century Europe, rather than the luxuries carried on the oriental caravans. Here again geography played a crucial role, for water transport of these goods was so much more economical and Europe possessed many navigable rivers. Being surrounded by seas was a further incentive to the vital shipbuilding industry, and by the later Middle Ages a flourishing maritime commerce was being carried out between the Baltic, the North Sea, the Mediterranean, and the Black Sea. This trade was, predictably, interrupted in part by war and affected by local disasters such as crop failures and plagues; but in general it continued to expand, increasing Europe's prosperity and enriching its diet, and leading to the creation of new centers of wealth like the Hansa towns or the Italian cities. Regular long-distance exchanges of wares in turn encouraged the growth of bills of exchange, a credit system, and banking on an international scale. The very existence of mercantile credit, and then of bills of insurance, pointed to a basic *predictability* of economic conditions which private traders had hitherto rarely, if ever, enjoyed anywhere in the world.¹⁷

In addition, because much of this trade was carried through the rougher waters of the North Sea and Bay of Biscay—and also because long-range fishing became an important source of nutrient and wealth—shipwrights were forced to build tough (if rather slow and inelegant) vessels capable of carrying large loads and finding their motive power in the winds alone. Although over time they developed more sail and masts, and stern rudders, and therefore became more maneuverable, North Sea “cogs” and their successors may not have appeared as impressive as the lighter craft which plied the shores of the eastern Mediterranean and the Indian Ocean; but, as we shall see below, they were going to possess distinct advantages in the long run.¹⁸

The political and social consequences of this decentralized, largely unsupervised growth of commerce and merchants and ports and markets were of the greatest significance. In the first place, there was no way in which such economic developments could be fully suppressed. This is not to say that the rise of market forces did not disturb many in authority. Feudal lords, suspicious of towns as centers of dissidence and sanctuaries of serfs, often tried to curtail their privileges. As elsewhere, merchants were frequently preyed upon, their goods stolen, their property seized. Papal pronouncements upon usury echo in many ways the Confucian dislike of profit-making middlemen and money-lenders. But the basic fact was that there existed no uniform authority

Nin Europe which could effectively halt this or that commercial development; no central government whose changes in priorities could cause the rise and fall of a particular industry; no systematic and universal plundering of businessmen and entrepreneurs by tax gatherers, which so retarded the economy of Mogul India. To take one specific and obvious instance, it was inconceivable in the fractured political circumstances of Reformation Europe that everyone would acknowledge the pope's 1494 division of the overseas world into Spanish and Portuguese spheres—and even less conceivable that an order banning overseas trade (akin to those promulgated in Ming China and Tokugawa Japan) would have had any effect.

The fact was that in Europe there were always some princes and local lords willing to tolerate merchants and their ways even when others plundered and expelled them; and, as the record shows, oppressed Jewish traders, ruined Flemish textile workers, persecuted Huguenots, moved on and took their expertise with them. A Rhineland baron who overtaxed commercial travelers would find that the trade routes had gone elsewhere, and with it his revenues. A monarch who repudiated himself would have immense difficulties raising a loan when the next war threatened and funds were quickly needed to equip his armies and fleets. Bankers and arms dealers and artisans were essential, not peripheral, members of society. Gradually, unevenly, most of the regimes of Europe entered into a symbiotic relationship with the market economy, providing for it domestic order and a nonarbitrary legal system (even for foreigners), and receiving in taxes a share of the growing profits from trade. Long before Adam Smith had coined the exact words, the rulers of certain societies of western Europe were tacitly recognizing that "little else is requisite to carry a state to the highest degree of opulence from the lowest barbarism, but peace, easy taxes, and tolerable administration of justice. . . ." From time to time the less perceptive leaders—like the Spanish administrators of Castile, or an occasional Bourbon king of France—would virtually kill the goose that laid the golden eggs; but the consequent decline in wealth, and thus in military power, was soon obvious to all but the most purblind.

