

## CHAPTER SIX



# The Great Departure

### Introduction to the Twentieth Century and Beyond

By 1900, the major elements of the modern world had been created. Nation-states had become the most successful organization for controlling territory and had been adopted throughout much of Europe and the Americas. Some of these nation-states had industrialized (notably those in western Europe, the United States, and Japan) and had harnessed their newfound industrial power for imperialist military and economic purposes to colonize most of Africa and much of Asia. Europeans, Americans, and Japanese had developed racist ideas of their superiority—the European whites arising from a Christian “civilizing” mission coupled with social Darwinism, and the Japanese from their purported uniqueness in Asia—which contributed to their colonizing programs, and a belief that the world order was as it should be with them on top.<sup>1</sup> The burning of fossil fuels for industry was pumping greenhouse gases into the atmosphere, continuing the process of transforming that part of the biosphere into the “anthroposphere,” where human actions began to have impacts equaling or surpassing natural processes.

The twentieth century and the first decades of the twenty-first were to bring remarkable change. To be sure, we still live in a world of nation-states, of industry, of a growing gap between the richest and poorest parts of the globe as well as within specific countries, and of mounting environmental challenges. But the early twenty-first century differs substantially from the early 1900s. During the last century, whole new industries developed, dramatically restructuring the industrial world—oil and the automobile; electricity and the telephone, radio, television, and computers; motors and the airplane, jet engines, and space travel as well as washing machines and vacuum cleaners; the germ theory of disease and inoculation against it; genetic

manipulation; and robotization and artificial intelligence, to mention just a few scientific advances that would transform lives throughout the world. The twentieth century saw additional waves of industrialization and its spread around the world. These clusters of innovations created consumption patterns that required energy from burning vast quantities of cheap fossil fuels, and the effects of spewing vast amounts of greenhouse gases into the atmosphere became increasingly documented in climate change and global warming.<sup>2</sup>

In addition to technological change and its economic and environmental consequences, by the middle of the twentieth century, western European states would be dislodged from dominance. World War I (1914–18) shook the imperialist order of the late nineteenth century to its foundations and had major consequences for the shape of the twentieth century as a century of war and violence. But it was World War II (1939–45) that destroyed not only the old European colonial order but also the new Japanese empire and gave rise to a bifurcated world dominated by two superpowers: the United States and the Soviet Union (the USSR, or Union of Soviet Socialist Republics). During the twentieth century, nearly two hundred million people were killed in war, revolution, genocide, and other human-caused mass deaths.<sup>3</sup> Two world wars, punctuated by a global economic breakdown known as the Great Depression, constituted thirty years of crisis from 1914 to 1945. That “Thirty-Year Crisis” of the modern world destroyed Europe’s global dominance and Japan’s Asian empire, made way for the rise of two new superpowers (the United States and the Soviet Union) and their “Cold War,” and created a host of newly independent former colonies seeking to unlock the secrets of industrial development.

In two great waves of globalization, one following the end of the Second World War in 1945 and the other the end of the Cold War in 1991, the world became increasingly interconnected: ideas, capital, and labor moved with increasing rapidity and ease around the globe, by the end of the century spreading fears about what the ensuing “deterritorialization” meant for nations and identities. This round of globalization, largely under U.S. auspices and with the specific goal of spreading capitalism and the institutions that protect it around the world, has benefited some, but not most, contributing to a continued and deepening gap between the wealthy Global North and poor Global South countries of the world. Most recently, what some have called the U.S.-led “rules-based liberal world order” has come under attack by nationalist leaders in many countries. Indeed, the rise of nationalism is one reaction to the rapid movement of capital and labor around the

world irrespective of national boundaries. Moreover, the main cleavages between the Global North and the Global South—“the Rio Grande separating the United States from Mexico, and the Mediterranean Sea separating the European and African continents”—are the locus of the most intense conflict over the flows of migrants and refugees from south to north.<sup>4</sup>

And yet these may not be considered the most important changes in the modern world in the twentieth and twenty-first centuries; perhaps the most significant in the long run will be the impact humans have had on the environment. In the pursuit of rapid economic development in the capitalist world, the socialist world, and the third world alike, the relationship of human beings to the natural environment has changed to the point where human activity now affects global environmental processes—we have now fully entered the Anthropocene. Just as the use of fossil fuels in the nineteenth century freed industrial production and economic growth from natural constraints, so too in the twentieth century did synthetic fertilizer increase food supplies, sending the world’s human population soaring. The combination of both rapid industrial and population growth in the twentieth century and beyond marks a “great departure” of humans and our history from the rhythms and constraints of the biological old regime.

To help readers, this chapter is divided into four parts. Part I takes the story to the end of World War I; part II analyzes the post–World War II era from 1945 to 1991; part III looks at globalization and its opponents from 1991 to the present; and part IV considers the extent to which the world has entered a new era—the Anthropocene—in which the actions and activities of humans have begun to overwhelm the forces of nature and are pushing us into dangerous new territory in terms of our relationship with Earth’s natural systems. The story starts with the invention of synthetic nitrogenous fertilizer.

### **Part I: Nitrogen, Wars, and the First Deglobalization, 1900–45**

At the dawn of the twentieth century, social Darwinism and racism blinded Europeans to two dangers. First, they could not believe that the “advanced, progressive, civilized” races of the world (i.e., the whites) could go to war among themselves; that myth would come crashing down in World War I, and with it the vision of the omnipotence of Europe. Second, they could not conceive that the poor, backward, black, brown, and yellow peoples would ever be able to militarily challenge their European masters. That myth began

to crumble in 1905 when Japan defeated Russia, but it would take successful revolutions and wars against Europeans to finally dispel it and bring down the old colonial order. One of the main reasons twentieth-century wars were so destructive is that the machinery of death was industrialized.

The peculiar thing about the technologies of war that imperialist states wielded against Asians, Africans, and indigenous peoples of the Americas through the nineteenth century is that the manufacture of a crucial element—gunpowder—was dependent upon extremely slow processes of nature. For all the steel, steam, and guns that their factories could produce, Europeans could not manufacture nitrates, the stuff that made gunpowder explode—they had to find the raw materials in the natural world. The critical element in nitrates is nitrogen, and although European scientists had figured that out, they had difficulty discovering how to take nitrogen from the air and “fix” it into reactive nitrogen ( $N_2$ ; see the discussions in chapters 1 and 5).<sup>5</sup> Paradoxically, coal, steam, iron, and steel had enabled the industrializing countries to escape some of the limitations of the biological old regime, but the gunpowder they used to dominate the rest of the world was still limited to naturally occurring sources of nitrogen.

As discussed in earlier chapters, nitrogen is crucial to the growth of plants and is essential to the creation of the amino acids that sustain animal, including human, life. Life on Earth is part of a global nitrogen cycle by which a small portion of the vast sources of nitrogen in the atmosphere becomes available to plants and, through them, to animals. Certain plants—legumes like beans, peanuts, and clover—fix nitrogen to the soil, and that helps fertilize fields and improve crop yields, making more food available to humans. Lightning strikes too can produce small amounts of nitrates. Among the largest sources of naturally occurring nitrates are human and animal waste. Farmers around the world, knowing that, have long applied animal manure to their fields. These naturally occurring but limited sources of nitrogen sustained life, but they also limited the size of the human population by limiting the amount of food that could be produced. As we will see later in this chapter, similar dynamics apply to phosphorous, another element essential to life, and in the form of phosphate, a crucial component in fertilizer. As long as humans depended upon nature to supply nitrogen, they remained constrained within the rhythms and processes of the biological old regime.

Ironically, that same substance—nitrates—was essential to improving agricultural yields *and* to making explosives.<sup>6</sup> Paradoxically then, both the size of the global human population and its ability to conduct modern warfare depended on, and were limited by, nature. That fact led to a global

search for naturally occurring deposits of phosphates and nitrates, mostly in the form of bat and bird guano. Guano is excrement that under certain conditions—in particular, the absence of rain that would otherwise dissolve the droppings and their precious nitrogen—could accumulate over time. Caves were one place that bat guano could build up and then be extracted by guano miners to make fertilizer and, increasingly in the nineteenth century, gunpowder. But it turned out that the largest supplies of bird guano had accumulated over thousands, if not millions, of years on the arid Chincha Islands off the coast of Peru.

The first clump of Peruvian guano was brought to Europe in 1804 by the German naturalist and world explorer Alexander von Humboldt and then extracted in ever greater amounts and exported by British merchants. By 1890, the supplies of Peruvian guano were mostly exhausted, but another natural source (sodium nitrate, or saltpeter) that could be mined was found in southern Peru; in 1879 Chile had gone to war with Peru to gain control of the sodium nitrate and exported it to the industrializing world, which used it to make both fertilizer and gunpowder. In 1900, for instance, the United States used about half of its imports of Chilean sodium nitrate to make explosives. Food or explosives?<sup>7</sup> For the imperialist powers of the world, that was a tough enough proposition, but it was exacerbated further by the fact that Chile had a monopoly on the largest naturally occurring source of sodium nitrate. Moreover, for the saltpeter to get from Chile to Europe or the United States, it had to be shipped. Sea power was thus crucial to maintaining supplies of sodium nitrate, and any imperialist power vulnerable to a maritime blockade would be severely weakened, its food production and munitions industries held hostage to Chilean sodium nitrate.<sup>8</sup> That was particularly true with Germany. And it was there that the most intense search for a way to produce nitrates industrially was under way by the turn of the twentieth century.

It was not that other nations' scientists were unaware of the importance of the problem, for they certainly were. For Germany, its lagging agricultural output and its limited access to ocean shipping lanes made the problem pressing. In 1909 a chemist named Fritz Haber synthesized ammonia ( $\text{NH}_3$ , which contains nitrogen that could be processed into nitrates) in his laboratory, and a year later the issues of industrial production were resolved by Carl Bosch of the German firm BASF. The process of taking nitrogen from the atmosphere by synthesizing ammonia, known as the Haber-Bosch process, shaped the subsequent course of world history by lifting the constraints that nature had placed on the availability of nitrogen for plant growth.

The synthesis of ammonia, from which nitrogenous fertilizer could be manufactured, made possible the explosive growth of the world's human population in the twentieth century. Coupled with the expansion of farmland, the fertilizers from guano and saltpeter had enabled the world population to increase from about one billion in 1800 to 1.6 billion by 1900. But by 1900, most of the good arable land in the world was already being farmed, so that increased food production could come most readily from the application of additional fertilizer; but, as we have seen, most of the naturally occurring guano had already been used up, and global military competition ensured that substantial amounts of saltpeter went to various states' munitions industries. One expert has concluded that using the materials and techniques available in the biological old regime to improve agricultural output, the world's population might have topped out at 3.5 billion people.<sup>9</sup> The Haber-Bosch process for synthesizing ammonia made it possible to increase the food supply and support the world's population in 2000 of about 6.2 billion people (which increased by another billion in just one decade, to 7.3 billion in 2010). In other words, in the twentieth century, the population of the world increased from about 1.6 to 6.2 billion (or 4.6 billion more people, most of them since 1950) largely because of the Haber-Bosch process.<sup>10</sup> That increase in the human population alone makes the twentieth century unique in all of human history.<sup>11</sup> The synthesis of ammonia and the consequent industrial production of nitrogenous fertilizer freed human population growth from the natural limits of the biological old regime. By the early twenty-first century, industrial processes have come to add more reactive nitrogen to the world's landmass and waterways than all natural processes combined. More than that, the synthesis of ammonia also made possible large-scale industrial production of nitrate-based explosives, and because Germany was the first to use this new technology, it increased the confidence of its military leaders. And that was to be an important factor contributing to the outbreak of world war in 1914.

### **World War I and the Beginning of the Thirty-Year Crisis, 1914–45**

By 1900, there was precious little of the world left to be dominated by the imperialist powers; the largest chunks of land that were not yet spoken for were the Chinese and Ottoman empires. As for China, the Open Door Notes of 1900 led the imperialist powers to conclude that a weak Chinese state would enable them to enjoy the benefits of their "spheres of influence" without any one of them actually having to conquer and govern China, a task

made all the more difficult by the competing powers, including the United States and Japan, aspiring to dominate the region. Indeed, it was hoped that the acceptance of the Open Door Notes had cooled competition among the imperialist powers in Asia and removed an irritant and possible cause of war.

A general war among the European powers would indeed break out, but the spark was ignited not in Asia but in the Balkans in southeastern Europe. In July 1914, a Serbian nationalist assassinated the heir to the Austrian throne, Archduke Ferdinand, and his wife while they were visiting the city of Sarajevo, an administrative center in Bosnia that had recently been absorbed by the Austro-Hungarian empire. Supported by Germany and intending to cause a war and increase the size of its empire, Austria sent an ultimatum to Serbia, which in turn was supported by Russia.

What made this little confrontation in the Balkans so explosive was that in the previous years, imperialist rivalries and European power politics had led to a system of alliances, largely fueled by French and Russian fears of the rising economic and military power of Germany. In the early 1900s, Britain joined France and Russia to form the Triple Entente, while Germany and Austria-Hungary formed the Central Powers. Thus Austria counted on German support in attacking Serbia, while Russian support for Serbia soon brought France and Britain into the equation.

When Russian and German armies mobilized to support their allies, all of Europe soon was at war. Then Britain's new ally in Asia, Japan, declared war on the Central Powers, the Ottoman empire sided with Germany for fear of being partitioned by the Entente powers, Britain's dominions (Canada, Australia, New Zealand) mobilized, Britain and France mobilized armies and resources from their colonies, and soon the whole world outside of the Americas was warring or mobilized to support Europeans at war with each other. And by 1917, the United States too, previously insulated from self-destructive European wars by the Atlantic, entered the war in support of Britain and its allies. By the time an armistice was called on November 11, 1918, over ten million soldiers had been killed, and upward of twenty million had been maimed, blinded, or otherwise wounded. The First World War was a particularly intense expression of the transnational interactions that mark the processes of globalization.

