

WORLD SOCIAL CHANGE
Series Editor: Mark Selden

Social and Political Change in Revolutionary China: The Taihang Base Area in the War of Resistance to Japan, 1937-1945
By David S. G. Goodman

Transforming Asian Socialism: China and Vietnam Compared
Edited by Anita Chan, Benedict J. Tria Kerkvliet, and Jonathan Unger

North China at War: The Social Ecology of Revolution, 1937-1945
Edited by Feng Chongyi and David S. G. Goodman

Istanbul: Between the Global and the Local
Edited by Caglar Keyder

The Origins of the Modern World: A Global and Ecological Narrative
By Robert B. Marks

The Origins of the Modern World

A Global and Ecological Narrative

ROBERT B. MARKS

ROWMAN & LITTLEFIELD PUBLISHERS, INC.

Lanham • Boulder • New York • Oxford

48249385

LIB 4/30/02

D
203
M37
2002

18. For a discussion, see *ibid.*, chap. 1.

19. For the details, see Janet Abu-Lughod, *Before European Hegemony: The World System A.D. 1250–1350* (New York: Oxford University Press, 1989), chap. 4.

20. Quoted in Chaudhuri, *Trade and Civilization*, 65.

21. *Ibid.*, 63.

22. Although spices continued to seep into Europe via the Red Sea route, the establishment of a direct sea route connecting Asia and Europe all but doomed Venice as an economic power in Europe.

23. These are derived from Chaudhuri, *Trade and Civilization*, 17.

24. Andre Gunder Frank, *ReOrient: Global Economy in the Asian Age* (Berkeley: University of California Press, 1998).

CHAPTER THREE



Empires, States, and the New World, 1500–1775

In the period from 1500 to 1775, many of the ways in which the world was organized began to change. First and foremost, most parts of the world were drawn into regular, ongoing contact in ways that had never happened in the past. Where previously there had been several “worlds” in the world—the Chinese world, the Indian Ocean world, the Mediterranean world, and the Americas, as yet unknown to Europeans, Asians, or Africans—after 1500 two new links drew the entire globe into a single world for the first time. The voyage of Christopher Columbus in 1492 opened up the New World and established new relations among the Americas, Europe, and Africa. But there was also a less well-known Pacific route linking the New World to China after the Spanish established a colony in the Philippines in 1571. These new linkages led to the exchange around the world of commodities, ideas, germs, foods, and people, in the process creating a dynamic but also very peculiar kind of New World, quite different from the old (that is, Afro-Eurasia). We can easily think of these sixteenth-century developments as the “first globalization.”

A second large process was the continued growth and vitality of empires throughout Eurasia. In the sixteenth century, empires remained the most common political form for bringing large parts of the earth under human control. Of all the various kinds of political and economic systems that humans have devised to draw sustenance from the land and to increase our numbers, by far the most successful was an empire. Why we are not now living in empires instead of nation-states is worth pondering. We aren't because a new kind of state system developed in western Europe. To be sure, Spanish control of much of the New World initially gave them the resources to attempt to establish an

empire, but that attempt also elicited fierce resistance among other European states, both killing the prospects for an empire in Europe and launching a new kind of international political order.

The third major process concerns the growth of a system of sovereign states in Europe and the linkage between that process and war. In comparison with Asian empires, the European states appear to be small and rather fragile constructs that could not possibly compete with the larger empires. Their rulers were so poor that they constantly had to seek loans to maintain their militaries. They were so small that they did not have within their borders all the resources necessary for their own defense, and, had the Spanish succeeded in establishing an empire in Europe and eliminating interstate war, independent European states might not have developed at all. As it was, the system of European interstate war favored a particular kind of state that developed in England and France in the sixteenth and seventeenth centuries, leading to conflict between those two for much of the eighteenth century.

By the late eighteenth century, England would emerge on top of the European state system. In Asia, the dynamics of empires in India and China would lead to the weakening of India and the strengthening of China. From a global perspective at the end of the eighteenth century, it is not too much to say that two very differently organized worlds would come to confront each other: a China-centered East Asian world system, and a British-centered Euro-American world system.¹ That the nineteenth century would see the balance of power tip in Britain's favor is part of the story that is told in chapters 4 and 5; here we need to examine the three processes introduced above.

Empire Builders and Conquerors

Across Eurasia, five empires expanded dramatically after 1500, remaking the political demarcations of the continent and all but ending the role of nomadic warriors there: China in the east, Russia in the center, Mughal India in the south, Safavid Iran in the southwest, and the Ottoman empire in the west. Although they did not all expand at the same time or rate, and one or the other experienced significant setbacks at one time or another, the expansive thrust of these empires was so great that by 1775 nearly all of Eurasia—except for the European far west—was under the control of one or the other of these empires.

Russia and China

The two most dramatic cases of empire expansion were Russia and China, the former more than quadrupling its size from 1500 to 1800 and the latter more than doubling its size. The Russian empire expanded from the principality of

Moscow, which in 1300 was little more than a stockade (called a “kremlin”) surrounded by a few thousand square miles of forest interspersed with farms. Over the next 150 years, Muscovite rulers expanded their territory by conquering other Russian-speaking principalities. The most dramatic expansion came in the 1500s when the Muscovite ruler Ivan IV (“the Terrible,” r. 1533–1584) pushed his empire east to the Ural Mountains, north to the Berents Sea, and south to the Caspian Sea. Following a “time of troubles” around 1600, the new Romanov dynasty (which ruled Russia until 1917) expanded the Russian empire east into Siberia and then all the way to the Pacific Ocean. Eighteenth-century rulers Peter the Great (r. 1682–1725) and Catherine the Great (r. 1762–1796) also extended Russian boundaries to the west, taking the Baltic nations, partitioning Poland, and crushing resistance to Russian rule in the Ukraine and Crimea.

China had the world's longest tradition of empire, a 2,000-year stretch beginning around 200 B.C.E. and lasting until the early twentieth century. Although experiencing significant periods of disintegration and conquest by non-Chinese forces, the traditions and techniques of imperial rule perdured. In 1500 China had been ruled by the Chinese Ming dynasty since 1368. Conquered in the mid-1600s by Manchus from the northeast, the new Qing dynasty soon set out on a series of military campaigns, especially under the leadership of the Qianlong emperor (r. 1736–1795). The Qianlong emperor campaigned in the northwest and west, defeating several non-Chinese peoples, in particular the Muslim Uigurs and the Tibetans, and incorporating them and their lands into the empire. By the time he was finished in the 1770s, the size of the Chinese empire had doubled with the incorporation of Tibetan, Mongol, and other peoples, although the new territories were sparsely populated steppe, semidesert, or mountainous regions.

China was the center of a “tribute trade system,” which included most of East Asia, including neighboring areas that were not formally incorporated within its empire. To the north, west, and southwest, stateless peoples of various ethnicities paid tribute, both literally and figuratively, to China's emperor by sending periodic missions to the capital in Beijing. China's rulers also considered neighboring states, such as Vietnam, Korea, Java, and even Japan, to be tributary, and expected to receive tribute missions from them as well. The tribute missions not only recognized the dominant position of China within East Asia, but also provided lucrative official and private trade opportunities linking China and the tributary states. China thus exercised substantial direct and indirect influence over a territory much greater than that directly governed, incorporating most of Southeast Asia within the East Asian tribute trade system.²

Mughal, Safavid, and Ottoman Expansion

The Mughal, Safavid, and Ottoman empires, which together spanned the southern and southwestern portions of the Eurasian continent, shared many similarities. First, they all had Turkish ruling dynasties. Originally the Turks had been one of the nomadic peoples of central Asia, developing sufficient military strength to conquer the more densely populated agricultural regions of north India, the Persian peninsula, and the Anatolian highlands. I have already discussed the origins of the Ottoman empire in the previous chapter. Here, suffice it to say that after conquering Constantinople in 1453, the Ottomans continued to expand their empire around the Mediterranean Sea, including Greece and the Balkans on the northern coast, Syria, Lebanon, and Palestine in the Levant, and the entire southern coast from Egypt to Algeria. Similarly, in the early 1500s leaders of Turkish bands conquered Persia, establishing the Safavid dynasty, and India, establishing the Mughal dynasty.