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Probably the only factor which might have led to a centralization of authority would have been such a breakthrough in firearms technology by one state that all opponents were crushed or overawed. In the quickening pace of economic and technical development which occurred in fifteenth-century Europe as the continent's population recovered from the Black Death and the Italian Renaissance blossomed, this was by no means impossible. It was, as noted above, in this broad period from 1450 to 1600 that "gunpowder empires" were established elsewhere. Muscovy, Tokugawa Japan, and Mogul India provide excellent examples of how great states could be fashioned by leaders who

not evidence, rather examples?

secured the firearms and the cannon with which to compel all rivals to obedience.

Since, furthermore, it was in late-medieval and early modern Europe that new techniques of warfare occurred more frequently than elsewhere, it was not implausible that one such breakthrough could enable a certain nation to dominate its rivals. Already the signs pointed to an increasing concentration of military power.²⁰ In Italy the use of companies of crossbowmen, protected when necessary by soldiers using pikes, had brought to a close the age of the knight on horseback and his accompanying ill-trained feudal levy; but it was also clear that only the wealthier states like Venice and Milan could pay for the new armies officered by the famous *condottieri*. By around 1500, moreover, the kings of France and England had gained an artillery monopoly at home and were thus able, if the need arose, to crush an overmighty subject even if the latter sheltered behind castle walls. But would not this tendency finally lead to a larger transnational monopoly, stretching across Europe? This must have been a question many asked around 1550, as they observed the vast concentration of lands and armies under the Emperor Charles V.

A fuller discussion of that specific Habsburg attempt, and failure~~tech gap~~ required for to gain the mastery of Europe will be presented in the next chapter. But the more general reason why it was impossible to impose unity across the continent can briefly be stated here. Once again, the existence of a variety of economic and military centers of power was fundamental. No one Italian city-state could strive to enhance itself without the others intervening to preserve the equilibrium; no "new monarchy" could increase its dominions without stirring rivals to seek compensation. By the time the Reformation was well and truly under way, religious antagonisms were added to the traditional balance-of-power rivalries, thus making the prospects of political centralization even more remote. Yet the real explanation lies a little deeper; after all, the simple existence of competitors, and of bitter feelings between warring groups, was evident in Japan, India, and elsewhere, but that of itself had not prevented eventual unification. Europe was different in that each of the rival forces was able to gain access to the new military techniques, so that no single power ever possessed the decisive edge. The services of the Swiss and other mercenaries, for example, were on offer to anyone who was able to pay for them. There was no single center for the production of crossbows, nor for that of cannon—whether of the earlier bronze guns or of the later, cheaper cast-iron artillery; instead, such armaments were being made close to the ore deposits on the Weald, in central Europe, in Málaga, in Milan, in Liège, and later in Sweden. Similarly, the proliferation of shipbuilding skills in various ports ranging from the Baltic to the Black Sea made it extremely difficult for any one country to monopolize maritime power,

which in turn helped to prevent the conquest and elimination of rival centers of armaments production lying across the sea.

To say that Europe's decentralized states system was the great obstacle to centralization is not, then, a tautology. Because there existed a number of competing political entities, *most of which possessed or were able to buy the military means to preserve their independence*, no single one could ever achieve the breakthrough to the mastery of the continent.

While this competitive interaction between the European states seems to explain the absence of a unified "gunpowder empire" there, it does not at first sight provide the reason for Europe's steady rise to global leadership. After all, would not the forces possessed by the new monarchies in 1500 have seemed puny if they had been deployed against the enormous armies of the sultan and the massed troops of the Ming Empire? This was true in the early sixteenth century and, in some respects, even in the seventeenth century; but by the latter period the balance of military strength was tilting rapidly in favor of the West. For the explanation of this shift one must again point to the decentralization of power in Europe. What it did, above all else, was to engender a primitive form of arms race among the city-states and then the larger kingdoms. To some extent, this probably had socioeconomic roots. Once the contending armies in Italy no longer consisted of feudal knights and their retainers but of pikemen, crossbowmen, and (flanking) cavalry paid for by the merchants and supervised by the magistrates of a particular city, it was almost inevitable that the latter would demand value for money—despite all the best maneuvers of *condottieri* not to make themselves redundant; the cities would require, in other words, the sort of arms and tactics which might produce a swift victory, so that the expenses of war could then be reduced. Similarly, once the French monarchs of the late fifteenth century had a "national" army under their direct control and pay, they were anxious to see this force produce decisive results.²¹