It had been the bloodiest conflict the world had ever seen, in large part because industrialization had made war more destructive than ever. Not only did Fritz Haber's invention free the production of explosives from natural constraints,<sup>12</sup> but also Haber discovered how to manufacture various poisonous gases that then were used in the trench warfare of World War I, and later

by Hitler's Nazi regime in the extermination camps. Tanks, submarines, and great battleships increased the carnage.

Viewed in long-term historical perspective, the "Great War," as World War I was then known, was the beginning of the end of the European-dominated world order, an end that ultimately would take the Great Depression and another world war to complete. However, as the First World War ended, that outcome was not yet clearly in sight.

The 1917 entry of the United States on the side of Britain and France assured the defeat of Germany and Austria. America had troops, war materiel, and an awesomely productive industrial economy to throw into the war effort. It also cost the United States over one hundred thousand dead and two hundred thousand wounded, a small fraction of the casualties suffered by the main European contenders, but enough to guarantee a seat at the Versailles Peace Conference called to draw up the terms ending the war. Germany had not surrendered but had agreed to an armistice and thus hoped to have a voice in what would happen to it after the war; that was not to be, as the losers were treated as losers. The British and French colonial subjects who had fought for their colonial rulers in the war thought they would get enhanced treatment, especially when they heard about U.S. president Wilson's "Fourteen Points" that included a call for respecting nations' sovereign rights, but that was not to be either. The various Arab peoples who were encouraged to revolt against the Ottomans in return for British and French promises of independence were likewise disappointed. And China, which had joined on the side of Britain and France (sending young men to France to work at factory jobs) in the hopes of regaining control of German concessions in Shandong province, would get a different lesson.

Instead of a more equitable settlement implicit in all of these hopes and aspirations, Britain, France, and Japan acted as victorious imperialists whose main task was divvying up the spoils of war. France took back Alsace-Lorraine from Germany, Germany was forced to pay huge war reparations, the Austro-Hungarian empire was taken apart, with the new states of Czechoslovakia, Hungary, and Yugoslavia being formed, and Poland was reconstituted, also from parts of Germany. Instead of China recovering its own Shandong peninsula from a defeated Germany, control passed to Japan, which also had entered the war on the winning side.

After the League of Nations was formed, Britain and France used it to gain "mandates" to control the Middle Eastern remnants of the Ottoman empire: France got Syria, Britain carved out Iraq, and neither Arab Palestinians nor Jewish Zionists got Palestine, which became a British mandate. Vietnamese



who had helped the French, and Indians who had supported the British, also were slapped down by their colonial masters. However, actions by the victorious imperialist powers at the end of World War I provoked reactions that could not be contained, as German resentment built and provided support for Adolf Hitler and his Nazi program, and as national independence movements spurred opposition to imperialism and colonialism.

### **Revolutions**

Added to that, the 1917 communist-led Bolshevik Revolution in Russia challenged the capitalist world order itself. Under the leadership of V. I. Lenin, the Bolsheviks seized power in October 1917 after the czarist regime had collapsed amid disastrous defeats in World War I, and promptly signed a separate peace with Germany, taking Russia out of the war. Despite armed intervention and a civil war that followed, the Bolsheviks established the world's first communist-led state with the avowed intent of building socialism and seeing an end to the capitalist world. After Lenin died in 1924, Joseph Stalin consolidated power and led the Soviet Union on a crash industrialization project that he termed "socialism in one country," relying solely on Russian resources and having as little contact as possible with the capitalist world.

Revolution was shaking not just Russia but other parts of the world as well in the years before and after World War I. In Mexico, moderate reform in 1910 was followed by peasant rebellions led by Emiliano Zapata in the south and Pancho Villa in the north that fueled the Mexican Revolution (1910–20), ushering in land reform and limiting foreign ownership of Mexican natural resources. In China, revolutionaries toppled the Manchu dynasty in 1911, and after a decade of confusing warlord politics, two new political parties formed with explicitly nationalist goals. Cooperating in the 1920s to eliminate warlords, the revolutionaries threatened to break imperialist control of the modern sectors of China's economy. In Italy, a new movement—fascism—emerged that was both anti-communist and promised to avoid the miseries of capitalism by fostering national unity and the power of the state under a strong leader, Benito Mussolini.

### **Colonial Independence Movements**

Post-World War I challenges to the imperialist world order came not just from revolutionary movements in Russia, China, Mexico, and Italy, but also from independence movements in Europe's colonies, most notably India. There, Mohandas Gandhi created a nonviolent independence movement stressing boycotts of British goods (especially cotton textiles) and salt. In the

process, civil disobedience was born. Gandhi broke colonial laws and invited imprisonment for doing so, all in the name of Indian independence. A Hindu himself, Gandhi stressed the multiethnic scope of the anticolonial movement by insisting that his Congress Party include Muslims and Sikhs in leadership positions as well.

In the face of setbacks and divisions among the imperialist powers in World War I, nationalism fueled anti-imperialist and anticolonial independence movements not just in India and China, but in Egypt, Vietnam, and Palestine as well. Nationalism, which had developed in nineteenth-century Europe and Japan, in the twentieth century became a global force. Where in Europe nationalism was mostly a conservative force that emphasized cultural, linguistic, and religious commonalities to blunt the class conflicts that grew along with industrialization, in Asia and Africa nationalism would have an explicit anti-imperialist content, often fueling socially revolutionary movements.

### **Normalcy?**

World War I had brought the capitalist world system to a point of crisis that was only postponed by the apparent “return to normalcy” of the 1920s in the industrialized world. Although Europe had been deeply shaken by the war and much of its productive capacity destroyed, loans from U.S. banks (in particular to Germany) kept sufficient liquidity for Europeans to buy American products, restoring prosperity to Europe and stimulating U.S. industry. U.S. capital was keeping the global system afloat, though few realized it at the time. After the conclusion of the Versailles Peace Conference ending World War I, President Woodrow Wilson’s fond hope that the economic and political conditions causing war could be ameliorated through U.S. leadership of new international bodies such as the League of Nations was shattered when an isolationist Congress refused to approve U.S. participation.

There were other signs of serious problems in the industrialized world, especially in agriculture. Wartime demand and rising prices throughout Europe and the United States prompted farmers to increase production, while postwar inflation encouraged them to take loans to expand food production even more. By the early 1920s, there was serious overproduction of food (together with malnutrition and starvation in poor regions), a sharp decline in agricultural prices, and a spike in foreclosures as farmers had difficulty repaying loans. The increased supply of food on the world market came also from Australia and New Zealand, as well as the newly formed states of eastern Europe. To make matters worse, prices for coffee, sugar, and other

agricultural and primary product exports that Latin American countries had relied upon also collapsed. By the late 1920s, few rural producers anywhere in the world could afford to buy manufactured goods.

### The Great Depression of the 1930s

To protect their nation's manufactures, industrialized states began raising tariffs on imported goods, which further cut international trade in industrial goods. Loans that U.S. bankers had made to European countries were called in, and when that happened, investors panicked, leading to "Black Monday" in October 1929 when the U.S. stock market crashed. Wealth vanished overnight, banks failed, and the savings of millions evaporated. The world economy entered a vicious downward spiral in which factories laid off workers whose income and purchases shrank. Lower demand led to further cuts in production—the only thing that was rising in the 1930s was the unemployment rate. In the industrialized world, between 22 percent of the workers (in Sweden) and 44 percent (in Germany) lost their jobs. The U.S. unemployment rate reached 25 percent by 1933.

By 1913, the United States had become the largest economy on Earth, producing one-third of the world's output. World War I provided further stimulation, and by 1929 the U.S. economy had grown to an astounding 42 percent of world output. So, when the Great Depression hit America, it affected the entire world. U.S. imports crashed by 70 percent between 1929 and 1933, and its exports fell by half.<sup>13</sup>

The Great Depression thus was a global phenomenon. States in western Europe, Latin America, Asia, and Africa all suffered. Only the Soviet Union, which had cut itself off from the capitalist world and was trying, under Joseph Stalin, to build "socialism in one country," emerged unscathed. As the rest of the capitalist world was plunged into the Great Depression, the communist-led Soviet Union was experiencing rapid economic growth, and touting that fact as proof that communism was superior to capitalism.

The Great Depression was a global crisis of capitalism, leading several states to abandon the pre-World War I model of unfettered markets, becoming increasingly isolationist and protectionist. Some states experimented with reforms to provide a social safety net for the workers and farmers who suffered mightily (e.g., U.S. president Franklin D. Roosevelt's "New Deal"). In Germany, the reparations issue and the loss of territory after World War I, coupled with the crisis of the Great Depression, laid the groundwork for the 1933 rise to power of Adolf Hitler and his "Nazi," or National Socialist, Party, which promised that a powerful state headed by a strong leader would

get Germany out of the crisis it was in: by the mid-1930s, Germany's economy was indeed growing once again, and many Germans credited Hitler's national socialism with improving their lot. In Japan, where exports of silk to the United States shrank as women cut back on purchases of silk stockings, military leaders saw dependence on the world market as a strategic mistake and began to move more aggressively to a position of primacy among the powers in Asia, building on its formal colonies in Taiwan and Korea and extending its reach in 1932 with the creation of Manchukuo out of Manchuria, a region it took from China by military force. By the early 1930s, nationalistic, authoritarian, and militarily aggressive regimes had come to power in Germany and Japan.

By its actions toward China during World War I, Japan had signaled that it intended to be a major player among the imperialist powers in Asia. Although it was not strong enough in the 1920s to resist the combined power of Britain and the United States, when the world entered into the crisis decade of the 1930s, Japan extended its empire at China's expense and ultimately militarily confronted the United States for control of the Pacific. While Japan and the United States jockeyed for dominance in Asia, they overlooked the growing power and world-changing significance of the Chinese communist movement that would establish China's independence in the wake of World War II, setting the stage for its rise to global power in the late twentieth century.

During the Great Depression, the global trading and monetary systems came apart; instead of seeking to increase international trade as a way out of the depression, those states that could severed ties to the global system and instead sought to gain as much independence from it as possible—the goal was “autarky.” In the early 1930s, Britain attempted to protect its economy by binding its colonies ever tighter to the home market and discouraging other nations from trading there. The United States took similar actions with regard to its Caribbean and Philippine colonies as well as in Latin American countries under its sway. The Soviet Union already had successfully broken away from the international system. After Japan added Manchukuo to its colonial empire, it continued to build its own “Greater East Asian Co-Prosperity Sphere.” Italy expanded into North Africa, and Hitler's Nazi Germany looked to reconstitute an empire in central and eastern Europe, annexing Austria in 1938, dismembering Czechoslovakia in early 1938, and then taking the rest of it in early 1939. The world system disintegrated into competing and then warring blocs, and it might have solidified in that deglobalized form if not for a second world war.

## World War II

Britain and France had given guarantees of protection to Poland, so when Nazi armies invaded in September 1939, Britain declared war. The still isolationist United States stayed out of the conflict, but when Japan attacked Pearl Harbor on December 7, 1941, it entered the war in both the Pacific and Europe. By then the Soviet Union too had become involved after Hitler broke a nonaggression treaty and attacked the USSR in 1941. The communist-led Soviet Union then made common cause with capitalist Britain and the United States against the immediate threat, the Axis powers of Nazi Germany and Fascist Italy, soon joined by Imperial Japan.

The Second World War was even more destructive than the first. Not only were the numbers of dead and injured soldiers vastly greater, but civilians mobilized for the war effort (nearly all industrial production in the contending states was geared toward war) and then became targets as well. By 1943, the Allies (Britain, France, the United States, and the Soviet Union) had determined that only total, unconditional defeat of the Axis powers was acceptable, and by 1944 U.S. resistance to using military force against civilians was overcome. U.S. warplanes joined the British in the firebombing of Dresden in Germany; then in Japan they firebombed Tokyo and sixty-three other cities, before dropping the first atomic bombs on Hiroshima and Nagasaki in August 1945.

If war was hell, “total war” was total hell. The Nazis, of course, had industrialized the death of six million Jews and other “undesirables,” while the Japanese had conducted the “three all” (kill all, burn all, destroy all) campaigns against Chinese villagers, among other atrocities. More civilians and more troops died in the Second World War than in the First. The number is staggering. More than fifty million people around the world perished, with twenty million in the Soviet Union and ten million in China accounting for most of the war dead.

The Thirty-Year Crisis had a dramatic effect on the wealth accumulated by the richest countries of the world over the previous century through the industrialization of their economies and the colonization of much of the rest of the world. To be sure, the actual physical destruction of property in Europe through the two world wars was significant, as was the destruction of capital through the waves of bankruptcies during the Great Depression. But even greater effects upon the accumulated wealth of European countries (and Japan) came from the loss of their colonial empires either as a result of their defeat in the Second World War or through expropriations of their capital

investments through communist revolutions in Russia and China and decolonization movements elsewhere. Moreover, countries funded their massive expenses for war by deficit spending financed by loans from their own citizens, drawing down private wealth and limiting the ability of even the richest in those countries of saving or investing much.<sup>14</sup> Paradoxically, as we will see later in this chapter in the section “Inequality,” the destruction of wealth as a result of the Thirty-Year Crisis provided a basis in the post–World War II era for more income equality within the countries of the industrialized world, especially when coupled with tax and wage policies that improved the lot of working people.

## Part II: The Post–World War II and Cold War Worlds, 1945–91

The end of World War II in 1945 would be much different from the end of World War I. There was no “armistice” or standing down of armies; total war yielded total defeat—the unconditional surrender of Germany (in June 1945) and Japan (in September) to the victorious Allies. Perhaps most important, European states (victors as well as vanquished) would not have the ability to reconstitute their colonial empires—over the course of the coming decades, Asian and African colonies would become independent states. In Asia, Japan’s colonial empire was also dismantled during the U.S. occupation of Japan in the years from 1945 to 1952. A civil war in China would bring the Chinese Communist Party to power in 1949. In short order, the former colonial world and a communist-led China began aggressive pursuit of economic “development” with an emphasis on industrialization.