Second, these three dynasties all embraced one branch or another of Islam. The Ottomans were staunch Sunni believers, the Safavids were Shiite, and the Mughals (a Persian word for “Mongol”), initially at least, were quite tolerant not just of the various branches of Islam, but of Hindu practices and beliefs as well. These three empires, then, were all successor states of the first great Islamic empire that arose in the eighth century. Nonetheless, the doctrinal differences between Sunni Ottomans and the Shiite Safavids were so great that they clashed militarily, first in the Battle of Chaldiran in 1514, and then intermittently for the next two hundred years.

Third, these Islamic empires had similar political and economic structures. The conquering rulers established dynasties in which their sons ascended to the throne following their death in a way very similar to the Chinese system. Also like China, the Islamic successor states ruled their territories through a bureaucracy of officials posted throughout the realm and responsible to the emperor. These empires all rested on productive agricultural economies that produced a surplus the rulers could tap by taxing the peasant producers or larger landowners.

The Dynamics of Empire

Although all of these empires faced difficulties, especially arising from what historians call “the mid-seventeenth-century crisis,” the fact is that, even with their ups and downs, they were expansive and successful forms of organizing political economies over vast territories in the period from 1500 to 1775. What they showed they could do was to mobilize resources within their control to augment and extend the power of the ruling dynasty into new areas. Indeed, by 1700 most of the Eurasian continent was under the control of

an empire of one kind or another. Ironically, since all of these empires except the Russian had been established by conquerors from the steppe, these expansive empires ended any further nomadic threat to their existence by placing the remaining nomads under their control. To be sure, even into the nineteenth century these peoples and others could “revolt” and cause substantial disruption, but the power of the large central states was rolling over that of the nomads. One of the previous dynamics of empires—nomadic invasions causing collapse or strain—was thus extinguished.⁴

But other dynamics internal to particular empires continued to account for their rise and decline. In India, the peak of Mughal power was reached under the rule of Aurangzeb (d. 1707). Shortly after his death, various Indian princes challenged Mughal power and effectively asserted their independence, fragmenting political power and leaving openings, as we will see in the next chapter, for Europeans to establish footholds in India. China’s power during the eighteenth century seemed to be quite well established, although in retrospect we now know that corruption at the highest levels was beginning to sap political will, and population growth coupled with economic difficulties fueled a large rebellion at the end of the century. The costs of suppressing the White Lotus Rebellion caused other problems to begin surfacing in the early nineteenth century.

Throughout most of the Eurasian continent, empires flourished over the centuries from 1500 to 1800. Although they each had their own particular histories and cultures, they did share commonalities. Mostly, empires were political systems encompassing large territories over whom a single person (usually called “emperor”) claimed sovereignty. Empires tended to be so large and encompassed so many peoples speaking different languages that emperors ruled indirectly through intermediaries rather than through centrally appointed local officials (although the Chinese emperor did try to rule that way). Empires proved to be quite effective in ruling people, so it is not surprising that they developed and were used elsewhere in the world too, especially in western Africa and in the pre-Columbian Americas, and that even Europeans, as we will see, harbored dreams of a unified empire. In chapter 2, I discussed the west African empires; here I will bring the Americas and Europe into the story.

The Americas

North and South America prior to the arrival of the Europeans was populated with peoples who had constructed varying kinds of social and economic systems, ranging from hunting and gathering societies to highly developed agrarian societies,⁵ in the centuries after humans first migrated into the Americas

around 15,000 B.C.E.⁶ It thus should not be too surprising that these people could also create the highest form of political organization in the biological old regime, an empire. Two in particular are important to our story, the Aztecs in central Mexico and the Incas in the mountains of what is now Peru and Chile. (See map 2.1.)

The Aztecs

The valley of central Mexico had long sustained impressive civilizations, starting with the Olmecs about 1500 B.C.E. On the Yucatan peninsula, the Mayas had built a magnificent civilization with cities, large pyramids, and a highly productive agriculture that peaked around 600–900 C.E., after which the Mayan state dissolved into numerous smaller agglomerations. By 1100 C.E., the valley of Mexico was dominated by the Toltecs who had a capital at Tula at the northern end of the valley. With rich soils and regular supplies of water from snow-fed rivers originating in the surrounding mountains, the valley of Mexico was agriculturally rich and attracted peoples from all over North America.

Among those migrating into the valley of Mexico around 1350 were a people called the Mexica, also known as the Aztecs.⁷ As latecomers with dubious civilizational achievements and agricultural competence, the Mexica were shunted off into the worst land—swamps and a lake, to be precise—and were considered to be subordinates of others. After making the mistake of sacrificing the daughter of one of their superiors, the Mexica were exiled to some islands in Lake Texcoco. Dredging up fertile muck from the lake bed into small floating plots called *chinampa*, the Mexica gradually created an island in the middle of Lake Texcoco upon which their city, Tenochtitlán (the site of modern-day Mexico City), ultimately arose. Being interlopers and forced to defend themselves, the Mexica became excellent warriors, sometimes working for others but all the while building their own defenses and power.

By 1400, the valley of Mexico was studded with numerous warring city-states. Three or four were major players, while the Mexica were mercenaries and minor players until 1428 when they established a Triple Alliance with two other groups. The Mexica then were powerful enough to begin conquering and subduing their neighbors and demanding that they send tribute to the capital at Tenochtitlán. Two Mexica rulers in the mid-1400s—Itzcoatl (1428–1440) and Moctezuma I (1440–1469)—led the alliance, which came to control all of the valley of Mexico and beyond. At the peak of its power in the early 1500s, the empire ruled over some 489 subject territories totaling 25 million people, all of whom were expected to pay tribute to the Mexica at Tenochtitlán.

The Mexica rulers thus accumulated considerable wealth from their tributary states. Food, textiles, jewelry, furs, rubber balls, precious stones, gold, and silver flowed to Tenochtitlán, not because the conquered peoples wanted to send these items, but out of fear of retribution if they did not. The Mexica ruled their empire not through a bureaucracy or assimilation, but through terror, and used the least sign of resistance as a pretext for war and the taking of prisoners for sacrifice to their gods.⁸ The Mexica thus constructed a large empire built upon the extraction of tribute from subject peoples, periodic wars, and the daily sacrifice of hundreds if not thousands of captives. Tenochtitlán may have been an exceptionally wealthy city, but the foundations of the empire itself were not strong, resting largely on the fear the Mexica instilled in their subjects.

The Inca

The same could not be said about the other empire being built in the Americas by the Inca. Unlike the Mexica (and the Maya), the Inca did not develop a written language, so most of what we know about them comes from accounts compiled in the early 1500s by European conquerors. Nevertheless, the story is impressive. Settling in the highlands of Peru around Lake Titicaca in the mid-1200s, the Inca (the name originally referred to the title of their emperor, but later European usage expanded it to refer to the people as well) launched military campaigns in the 1400s that created a huge empire, stretching some 2,500 miles from modern Quito in the north to Santiago in the south.

Unlike the Mexica, the Inca consciously incorporated the conquered peoples into their culture, forcing them to adopt a common language (Quechua) and directly governing them with professional administrators. Besides being exceptionally long, covering most the Pacific highlands of South America, the Inca empire was also “vertical.” The Peruvian mountains reached to 13,000 feet, some cities sat at 9,000 feet, and Incan villages were scattered all the way up and down the mountains and the valleys. Besides a challenge to governing, verticality was also a challenge to growing food; because of the vast changes in ecosystems arising from the different altitudes, different crops had to be grown in different locals. To ensure the unity of such an unusual empire, the Incas paved mountain roads with cut stone for imperial runners and armies.

Surprisingly, for such a large empire, the Inca did not have a true writing system, but instead developed an ingenious system of colored, knotted cords that allowed the rulers to keep track of vital information (population, taxes,

labor services owed the government) to keep the empire together. Movement from one's village was prohibited, and the absence of money and private trade limited the development of private property and wealth. Nonetheless, the empire itself was wealthy, ruling over sixteen million people.