By the same token, this free-market system not only forced the numerous *condottieri* to compete for contracts but also encouraged artisans and inventors to improve their wares, so as to obtain new orders. While this armaments spiral could already be seen in the manufacture of crossbows and armor plate in the early fifteenth century, the principle spread to experimentation with gunpowder weapons in the following fifty years. It is important to recall here that when cannon were first employed, there was little difference between the West and Asia in their design and effectiveness. Gigantic wrought-iron tubes that fired a stone ball and made an immense noise obviously looked impressive and at times had results; it was that type which was used by the Turks to bombard the walls of Constantinople in 1453. Yet it seems to have been only in Europe that the impetus existed for con-

stant improvements: in the gunpowder grains, in casting much smaller (yet equally powerful) cannon from bronze and tin alloys, in the shape and texture of the barrel and the missile, in the gun mountings and carriages. All of this enhanced to an enormous degree the power and the mobility of artillery and gave the owner of such weapons the means to reduce the strongest fortresses—as the Italian city-states found to their alarm when a French army equipped with formidable bronze guns invaded Italy in 1494. It was scarcely surprising, therefore, that inventors and men of letters were being urged to design some counter to these cannon (and scarcely less surprising that Leonardo's notebooks for this time contain sketches for a machine gun, a primitive tank, and a steam-powered cannon).²²

This is not to say that other civilizations did not improve their armaments from the early, crude designs; some of them did, usually by copying from European models or persuading European visitors (like the Jesuits in China) to lend their expertise. But because the Ming government had a monopoly of cannon, and the thrusting leaders of Russia, Japan, and Mogul India soon acquired a monopoly, there was much less incentive to improve such weapons once their authority had been established. Turning in upon themselves, the Chinese and the Japanese neglected to develop armaments production. Clinging to their traditional fighting ways, the janissaries of Islam scorned taking much interest in artillery until it was too late to catch up to Europe's lead. Facing less-advanced peoples, Russian and Mogul army commanders had no compelling need for improved weaponry, since what they already possessed overawed their opponents. Just as in the general economic field, so also in this specific area of military technology, Europe, fueled by a flourishing arms trade, took a decisive lead over the other civilizations and power centers.

Two further consequences of this armaments spiral need to be mentioned here. One ensured the political plurality of Europe, the other its eventual maritime mastery. The first is a simple enough story and can be dealt with briefly.²³ Within a quarter-century of the French invasion of 1494, and in certain respects even before then, some Italians had discovered that raised earthworks inside the city walls could greatly reduce the effects of artillery bombardment; when crashing into the compacted mounds of earth, cannonballs lost the devastating impact they had upon the outer walls. If these varied earthworks also had a steep ditch in front of them (and, later, a sophisticated series of protected bastions from which muskets and cannon could pour a crossfire), they constituted a near-insuperable obstacle to the besieging infantry. This restored the security of the Italian city-states, or at least of those which had not fallen to a foreign conqueror and which possessed the vast amounts of manpower needed to build and garrison such complex fortifications. It also gave an advantage to the armies

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engaged in holding off the Turks, as the Christian garrisons in Malta and in northern Hungary soon discovered. Above all, it hindered the easy conquest of rebels and rivals by one overweening power in Europe, as the protracted siege warfare which accompanied the Revolt of the Netherlands attested. Victories attained in the open field by, say, the formidable Spanish infantry could not be made decisive if the foe possessed heavily fortified bases into which he could retreat. The authority acquired through gunpowder by the Tokugawa shogunate, or by Akbar in India, was not replicated in the West, which continued to be characterized by political pluralism and its deadly concomitant, the arms race.