Hitler’s national socialism, Italy’s fascism, and Japan’s statist development models, while successful in getting those states out of the Great Depression faster than European and American states, also led them to war and defeat. Europe’s colonial model also was discredited and destroyed. Left standing and considerably strengthened by the end of World War II and the Thirty-Year Crisis were the United States and the Soviet Union, the two rising powers of the postwar world. Indeed, the defeat of Nazi Germany would not have been possible without the Soviet Red Army, just as the United States was primarily responsible for the defeat of Japan.

Rather than construct an American colonial empire from the ruins of its defeated enemies, the United States hoped to reconstruct a world order that avoided the mistakes and miscues that led to both World War I and the Great

Depression. Unrestrained nationalism and the hatreds it fostered were anathema, as were isolationism, trade protectionism, and autarky. U.S. leaders were convinced that a more globally interconnected world with trade and diplomacy regulated by international agreements and organizations would be the best possible world for all, and the United States believed it had the power and the support to realize its post-war vision. What it didn't count on was the challenge from the socialist visions of the Soviet Union, as we will see in the section on the Cold War later in this chapter.

In the meantime, the United States and the Soviet Union could agree upon opposition to colonialism. For the United States, this was somewhat surprising since it had spent much of the prior fifty years amassing and ruling an overseas empire. Many of its colonial holdings had come from Spain in the aftermath of the Spanish-American war of 1898, including Puerto Rico in the Caribbean and the Philippine Islands in the Pacific. By the end of World War II, having emerged victorious and the most economically and militarily powerful state in the world, the United States had its colonial possessions intact and additionally occupied Japan and parts of Korea, Germany, and Austria, with a total population exceeding that of the continental United States.<sup>15</sup>

Instead of ruling much of the world as a colonial power (as Britain had done after World War I), the United States gave up most of these territories and distanced itself from colonialism. Historian Daniel Immerwahr notes that the largest U.S. colony became independent (the Philippines), another became a Commonwealth with the inhabitants ultimately given U.S. citizenship (Puerto Rico), and two became states (Alaska and Hawaii). Immerwahr asks the important question of “why” the United States took this unusual step. In part he says, colonized peoples, especially in the Asian countries that had been part of the Japanese empire, resisted and prompted not just the United States but other colonial powers to grant independence. But more important, the war effort spawned technologies that made it possible for the United States to have a global-girdling empire without colonies: airplanes, radio, shipping, and innovations in chemistry and industrial engineering, among others, that produced synthetic rubber, plastics, and the multitude of products made from synthetics not dependent on tropical colonies.<sup>16</sup> But most important, “in just a few years the [U.S.] military built a world-spanning logistical network” that depended less on colonies than overseas military bases built with the cooperation of other governments, or on uninhabited islands that the United States kept. The United States has “roughly eight hundred overseas military bases around the world. . . . These . . . are the

foundations of U.S. world power.” In the post-war period, the United States has deployed its military power from these bases 211 times in 67 countries. “Call it peacekeeping if you want,” Immelwahr says, “or call it imperialism. But clearly this is not a country that has kept its hands to itself.”<sup>17</sup>

For different reasons, then, both the United States and the Soviet Union took anticolonial stances after World War II and were opposed to European states maintaining their colonies, and that fact contributed to the surge of postwar anticolonial movements. But they also had vastly different social and economic systems—one primarily free-market capitalism (the United States) and the other state-planned socialism (the Soviet Union)—that each sought to project as a global model. The United States wanted to end colonialism not simply because it believed in the inherent right of national independence, but because it could then get access to those markets and raw materials denied it by colonial preference systems. The Soviets believed that ending colonialism would further the likelihood of socialist transformations in the colonies, a necessary step on the way to a communist world.

Although both the United States and the Soviet Union were anticolonial, their very different visions of the place of newly independent colonies in the world led to tensions between the United States and the Soviet Union that would produce the Cold War, an arms race with horrifying new nuclear weapons that each side realized could never be used, but which could deter the other from attacking. MAD, it was called: “mutually assured destruction.” So the military standoff between the United States and the USSR would not result in actual “hot” war but a “cold” war, one that would provide the context for most of the post–World War II world until the collapse of the Soviet Union in 1991.

### **Decolonization**

While it is true that most colonies became independent states only after World War II, the process had begun in the aftermath of World War I. The sense of betrayal after World War I, combined with the clear recognition of the vulnerability of the colonial powers, had fueled nationalist-inspired independence movements throughout Asia and Africa. By the time World War II broke out, some nationalist leaders, especially in Asia, began to break with their colonial masters by siding with Japan and their call of “Asia for Asians.”<sup>18</sup>

The independence of the largest of all colonies, India, was on the agenda by the end of World War II, and after the war Britain quickly arranged the



terms of its departure and the independence of the subcontinent. The tragedy of Indian independence, though, is the massive violence that attended the process. Where Gandhi and the Congress Party had intended to create a multiethnic, multi religious state, one part of India's Muslim leadership in the 1930s had begun agitating for the creation of a separate Muslim state to be called Pakistan. Hindu nationalists too wanted an India for Hindus, and it was an ultranationalist Hindu who assassinated fellow Hindu Gandhi for proposing a single, multiethnic state with protections for Hindus, Muslims, and other ethnic and religious groups. By 1947, independence meant the partition of the colony into the states of predominantly Hindu India, and predominantly Muslim Pakistan (the latter in two parts, east and west). The state of Kashmir, which had a predominantly Muslim population but had been ruled by a Hindu prince, was divided and remains a source of tension and conflict between Pakistan and India.<sup>19</sup>

With the withdrawal of the British, and the fears of Hindus and Muslims of each other fanned by nationalists on each side, Hindus in what was to become Pakistan fled toward India, and Muslims in India streamed toward Pakistan. In the course of this huge movement of people during "partition," as it came to be called, millions lost their property and homes and hundreds of thousands were killed. Not surprisingly, India and Pakistan ever since have been wary, and twice warring, neighbors, in addition to having numerous border skirmishes, struggling over control of Kashmir, and (since 1998) aiming nuclear weapons at each other.

Indian independence and partition points to two significant aspects of the postwar decolonization of Asia and Africa. First, European colonialists assumed that independence meant the independence of territorial states. Some parts of their colonial holdings certainly had had historical experience with states (especially in Asia and the Middle East), but much of Africa did not. The borders that Europeans drew there for newly independent African states were often quite arbitrary and did not take into consideration the peoples living there. Thus just as the lines dividing India from Pakistan wrought havoc for the tens of millions of Muslims and Hindus inconveniently on the wrong side of a line, so too did line drawing in Africa and the Middle East create states with people of common languages and cultures across two (or more) borders. Important examples are the Kurds who now inhabit northern Iraq, western Iran, and eastern Turkey, and parts of Syria, and the Hutus and Tutsis in Rwanda and Congo.

Much of Asia and the Middle East decolonized by 1950, and most of Africa was composed of independent states by 1960. Smaller island territories in the Caribbean and Pacific attained independence in the 1960s. This

spurt of decolonization created a host of newly independent states, boosting membership in the United Nations from fifty-one at its creation in 1945 to 127 by 1970. By 2015 U.N. membership had increased to 193, reflecting the establishment of greater numbers of increasingly smaller independent states.

### **Asian Revolutions**

The global scale of World War II created the conditions not only for decolonization but also for revolutions, mostly led by communist or other leftist parties. In China, the Communist Party had been formed in 1921 in the aftermath of the Versailles Peace Conference and the Bolshevik Revolution in Russia. Rural poverty in China provided a vast reservoir of support for the communists, who delivered on rent and interest reduction promises and then targeted the landlords whose exploitation of the peasantry deepened rural misery. When Japan invaded China in 1937, the communists formed a “united front” with the ruling Guomintang party to resist Japan. The Japanese invasion forced the Guomintang to retreat to China’s far west, while the communists organized guerrilla warfare behind Japanese lines, strengthening their military skills and expanding the territory they controlled. When Japan surrendered to the United States in 1945, civil war between the communists and their Guomintang foes led to communist victory and the establishment in 1949 of the People’s Republic of China. The Chinese communists were determined to create a strong China that would never again be threatened by foreign powers. That resolve was tested in 1950 when communist China fought the United States to a draw in the Korean War (1950–53).

In French Indochina at the end of World War II, the Viet Minh under the leadership of Ho Chi Minh declared independence from France after having fought an anti-Japanese guerrilla war there and building up not just vast popular support but also a formidable military. The French, though, were not ready to give up their Asian colony (just as they wanted to retain their Algerian colony) and so sought to reestablish their power in Vietnam. In the war that followed, Ho Chi Minh’s forces defeated the French forces in 1954. The United States then became involved, at first diplomatically and then militarily. Rather than national elections and unification, which had been promised for 1956, the United States decided to support a client regime in the south, and Vietnam remained divided between North and South Vietnam. When the U.S.-supported southern regime had difficulty governing itself and maintaining popular support against the northern and the southern Viet Minh guerrilla fighters, the United States sent first advisors and then in the mid-1960s large numbers of combat troops to support the south. After a

decade of war, the United States and South Vietnam were defeated, and in 1976 Vietnam was formally reunited under communist leadership by the Socialist Republic of Vietnam.

Violence was also necessary to shake French control of Algeria, which finally became independent in 1962. The other colonial power to resist granting independence to its colonies was Portugal, which held on to Angola on the west coast of Africa until forced by armed rebels to give up control in 1975. The age of empire,<sup>20</sup> spawned by the European industrial revolution and military superiority, was over. In the decades after the Second World War, Asians, Africans, and Latin Americans were determined to use their newfound independence to improve the lot of their peoples by industrializing.

### Development and Underdevelopment

There is no mystery as to why colonies had not industrialized: with the exception of Japan's Korean colony, policies of the colonizing country mostly forbade it, seeing colonies instead as sources of raw materials and markets for manufactured goods.<sup>21</sup> China had some modern industry, but much of it was owned by foreigners and limited to pockets of coastal cities. For the first half of the twentieth century, China remained rural and in the grip of landlords. The Chinese communist victory in 1949 changed all that by eliminating the landlord class, nationalizing foreign-owned businesses, and having the military power to back up their actions.

Post-World War II decolonization and revolution brought to power regimes committed to explicit policies of economic and social "development." Moreover, since most of those former colonies (to say nothing of China) had bitter experiences with the capitalist West, the models they chose for the most part were strongly influenced by socialist, communist, or other statist ideas. In the postwar world, much of the underdeveloped world was beginning to move toward some form of state-driven industrialization. That was a problem for the United States, which had a different global vision, one centered on private ownership of property and capital and on the principles of international free or otherwise regulated and agreed upon trade.

If the first half of the twentieth century had been marked by processes leading to deglobalization (the Great Depression) and two world wars, the post-World War II era saw two more waves of renewed globalization. Even before the end of World War II, the United States actively planned to reconstitute the world on the basis of capitalist principles emphasizing free trade to prevent the world from sliding back into the autarkic (and then warring)

blocs of the Great Depression, and to ensure sufficient global demand to fuel the United States economy. Abandoning its prewar “isolationism,” the United States also took the lead in setting up the United Nations to resolve international conflict and creating new institutions to manage the postwar global economy, in particular the World Bank and the International Monetary Fund. A strong Soviet Union, the Chinese revolution, and the influence of socialism in the former colonies threatened both that free market vision and the global reach of the United States; the United States responded in part by building anti-Soviet military alliances around the world: NATO (the North Atlantic Treaty Organization), SEATO (the Southeast Asia Treaty Organization), and CENTO (the Central Treaty Organization). The UNITED STATES had a separate bilateral military agreement with Japan.

With the Soviet occupation of much of Eastern Europe at the end of World War II and the creation of “satellite” states there as well as Soviet support for communist North Korea and Vietnam and the growing power of communists in China, U.S. leaders decided to revive the German and Japanese economies, creating them as the workshops of Europe and Asia and bulwarks against Communism in Europe and Asia. This “reverse course” with respect to Germany and Japan and the policy of “containment” toward the Soviet Union were in place by 1947. The United States would seek not to go to war to roll back the Bolshevik Revolution (in today’s language, to seek “regime change”) but to “contain” its power and influence in the world.

By 1947 the Cold War was on, and would last until 1991, defining much of the post–World War II world. As part of its policy of containing communism, the United States would go to war in Korea (1950–53), confronting not just North Korean but Chinese communist troops as well; get involved in Vietnam and then war there (1956–75); use covert operations to overthrow democratically elected, left-leaning governments in Latin America; support authoritarian regimes there and in the Middle East; and prop up undemocratic authoritarian but anticommunist regimes throughout the world, ironically all in the name of “freedom and democracy.”

The Cold War had other consequences as well. The United States began the post–World War II era as the only nuclear power, but in 1949 the Soviets detonated their first atomic bomb and the nuclear arms race was on in earnest, leading not just to fleets of warplanes equipped to drop nuclear bombs, but more ominously to intercontinental ballistic missiles (ICBMs) capable of reaching their targets just minutes after launch. There was (and still is) no defense against these weapons of mass destruction other than the surety of a massive retaliation once missile launches have been detected. By the 1960s,

with each side having thousands of ICBMs and nuclear warheads, a nuclear attack could have ended not just human civilization but quite possibly humans as a species.<sup>22</sup> As it was, although there were numerous threats of nuclear attack, the world came to “the brink” just once in the early 1960s, when the Soviet Union moved missiles to Cuba shortly after Fidel Castro came to power in 1959.