Like the Mexica empire, though, stresses had built within the Inca empire as it expanded. The Inca believed that their ruler was descended from the sun-god, and to keep him happy (and the crops growing) after death, the ruler was mummified in order to be taken out for all important occasions or decisions, thereby maintaining the link to the sun-god. Moreover, the mummified leader's direct descendants were given all his land and possessions in order to sustain this activity. A new Inca ruler thus came to the throne land poor and had to conquer new lands and peoples of his own, thereby giving a certain dynamic to Incan imperial expansion. When that expansion slowed, as all available lands were conquered or the Incan armies suffered defeat—as they did when they went down the east side of the Andes into the Amazon rainforest where they were then driven out—tensions within the royal family began to run high and soon exploded when an Incan emperor died in 1525, leading to a succession crisis and contest for the throne between two half-brothers.

By 1500, both the Aztec and Inca empires were well established and quite powerful, although each had weaknesses. The Aztecs had constructed an empire based on forced extraction of surplus from subjugated people, while the Incas had a system that required expansion in order for the new ruler to obtain new lands to support his family. Then, the arrival of the Spanish, first Columbus in 1492 of course, but more importantly Hernan Cortéz in 1519 and Francisco Pizarro in 1531, changed everything.

The Conquest of the Americas and the Spanish Empire

In 1500, Tenochtitlán, the capital of the Aztec empire, had a population of 250,000, making it one of the largest cities in the world. The city boasted pyramids, botanical gardens, canals, zoos, a sewage system, and streets that were cleaned daily by about one thousand men. Tenochtitlán was an impressive place. Aztec warriors instilled fear in the people they conquered, ensuring the flow of food and goods into the capital. Yet this large, complex, and powerful empire was brought down by just six hundred Spanish "conquistadors" led by Hernan Cortéz; an even smaller "army" under Francisco Pizarro conquered the Incan empire in the 1530s. How did that happen?

In 1519, after Cortéz landed on the coast of Mexico near what would become the city of Vera Cruz, he heard stories of vast amounts of gold inland and that various people the Aztecs had conquered would help him by providing intelligence, food, canoes, and warriors. The Aztec emperor, Moctezuma II, at first believing that Cortéz was a returning god, sent gifts of gold to appease the Spaniards, hoping they would go away. But, according to Cortéz, "we have a disease of the heart that can only be cured with gold," and so began the expedition overland to Tenochtitlán.

Exploiting the feelings of hatred the conquered peoples had toward the Aztecs, Cortéz enrolled their help both in getting to Tenochtitlán and then in war against the Aztecs. Even though the Aztecs were fierce warriors who had developed many instruments of war that worked well in the Valley of Mexico, ultimately the Spaniards had a huge technological advantage. Where the Spaniards had steel swords and armor, the Aztecs had bronze weapons and cloth armor; where the Spaniards had cannons, the Aztecs had none; where the Spaniards had wheels, the Aztecs had none; where the Spaniards had horses, the Aztecs had none; where the Spaniards had "the dogs of war," the Aztecs had none; where the Spaniards fought to kill and to conquer territory, the Aztecs fought when equally matched and did not kill all their enemies. And finally, the Spaniards unwittingly brought the smallpox virus, which unleashed an epidemic in the summer of 1520, killing over half the residents of Tenochtitlán, demoralizing the Aztec warriors, and enabling the disciplined Spanish soldiers to take advantage of the moment to seize Tenochtitlán.

A similar combination of factors allowed Francisco Pizarro's small band of men to conquer the Incas.⁹ In this case, though, the smallpox epidemic had already spread to Peru from Mexico in the 1520s, decimating Andean Indian populations long before Pizarro arrived. When he did, he exploited differences among Incan claimants to the throne, lured them into a trap, and then killed almost all, initially sparing the last Incan ruler until he delivered a sufficient amount of gold but then strangling and decapitating him.

Although we use the word "conquest" to describe what happened to the Aztecs and Incas in the sixteenth century, the fact is that Spanish victory was neither swift nor complete, for the native peoples of the Americas put up a long and valiant struggle against European invaders. The Incas resisted for another century, the Spanish in fact faced several defeats at the hands of the Seminoles in Florida, and as we know, the history of the United States is riddled with Indian wars. Indeed, in some ways Native American resistance has not yet ended, as the events in Chiapas, Mexico, in the 1990s serve to remind

us. However, if not fully defeated and if continued resistance allowed Native Americans to negotiate or win concessions at the margins, the fact is that ultimately Europeans and Africans replaced the Native Americans as the most populous peoples in the Americas, as we will see in more detail below.

The Columbian Exchange

The conquest of the Americas led to a global exchange of natural products and foodstuffs, especially of New World foods to the Old World agrarian economies. Maize (corn), potatoes, tomatoes, chiles, and other foods spread rapidly throughout Eurasia, enriching the diets of commoners and elites alike. Sweet potatoes, for instance, reached China by the mid-1500s, making it possible for peasants there to sell their rice rather than eat it. Certainly the spread of New World crops into the Old World made it possible for populations there to increase above what would have been possible on the basis of the existing basket of foods.

But the Columbian exchange was a two-way exchange and it seems that the native peoples of the New World were the losers, for the encounter between Old and New Worlds brought two hitherto separate disease pools into contact. The Native American ancestors had migrated into the Americas during the last Ice Age when a land bridge linked Alaska to Siberia, thousands of years before the agricultural revolution in Eurasia brought people and domesticated animals together in a rich recipe for the transfer of animal pathogens to humans, leading to a whole range of diseases including smallpox, chicken pox, and influenza. Eurasians contracted these diseases and over time developed some immunities to them; New Worlders did not have a chance to do the same. When the Ice Age ended and the melting glaciers raised the ocean level above the Bering Strait land bridge, the peoples in the Americas were isolated from the diseases that then became an everyday part of the material world in Eurasia, rendering some of them “childhood” diseases from which most people easily recovered. The diseases for which Europeans had developed immunities over the centuries proved to be deadly to those in the Americas (and later the Pacific Islands too) without immunity.

The Great Dying

The smallpox epidemics that weakened both the Aztecs and Incas, paving the way for the Spanish conquest of both empires, were just the beginning of a century-long holocaust that almost wiped out Native American populations. From 1518 to 1600, seventeen major epidemics were recorded in the New World, spanning a territory from what is now Argentina in the south to what is now Texas and the Carolinas in the United States. Not just smallpox, but

other killer diseases—measles, influenza, bubonic plague, cholera, chicken pox, whooping cough, diphtheria, and tropical malaria—ravaged American populations.¹⁰ Disease was not the only cause of the depopulation of the Americas in the century after the Spanish Conquest. The Conquest itself, war among the American natives, oppression by the conquerors, the forced requisitioning of Indian labor, and lowered fertility among the surviving native population all contributed to the disaster.¹¹

In Mexico alone, where there had been 25 million people in 1519, fifty years later there were 2.7 million, and a hundred years later there were but 750,000, or 3 percent of the original total. Similar fates befell the Incas, the inhabitants of the Caribbean Islands (starting with the Arawak on Española), and the Indians of (what is now) southeastern United States, although at different rates. Whether or not European-introduced diseases ravaged the Indians of the American Northeast, the upper Mississippi, or the Northwest before the 1600s is open for scholarly debate, but after permanent European settlements were established in North America, diseases afflicted those natives too. In short, in the century after European contact with the New World, vast regions were depopulated, losing 90 percent of their pre-1500 numbers, even if we do not know with certainty what the precontact population of the Americas was. Nonetheless, it does seem certain that tens of millions of people across the Americas had vanished.

Labor Supply Problems

Even without the Great Dying, the Spaniards would have had a labor problem in the New World because they themselves were not inclined to do manual labor, and getting the native Indians to work for them voluntarily proved problematic. Enslaving the Indians was also ruled out after a debate within the Catholic Church settled the debate over whether the Indians had a soul (ruling that they did). Although not slaves, Indians were compelled by Spaniards to work their fields or their mines in return for providing food, shelter, and Christianity in a system known as the *encomienda*. After the Conquest and the Great Dying, the *encomienda* system was supplemented by another, the *repartimiento*. With Indians few and far between, the *repartimiento* forced them into small towns laid out in the grid pattern familiar to Spaniards. The combination of these two provided food and clothing for the conquistadors and their followers.

Silver

The “discovery” of the Americas was of course an accident. Columbus sailed west to get to Asia, and on the way stumbled across a huge new continent.