The impact of the "gunpowder revolution" at sea was even more wide-ranging.²⁴ As before, one is struck by the relative similarity of shipbuilding and naval power that existed during the later Middle Ages in northwest Europe, in the Islamic world, and in the Far East. If anything, the great voyages of Cheng Ho and the rapid advance of the Turkish fleets in the Black Sea and eastern Mediterranean might well have suggested to an observer around 1400 and 1450 that the future of maritime development lay with those two powers. There was also little difference, one suspects, between all three regions in regard to cartography, astronomy, and the use of instruments like the compass, astrolabe, and quadrant. What was different was *sustained organization*. Or, as Professor Jones observes, "given the distances covered by other seafarers, the Polynesians for example, the [Iberian] voyages are less impressive than Europe's ability to rationalize them and to develop the resources within her reach."²⁵ The systematic collection of geographical data by the Portuguese, the repeated willingness of Genoese merchant houses to fund Atlantic ventures which might ultimately compensate for their loss of Black Sea trade, and—farther north—the methodical development of the Newfoundland cod fisheries all signified a sustained readiness to reach outward which was not evident in other societies at that time.

But perhaps the most important act of "rationalization" was the steady improvement in ships' armaments. The siting of cannon on sailing vessels was a natural enough development at a time when sea warfare so resembled that on land; just as medieval castles contained archers along the walls and towers in order to drive off a besieging army, so the massive Genoese and Venetian and Aragonese trading vessels used men, armed with crossbows and sited in the fore and aft "castles," to defend themselves against Muslim pirates in the Mediterranean. This could cause severe losses among galley crews, although not necessarily enough to save a becalmed merchantman if its attackers were really determined. However, once sailors perceived the advances which had been made in gun design on land—that is, that the newer bronze cannon were much smaller, more powerful, and less

dangerous to the gun crew than the enormous wrought-iron bombard—it was predictable that such armaments would be placed on board. After all, catapults, trebuchets, and other sorts of missile-throwing instruments had already been mounted on warships in China and the West. Even when cannon became less volatile and dangerous to their crews, they still posed considerable problems; given the more effective gunpowder, the recoil could be tremendous, sending a gun backward right across the deck if not restrained, and these weapons were still weighty enough to unbalance a vessel if sufficient numbers of them were placed on board (especially on the castles). This was where the stoutly built, rounder-hulled, all-weather three-masted sailing vessel had an inherent advantage over the slim oared galleys of the inland waters of the Mediterranean, Baltic, and Black seas, and over the Arab dhow and even the Chinese junk. It could in any event fire a larger broadside while remaining stable, although of course disasters also occurred from time to time; but once it was realized that the siting of such weapons amidships rather than on the castles provided a much safer gun platform, the *potential power* of these caravels and galleons was formidable. By comparison, lighter craft suffered from the twin disadvantage of less gun-carrying capacity and greater vulnerability to cannonballs.

One is obliged to stress the words "potential power" because the evolution of the gunned long-range sailing ship was a slow, often uneven development. Many hybrid types were constructed, some carrying multiple masts, guns, and rows of oars. Galley-type vessels were still to be seen in the English Channel in the sixteenth century. Moreover, there were considerable arguments in favor of continuing to deploy galleys in the Mediterranean and the Black Sea; they were swifter on many occasions, more maneuverable in inshore waters, and thus easier to use in conjunction with land operations along the coast—which, for the Turks, outweighed the disadvantages of their being short-ranged and unable to act in heavy seas.²⁶