The Cold War also militarized much of the world and led, for the first time, to the full-time military mobilization of many states, in particular the United States and USSR and their respective allies. Unlike the periods following previous wars, the United States and its allies, as well as the Soviet Union and its allies, remained fully mobilized and ready to fight wars on several fronts, in Europe as well as Asia. The U.S. government thus devoted about one-third of its annual expenditures to the military (about 5 percent of GDP in 1985), while the Soviet Union spent even more proportionally (more than 10 percent of its GDP) on its military. The size and vitality of the competing economies thus became a crucial element in the ability of the two superpowers to build and maintain their military arsenals during the Cold War years. More than anything else, the Cold War was a battle of economies. Hence as the U.S. economy developed beyond the “smokestack” industries into advanced computer technologies in the 1980s, the gap between the productivity of the U.S. and Soviet economies grew.<sup>23</sup>

### **Consumerism versus Productionism**

As mentioned above, the Soviet Union had a planned economy in which the central state made the decisions and choices about the allocation of resources. To that extent, its economy was quite immune from the “boom and bust” cycles inherent in a capitalist free market economy. That explains a lot about how and why the Soviet Union was able to industrialize rapidly during the Great Depression when the capitalist economies were shrinking disastrously. After World War II, the Soviet Union also gained access to the resources and productive capacity of the East European countries it dominated.

What kept the Soviet bloc economies growing was the state plan. Although it is arguable whether state-run economies had anything to do with “true” communism, it is true that the communist leaders of the Soviet Union were influenced by Marxist views of human beings. Karl Marx had argued that human beings naturally were productive beings, and that their essence was to labor and to enjoy the fruits of their labor. The problem with the capitalist system, according to Marx, was not that people had to work,

but that they worked for wages and were “alienated” from the product of their labor, which the capitalist expropriated and sold. In the socialist future, Marx envisioned that people would continue to work, but would find self-realization in their labor because it would be theirs, not the capitalist’s.

In the Soviet system, people certainly worked, but the fiction was that because the state represented the interests of the working people, work on behalf of the state was work on their own behalf. The Soviet model was a “productionist” one: the more that was produced, the better. The Soviet state plans thus called for significant industry and factories, but most of that industrial production was destined to create additional industry or to support the military. Production, especially of and for heavy industry (e.g., coal, iron, steel, electricity), became its own end. Managers were valued and rewarded on the basis of how much they produced, and measures of production sometimes became skewed so that it didn’t matter so much whether the coal that was produced actually reached a power plant but that it had been put on a railroad car. Some railroad managers thus reportedly shipped the same coal back and forth to increase the production ratings of their unit. The state plan called for very little investment in consumer goods, although the state did make a commitment to providing minimal housing (in huge apartment blocks), health care, and education.

The Soviets also harnessed science to their system, and invested heavily in scientific education and development of new technology, especially with regard to military applications and space exploration. Thus the Soviets beat the United States to space by launching *Sputnik* in 1957 and sent the first man into Earth orbit shortly thereafter, spurring the “space race” with the United States and President Kennedy’s 1960 pledge to put an American on the moon by the end of the decade, a goal reached in 1969.

The Chinese communists after their 1949 victory initially followed the Soviet model of development, and China’s first Five-Year Plan (1953–57) achieved annual growth rates of 18 percent and succeeded in establishing foundations for a heavy industry base for the Chinese economy. But China’s leader, Mao Zedong, who was wary of the unintended results of the Soviet model, especially the creation of privileged urban elites that began to look like a new ruling class, sought a more egalitarian way to develop. He believed he found a new model based upon the large-scale rural collective (communes) and the full employment of labor through rural industrialization, and in 1958 called for a “Great Leap Forward,” proclaiming that China would surpass the industrial output of Great Britain within fifteen years.

That experiment was to turn into a disaster, in part because of three years of bad weather (drought in the north and floods in the south), but mostly because communist leaders became obsessed with reports of higher and higher figures for agricultural production, even when such reports had no basis in reality. The Chinese state thus carted grain out of the villages in the mistaken belief that adequate supplies remained for people to eat. In the ensuing three-year famine (1959–62)—made worse by the natural disasters—an estimated 15–43 million people perished, destroying the faith of other leaders in Mao’s abilities, and raising questions in the minds of Soviet leaders about China’s path. When Soviet leader Nikita Khrushchev refused to share nuclear weapon technology with China and Mao publicly criticized the Soviet Union, the Soviets withdrew their advisors and a split in the communist world became apparent to the Western world for the first time. Tensions between the Soviets and the Chinese continued to mount during the 1960s, leading to armed border clashes along the Amur River in 1969.

Despite the differences between the Soviet Union and China over the proper road to socialism and the way to combat the capitalist world, they did share a commitment to increasing economic production. The productionist biases of the Soviet and Chinese models of communism had horrific environmental consequences. In the Soviet Union, the formerly crystal-clear Lake Baikal in Siberia was clouded by industrial pollution; the Aral Sea dried up as nearby cotton fields received all its water; the air around most cities was among the foulest on Earth; and in 1986 the nuclear power plant at Chernobyl exploded. Stinking heaps of industrial waste polluted land, air, and water.<sup>24</sup> In China, the “war on nature”<sup>25</sup> led to steel complexes spewing pollutants that covered nearby vegetation with gray soot, rivers running black with industrial poisons, residents of Beijing bicycling to work in the winter with masks to keep charcoal dust out of their lungs, and so much water continuing to be taken from the Yellow River for irrigation that it seldom empties into the sea. Perversely, the last thirty-five years of accelerated growth on the basis of market reform and private enterprise in China, far from improving the situation, have exacerbated it: seven of the world’s ten most polluted cities are in China, and the near-term outlook is for environmental degradation there to intensify, even as its leaders now talk about building “an ecological civilization.”<sup>26</sup>

### **Consumerism**

As both the acknowledged leader of the postwar capitalist world and its economic powerhouse, the United States was determined not to allow the post-

World War II world economy to slide into the overproduction and economic decline that plagued the world after World War I. Not only were reforms of the international trading system necessary to lower tariffs and increase global demand for America's industrial products, but changes to the domestic economy were needed too.

Like the rest of the industrialized world, much early industrialization had provided products to create additional factories and industries. To that extent, industry created more industry, which drew workers into ever-larger cities. Cities and their populations certainly provided the labor for factories, but they also created demand for consumption. Until the post-World War II era, that urban consumer demand mostly had been for the necessities of life—housing, food, and clothing. But a series of post-World War II developments in the United States soon spurred the growth of whole new sectors of the economy to provide consumer goods.<sup>27</sup>

Indeed, the United States had already pioneered the mass production of goods sold primarily to consumers, not to other businesses or factories. Prior to World War I, Henry Ford had invented the assembly line for automobiles, but he also recognized that workers would have to be paid adequate wages to be able to purchase the Model Ts his factories produced if the economy was to be sustainable. The Great Depression and then World War II dampened consumer demand for cars, but the end of the war and the need to convert factories from wartime to peacetime production provided an opportunity for American auto manufacturers. Starting in the late 1940s, U.S. auto production soared, and soon nearly every American family owned a car or light truck, in part because strong labor unions won substantial wage gains for American workers. But once everyone had a car, demand would slacken, and industrial production of autos would grind to a halt.

To keep demand for cars up, new demand had to be created, and that was done by two means: planned obsolescence and advertising. In the 1950s, cars became obsolete not necessarily because they fell apart but because the styles changed. And as styles changed, consumers were enticed to want to buy that new car by slick and powerful advertising. Many families became convinced of the need to buy a new car every three years, if they had the resources, or to want to if they didn't.

Easier credit helped the automobile become a consumer commodity. Credit first became available for purchasing houses. Prior to World War II, mortgages were relatively short (from three to five years) and purchasers had to come up with half of the purchase price before banks would lend the money. That limited the number of people who could afford houses to about



40 percent of the population in 1940. After World War II, changes in banking rules encouraged banks to lower the down payment requirement and to extend the mortgage to twenty years. Two new federal agencies—the Veterans Administration and the Federal Housing Administration—made mortgages even more available by guaranteeing the loan. In a further expansion, credit soon came dispensed via “cards” issued first by department stores to customers and then, by the 1960s, by firms simply organizing and selling credit (Diners Club, American Express, MasterCard, Visa). The vast expansion of credit, especially to buy houses, contributed to the “Great Depression” of 2008 when the global banking system froze up, employers couldn’t get credit to keep their businesses open, and millions of people lost their jobs and their homes.

The car and cheap housing combined to create vast swaths of suburbs around cities, the archetype being Los Angeles. With cars there making the commute possible, the dismantling of the “Red Car” trolley system, and the construction of “freeways,” Los Angeles–area suburbanites could get to work in the city in the morning and be home by dinner. The postwar building boom created new suburbs where cow pastures or orchards had once dominated the landscape and extended new housing tracts around small farming towns. The automobile revolution in postwar Los Angeles contributed to the production of such high levels of ozone-dense smog that into the 1980s local governments issued warnings to people to stay indoors on especially bad days. Concrete to build roads and other structures, not just in L.A. but around the world, has also contributed to air pollution and global warming.<sup>28</sup>

One other development made the post–World War II consumer revolution possible. Electricity, which had first begun powering factories and lighting cities in the late nineteenth century, extended to urban households in the early twentieth century. Then the various public works projects of the 1930s electrified most of rural America by 1940. When small electrical motors began running all sorts of household products such as refrigerators and washing and sewing machines, whole new industries flourished. With electrical outlets in every house and increasing leisure time, televisions flooded American living rooms, and most households came to have a telephone as well.<sup>29</sup>

The mass consumption culture thus was created in the United States in the 1930s to the 1950s and came to represent a growing portion of the U.S. economy. By the early twenty-first century, 70 percent of the domestic economy was devoted to producing consumer goods; only 30 percent provided producer goods. That was a reversal of the proportions at the beginning of

the twentieth century. The postwar growth of the U.S. economy, the engine of the world economy through much of the twentieth century, was largely powered by the consumer revolution, at least until the ability of average Americans to consume began to wane beginning in the 1980s. Americans had come to equate consumer purchases with “freedom” and to condemn the Soviet Union for its absence. Indeed, one critic argued that in the 1950s the U.S. government required only two things of its citizens: to be anticommunist and to consume.<sup>30</sup> Among its consequences was the fact that the consumer revolution liberated women from onerous daily tasks, making possible both their greater participation in the worlds of work and politics and demands for equal treatment.

The consumer society was premised on cheap and available energy—gasoline to run the car culture and electricity to keep the lights burning and motors running at home. If the nineteenth century had been the “Coke-town” age of coal, iron, and the railroad, the twentieth century was the “Motown” age of oil, steel, and the automobile.<sup>31</sup> Like coal, oil is distributed unevenly around the world, and the United States was fortunate to have significant fields in Texas and Southern California. Mexico, Venezuela, Nigeria, and Russia also have deposits, but by far the world’s greatest concentration of oil is in the vicinity of the Persian Gulf, notably Saudi Arabia, followed by Iraq and Iran and Venezuela in South America, although the surge of hydraulic fracturing, or “fracking,” has dramatically increased the production of natural gas and oil in the United States. The automobile created the oil industry, and because U.S. consumption soon exceeded the capacity of its domestic wells, a global transport and financial system arose to move oil around the world. By the early 1970s, the United States was importing about one-third of the oil it needed for domestic consumption. That focused U.S. attention on the Middle East, but it also had deeper consequences: a technological “lock in” to a particular kind of global economy dependent on burning oil. The world is dependent not only on oil and natural gas for energy, but also on the particular social, economic, political, cultural, and military complexes that have arisen to control it.

In the 1950s, the consumer society spread to Britain and Canada, and in the 1960s to France, Italy, other West European societies, Japan, and pockets in Latin American cities, and with it the automobile and even greater demand for oil. By the 1970s, demand for consumer items such as refrigerators and TVs, if not the whole consumer society, spread to communist East Germany and Czechoslovakia as well.

Like the productionism of the Soviet and Chinese models, the consumerism of the West had significant environmental consequences. Not only did refining oil and burning gasoline pollute the air in virtually all major cities in the United States, Europe, and Japan, but extracting the oil and moving it around the world in tankers left spills on land and sea. Making cars also requires huge amounts of energy, creates nearly thirty tons of waste for every ton of car made, and uses charcoal burned from the Amazon rain forest, contributing directly to global warming and deforestation.<sup>32</sup> Fracking has significant impacts on water quality and probably seismic activity as well.

### **Third World Developmentalism**

Decolonization and revolution after World War II created several score of new states, especially in Asia and Africa, but some in Latin America as well. Despite the friendliness of these new states to broadly statist and collectivist approaches associated with the Soviet model of socialism, many failed to emulate the Soviet Union, particularly following the Korean and Vietnam Wars, which showed graphically what could happen when the Cold War turned hot. As India's leader Nehru put it, when elephants fight, the grass gets trampled. So in the early 1950s leaders of several of these states, in particular Indonesia, Egypt, Yugoslavia, and India, started a "nonaligned" movement to keep out of the Cold War alliance systems that the United States and the USSR were putting together. In 1949, the United States had created NATO (the North Atlantic Treaty Organization, essentially Western Europe and the United States and Canada) to confront the Soviets in Europe; the Soviet Union then responded with the Warsaw Pact, creating an economic and security bloc dominated by the Soviet Union. To "contain" the Soviet Union to its south in the Middle East, the United States got the conservative leaders of Iran, Turkey, and Iraq to form CENTO (the Central Treaty Organization); Pakistan, Thailand, and the Philippines constituted the Southeast Asia Treaty Organization (SEATO). In response to these moves by the superpowers, "the nonaligned states" held their first conference in 1955 at Bandung in Indonesia. All those countries plus Latin American states soon became lumped together as "the third world," in contrast to the "first world" of the industrialized capitalist world and the "second world" of the communist states.

Although there were many differences among third world states, they did share some common issues and problems, three of which stand out. First, their economies had been controlled either by their colonial masters or a regional hegemon (e.g., the United States in the case of Latin America),

which had kept them largely rural and suppliers of food and raw materials. Even after gaining political independence, their economies remained “dependent.” To break that dependency became a goal of “development.” Second, because little industrial development and in some instances limited urbanization had occurred, third world states were predominantly rural peasant societies. Even today with more than thirty years of rapid industrial development behind them, the world’s two most populous countries—India and China—remain substantially rural societies, although they are rapidly urbanizing. And third, decolonization and revolution set the stage for the massive post–World War II population explosion in third world countries.