But the reason he sought Asia was shared by those who followed him to America: to get rich. Not only did the Spaniards stumble into America, they stumbled across huge amounts of gold and silver that the Aztecs and the Incas had fashioned into works of art, power, and utility that were theirs for the taking after the Aztecs and Incas had been defeated.

A shortage of Indian labor was not a problem when all the Spaniards had to do was loot the silver and gold already collected in Tenochtitlán and Cuzco (the former Inca capital in Peru), melt it down, and ship it off to Seville. The Great Dying thus was accompanied by a Great Plundering, and that is what characterized the Spanish approach to the New World economy for several decades after the conquest. But that soon changed with the discovery of huge deposits of silver ore in the former Incan empire (now in western Bolivia) and also in Mexico.

The biggest strike was at Potosí in 1545, which soon became a boomtown (even though at 11,000 feet elevation) with 150,000 people by 1570. Over the next century, thousands of tons of silver came out of Potosí, especially after the introduction of the mercury refining process. Indians worked in the mines and refined the ore, either because they were forced to do it or because they were drawn to the work and were paid wages. Where to the Spaniards Potosí was a source of fabled wealth (“to be worth a Potosí” became a stock phrase for being rich), to the Indian laborers it was “the mouth of hell.” Mining was especially dangerous to begin with, but working with mercury was deadly (it is a poison); over the three centuries that Potosí was operating, it is estimated that eight million Indians—seven out of every ten working the mines—died.

Huge amounts of silver flowed out of the New World, half of it coming from Potosí alone: from 1503 to 1660, over 32 million pounds of silver and 360,000 pounds of gold were exported. But where did it all go? Who provided such an enormous demand for silver that Potosí would sprout in the middle of nowhere, and Spaniards were willing to work eight million Indians to death to get their hands on it? After all, the conquistadors had wanted gold, not silver. And yet here they were pumping out silver. Why? There are two parts to the answer to that question.

The Spanish Empire and Its Collapse

With vast sources of newfound wealth apparently at their fingertips, Spain's rulers attempted to bring all of Europe under their dominion. The idea (and ideal) of empire was never far from the surface in sixteenth-century Europe. Indeed, ever since the fall of the Roman Empire, some Europeans had pined for the reestablishment of a universal political order based upon Christianity.

For a very long time, hopes rested with the Byzantine empire in the eastern Mediterranean, the defenders of Eastern Orthodox Christianity. But those hopes were dashed when the Ottoman Turks took Constantinople in 1453 and made it into a Muslim city.

Within western Europe, the idea of empire was enshrined in the Holy Roman Empire. More name and hope than reality, the title was revived in 962 when a semibarbarian Germanic invader took Italy and was crowned “Holy Roman emperor” by the pope. The title, mostly associated with Austria and Germany, persisted until 1806, even though Germany itself was politically fragmented even more than Italy.

But in the early 1500s, it looked like the Spanish might just succeed in creating a real empire in Europe. Ferdinand and Isabella's son, Charles V, inherited not just the Spanish crown, but claims to Habsburg lands spread throughout Europe (Austria, the Netherlands, Sicily, and Sardinia) as well as New Spain (Mexico) and New Castile (Peru) in the New World. The New World wealth that started flowing into Spain, at first from simply looting Aztec and Inca treasuries, but regularly after the mines at Potosí started operating, gave Charles V and then his successor, Philip II, the money to attempt to unify their lands. Between the Spanish monarchs and their attempts to unify their lands stood France and the Protestants in the Spanish-claimed territories in the Netherlands, with the English helping Spain's enemies as needed.

War followed war between Spain and France, and the Dutch war of independence (the Protestant Dutch versus the Catholic Spanish, especially heavy in the 1570s) too sapped Spanish strength. Despite the massive amounts of New World silver flowing into Spain, the wars proved so costly that the Spanish crown declared bankruptcy not just once but several times (first in 1557 and 1560, and numerous times thereafter). The English defeat of the Spanish Armada in 1588, followed by further Spanish defeats in Europe (the Thirty Years' War, 1618–1648) and in the New World too, sealed the fate of the Spanish attempt to create a European empire. Something new—a competitive system of sovereign nation-states—would take its place, and Spain would not be at its center. Many historians consider the end of the possibility of empire and the emergence instead of nation-states to be one of the critical turning points in west European history.¹² We will come to that later in this chapter. Now, we need to return to the second part of the answer to why there was such an interest in digging silver out of the New World.

China's Demand for Silver

Columbus risked the unknown of the Atlantic and Vasco da Gama charted new waters around the Cape of Good Hope to get direct access to the riches

of Asia, bypassing the Ottomans and the rest of the Muslim world that controlled the overland routes from the eastern Mediterranean to Asia. Of course, Columbus never got to Asia (although he did think he got there, calling the Native Americans “Indians”), and when the Portuguese sailed into the Indian Ocean and the China Sea, they discovered they were poor and had little money with which to buy Asian spices and manufactured goods (so they extorted the goods with their “armed trading” protection racket). But when the Spaniards stumbled onto the silver of the New World, they found the key to accessing the wealth of Asia. Sort of.

The problem was the Spanish “owned the cow but did not drink the milk,” as the saying went. True, the silver flowed from the New World to Seville. But the Spanish monarchs, especially Charles V and Philip II, were constantly warring in their efforts to unite Europe under their empire. The silver thus flowed out of Spain and into the hands of Dutch arms merchants and English and Italian financiers, who then used their newfound silver wealth to finance trade missions to China and the Indian Ocean. Moreover, the Spanish lacked direct access to Asia in any event, those routes being held by the Portuguese, the Dutch, the English, and the French, at least until 1571 when the Spanish seized Manila in the Philippines, established a colony there, and sent galleons loaded with silver directly from Acapulco to Manila.

All told, “approximately three-quarters of the New World silver production” over the three centuries from 1500 to 1800 eventually wound up in China.¹³ The reason is that China had a huge demand for silver, both to serve as the basis of its monetary system and to facilitate economic growth. Because the Chinese valued silver, it was expensive there and very cheap in the Americas (after looting it, its cost was the cost of production, and that was very low as the deaths of the eight million Indian miners attest). Silver thus flowed from the New World, both through Europe and across the Pacific to the Philippines, all to China. As the largest and most productive economy in the world, China was the engine that powered much of the early modern economy, with New World silver providing the energy. It is not too much to say that without China, there would have been no Potosí (or at least a much smaller one). And without Potosí, the Spanish would not have attempted to create an empire in Europe. In short, silver “went around the world and made the world go round,” in the words of a recent world historian.¹⁴

In the period from 1500 to 1800, the bulk of the world’s population, economic activity, and trade remained Asian, despite the new beginnings made by Europeans in the New World and Asia.¹⁵ In fact, Asia’s proportion of world population rose from about 60 percent around 1500 to 66 percent in 1750 and 67 percent in 1800. Two-thirds of the world’s population was Asian as

late as 1800, with the bulk of that in China and India. As discussed in chapter 1, in the biological old regime, a growing population is evidence of success in developing additional resources to sustain the larger population.

But not only was Asia’s population growing, so too was its economic production and productivity. In 1775, Asia produced about 80 percent of everything in the world, probably an increase from 1500. In other words, two-thirds of the world’s population—Asians—produced four-fifths of the world’s goods. Seen from another perspective, Europeans, at one-fifth of the world’s population in 1775, shared production of one-fifth of the world’s goods with Africans and Americans. Asia thus had the most productive economies in the three centuries after 1500.

Evidence for that can be seen in some surprising places, including the New World. In the 1500s, Chinese manufactured goods were so much better and cheaper than European ones that “they quickly ended the domination of markets there by commercial interests in Spain.” The Spanish viceroy of Peru thus complained in 1594 to the authorities in Madrid:

Chinese merchandise is so cheap and Spanish goods so dear that I believe it impossible to choke off the trade to such an extent that no Chinese wares will be consumed in this realm, since a man can clothe his wife in Chinese silks for 200 reales [25 pesos], whereas he could not provide her with clothing of Spanish silks with 200 pesos.