In just the same way, we should not imagine that as soon as the first Portuguese vessels rounded the Cape of Good Hope, the age of unchallenged western dominance had begun. What historians refer to as the "Vasco da Gama epoch" and the "Columbian era"—that is, the three or four centuries of European hegemony after 1500—was a very gradual process. Portuguese explorers might have reached the shores of India by the 1490s, but their vessels were still small (often only 300 tons) and not all that well armed—certainly not compared with the powerful Dutch East Indiamen which sailed in those waters a century later. In fact, the Portuguese could not penetrate the Red Sea for a long while, and then only precariously, nor could they gain much of a footing in China; and in the late sixteenth century they lost some of their East African stations to an Arab counteroffensive.²⁷

guns on
boats

It would be erroneous, too, to assume that the non-European powers simply collapsed like a pack of cards at the first signs of western expansionism. This was precisely what did happen in Mexico, Peru, and other less developed societies of the New World when the Spanish adventurers landed. Elsewhere, the story was very different. Since the Chinese government had voluntarily turned its back upon maritime trade, it did not really care if that commerce fell into the hands of the barbarians; even the quasi-official trading post which the Portuguese set up at Macao in 1557, lucrative though it must have been to the local silk merchants and conniving administrators, does not seem to have disturbed Peking's equanimity. The Japanese, for their part, were much more blunt. When the Portuguese sent a mission in 1640 to protest against the expulsion of foreigners, almost all its members were killed; there could be no attempt at retribution from Lisbon. Finally, Ottoman sea power was holding its own in the eastern Mediterranean, and Ottoman land power remained a massive threat to central Europe. In the sixteenth century, indeed, "to most European statesmen the loss of Hungary was of far greater import than the establishment of factories in the Orient, and the threat to Vienna more significant than their own challenges at Aden, Goa and Malacca; only governments bordering the Atlantic could, like their later historians, ignore this fact."²⁸

Yet when all these reservations are made, there is no doubt that the development of the long-range armed sailing ship heralded a fundamental advance in Europe's place in the world. With these vessels, the naval powers of the West were in a position to control the oceanic trade routes and to overawe all societies vulnerable to the workings of sea power. Even the first great clashes between the Portuguese and their Muslim foes in the Indian Ocean made this clear. No doubt they exaggerated in retrospect, but to read the journals and reports of da Gama and Albuquerque, describing how their warships blasted their way through the massed fleets of Arab dhows and other light craft which they encountered off the Malabar coast and in the Ormuz and Malacca roads, is to gain the impression that an extraterrestrial, superhuman force had descended upon their unfortunate opponents. Following the new tactic that "they were by no means to board, but to fight with the artillery," the Portuguese crews were virtually invincible at sea.²⁹ On land it was quite a different matter, as the fierce battles (and occasional defeats) at Aden, Jiddah, Goa, and elsewhere demonstrated; yet so determined and brutal were these western invaders that by the mid-sixteenth century they had carved out for themselves a chain of forts from the Gulf of Guinea to the South China Sea. Although never able to monopolize the spice trade from the Indies—much of which continued to flow via the traditional channels to Venice—the Portuguese certainly cornered considerable

portions of that commerce and profited greatly from their early lead in the race for empire.³⁰

The evidence of profit was even greater, of course, in the vast land empire which the conquistadores swiftly established in the western hemisphere. From the early settlements in Hispaniola and Cuba, Spanish expeditions pushed toward the mainland, conquering Mexico in the 1520s and Peru in the 1530s. Within a few decades this dominion extended from the River Plate in the south to the Rio Grande in the north. Spanish galleons, plying along the western coast, linked up with vessels coming from the Philippines, bearing Chinese silks in exchange for Peruvian silver. In their "New World" the Spaniards made it clear that they were there to stay, setting up an imperial administration, building churches, and engaging in ranching and mining. Exploiting the natural resources—and, still more, the native labor—of these territories, the conquerors sent home a steady flow of sugar, cochineal, hides, and other wares. Above all, they sent home silver from the Potosí mine, which for over a century was the biggest single deposit of that metal in the world. All this led to "a lightning growth of transatlantic trade, the volume increasing eightfold between 1510 and 1550, and threefold again between 1550 and 1610."³¹

All the signs were, therefore, that this imperialism was intended to be permanent. Unlike the fleeting visits paid by Cheng Ho, the actions of the Portuguese and Spanish explorers symbolized a commitment to alter the world's political and economic balances. With their shipborne cannon and musket-bearing soldier, they did precisely that. In retrospect it sometimes seems difficult to grasp that a country with the limited population and resources of Portugal could reach so far and acquire so much. In the special circumstances of European military and naval superiority described above, this was by no means impossible. Once it was done, the evident profits of empire, and the desire for more, simply accelerated the process of aggrandizement.