Rural societies typically have both high birthrates and high death rates (especially for infants). In the biological old regime, infectious disease and limited food supplies carried off as many as half of all children born. Ensuring adequate numbers of children to work the farms and provide brides for other families thus required many births—four to seven live births was not uncommon. Those high birthrates continued after World War II, but the death rates dropped precipitously because the newly independent states, with support from the WHO (World Health Organization, a UN organization), made modern drugs (e.g., antibiotics and immunizations) available to rural people. Infant mortality rates fell sharply (by as much as half) and populations exploded, in many countries doubling within thirty years. Increased food supplies sustained those growing populations. As a result, where in 1950 the population of the world was about 2.5 billion, by 1970 it was 4 billion, by 2000 it was 6 billion, and by 2010 the world’s population was over 7 billion; most of those additional billions were born and live in third world countries. That remains a compelling fact about the world in the early twenty-first century.

With growing populations, development first and foremost meant improving agriculture to increase the food supply. On the one hand, new land could be brought under the plow, but much of it was marginal, ecologically fragile land or forested land. Either way, trying to meet food demands by increasing the land under cultivation created environmental problems caused by deforestation and siltation. So to increase food production largely meant improving agricultural yields, and the quickest way to do that is to irrigate and apply synthetic fertilizer. As we saw at the beginning of this chapter, the industrial process for making ammonia-based nitrogenous fertilizer was invented at the beginning of the twentieth century and served to increase agricultural yields in Europe and the United States in the first half of the century. In the second half of the century, its use spread to the developing world, at least to those

areas with farmers well off enough to buy the artificial fertilizer. The combination of synthetic fertilizer with irrigation and the development of new high-yielding seeds in the 1960s came to be known as “the green revolution.”

But even successfully implementing a green revolution would keep a third world country agricultural and poor—ever since the Great Depression of the 1930s, food and raw material prices relative to manufactured goods prices have been falling. To put it another way, an agricultural country would have to export increasing amounts of its products simply to buy the same amount of manufactured goods *all while its population is increasing*. In other words, because of population increases and the relative price weakness of agricultural products, many people in much of the third world got poorer in the second half of the twentieth century and could not afford the industrially produced fertilizers that would increase their yields. The way out—for some countries at least—was industrialization.

Even in England in the decades around 1800 where industrialization began, a strong, well-organized, and efficient state with capable leaders pursued policies that nurtured industry.<sup>33</sup> Additional examples of strong, interventionist states include Japan and Germany in the late nineteenth century, Soviet Russia under Stalin in the 1930s, and China since 1949. In East Asia, some smaller states too have vigorously pursued industrial policies in the late twentieth century, and all of them have had strong states to direct the process: South Korea, Taiwan, Singapore, and Hong Kong, the “four tigers” of Asia.<sup>34</sup> In Latin America, Brazil, Mexico, and Chile have established significant industrial sectors while maintaining large and poor rural sectors.

In part, those industrializing countries had strong states that took the lead in promoting industrialization, keeping in check the demands both of labor for unions and higher wages and of traditionalist religious leaders who felt their visions of the world threatened by the new ways of social organization represented by cities and factories. In addition, from the 1970s on, structural changes in the world economy provided opportunities that these states could benefit from. In particular, in a world of international trade and competition, improvements in global transportation and communications made it possible for first world manufacturers to relocate plants to lower-wage parts of the world, especially in Asia and Latin America. After the collapse of the Soviet Union in 1991, the former “Eastern bloc” also attracted factories from Western Europe. Powered largely by the consumer demands in the wealthy countries, Nike shoes manufactured in Vietnam, T-shirts in Thailand, telephones, and a thousand other products from Asia and Latin America filled

container ships heading for the ports of Long Beach, New Orleans, or New York and the nearest Walmart.

One part of the third world whose economy relied almost exclusively on the export of a single raw material—oil—until recently succeeded in significantly raising its international market price. Oil-producing countries (mostly in the Middle East, but including Nigeria in Africa and Mexico and Venezuela in Latin America) formed the Organization of Petroleum Exporting Countries in 1960, but OPEC had had little success in shoring up the price of oil; in 1970, oil sold for about \$2.50 per barrel. But in 1973, in the midst of the second Arab-Israeli war, the Arab members of OPEC (with their separate Organization of Arab Petroleum Exporting Countries, or OAPEC) announced an embargo on their oil exports to the United States, the main supporter of Israel, and in its aftermath OPEC was able to pump up the price of oil to \$40 per barrel by 1980. Dollars flowed into the oil-producing Arab sheikdoms, creating fabulously wealthy (if unindustrialized) societies.

### **Migration, Refugees, and States**

Through the twentieth century to the present, global migration has been patterned by the territorial nation-state that became the near-universal form of political order and the continued industrialization of parts of the world.<sup>35</sup> As noted in the last chapter, states began the process of regulating and policing their borders to control foreign access to their nations. Globally, migration surged in the first four decades of the twentieth century; even as transatlantic migration shrunk, movement to Southeast Asia and North Asia continued the surge from the nineteenth century, and for the same reasons as discussed in chapter 5. Mostly the pattern of global migration was from the poorer parts of the world increasingly known as the Global South (mostly the formerly colonized or semi-colonized regions of Africa, Asia, Latin America, and the Middle East) to the industrialized core countries of the world known as the Global North, primarily Europe and North America. In the view of migration historian Eliot Dickinson, the attraction of the Global North is that “in comparative perspective, rich core countries offer job, educational opportunity, social mobility, stable government, and political freedoms.”<sup>36</sup> As we will see in more detail later in this chapter, the “gap” between the richest and poorest parts of the world has not gone away, and in many ways has gotten worse for many people, pushing them to find ways to better their lives.

The twentieth century with its world wars and civil wars added another dynamic to global migration with people fleeing war, destruction, persecution, and genocide in the context of nationalist and racist movements. Estimates vary, but interstate wars in the twentieth century account for between 125 and 175 million deaths, making that century the world's most violent.<sup>37</sup> Moreover, deliberate state actions in the Soviet Union in the 1930s and China in the late 1950s contributed directly or indirectly to famines that added another 60–80 million dead. Wars and political persecution also caused huge flows of people fleeing the violence; by the end of World War II Europe had 40 million refugees. In the wake of that war and with the establishment of the United Nations, the definition, status, and rights of refugees were codified in 1951 to include those who cross national boundaries to flee persecution and fear for their lives if they were to return, or otherwise cannot return to their country of origin. In the twentieth century, refugees comprised a growing proportion of migrants, a trend that has continued into the twenty-first century.

During the early years of World War I, the Ottoman state “relocated” Armenians to the southern boundaries of its empire during which so many executions took place that the episode is known as the Armenian Genocide. In South Africa, black Africans were excluded from the political process, denied rights to reside in white areas, and were forcibly relocated to “townships” and kept there by the rules of “apartheid.” The Nazi holocaust spurred many Jews to flee Europe to find safe haven elsewhere, including the United States, which in at least two instances refused Jewish refugees entry to the United States. The 1947 partition of India sent millions of Hindus fleeing south into what became India and Muslims fleeing north into what became Pakistan. In the process, hundreds of thousands were killed and most had their property and lands confiscated by others.

In the uneasy international peace accompanying the Cold War, civil wars often fought along national or racial bounds sent refugees fleeing to seek safe elsewhere. Civil wars in African countries in the 1970s and 80s contributed to streams of refugees flowing north to the Mediterranean and Europe, as did civil wars in Central America send refugees north to the United States, crossing illegally across the U.S. southern border if necessary; these crossings were despite the US signing on to the 1951 UN Refugee Convention that defined refugees as those outside their home country seeking protection from persecution there, and binding signatory states to abide by the Convention that obliges them to accept refugees. The vicious civil war in Syria, begun in

2011 and not over as of this writing, has resulted in the destruction of towns and cities of people opposing the Syrian government and being forced to flee: about a million have taken refuge in Turkey, and hundreds of thousands more trekked to Europe seeking asylum in countries there; most were accommodating, but at least one—Hungary—put up fences to keep all the refugees out. Another recent case is the flight of the largely Muslim Rohingya people within Myanmar to Bangladesh to escape persecution and death. The total number of refugees in the past decade has increased from over 40 million in 2007 to nearly 70 million in 2017, many living in refugee camps with others distributed among the host country's population, as when Germany accepted about one million Syrian refugees in 2015.

To the millions of refugees and people displaced within their own countries, there continues the mass migrations of people seeking to better their and their family's material and political fortunes, migrating from Africa to Europe, Asia to North America, and Central America and Mexico to the United States. According to one calculation of global totals, where in 1910 countries had a total of 35.7 million foreign-born people among their population (or 2.0 percent of world population), by 2003 there were 175 million, or 2.8 percent of the world population.<sup>38</sup>

On the one hand, these cross-national movements of people, especially to urban areas, contribute to the creation of a vibrant cosmopolitan culture, where food, drink, art, music, ideas, and religion, among other cultural productions, add to and enrich the human experience of all the residents willing and open to the new. On the other hand, immigrants and their cultures can be experienced as a threat to the native (or nativistic) residents, either because there is the perception that the newcomers take jobs, or the racist assertion that the immigrants cannot and should not be accepted and assimilated because of the cultural and political changes that may follow in their wake. Over the past decade, many migrants are from the poorest parts of the world—sub-Saharan Africa and Central America—looking for better life opportunities. That these migrants are arriving at the borders of European states and the United States has given rise to strong anti-immigration views and movements.<sup>39</sup>

Elsewhere, one of the largest mass migrations in all of history is underway in China, where in recent decades hundreds of millions have moved from the countryside to cities, and the Chinese state expects that by 2030 an additional 500 million people will migrant from rural areas to newly built cities and China will have at least two-thirds of population living in cities of a million or more.<sup>40</sup>



The waves of globalization that were spawned in the second half of the twentieth century by numerous factors—industrialization; the movement of capital to regions of lower wages for manufacturing; the spread of global webs of supply chains to build everything from automobiles to smartphones; the impoverishment of large parts of the world; interstate and civil wars; and genocide—show no evidence of subsiding in the first decades of the twenty-first century. These challenges to the sovereignty of nation states and the management of their borders—a process that some have called “deterritorialization”—in the context of the global Great Recession of 2008 has also created a political backlash that looks increasingly nativistic, nationalist, and potentially isolationist, trends to be discussed more in a later section of this chapter. Suffice it to say here that while the processes of globalization have led to the freer movement of goods, raw materials, and capital around the world, with barriers to all of those coming down, barriers to people moving across national boundaries have made the cross-national migrations of people in search of a better or safer life much more difficult.

### Global Inequality

Despite the industrialization of some parts of the former third world, the luck of OPEC states, or the migration of millions to richer states, the gap between the richest and poorest parts of the world has not closed; indeed, it has increased. In 1990, the per capita income of the wealthiest countries was \$18,280, or fifty-five times that of the poorest nations. Seen another way, from 1960 to 1995, the ratio of the income of the richest states in the world to the poorest increased from 30:1 to 80:1.<sup>41</sup> What is perhaps even more shocking is that the poorest people constitute *one-half* of the world’s population.<sup>42</sup> Significant numbers of those are the rural poor in the world’s two largest countries, China and India, even though they are rapidly developing, with millions more in Southeast Asia and the Caribbean island nation of Haiti. But the largest proportions are in Africa (see map 6.1).

Africa’s poverty can be traced to several factors, including slavery, colonialism, postcolonial indebtedness, civil war, and debilitating disease. Decolonization left in its wake territorial states where none had existed. The new states constituted organizations that possessed the administrative and military power to extract and control resources, in the form of both taxes and raw materials. To fund “development,” rulers of these new states sought loans from the World Bank, the International Monetary Fund, and the African Development Bank, but mostly such loans funded corruption. Controlling the state apparatus thus conferred wealth on leaders, and desire for those



**Map 6.1. The World's Poorest Countries by Region (defined as having a gross national income in 2017 of less than US\$2,500, as indicated by darker shading)**

Source: FocusEconomics, <https://www.focus-economics.com/blog/the-poorest-countries-in-the-world>.



outside the government to control wealth by gaining control of the state, mostly by violent means, thereby creating successive military regimes, armed opposition movements, and civil war. Often the contending parties belonged to different ethnic or linguistic groups who had been thrown together into the same state when colonial rule ended. Chronic diseases, in particular malaria, AIDS, and Ebola, sap energies and the ability of hundreds of millions to work in Sub-Saharan Africa.<sup>43</sup>

By the 1980s, much of Sub-Saharan Africa was so poor that it held little attraction to foreign investors, so little capital flowed into Africa; even Africans sent capital out of Africa for investment elsewhere. As a result, many African states became dependent on even more loans to keep afloat. So now, many African states are burdened by such crushing levels of debt on top of everything else that they have been labeled “Heavily Indebted Poor Countries,” or HIPC. Of the world’s thirty-nine HIPC in 2013, thirty-four are in Sub-Saharan Africa, three in Latin America, and one each in Asia and the Middle East.<sup>44</sup> The number of extremely poor people in Africa doubled from 1981 to 2001, and despite international goals to reduce African poverty, the poor there are expected to continue to increase, reaching 340 million by 2015.<sup>45</sup> Food security is a challenge, with over 40 percent of Africans unable to obtain food on a day-to-day basis, even from their own farms. Two-thirds of the soils in Sub-Saharan Africa are deficient in the critical nutrients of nitrogen and phosphorous and farmers there cannot afford to apply chemical fertilizers; 30 percent of the population is undernourished.<sup>46</sup>