In Lima, the citizens also wore Chinese silks, and in Mexico City women wore dresses known as *China poblana*, which were, and remain, the “national dress” of Mexican women. Indeed, Chinese imports were so well made and cheap that they destroyed the Mexican silk industry, even as silk weaving increased because of cheap silk thread imported from China.¹⁶

The English too found cheap cotton textiles from India to be so superior to anything they could buy locally (either woolens or linens) that Indian imports climbed steadily during the seventeenth century. Indeed, the British were importing so much finished cotton from India by 1700 that it appeared to British textile manufacturers that their industry was doomed by the competition. So, instead of becoming more efficient producers to compete with India, in 1707 they successfully pressured the British government to embargo the importation of Indian cotton. French women found brightly painted Indian calicoes to be so fashionable that laws were passed in 1717 against wearing Indian cotton or Chinese silk clothing in order to protect the French home industry. One Paris merchant went so far as to offer to pay anyone 500 livres who would “strip . . . in the street, any woman wearing Indian fabrics.”¹⁷

I will have more to say about the place of textiles in the story of industrialization in the next chapter. Suffice it to say here that in the global economy, and despite the wealth extracted from the New World, Europeans at the turn of the eighteenth century still were at a competitive disadvantage to Asians. In fact, one way to think about the global situation is that Europeans were so poor relative to Asia and still so peripheral to the real generators of industrial wealth and productivity that they competed mightily among themselves merely to gain the upper hand in dealing in Asian markets. Europe's peripheral position, in other words, heightened competition among European states, leading to attempts to find ways to accumulate wealth and power in a world still dominated by Asia. That is where the New World fits in again.

The New World Economy

Sugar and Slavery

Contributing to the making of the New World economy was the establishment and growth of a plantation system using imported African slave labor, initially for the production of sugar,¹⁸ but eventually adapted to tobacco in the seventeenth century and cotton in the eighteenth century. The Portuguese played an essential role in this process by experimenting with the best way to exploit their colonial possession in Brazil. With so few Portuguese willing to migrate to Brazil, the Portuguese had no choice but to rely upon the native Tainos, who, to put it mildly, had little desire to work farms and instead fled into the forest. Even enslaving the Taino did little to resolve the Portuguese labor shortage, which became acute after the introduction of European diseases further reduced the Taino population. The solution was the use of African slaves.

Even before the discovery of the New World, the Portuguese had already worked out a slave-based plantation system for sugar production on the islands off the coast of Africa they had conquered in their quest for a sea route to Asia (borrowing from even earlier Spanish and Genoan success in the Mediterranean). The story of how that happened from the 1420s on is quite instructive for what happened later in the New World, for it involved the massive ecological change of tropical forests into sugar plantations, the enslavement and extermination of a native people (the Guanches), and then the importation of African slaves to work the sugar plantations.¹⁹ All of this happened before Columbus stumbled on the Americas, but it did give the Portuguese experience in slave-based plantations, which they quickly adapted to the depopulated New World; by the 1580s, slavery and plantations were dominant features of the economy of Brazil.

The French and the English also soon created slave-based sugar plantations on Caribbean islands. Soon after the British took Barbados, in 1640, settlers started clearing the land for sugar plantations, with sugar exported to the home country in the 1650s. The sugar industry expanded rapidly, especially after Britain took the island of Jamaica—thirty times the size of Barbados—from the Spanish. The French also established sugar plantations in the Caribbean, starting on Martinique, exporting sugar back to France. By the late seventeenth century, so much English and French sugar was being exported back to the home countries that the competition drove Brazilian sugar from northern Europe. Ultimately, the British and French had so totally deforested several Caribbean islands for sugar that erosion wrecked the fertility of the soil (as in Haiti) and changed local climates as well.²⁰

The number of African slaves taken to work the New World plantations is astounding, numbering over nine million people by the time the slave trade ended in the 1800s; by 1650, “Africans were the majority of new settlers in the new Atlantic world.”²¹ For nearly three hundred years, European slave traders, at first Portuguese and Dutch but eventually mostly the British, took thousands of African slaves every year to the Americas, leaving a lasting impact not only upon African but American (north and south) society as well. Although those effects are historically important,²² here we are mostly interested in how the slave-based plantation system fit in with the world economy.

Two triangles of trade linked the Atlantic world, arising in the seventeenth century and maturing in the eighteenth century. The first, and by far the best known, linked England to Africa and the New World. Commodities from the Americas (not just sugar but timber and fish from North America too) went to England (and from there to its trading partners); finished goods (increasingly cotton textiles from India) were taken to Africa where they were exchanged for slaves; and slaves were taken to the Americas. The other triangle went in another direction. From England's North American colonies, rum went to Africa in exchange for slaves; slaves went to the Caribbean; and molasses (from sugar refining) went to New England to produce more rum.²³

In all of these transactions, Europeans and North American colonists made money and accumulated wealth. The question of the extent to which slavery and the plantation economy benefited Europeans and allowed them to compete more effectively and in the world economy will be taken up in more detail in the next chapter. For now, we need note only that seventeenth- and eighteenth-century Europeans competed not only in a world economy dominated by Asian manufactures, but among themselves as well. The end of the Spanish attempt to create an empire in Europe soon led to the

creation of a new system linking European states and pushing the development of the state and its power.

The European State System

Warfare defined the emerging European state system. Until the mid-seventeenth century, wars were mostly fought to stop the Spanish from establishing an empire or to support Protestants (in Holland and the German states) in their attempts to gain independence from the Catholic monarchs of Spain. From the 1648 Peace of Westphalia, which ended the Thirty Years' War, wars were mostly between France and England, culminating in the Seven Years' War (1754–1763), or what Americans call the French and Indian War, and leading to Britain's victory over France.

There are many things that are historically significant about wars among European states in the period we are considering in this chapter (i.e., from 1500 to 1775). First, the wars involved virtually all European states, tying them very clearly in a single system, especially after the Peace of Westphalia. That can be seen quite clearly in two schematic charts prepared by the historian Charles Tilly (see figure 3.1).²⁴ In these charts, which represent two different periods (Europe ca. 1500 and ca. 1650), the thin lines represent one war and the bold lines two or more wars between the states connected. Where there were two subsystems in 1500, with the western one focused on Italy, by 1650 all European states were embroiled in a common set of entanglements defined by war.

Second, wars in Europe led both to consolidation into increasingly fewer political units and to the development of a particular kind of national state as the most successful form of European state. Tilly's work again supplies the basic data. Beginning around 1000 C.E., the thirty million or so people who lived in the area we now call Europe lived in a bewildering array of political units headed by "emperors, kings, princes, dukes, caliphs, sultans, and other potentates." These titles, Tilly warns us, should not hide the fact of stupendous political fragmentation in Europe: in Italy alone there were two hundred to three hundred city-states. Five hundred years later, around 1500, "Europe's 80 million people divided into something like 500 states, would-be states, statelets, and statelike organizations." From then on, warfare reduced the number of European states until modern times when there were about thirty or so.²⁵

Where the Spanish Habsburg empire proved to be too large and inefficient to mobilize its own resources against the English or the French, the wealthy