There are elements in this story of "the expansion of Europe" which have been ignored, or but briefly mentioned so far. The personal aspect has not been examined, and yet—as in all great endeavors—it was there in abundance: in the encouragements of men like Henry the Navigator; in the ingenuity of ship craftsmen and armorers and men of letters; in the enterprise of merchants; above all, in the sheer courage of those who partook in the overseas voyages and endured all that the mighty seas, hostile climates, wild landscapes, and fierce opponents could place in their way. For a complex mixture of motives—personal gain, national glory, religious zeal, perhaps a sense of adventure—men were willing to risk everything, as indeed they did in many cases. Nor has there been much dwelling upon the awful cruelties inflicted by these European conquerors upon their many victims in Africa, Asia, and America. If these features are hardly mentioned

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here, it is because many societies in their time have thrown up individuals and groups willing to dare all and do anything in order to make the world their oyster. What distinguished the captains, crews, and explorers of Europe was that they possessed the ships and the firepower with which to achieve their ambitions, and that they came from a political environment in which competition, risk, and entrepreneurship were prevalent.

The benefits accruing from the expansion of Europe were widespread and permanent, and—most important of all—they helped to accelerate an already-existing dynamic. The emphasis upon the acquisition of gold, silver, precious metals, and spices, important though such valuables were, ought not to obscure the worth of the less glamorous items which flooded into Europe's ports once its sailors had breached the oceanic frontier. Access to the Newfoundland fisheries brought an apparently inexhaustible supply of food, and the Atlantic Ocean also provided the whale oil and seal oil vital for illumination, lubrication, and many other purposes. Sugar, indigo, tobacco, rice, furs, timber, and new plants like the potato and maize were all to boost the total wealth and well-being of the continent; later on, of course, there was to come the flow of grain and meats and cotton. But one does not need to anticipate the cosmopolitan world economy of the later nineteenth century to understand that the Portuguese and Spanish discoveries were, within decades, of great and ever-growing importance in enhancing the prosperity and power of the western portions of the continent. Bulk trades like the fisheries employed a large number of hands, both in catching and in distribution, which further boosted the market economy. And all of this gave the greatest stimulus to the European shipbuilding industry, attracting around the ports of London, Bristol, Antwerp, Amsterdam, and many others a vast array of craftsmen, suppliers, dealers, insurers. The net effect was to give to a considerable proportion of western Europe's population—and not just to the elite few—an abiding material interest in the fruits of overseas trade.

When one adds to this list of commodities the commerce which attended the landward expansion of Russia—the furs, hides, wood, hemp, salt, and grain which came from there to western Europe—then scholars have some cause in describing this as the beginnings of a “modern world system.”³² What had started as a number of separate expansions was steadily turning into an interlocking whole: the gold of the Guinea coast and the silver of Peru were used by the Portuguese, Spaniards, and Italians to pay for spices and silks from the Orient; the firs and timber of Russia helped in the purchase of iron guns from England; grain from the Baltic passed through Amsterdam on its way to the Mediterranean. All this generated a continual interaction—of further European expansion, bringing fresh discoveries and thus trade

opportunities, resulting in additional gains, which stimulated still more expansion. This was not necessarily a smooth upward progression: a great war in Europe or civil unrest could sharply reduce activities overseas. But the colonizing powers rarely if ever gave up their acquisitions, and within a short while a fresh wave of expansion and exploration would begin. After all, if the established imperial nations did not exploit their positions, others were willing to do it instead.