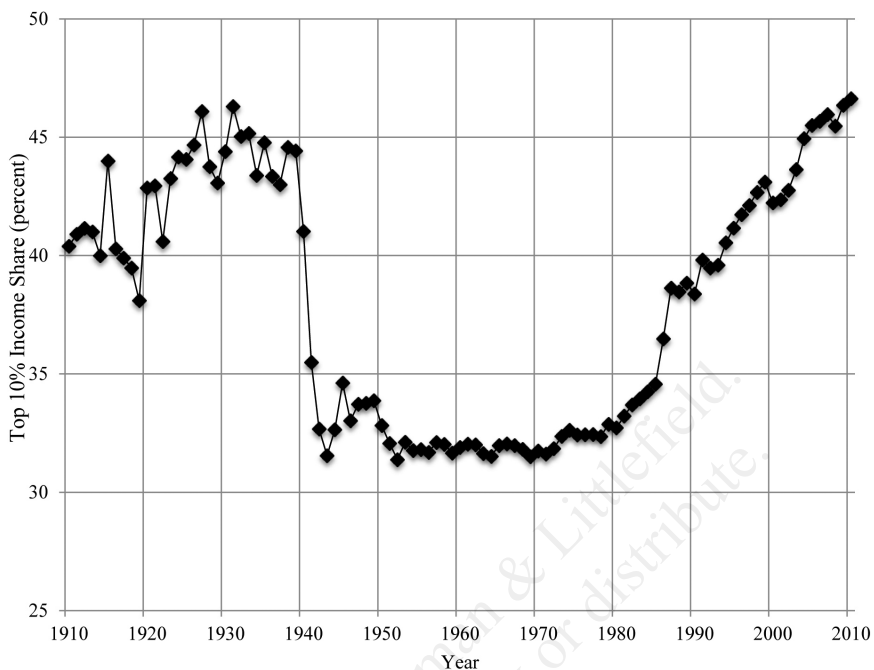
Perversely, policies of the industrialized world conspire to keep poor nations poor. The United States, Japan, and the European Union all subsidize their farmers and keep high tariffs on agricultural imports to protect their agricultural sectors. Their farmers are rich and can afford synthetic fertilizer, advanced seeds, and irrigation, all of which increase their agricultural output. Farmers in poor countries are disadvantaged enough, but the high tariffs on agricultural products make it almost impossible for them to compete in the international market: markets tend to work best for those with money. The demand for lowering rich country tariffs on agricultural products thus comes not from the industrialized world, but from the poor countries—to little response by the industrialized world.<sup>47</sup> The 2014 U.S. Africa Leaders Summit, hosted by U.S. president Obama, promised to focus on African development by increasing U.S. trade and investment, but results remain to be seen.<sup>48</sup>

**Inequality within Rich Countries<sup>49</sup>**

Just as the post–World War II era has not seen a narrowing of the gap between the richest and poorest in the world—despite decolonization, some third world development, and the recent rise of China and India—so too has inequality within countries, especially the wealthiest, continued and in recent decades increased dramatically. This was not the case in the first three decades after World War II, when the lowest levels of inequality within the advanced industrial countries were reached. In the nineteenth century, industrialization, the accumulation of wealth, and the absence of taxes on income, capital gains, or corporate profits led to massive inequality in the richest countries (Europe and the United States for the most part) where the richest 10 percent of the population owned 80 to 90 percent of the wealth. The poorest 50 percent owned almost nothing, and the very small middle 40 percent owned 10 to 20 percent of the wealth.

As noted earlier at the end of the section on the Thirty-Year Crisis of 1914–45, the shocks of two world wars and a global depression significantly brought down the shares of wealth owned by the top 10 percent, playing an “essential role in the compression of inequality,” in economist Thomas Piketty’s words. Income taxes, increasingly progressive taxes on capital gains and inherited wealth (estates) that had begun to be levied as early as 1913, and a rising minimum wage continued in the post–World War II era as the United States began building an economy based on consumption fueled by a rising middle class. The vast expansion of educational opportunities in colleges and universities also helped many families improve their economic position. By many measures, the thirty years from 1945 to 1975 saw the lowest levels ever of income inequality in the world’s richest countries, a development that some economists wrongly attributed to the wonders of market capitalism.<sup>50</sup>

The relatively more equal condition of the postwar era began to fade by the early 1980s, to be replaced by an era of rising income inequality to the point that the richest societies are now as unequal in the distribution of wealth as they were in 1913 on the eve of World War I, a period characterized by many as one of an extreme concentration of wealth (see figure 6.1). In nearly all societies now, the top 10 percent own 60–90 percent of all wealth, the least wealthy bottom 50 percent own less than 5 percent, and the remaining 40 percent (the “middle” class) own from 5 to 35 percent of a country’s wealth (mostly from home ownership).



**Figure 6.1. Income Inequality in the United States, 1910–2010**

Source: Thomas Piketty, *Capital in the Twenty-First Century* (Cambridge, MA: Harvard University Press, 2014), technical online appendix (<http://piketty.pse.ens.fr/en/capital21c2>). Data points for 1911–16 inferred from chart I.1, p. 24.

There is little question that the world has returned to levels of inequality seen a century ago. Policy makers, economists, and historians among others are debating the causes and consequences of this rising inequality, especially in the wake of the global financial collapse of 2008 (often called the Great Recession) and its continuing effects. Inequality increased from the 1980s on as taxes on capital gains were dramatically reduced (especially in the United States and Britain during the Reagan and Thatcher administrations), and expensive wars in Afghanistan and Iraq (to be discussed in a coming section) were funded not with increased taxes on the wealthiest (as had been true of the two world wars) but by deficit spending. Since the 1980s, the share of income taken by the top 10 percent, and especially by the top 1 percent, has grown dramatically, while that of the remaining 90 percent has grown hardly at all. In other words, the vast majority of people in the wealthiest countries have seen stagnating incomes, while the rich have gotten richer. That trend

will no doubt continue in the UNITED STATES with massive tax cuts beginning in 2017 going to corporations and the wealthiest one percent of taxpayers. There is little evidence that globalization has benefitted the vast majority of the world's people.

But so what? Doesn't income inequality create incentives for lower-income people to work harder and try to get ahead? To a certain extent, that may be true. But as a 2014 report by Standard & Poor's (a U.S. financial services company) points out, an unequal distribution of wealth hinders economic growth. That happens because the wealthiest actually have a lower propensity to consume than poorer or less wealthy people, who tend to spend more of their income than to save it. Thus, if overall national wealth increases, but those increases fall mostly to the wealthiest, overall consumption does not increase much. Demand for consumer goods does not grow, and the economy stagnates. That seems to be the situation the United States has been in recently,<sup>51</sup> and it seems to point to a serious problem for the functioning of a global economic order premised on mass consumption. With incomes stagnating, many people in the "lower" 90 percent could continue to consume only by taking on larger amounts of debt, and that system came tumbling down in the financial crisis of 2008 with millions of people losing their homes and then their jobs in the ensuing economic recession.

### Part III: Globalization and Its Opponents, 1991–Present

#### The End of the Cold War

The 1973 "oil shock" caused by the OPEC oil embargo, designed to raise world oil prices, compounded global economic troubles first signaled in 1971 when the United States abandoned the gold standard and allowed the value of the dollar to "float," which it did—down (intentionally, to devalue the dollar and make it possible to pay for oil imports). The U.S. economy was thrown into the horrors of an unexplainable "stagflation," or economic stagnation *and* inflation, a combination that baffled economists. A stumbling U.S. economy drew the rest of the capitalist world economy down with it. Crisis? Slump? Recession? Historian Eric Hobsbawm sees 1973 as the end of a post–World War II "golden age" and the beginning of "the crisis decades."<sup>52</sup> Whatever the 1970s might have been called, it was a stressful time for the capitalist world.

But it was worse in the Soviet bloc. Economic growth had been slowing steadily since the 1950s, and it was not possible to supply the needs of the

military, industry, *and* consumers. So consumers suffered, with long lines and waits at grocery stores for basic foodstuffs. Equally, if not more importantly, the “productionist” biases of the system were leading to huge environmental problems that could no longer be avoided. By the 1970s, it was clear that reforms were in order, but getting the huge and unwieldy Soviet bureaucracy to change was difficult, if not impossible, because the Communist Party cadre who staffed the state ministries benefited from their positions. Attempts at reform in other East European countries had been met with Soviet tanks (Hungary in 1956; Czechoslovakia in 1968). Keeping their East European satellites in orbit was getting increasingly expensive for the Soviet Union.

In these crisis years for both the United States and the USSR, two political leaders played significant roles in reducing and then ending the Cold War: Ronald Reagan (elected U.S. president in 1980) and Mikhail Gorbachev (selected to lead the USSR in 1985). In part to lift the U.S. economy out of the deep recession he had forced by sharply raising interest rates in 1981–82, President Reagan vastly increased military spending (and the U.S. deficit as well). Reagan hoped a renewed arms race would spend the Soviets into oblivion, and to a certain extent he was right. When Gorbachev came to power, he recognized the Soviet Union could not keep up with U.S. military spending and the threat of a U.S. space-based missile defense system and so sought not just nuclear arms control but arms reduction through agreements with the United States. He hoped his program of “glasnost,” or openness to ideas and culture from the West, would breathe some life into the stale Soviet system, while “perestroika,” or readjustment, would reform party, state, and economy. The Cold War was coming to end, but so too was the Soviet system.

Simultaneously, communist power in East European states was being challenged, in part by labor leaders like Lech Walesa in Poland and in part by the Roman Catholic and Eastern Orthodox churches. Deep economic distress, political corruption, and weakening control from Moscow emboldened East European citizens to make public demonstrations that the state police and armies suddenly refused to suppress. From August 1989 to the end of the year, “people’s power” peacefully drove communist regimes from power throughout Eastern Europe. Only in Romania was a Communist Party boss killed. The end of the Soviet Union too was at hand. As the nominally independent republics that constituted the Soviet Union became truly independent, the Soviet Union ceased to exist, rendering Gorbachev’s position as head of that state irrelevant. In August 1991 some leaders of the Soviet military tried to use force to bring the “union” back together, but the leader of the Russian



federation, Boris Yeltsin, stood up to them; the coup collapsed, and along with it the Soviet Union. By the end of 1991, the United States was the world's sole remaining superpower.

The immediate effect of the collapse of the Soviet Union was to increase the number of nation-states in the world. Mostly, the process was peaceful, an outcome attributed to the cooperation of then-American President George H. W. Bush and Mikhail Gorbachev. The former Soviet Union broke up into fifteen new states, the largest of which is Russia, which inherited much of the power, including nuclear weapons, of the former Soviet Union. In one case—Germany—the process yielded one fewer state when the former communist East Germany reunited with West Germany, which dominated the marriage. Czechoslovakia split into two states (the Czech Republic and Slovakia). In the former Yugoslavia, though, civil war, “ethnic cleansing,” atrocities, war crimes, and ultimately military intervention by NATO and U.S. forces accompanied its breakup into six smaller states. In all, the number of territorial states increased to 191 members of the United Nations.

### **The End of History?**

The demise of the Soviet Union and the end of the Cold War was greeted with relief, celebration, and caution: relief for those who had fretted that the Cold War might turn hot; celebration by those committed to the imminent global triumph of the values associated with capitalism and democracy; and caution by those wary of the intent and actions of a United States unburdened by the Soviet threat.

Indeed, the Soviet Union had been a defining feature of the twentieth century, from its origins in the wake of World War I as a challenger to capitalism, to its critical role in defeating Hitler in World War II, and then its contest with the United States for global leadership in the Cold War. With the Soviet Union gone and the Cold War ended, some believed that the causes of global conflict—and hence of “history”—had been eliminated for good and that the future would consist of the largely uneventful and peaceful unfolding of democratic institutions and free market economies.<sup>53</sup> Clearly, that has not been the course of history over the past 30 years.

To be sure, the end of the Soviet bloc meant the end of its form of “productionist” communism. Russia and most of the former Soviet and East European states have since legalized private ownership of property, established the rule of law to protect capital, welcomed foreign investment, and embraced free trade. In short, the part of the world open to capitalism greatly

expanded in the 1990s; as a result, “globalization” entered the consciousness of many in the world.

Market reforms in communist China too added fuel to the expansion of free market capitalism and the intensification of global integration in the 1990s. Under the leadership of the Chinese Communist Party, in the early 1980s China began dismantling its state-owned and -controlled economy. That may seem strange, but concerned with spurring economic growth more than anything, China’s leader Deng Xiaoping claimed he didn’t care whether the cat was white or black, as long as it caught mice.

Beginning with the privatization of agriculture in the early 1980s and moving on to industry in the late 1980s and then opening China to foreign investment, by the early 1990s China’s economy was basically capitalist, although the banking system and energy production remain state owned. Attracting foreign capital to build new factories (with the proviso that foreign firms do so through partnerships with Chinese firms and that the foreign companies transfer technology to their Chinese partners), China’s strategy has focused on producing consumer goods for the export market. In the 1990s, so much Chinese-made stuff flooded the world market, especially the United States, that China each month exported about eighteen billion dollars more than it imported. As a result, China has a huge accumulation of dollars (about four trillion as of 2014) with which it buys U.S. Treasury bonds and American companies (IBM’s personal computer division—now Chinese-owned Lenovo—was a first notable instance). Since the 1980s, China’s economy has been the fastest growing in the world and, having surpassed Germany and Japan early in the twentieth century recently exceeded that of the United States to become the world’s largest (overall, but not per capita).