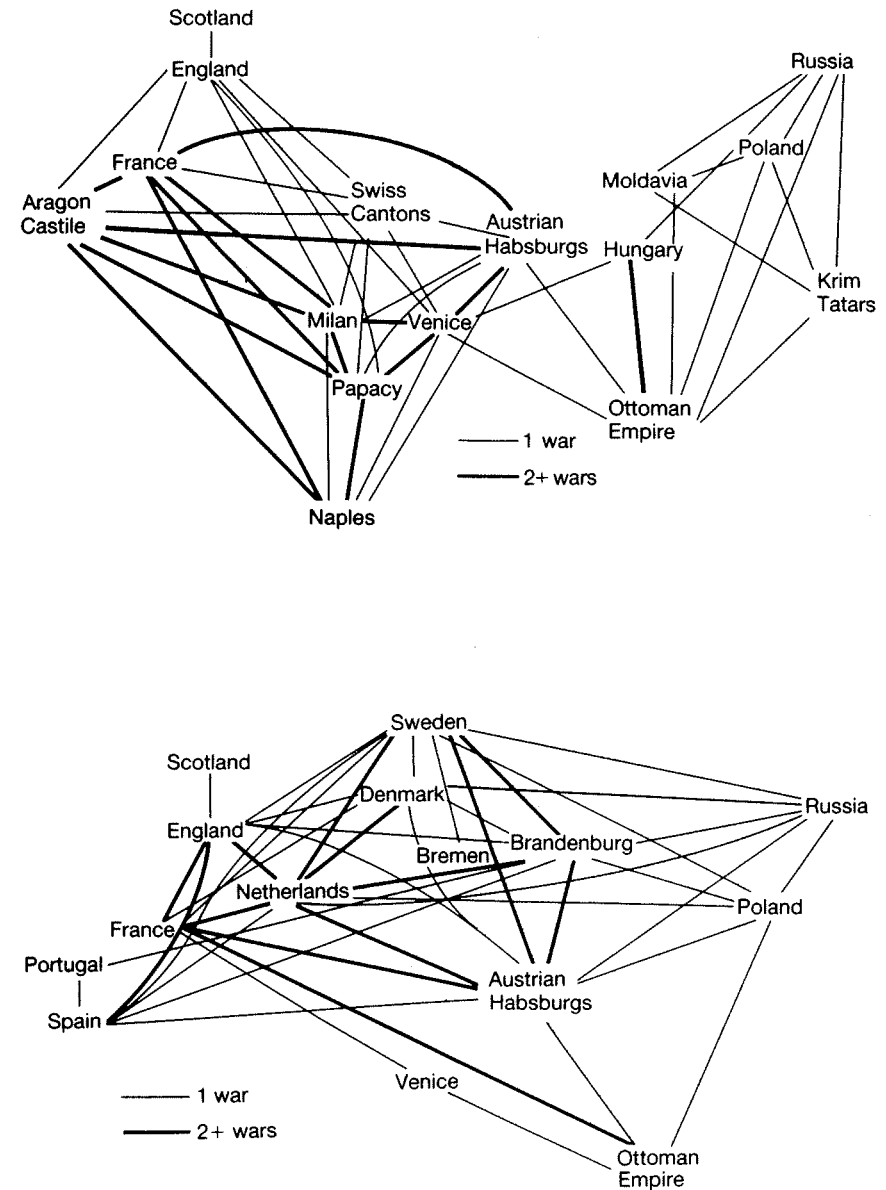


Figure 3.1. Joint Involvement of European States in Great Power Wars, 1496–1514 and 1656–1674

Source: Charles Tilly, *Coercion, Capital, and European States, A.D. 990–1990* (Oxford: Basil Blackwell, 1990), 176–177.

city-states of Italy lacked the manpower to campaign outside of Italy against larger armies. Similarly, the various principalities of Germany, while strong enough to fend one another off, found it hard to keep larger states from interfering in their affairs. Small states like Sweden or Holland, which had some resources that allowed them to be international players in the seventeenth century, fell by the wayside in the eighteenth century as larger states came to dominate European politics. On the other hand, some large and populous states such as Poland, with a small nobility ruling over a large enserfed peasantry, could not field large enough armies to compete; Poland thus was partitioned at the end of the eighteenth century.

In this context, the third interesting consequence of war was the way it affected the internal evolution of European states, favoring some kinds but not others. The rulers of European states were not rich, and wars were expensive. Basically, European rulers could tap two sources of revenue. First, they could tax, but taxes usually met resistance from landowners. Hence, to gain the right to levy and use taxes, most European rulers had to negotiate with landowning elites, usually resulting in the establishment of some form of representative assembly that rulers were supposed to consult before imposing or raising taxes. Besides assemblies of landowners, the other institution growing up with taxation was the state bureaucracy necessary to assess and collect taxes from the known subject population, rather than “farming” the collection of taxes out to private parties. The tensions arising from both of these processes account for much of the internal political history of many European states in the centuries from 1500 to 1800.

A second source of revenue was loans from bankers or other wealthy people. The sixteenth-century Spanish monarchs, for instance, had to rely on loans to finance their wars, but much of the money came from bankers outside of Spain or Spanish control. All European rulers had to rely on both short- and long-term loans to prosecute their wars, and it thus became in their interest to encourage those with capital to reside in their cities. The English and the Dutch were most successful at this, in part because of their religious tolerance and willingness to take in wealthy Protestants and Jews unwelcome in Catholic lands. But even loans to one’s own subjects had to be repaid, leading the British to institute “the national debt” in the late 1600s, an innovation of immense importance in enabling British power to expand.

England’s national debt was in effect long-term loans secured by the Bank of England, or in other words “bonds.” Other European rulers had often attempted to resolve their financial difficulties by consolidating short-term into long-term debt, but these were secured on the ability of the ruler to repay. The English innovation was to issue the bonds through the Bank of

England, established in 1694, and to guarantee them with the subscribed capital of the bank. The national debt not only provided British rulers with ready sources of cash for their wars, but also gave investors a relatively safe investment instrument, thereby attracting even more deposits to the Bank of England.

In summary, the wars of European states drove their expenses well above the amount of silver that was left in European hands after it was used to buy Asian products, leading to standing armies and navies, taxation and state bureaucracies to collect it, representative assemblies of various kinds demanded by the taxed subjects so they could influence the level of taxation (even though Europe’s “absolute monarchs” tried mightily to ignore or shut down these institutions), public indebtedness, and the institution of the national debt. All of these activities were part of a “state building” process in seventeenth- and eighteenth-century Europe.

State Building

European rulers would resort to force, if necessary, to gain access to the resources needed to conduct war, but rulers considered it preferable if their subjects would more voluntarily render those resources to the state. Rulers thus made various claims to legitimacy, that is, the idea that subjects should willingly obey their ruler. In the sixteenth and seventeenth centuries, these claims to legitimacy rested on religious grounds, expressed as “the divine right of kings,” that is, that the Christian God gave them the right to rule. These religious claims also led European monarchs, in particular the Catholic ones, to expel non-Catholics from their territory. Spain’s Ferdinand and Isabella’s expulsion of the Jews and Muslims (who they called “Moors”) was an early example, but so too was the late seventeenth-century French prosecution of Protestants (the Huguenots). The Spanish Inquisition was also part of this process of ensuring that subjects throughout their realms in Europe and the Americas were Catholic and loyal.

The European Enlightenment of the late seventeenth and eighteenth centuries challenged the idea of the “divine right” of monarchs to rule, positing more democratic ones based upon the construction of the rights of the individual. Expounded most forcefully by the French “philosophes” in their struggle against the absolutisms of the French state and the Catholic Church, these ideas began to broaden the legitimate basis upon which a state could be established to include the consent of the governed, the “citizens.” By the end of the eighteenth century and in the aftermath of the French Revolution of 1789, these were the ideas the French used to justify the execution of their monarchs and the establishment of a republic.²⁶

In the competitive, war-driven environment in Europe, some states thus had advantages that led ultimately to a particular kind of state—one that had cities with large accumulations of capital and rural hinterlands with a population large enough to sustain armies—to become the most successful kind. For reasons that need not concern us, in the centuries after about 1000 C.E., cities in Europe tended to develop in a band extending north from Tuscany in Italy, across the Alps to Ghent, Bruges, and London; Paris also grew. To this day, this band is Europe's most urbanized zone. Cities provided the rulers of states encompassing them with opportunities to tax urban-to-rural trade, to gain access to funding from banks and thereby to avoid reliance of rural nobility for support, and generally to strengthen themselves: in general, to command more resources of all kinds, but especially money and men, than less-blessed competitors farther away from cities.²⁷ The rulers of two states in particular—England and France—proved to be most able to build that kind of state, combining the capital resources to be found in London or Paris with the manpower that could be tapped from the rural population. And, having built powerful states, England and France came to be intense competitors by the late seventeenth century.

The English proved willing and able to use state power for economic ends. In its struggles against Dutch competitors, the English had passed a series of Navigation Acts in the mid-seventeenth century designed to restrict the trade of her colonies in the New World to England only and to enforce those acts with force if necessary.²⁸ The Glorious Revolution of 1688–1689 brought Protestant monarchs to the English throne who agreed to abide by the laws of a Parliament dominated by domestic manufacturing interests; in 1707 Parliament then passed laws restricting the importation of Indian cotton textiles into England in order to protect British manufacturers and to encourage the development of a British cotton textile industry. By 1700, then, England had a government that, in the words of one British historian, “was prepared to subordinate all foreign policy to economic ends. Her war aims were commercial” and her foreign policy “shaped” by pressure from manufacturers.²⁹

Mercantilism

For its part, France too was building a strong state, and under the guidance of Jean-Baptiste Colbert, its minister of finance in the late seventeenth century, it implemented economic policies that came to be known as mercantilism. European rulers always seemed to be short of money to pay for their wars. Even the Spanish complained in the 1580s that “experience has shown that within a month or two of the arrival of a fleet from the Indies, not a farthing is to be seen.” An English businessman likewise complained in the 1620s of the “scarcity

of coin.”³⁰ The reason is that although Europe's stock of money increased (especially from 1580 to 1620), by 1620 it probably declined as silver mining in Europe collapsed, American silver declined, and the outflow to Asia increased. Not only were European states competing on the battlefield, they were competing to attract and retain as much silver and gold bullion as possible.