This, finally, was the greatest reason why the dynamic continued to operate as it did: the manifold rivalries of the European states, already acute, were spilling over into transoceanic spheres. Try as they might, Spain and Portugal simply could not keep their papally assigned monopoly of the outside world to themselves, the more especially when men realized that there was no northeast or northwest passage from Europe to Cathay. Already by the 1560s, Dutch, French, and English vessels were venturing across the Atlantic, and a little later into the Indian and Pacific oceans—a process quickened by the decline of the English cloth trade and the Revolt of the Netherlands. With royal and aristocratic patrons, with funding from the great merchants of Amsterdam and London, and with all the religious and nationalist zeal which the Reformation and Counter-Reformation had produced, new trading and plundering expeditions set out from northwest Europe to secure a share of the spoils. There was the prospect of gaining glory and riches, of striking at a rival and boosting the resources of one's own country, and of converting new souls to the one true faith; what possible counterarguments could hold out against the launching of such ventures?³³

The fairer aspect of this increasing commercial and colonial rivalry was the parallel upward spiral in knowledge—in science and technology.³⁴ No doubt many of the advances of this time were spinoffs from the arms race and the scramble for overseas trade; but the eventual benefits transcended their inglorious origins. Improved cartography, navigational tables, new instruments like the telescope, barometer, backstaff, and gimbaled compass, and better methods of shipbuilding helped to make maritime travel a less unpredictable form of travel. New crops and plants not only brought better nutrition but also were a stimulus to botany and agricultural science. Metallurgical skills, and indeed the whole iron industry, made rapid progress; deep-mining techniques did the same. Astronomy, medicine, physics, and engineering also benefited from the quickening economic pace and the enhanced value of science. The inquiring, rationalist mind was observing more, and experimenting more; and the printing presses, apart from producing vernacular Bibles and political treatises, were spreading these findings. The cumulative effect of this explosion of knowledge was to buttress Europe's technological—and therefore military—superiority still further. Even the powerful Ottomans, or at least their front-

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line soldiers and sailors, were feeling some of the consequences of this by the end of the sixteenth century. On other, less active societies, the effects were to be far more serious. Whether or not certain states in Asia would have taken off into a self-driven commercial and industrial revolution had they been left undisturbed seems open to considerable doubt,³⁵ but what was clear was that it was going to be extremely difficult for other societies to ascend the ladder of world power when the more advanced European states occupied all the top rungs.

This difficulty would be compounded, it seems fair to argue, because moving up that ladder would have involved not merely the acquisition of European equipment or even of European techniques; it would also have implied a wholesale borrowing of those general features which distinguished the societies of the West from all the others.

It would have meant the existence of a market economy, if not to the extent proposed by Adam Smith then at least to the extent that merchants and entrepreneurs would not be consistently deterred, obstructed, and preyed upon. It would also have meant the existence of a plurality of power centers, each if possible with its own economic base, so that there was no prospect of the imposed centralization of a despotic oriental-style regime—and every prospect of the progressive, if turbulent and occasionally brutal, stimulus of competition. By extension, this lack of economic and political rigidity would imply a similar lack of cultural and ideological orthodoxy—that is, a freedom to inquire, to dispute, to experiment, a belief in the possibilities of improvement, a concern for the practical rather than the abstract, a rationalism which defied mandarin codes, religious dogma, and traditional folklore.³⁶ In most cases, what was involved was not so much positive elements, but rather the reduction in the number of *hindrances* which checked economic growth and political diversity. Europe's greatest advantage was that it had fewer disadvantages than the other civilizations.

Although it is impossible to prove it, one suspects that these various general features related to one another, by some inner logic as it were, and that all were necessary. It was a combination of economic laissez-faire, political and military pluralism, and intellectual liberty—however rudimentary each factor was compared with later ages—which had been in constant interaction to produce the "European miracle." Since the miracle was historically unique, it seems plausible to assume that only a replication of all its component parts could have produced a similar result elsewhere. Because that mix of critical ingredients did not exist in Ming China, or in the Muslim empires of the Middle East and Asia, or in any other of the societies examined above, they appeared to stand still while Europe advanced to the center of the world stage.

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