### **A Clash of Civilizations?**

Some observers were not so sure that the end of the Cold War had banished conflict from the world, or that new forms of conflict would not emerge. One influential view was that the Cold War had merely served to cover up deeper “civilizational” differences that would emerge once again, in particular pitting “the West” against its historic challengers, the Islamic and Chinese civilizations. These theoreticians advised the United States to gear up for a coming “clash of civilizations.”<sup>54</sup>

Numerous events since the end of the Cold War seemed to lend credence to that view, especially with regard to the Muslim world. In 1990, Iraq under Saddam Hussein invaded neighboring Kuwait claiming that it was historically part of Iraq. The United States led a coalition of forces first condemning Iraq in the United Nations and then using military force in the first Gulf

War of 1991 to push Saddam's forces out of Kuwait. With U.S. forces then stationed in Saudi Arabia as a check on Iraq, Muslims who in the 1980s had fought against Soviet influence in the region turned their ire on the United States, attacking U.S. interests in Saudi Arabia (the Khobar Towers bombing in 1996), U.S. embassies in Kenya and Tanzania in 1998, and the U.S. destroyer *Cole* in Yemen in 2000. The Islamic group that carried out many of these attacks—al Qaeda, under the leadership of Osama bin Laden—then launched attacks on the World Trade Center and the Pentagon on September 11, 2001, in which 3,000 U.S. citizens were killed. This *casus belli* prompted the United States during the George W. Bush administration to go to war with Afghanistan in 2002, and then much more controversially in 2003 against Iraq, toppling Saddam Hussein, but finding none of the weapons of mass destruction he was supposed to have amassed as a threat to world peace.

The 9/11 attacks, Osama bin Laden's videotaped statement about it, the U.S.-built coalition against global terrorism,<sup>55</sup> and the subsequent U.S.-led wars in Afghanistan and Iraq all raise the question of whether or not the dynamics of the modern world have changed. The basic problem with both bin Laden's vision of a revived Islamic empire and the idea of "the clash of civilizations" between the Western and Islamic worlds is that they ignore the processes and forces that brought the modern world into being. While the gap between the richest and poorest in the world may well fuel resentment in the third world (among Palestinians, Afghans, or Pakistanis, for instance) against the United States, Europe, and Japan, there is little reason to think that bin Laden's dream of an Islamic empire approximating its eighth-century scope has any possibility of being erected over a framework of nation-states. To be sure, the civil war that began in Syria in 2012 provided an opening for the rise of a group called ISIS (Islamic State in Iraq and Syria) to seize territory in Syria and northern Iraq and to proclaim the establishment of an Islamic State (IS), but a *de facto* military coalition of Iraq, Turkey, Iran, and the United States, as well as stateless Kurds evicted ISIS from its capital in Raqqa and Mosul in Iraq. As of early 2019, ISIS had been pushed into a few small pockets on the Syria-Iraq border with the coalition that formed to fight them committed to their destruction. The archaic vision of the future articulated by bin Laden and ISIS most likely has little possibility of coming to fruition in a world of national interests, even in Arabic-speaking lands where most people profess one version or another of Islam in the context of established nation-states. Palestinian hopes for the future, for instance, are rooted in their nationalism and prospects for a sovereign state,

not a transnational Islamic empire. Neither is there any evidence that “civilizations” are actors on the global stage (even if they can be demonstrated to exist in the modern world). Divisions within Islam between Sunni and Shia, not to mention the rise of radical jihadist groups that challenge the interests of mainstream Sunni and Shia groups, for instance, appear so significant that it makes the idea of a single Islamic world or “civilization” irrelevant. In fact, the September 11 attacks are best construed as attacks not on Western civilization but on symbols of the building blocks of the modern world: global capitalism, represented by the World Trade Center, and the nation-state, represented by the Pentagon (or more pointedly, by the White House, if in fact it was a target).

In fact, what might appear to be a conflict between “the West” and Islam is mostly an accident of history. The United States became militarily engaged in the Islamic world not because of some civilizational crusade against Islam but because of an accident of geography: most of the world’s supply of oil is to be found in the Persian Gulf region, the home of Islam. The United States would be involved in the Middle East regardless of who ruled the region or their religious beliefs. That the Persian Gulf is both the historic home of Islam and the depository of much of the world’s supply of oil is coincidental.

### **Global Free Trade**

Although not “the end of history” or “the clash of civilizations” following the end of the Cold War, the 1990s did in fact see the global spread of markets and capitalism. Indeed, the two major challengers to that way of organizing the world—the Soviet communist model (and its Chinese variant) and the statist German Nazi or Japanese imperial models—had been destroyed, leaving the United States as the sole superpower. Under its auspices, the global economic order has become much more uniform and much more globally integrated. Paradoxically, though, no state—no matter how powerful or rich, the United States included—can control the world economy.<sup>56</sup>

To be sure, the United States retains a powerful voice in the World Bank and the IMF as well as in the WTO, and the leaders of the industrialized “G7” countries meet every July to coordinate global economic policy. But the growth of the global market has rendered most governments quite powerless to control their own economic fate, placing all in ruthless competition, which thus far continues to be dominated by the rich, but not without challengers. Policies designed to ensure full employment or to control inflation

(or deflation) have been shown to be useless in the face of international competition, which puts downward pressure on wages and benefits. In this highly integrated global economic environment, states that refuse to allow greater corporate profits by insisting on large payments of social security, unemployment, or health insurance face the prospect of companies closing their factories and moving elsewhere to more favorable sites. As a result, the costs of industrial production around the world fall, as well as prices for most agricultural and raw materials, not because of the results of “comparative advantage” as predicted by those championing international free trade, but because of declining living standards, not just in the poor, developing world but in rich countries like the United States as well.<sup>57</sup>

As the long-term linchpin of this global system of states and economies, the United States has been in a paradoxical position. On the one hand, it has the most powerful military on Earth; on the other, while economically powerful, its share of world production is falling while that of others, in particular China, has risen. It cannot control the world economy, but until recently has felt compelled to use its military power to channel global forces in ways that keep the international system well oiled (literally). Some see the United States as presiding over a new, global empire and “policing” the world for its interests,<sup>58</sup> although the Obama administration (2008–16) was very cautious about the use of American military power and was severely criticized by some for that stance. After his election as president of the United States in 2016, Donald Trump has called for the withdrawal of American military forces from around the world,<sup>59</sup> but so far the global military reach of the United States seems to be unaltered.

### **Energy, Oil, and War**

Human societies require energy. For most of our history on Earth, humans have relied on their own and animal muscles to do work, transforming calories from vegetable and animal matter into motion. The great fifteenth-century maritime explorations of Zheng He, Vasco da Gama, and Christopher Columbus began the age of sail, with humans capturing power generated by wind. The Industrial Revolution greatly expanded the sources of energy by tapping coal, and in the twentieth century other fossil fuels, in particular oil, have increased energy output and the mobility of energy-consuming machines such as automobiles and airplanes. Each of those ways of generating and using energy gives rise to technologies, social and economic relationships, and political interests that lock societies into those particular regimes.<sup>60</sup>

Societies that can mobilize sources of energy for industry, consumption, and armies are strong and powerful and use that power to ensure flows of energy from other parts of the world to themselves. Such power, like deposits of coal, oil, and natural gas, is distributed unevenly in the world, accentuating global differences in wealth and poverty: today, the consumer societies, with about 20 percent of the world's population, use about two-thirds of all the energy produced, nearly all of which comes from fossil fuels.

Additionally, the rapid development of China and India, including the advent of high-consuming “middle classes,” has increased their demand for, and consumption of, oil, leading one analyst to see a “frenzied search” and “intensifying global struggle for energy” leading to competition and potential international conflict. China increasingly claims rights to large areas of the South China Sea where there are confirmed oil reserves, but the neighboring nations of Vietnam, the Philippines, and Indonesia have territorial claims there too, leading to international tensions. Increased global demand for limited supplies of oil certainly has led to increases in the price of oil, and with the technology of “fracking” (hydraulic fracturing) so much additional oil is being reclaimed from existing wells in the United States, along with a boom in natural gas production, that the United States may become self-sufficient in oil and gas.

### **Deterritorialization**<sup>61</sup>

Opposition to globalization and its results over the past two decades has shifted from critics broadly on the left to those on the right who are more nationalist or isolationist.<sup>62</sup>

Leftists began the opposition to globalization by pointing to the fact that the process was set up to reward first and foremost the owners of capital who could more freely move it around the world in the search for the greatest profits, regardless of the impact that had on people in states from which capital fled and on people and environments where new factories were established. International organizations such as the World Trade Organization and the International Monetary Fund, as well as the G7 (the “Group of 7” major industrial countries in the world) have pressed to loosen the regulations that kept financial capital from flowing via loans to developing countries by insisting on “structural adjustments” there to cut tariffs, social spending, and subsidies for farmers.<sup>63</sup> As the G7 statement from their 2001 meeting in Genoa, Italy noted: “sustained economic growth worldwide requires a renewed commitment to [global] free trade. . . . Opening markets globally and strengthening the World Trade Organization (WTO) as the bedrock of

multilateral trading is . . . an economic imperative.”<sup>64</sup> In other words, parts of the world that had not been fully integrated into the global economy would be, thereby opening new areas for the expansion and growth of capital and profits at the expense of workers and the environment.

The first mass demonstration against contemporary globalization was at the 1999 WTO meeting in Seattle that became known as “the Battle in Seattle.” Massive street demonstrations disrupted the meetings, while protestors dressed as sea turtles drew attention to the environmental impact that unrestrained capitalist development had. Annual protests followed the WTO or G7 meetings for several years—demonstrations at the 2001 G7 meeting were particularly bloody with one protester being killed by riot police—until WTO and G7 organizers started holding their meetings in places like Doha that made mass mobilization protests less likely or less effective (the 2015 G7 meeting was held in a remote and defensible Bavarian castle). More recently, though, the 2017 G20 meeting in Hamburg, Germany was peaceful, in part because Chancellor Angela Merkel worked to include civil society representatives, and the main topic was global warming, high on many countries’ agendas by that point.

In the meantime, the Great Recession of 2008 began to highlight to many unemployed and bankrupted homeowners, especially in the United States, the effects of globalized financial instruments known as CDOs (collateralized debt obligations), and the decision-making by global elites freed from national constraints or concerns. It became clear to many that these global elites and their organizations did not have the best interests of regular folk in mind. As historian Lynn Hunt puts it in summarizing one line of critique of globalization:

Capital markets and with them financial speculation are no longer constrained by national borders or even by industrial productivity. Since global capital is not fixed anywhere, it is “deterritorializing” in its impact; transactions no longer occur in a particular place. This deterritorialization challenges the sovereignty of nation-states, which after all are built on the notion of control over territory.<sup>65</sup>

A glaring paradox of the second wave of globalization that began in the last decade of the twentieth century and continues to the present is that while capital and commodities could move much more freely across national borders—indeed, the further creation of wealth and accumulation of capital depended on it—at the same time the movement of people met with increasing border restrictions. With large numbers of migrants heading north from

Central America and Mexico to enter the United States, the charge that the southern border was open or porous and that U.S. citizens were having their jobs taken by immigrants, anti-immigrant feeling was building toward a moment when a political leader could tap into it and build a political movement. But these dynamics are felt much more widely throughout the world than just the United States. The economic uncertainties and fears generated by globalization have been accompanied by increased attention to national identity, race, and immigration, fueled by deepening political polarization between left and right.

Similar deterritorializing dynamics have affected the EU (European Union), and for similar reasons, although the explicit intent of the EU was to reduce the sovereignty of its member states with “the aim of ending the frequent and bloody wars between neighbours, which culminated in the Second World War,” according to the EU’s official website.<sup>66</sup> The EU was established by treaty in 1993 following decades of increasingly closer political and economic cooperation among European countries (e.g., the EEC—the European Economic Community—or “Common Market” formed in 1957). The union created a single market “without internal frontiers in which the free movement of goods, persons, services and capital is assured,”<sup>67</sup> eliminating all tariffs between member countries, creating a common currency (the Euro, adopted by most, but not all EU members), and allowing citizens of member countries to travel freely to any other member county, and to reside and work in any county. The attraction of membership was access to a large and growing common market, and so the Union has vetted and accepted new members, bringing the total to 28 members by 2013 with a population of over 500 million and a GDP of nearly \$19 trillion, making it the second largest economy on Earth, even if its member states have “deterritorialized” and many people within them chafe at their states having ceded sovereignty to what they see as bureaucrats residing in Brussels.

Member countries have ceded monetary policy to the European Central Bank in Frankfurt, and member countries are expected not to run unapproved deficits, a stricture that became difficult for several states when the global economy began tanking with the 2008 Great Recession. In return for loans to keep their governments solvent, Greece, Spain, and Italy all had to cut social spending and to run balanced budgets, creating economic problems for their citizens. The EU thus was already under stress when the Syrian civil war broke out in 2011 and soon waves of refugees started showing up at border states, especially Greece and Italy, looking for asylum. Germany’s leader Angela Merkel allowed nearly one million into Germany, while



Poland and Hungary erected fences to keep the refugees out, sparking a fierce debate within the EU over migration policy and the impact of migrants on local economies and cultures.

Meanwhile in Britain, nationalist complaints about EU decision making in Brussels began to rankle some in the Conservative party who pressed for a referendum of the U.K. citizens about whether they wanted to remain in the EU, or leave it. Those who thought that the Britain should exit the EU—or “Brexit” as it became known—argued that control over its own borders and trade policies (the U.K. had kept its own currency, the pound sterling, and so had control over that already) would return national sovereignty to the U.K. Some in Britain also felt that there were too many migrants from other EU countries coming to Britain to work, and taking British jobs. Brexiteers campaigned hard on leaving and made many dubious promises to Britons about the wonderful things that would happen to them upon leaving the EU. The Brexit referendum passed in June 2016, and the British government began negotiating the terms of its exit, a process that is not yet completed at the time of this writing.

But like the nationalist and anti-immigrant movement in the United States, Brexit too was spawned by opposition to the deterritorializing outcomes of the processes of globalization, leading to a focus on benefits of belonging to a sovereign territorial state. Similar nationalist leaders and governments have come to power in Hungary, Poland, and Brazil. Elsewhere within the EU, elections have been held in which more traditional leaders in Germany, France, and the Netherlands have beaten back anti-immigrant fueled nationalist parties that remain active and continually point out the downsides of globalism and the necessity of asserting national sovereignty.