In the intensely competitive European context, it appeared that one state could gain only if another lost: it was a war of each against all in which “looking out for number one” was the highest principle. And the best way for a state to gain advantage, according to mercantilist theory, was to attract and then to keep the largest possible quantity of the world's stock of precious metals, especially silver (and later, gold). The reason for the need for bullion reserves was simple: wars were very costly, arms had to be purchased, in many instances from weapons makers outside the monarch's own country,³¹ and campaigning in a foreign country required vast amounts of silver or gold. To keep precious metals in one's own state therefore required economic policies that prevented them from flowing out in payment for, well, anything imported, especially for goods consumed and not used in war.

Thus European states imposed duties on virtually all imported goods, required that all goods be transported in their ships, and forced European New World colonists to trade only with the mother country, even if smuggling made such a policy somewhat porous. Mercantilist ideas also led to policies that states should use their own raw materials to manufacture within their own borders anything that was imported, an action we saw the English take in the early 1700s to keep Indian cotton textiles out. Although mercantilist policies did indeed lead to the establishment of industries in European states, industrialization itself was not the object: keeping gold and silver from flowing out of the state and enriching others was. European states were obsessed with their silver stocks: “the more silver, the stronger the state” was how a German once put it.³²

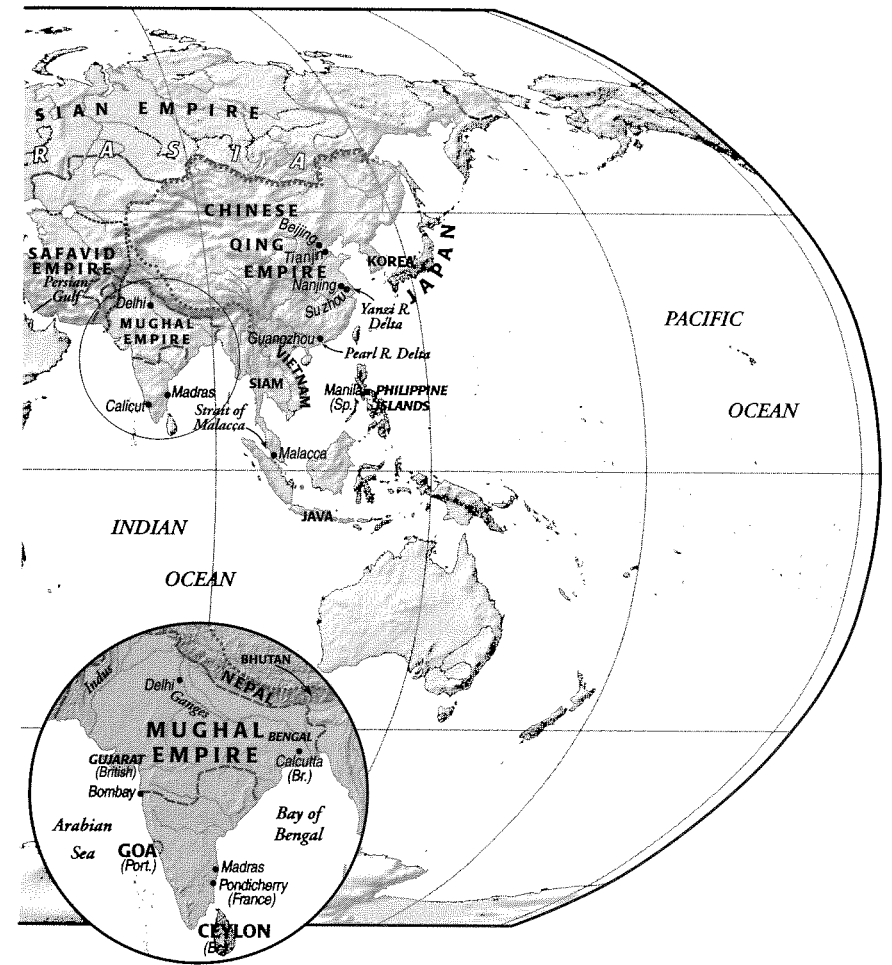
In these inter-European wars, the fates and fortunes of various states rose and fell. As we have already seen, by the end of the sixteenth century, Spain's power had begun to wane, and Portugal proved to be too small to mount much of a challenge to the French (or Spanish) in Europe, or to the Dutch in Asian waters. The Dutch, being among the first Europeans to apply vast amounts of capital to their trading enterprises in both Asia and the Americas, saw their fortunes peak in the seventeenth century, just as the French and the British were gaining power. Ultimately, though, the Dutch did not have the manpower to build a standing army sufficiently large to counter the French, and they ultimately allied with the British to offset French power on the continent. By the eighteenth century, Britain and France were the two most powerful and competitive states. (See map 3.1.)



Map 3.1. The World circa 1760

The Seven Years' War, 1756–1763

As the strongest and most successful European states, England and France competed not just in Europe but in the Americas and Asia as well. In the “long” eighteenth century from 1689 to 1815, Britain and France fought five wars, only one of which Britain did not initiate. Their engagement (with others) in the War of Spanish Succession was ended by the 1713 Treaty of Utrecht, which established the principle of the “balance of power” in Europe, that is, that no country should be allowed to dominate the others. However, periodic wars between the British and French continued.



But the most significant was the Seven Years' War of 1756–1763, or what Americans call the French and Indian War and interpret in terms of its impact on the American War of Independence of 1776–1783 against Britain. To be sure, the spark that led to war between Britain and France came in the American colonies, and it was in fact the twenty-two-year-old George Washington who lit it.³³ But it became a global engagement—perhaps the first real world war—with British and French troops fighting in the backwoods of the American colonies, in Canada, in Africa, in India, and in Europe. The outcome was disastrous for the French: they lost their colonial claims in both

North America (the British got Canada) and in India, leading to greater British power and position in both parts of the world.³⁴

By 1775, therefore, the processes of state building in Europe had led to the creation of a system defined by war, which favored a particular kind of state exemplified by the ones built in Britain and France. Balance of power among sovereign states, not a unified empire, had become the established principle, and Britain had emerged as the strongest European state. But that does not mean that it was the strongest or richest state in the world—far from it. To be sure, Mughal power in India was declining in the early 1700s, and as we will see in the next chapter, the British were able to begin building a colonial empire there. But the British were still too weak to be able to contest China's definition of the rules of trade in Asia. When they tried, most famously in 1793 under Lord Macartney's mission, the Chinese emperor sent them home with a stinging rebuke, and the British could do nothing about it. However, the British Isles were fortunate enough to be the location for the start of the Industrial Revolution, which was gaining steam even as Lord Macartney was sailing back to London. And when the British learned to apply the tools of the Industrial Revolution to war, the global balance of power between Britain and China tipped. That is the story of the next chapter.

Notes

1. For a scholarly comparison of these two very different political economies see R. Bin Wong, *China Transformed: Historical Change and the Limits of European Experience* (Ithaca, N.Y.: Cornell University Press, 1997), part 2.
2. See Takeshi Hamashita, "The Intra-Regional System in East Asia in Modern Times," in Peter J. Katzenstein and Takashi Shiraishi, eds., *Network Power: Japan and Asia* (Ithaca: Cornell University Press, 1997), chap. 3.
3. See Geoffrey Parker and Lesley M. Smith, eds., *The General Crisis of the Seventeenth Century*, 2d ed. (London: Routledge, 1997).
4. For some exceptions, see C. A. Bayly, *Imperial Meridian: The British Empire and the World, 1780–1830* (London: Longman, 1993).
5. Recent archaeological finds at Caral in Peru may well push back the dates for the establishment of cities and long-distance trade to about 2600 B.C.E. For an initial report on this research, see the *Los Angeles Times*, April 27, 2000, p. 1.
6. Humans may have migrated to the Americas as early as 35,000 years ago, but the consensus among scholars is about 15,000 B.C.E. See Richard E. W. Adams and Murdo J. MacLeod, eds., *The Cambridge History of the Native Peoples of the Americas*, vol. 2, part 1 (New York: Cambridge University Press, 2000), 28.
7. Pronounced "Me-shee-ka." Nineteenth-century historians began calling these people Aztecs, after the name of the place from which they supposedly originated, Aztlan.

8. War prisoners played an important role in Mexican religious practice. The Mexica believed—or at least their priests told them—that their gods had set the universe into motion by their individual sacrifices, and that to keep the world going, in particular to ensure that the sun came up every morning, it was imperative to honor the gods through ritual sacrifice of human beings. Bloodletting on the central altar in the city thus was a daily ritual. Additionally, the Mexica developed an especial fondness for the god of war, Huitzilopochtli, who demanded extra sacrifices. When the temple to this god was completed in 1487, reportedly 80,000 people were sacrificed to the god.
9. For additional insights, see Jared Diamond, *Guns, Germs, and Steel* (New York: W. W. Norton, 1998), chap. 3.
10. Bruce G. Trigger and Wilcomb E. Washburn, eds., *The Cambridge History of the Native Peoples of the Americas*, vol. 1, *North America* (Cambridge: Cambridge University Press, 1996), part 1, 361–369.
11. Leslie Bethell, ed., *The Cambridge History of Latin America*, vol. 2 (Cambridge: Cambridge University Press, 1984), chap. 1.
12. For a brief summary, see Thomas A. Brady, Jr., "The Rise of Merchant Empires, 1400–1700: A European Counterpoint," in James D. Tracy, ed., *The Political Economy of Merchant Empires: State Power and World Trade 1350–1750* (Cambridge: Cambridge University Press, 1991), 117–160.
13. Dennis O. Flynn and Arturo Giráldez, "Spanish Profitability in the Pacific: The Philippines in the Sixteenth and Seventeenth Centuries." In Dennis O. Flynn, Lionel Frost, and A. J. H. Latham, eds., *Pacific Centuries: Pacific and Pacific Rim History Since the Sixteenth Century* (London: Routledge, 1999), 23.
14. Andre Gunder Frank, *ReOrient: Global Economy in the Asian Age* (Berkeley: University of California Press, 1998), 131.
15. See *ibid.*, chap. 4 for the data cited in these paragraphs.
16. *Cambridge History of China*, vol. 8, part 2, 400–402.
17. Quoted in Fernand Braudel, *Civilization and Capitalism 15th–18th Century*, vol. 2 (New York: Harper and Row, 1981), 178.
18. The story of sugar and slavery can be found in Sidney W. Mintz, *Sweetness and Power: The Place of Sugar in Modern History* (New York: Viking Press, 1985), and in Bethell, *The Cambridge History of Latin America*, vols. 1–2.
19. See Alfred Crosby, *Ecological Imperialism: The Biological Expansion of Europe, 900–1900* (Cambridge: Cambridge University Press, 1986), chap. 4.
20. Richard Grove, *Green Imperialism: Colonial Expansion, Tropical Island Edens and the Origins of Environmentalism, 1600–1800* (Cambridge: Cambridge University Press, 1995), chap. 6.
21. John Thornton, *Africa and Africans in the Making of the Atlantic World, 1400–1800*, 2d ed. (Cambridge: Cambridge University Press, 1992), 14.
22. See Herbert S. Klein, *The Atlantic Slave Trade* (Cambridge: Cambridge University Press, 1999); Thornton, *Africa and Africans in the Making of the Atlantic World*.
23. As described in an exhibit at Britain's National Maritime Museum: "The slave trade was part of a global trading system. British products and Indian goods were shipped

to West Africa and exchanged for slaves. The slaves were taken to the Americas in return for sugar, tobacco, and other tropical produce. These were then sold in Britain for processing into consumer goods, and possible re-export.”

24. Charles Tilly, *Coercion, Capital, and European States, A.D. 990–1990* (Oxford: Basil Blackwell, 1990), 176–177.

25. *Ibid.*, 38–43. Tilly says twenty-five to twenty-eight states in 1990, numbers preceding the 1991 breakup of the Soviet Union and its former client states.

26. For an instructive history of the development of the idea of popular sovereignty in England and its American colonies, see Edmund S. Morgan, *Inventing the People: The Rise of Popular Sovereignty in England and America* (New York: W. W. Norton, 1988).

27. Tilly, *Coercion, Capital, and European States*, 47–54. The proximity to these cities, according to Tilly, led to the formation of three different kinds of European states. Wealthy cities could afford to hire their own mercenary armies (the “capital-intensive” path to state formation); rulers far away from cities and their capital had to rely on force mobilized from a rural nobility (the “coercion-intensive” path) to build states, while those with a combination of cities and their dependent countryside used a combination. Tilly argues that the latter, exemplified by England and France, proved to be the most successful kind in the competitive European state system.

28. On the Navigation Acts, see John J. McCusker and Russell R. Menard, *The Economy of British America, 1607–1789* (Chapel Hill: University of North Carolina Press, 1985), 46–50.

29. Eric Hobsbawm, *Industry and Empire* (New York: Penguin, 1968), 49.

30. Quoted in Geoffrey Parker, “The Emergence of Modern Finance in Europe 1500–1730,” in Carlo M. Cipolla, ed., *The Fontana Economic History of Europe*, vol. 2 (Glasgow: William Collins Sons, 1974), 530.

31. “Much of what Philip [II of Spain] needed for his armies was not available within peninsular Spain. His repeated efforts to establish factories producing cannon and other needed commodities always failed to flourish. Perversely, from a Spanish point of view, it was exactly in places where the king’s will was not sovereign that economic activity and arms production concentrated. . . . Thus, for example, the bishopric of Liege, adjacent to the Spanish Netherlands but not under Spanish rule, became the major seat of armaments production for the Dutch wars, supplying a large proportion of the material needed by both the Spanish and the Dutch armies.” William McNeill, *The Pursuit of Power: Technology, Armed Force, and Society since A.D. 1000* (Chicago: University of Chicago Press, 1982), 113.

32. Werner Sombart, quoted in Braudel, *Civilization and Capitalism*, vol. 2, 545.

33. See Fred Anderson, *Crucible of War* (New York: Alfred A. Knopf, 2000), for an engaging narrative of these events and of George Washington’s role.

34. According to E. J. Hobsbawm, “The result of this century [18th] of intermittent warfare was the greatest triumph ever achieved by any state [Britain]: the virtual monopoly among European powers of overseas colonies, and the virtual monopoly of world-wide naval power.” Quoted in Andre Gunder Frank, *World Accumulation 1492–1789* (New York: Monthly Review Press, 1978), 237.

CHAPTER FOUR



The Industrial Revolution and Its Consequences, 1750–1850

In 1750, every one of the world’s 750 million people, regardless of where they were or what political or economic system they had, lived and died within the biological old regime. The necessities of life—food, clothing, shelter, and fuel for heating and cooking—all came from the land, from what could be captured from annual energy flows from the sun to the earth. Industries too, such as textiles, leather, and construction, depended on products from agriculture or the forest. Even iron and steel making in the biological old regime, for instance, relied upon charcoal made from wood. The biological old regime thus set limits not just on the size of the human population, but to the productivity of the economy as well.

All of this would change in the century from 1750 to 1850 when people increasingly used coal to produce heat and then captured that heat to fuel repetitive motion with steam-powered machines.¹ The use of coal was a major breakthrough, launching human society out of the biological old regime and into a new one no longer limited by annual solar energy flows. Coal is stored solar energy, laid down hundreds of millions of years ago. Its use in steam engines freed human society from the limits imposed by the biological old regime, enabling the productive powers and the numbers of humans to grow exponentially. The replacement—with steam generated by burning coal—of wind, water, and animals for powering industrial machines constitutes the beginning of Industrial Revolution² and ranks with the much earlier agricultural revolution in importance for the course of history. How and why it happened and what consequences it had thus are vitally important matters in world history and will be the focus of this chapter.