Does globalization thus mean the end of the territorial sovereign state, as many seem to fear? What is feared and opposed perhaps is less the process of globalization, and more specifically a kind of “globalism,” which might be understood as the idea that decision making has been removed from nation states and handed to transnational, unaccountable global elites who tend to make economic and political decisions based on global considerations, not based on national self interest. In the minds of these critics, “nationalism” and nationalists are the antidote to globalism and globalists.

Angela Merkel, the Chancellor of Germany, strongly disagrees and recently made it clear that global issues require international cooperation to address and solve. In a 2019 New Year’s Eve speech, she said that when Germany takes on a two-year term on the UN Security Council, Germany will

press for “global solutions” to combatting global warming, managing migration, and fighting terrorism. “We want to resolve all these questions in our own interest, and we can do that best if we consider the interests of others. That is the lesson from the two world wars of the last century. But this conviction is no longer shared by everyone today, and uncertainties of international cooperation are coming under pressure.”<sup>68</sup> In her view, global cohesiveness is better than the alternative—global destabilization à la the Great Depression of the 1930s and the world wars that preceded and ended it.

### **Does History Repeat Itself?**

The past may not change, but our understanding of it and of its significance in the present may lead us to reassess or reemphasize certain parts of our historical narrative to highlight contemporary issues that historical perspectives might help clarify or raise questions about. That is what the rise of nationalism and the potential breakdown of the post-World War II global economic system raise for us now: Is it likely that the world could return to the conditions and experiences of the “Thirty-Year Crisis” discussed earlier in this chapter?

To be sure, nationalism and nationalist leaders have taken power in many countries, including the rising powers Russia, China, and Iran, as well as Hungary, Poland, and Brazil. Sometimes nationalist leaders come to power by stoking anti-immigrant fears, or fears about global elites who are trying to undermine a country’s national identity. And as the “Great Recession” of 2008 showed, a global economic crisis is indeed possible.

Are these countervailing trends enough to undo the seventy-year consensus of the post-World War II liberal order and change the course of history? That’s the view of some. Historian Mitchell Learner says that in the United States Mr. Trump’s actions “are not the simple mistake of an ill-informed leader but a blow at the very core of the modern world system.” Kori Schake of London’s International Institute for Strategic Studies says that “Decades from now, we may look back at . . . 2018 as a turning point in world history: the end of the liberal order.”<sup>69</sup> If so, what happens to the globalized modern world? Another round of instability, deglobalization, and interstate war such as the world experienced during the Great Depression of the 1930s?

If the United States becomes increasingly isolationist, will some other country or countries step in to provide global leadership? At one point that looked like the most likely outcome with China’s leader Xi Jinping assuming that mantle at the 2017 Davos meeting, additionally announcing that China

would continue to push the world toward fulfilling the Paris Climate accords, and launching a vast new infrastructure program called the “One Belt, One Road” initiative that lent billions of dollars to countries around the world to build airports, dams, roads, hydroelectric dams, and harbors from Southeast Asia to South America.<sup>70</sup> China has also launched its own multinational development bank that has the participation of Germany, France, Britain, and Australia. In addition, China has proposed that the International Monetary Fund add its currency, the yuan (or renminbi) to the U.S. dollar as the world’s reserve currency. As James Dobbins, a former U.S. assistant secretary of state for Europe concludes, “The real alternative to an American-led rules-based international order isn’t successful (Trumpian) bilateralism. It’s a Chinese-led order.”<sup>71</sup> Another analyst alleges that this is China’s “hundred-year marathon,” a “secret strategy to replace America as the global superpower.”<sup>72</sup>

An even somewhat more worrisome view puts the rise of nationalism into a longer-term historical perspective, looking back to the Thirty-Year Crisis of the twentieth century: two world wars and the Great Depression. How did the world get into that condition in the first place? Mostly the answer has to do with a conjuncture of the rise of virulent kinds of nationalism (especially in Germany and Japan), with a global economic crisis that led not just to the imposition of high tariffs and trade barriers that brought international trade almost to a standstill, but also to a breakdown of the international trading system itself. That contingent outcome is most clearly seen in the case of Japan in the 1930s and 1940s when its leaders understood that they could not rely on the global trading system to assure them access to needed sources of raw materials for their manufactures and overseas markets for their goods, and concluded instead that the only secure sources of raw materials and markets were those that Japan controlled militarily. This calculation led Japan to invade Manchuria in 1931, China in 1937, Indochina and the Dutch East Indies in 1940, and to attack the United States in 1941. It claimed the part of the world it controlled as “The East Asian Greater Co-Prosperty Sphere” ruled by Japan and with Britain and the United States driven from the region. Germany was moving in similar directions, and the Soviet Union was already its own world with “socialism in one country.”

So, the goal of the post-World War II U.S. planners was to forge a world that made it difficult if not impossible for nationalist hatreds and trade wars to lead to great power military conflict and another world war. That was the world they subsequently created, for good or ill, as the narrative in this chapter makes clear, and the world order that many in Europe and the United States think is endangered in one way or another.

We are now living through a great historical conjuncture. The post-World War II order is being challenged. The collapse of centrally planned economies in the former Soviet bloc and China opened the doors for the rapid movement of capital around the world looking for the greatest profits. As factories fled the industrialized Global North for less-expensive labor and fewer environmental protection regulations, unemployment and high incidences of drug use followed in their wake, especially in rural areas. Simultaneously, grinding poverty and violence in many parts of the Global South, also a consequence of globalization, have sent millions of people migrating in search of security and opportunity for themselves and their families. Except for the European Union, which eliminated barriers to the free flow of people among its member countries, globalization has made it safe and profitable for capital to flow across national borders, but many countries have thrown up barriers to people crossing borders. Adding to the stresses of these structural changes, the population of the world continues to climb, likely to reach over nine billion by 2050. And through the collective economic activity of humans, especially since the end of World War II, we are threatening the global environmental basis for a sustainable future for humans on Earth.

#### **Part IV: The Great Departure: Into the Anthropocene<sup>73</sup>**

The dependence of the modern world on fossil fuels is one reason a leading historian has argued that the twentieth century represents a major break with the past and the beginning of a vast, uncontrolled, and unprecedented experiment—a gamble that the fossil-fuel-consuming, twentieth-century way of organizing the globe will not undermine the ecological bases for life on Earth.<sup>74</sup> Twentieth-century American consumerism, Soviet productionism, and third world developmentalism, phenomena that have reverberated globally and shaped all societies in varying degrees, have placed a premium on industrialized economic growth, collectively creating an “anthroposphere” of such size and power as to rival, replace, and rechannel the natural processes of the biosphere. By the end of the twentieth century, humans were already taking 40 percent of the product of the natural process of photosynthesis.<sup>75</sup> We are living in a new era—the Anthropocene.<sup>76</sup>

In very rough terms, the size of the global economy at the beginning of the Industrial Revolution in 1800 was three times larger than it had been three hundred years earlier in 1500. Since then, economic growth has accelerated, tripling from 1800 to 1900. During the twentieth century, the world

economy has become fourteen times as large as it was in 1900, with most of that growth coming since the end of World War II, an era now dubbed “The Great Acceleration” of the Anthropocene.<sup>77</sup>

Economic growth is a rough indicator of our species’ relationship with the environment because virtually anything that counts as “economic” results from a transformation of nature. Mining, manufacturing, and farming are all processes that change some part of nature into something usable or consumable by humans. The more economic development we have, the more we change nature. After World War II, consumerism, productionism, and developmentalism combined to push even more economic growth. The pursuit of economic development has dramatically altered not only global power relations but also the environment and global ecological processes. According to the Millennium Ecosystem Assessment, “over the past fifty years, humans have changed ecosystems more rapidly and extensively than in any comparable period of time in human history, largely to meet growing demands for food, fresh water, timber, fiber, and fuel. This has resulted in a substantial and largely irreversible loss in the diversity of life on Earth.”<sup>78</sup>

Nitrogen-based chemical fertilizer, first manufactured in 1913 as a result of the Haber-Bosch process, now puts as much nitrogen into the environment as all global natural processes; during the course of the twentieth century, human action has overtaken the natural nitrogen cycle. By 1950, four million tons (Mt) of nitrogen fertilizer were used, mostly in advanced industrial countries. By 1970, thirty million tons were used; by 1985, that had increased to seventy million tons, and by 2000, to eighty million tons, with partial diversification to more countries beyond the industrial core. Significantly, 70 percent of that use is in just three countries: China (25 Mt), the United States (11 Mt), and India (10 Mt). Most of this fertilizer is used in agriculture, but a significant amount of that is for feed for animals that are raised for meat and dairy (cattle, milk cows, pigs, and chickens), and increasingly after World War II for suburban American lawns.

Not only does the amount of reactive nitrogen produced by humans in factories now exceed that produced by nature, it exceeds the amount that can be taken out of the biosphere by the action of denitrifying bacteria. What that has meant is that nitrate runoff gets into the water and air that humans and other animals need to live, and can kill them if ingested in sufficient quantities, as happened on several farms in the United States and with “blue baby syndrome” when nitrates got into well water.

Like nitrogen, life on Earth requires another chemical element, phosphorous (P). The two strands of our DNA helix are held together by a phosphate

ester bridge, without which life could not exist. Also like nitrogen, humans and other life forms get their phosphorous by consuming what to us is food, in vegetable and meat form. Unlike nitrogen, however, phosphorous is mostly locked up in various rock strata in an exceptionally slow-moving natural global cycle that relies on the weathering of rock and the decomposition of organic materials to replenish phosphate to the soil.

Farming depletes phosphorous from the soil, and as food is shipped from rural farming areas to urban centers of consumption, the available supply of naturally occurring phosphorous declines. In the biological old regime, farmers solved this problem by recycling human and animal waste. Unlike nitrogen, though, phosphorous is mostly concentrated in urine rather than feces. Two biological old regime farming systems that successfully recycled phosphorous via captured human urine were in China and Japan. In Europe, the depletion of phosphorous from the soil was temporarily solved in the mid-nineteenth century with the application of guano mined from islands off Peru (see chapter 5 for that part of the story). When those sources dried up in the early twentieth century, mined phosphate rock became the major source of phosphorous for combination with nitrogen in manufactured fertilizer. Unlike nitrogen, though, phosphorous cannot be manufactured out of thin air. Its supply is limited to sources that can be mined in deposits that are unevenly spread around the Earth's surface, and there are fears that its production is not only limited but may have peaked and will begin declining by 2030, although that scenario is highly debated.<sup>79</sup>

Nitrates and phosphates have polluted streams, rivers, aquifers, and the ocean, leading to algae blooms in freshwater and “dead zones” in oceans in a process known as “eutrophication.”<sup>80</sup> Nitrates also enter the air and are the cause of the smog in Los Angeles and other cities when inversions keep it trapped close to the ground and it gets baked by sunlight into the brown haze of nitrogen dioxide (NO<sub>2</sub>). To deal with these environmental problems, the UNITED STATES and state governments have enacted standards limiting the amount of nitrates allowed in drinking water and a tide of laws trying to limit the amount of nitrates that pollute the land, air, and water.<sup>81</sup>

Is it too late? The Stockholm Resilience Center has identified nitrogen and phosphorous loading into the environment as two of the “Nine Planetary Boundaries” that we on Earth have already moved beyond,<sup>82</sup> but there are actions that can be and are being taken to limit and then reduce the release of N and P into the environment.

The dual concerns of both the limited supplies of phosphorous and the environmental impact of their seepage into aquatic ecosystems has led even

fertilizer industry groups to seek ways of recycling and reducing the use of phosphorous in chemical fertilizers to become more sustainable over the long term. Whether that succeeds or not remains to be seen, but there are experiments in the United States with collecting and recycling human urine on Vermont farms, with urine-diverting toilets in India and Sweden, and with treated urban wastewater that fertilizes 25 percent of the vegetables finding their way to urban tables in Pakistan.<sup>83</sup>

By contrast, almost no synthetic nitrogen or phosphorous fertilizer is used in Sub-Saharan Africa, the poorest place on Earth.<sup>84</sup> There and elsewhere, increasingly poor farmers with no money for artificial fertilizer, irrigation, or high-yielding seeds remain trapped within the biological old regime and increasingly use up natural resources to sustain their lives, further impoverishing their environment. Poor rural populations burn forests, grasses, or anything else for cooking, heating, and lighting—survival—further impoverishing both their environment and themselves. It's not just industry that transforms the global environment but rural poverty too.

Some suggest that new technologies such as biotechnology, computers, and the Internet might foster the needed economic growth that will break the grip of poverty, touting for example the liberating effects of the mobile smartphone, while reducing the impact on the environment. Manufacturing computer chips or manipulating genes uses very little raw material compared, say, to locomotives or ships. But without electricity, the computer and biotechnology worlds could not exist. Indeed, the world's energy use in the twentieth century parallels the century's economic and population explosions, with sixteen times as much energy being used in 1990 as in 1900. One analyst calculates that humans used more energy in the twentieth century than in all the 10,000 years from the agricultural revolution to the Industrial Revolution. Coal and steam fired early industry, but the twentieth century is the oil era, fueling the spread of both the automobile and power plants for electricity. Much electricity is generated by coal, and the combination of burning oil, gas, and coal—all nonrenewable “fossil fuels”—has led to global warming.

Global warming is caused by the release of greenhouse gases into the atmosphere, notably carbon dioxide from burning coal and gas, but also sulfur dioxide, from the industrial processes let loose by human action. Methane from irrigated rice paddies and animal herds also contributes to global warming.<sup>85</sup> Although dust in the atmosphere from volcanic eruptions, as well as sulfur dioxide, may have mitigated global warming in the nineteenth century

and the first half of the twentieth century, it is clear both that global temperatures have increased over the course of the twentieth century to the present and that this rise in temperature has “tracked the dramatic rise in the volume of greenhouse gases. . . . CO<sub>2</sub> had reached 295 ppm [parts per million] by the 1890s . . . and to 310 ppm as of World War II: since 1945, it has surged to 385 ppm, and shows no signs of slowing.”<sup>86</sup> As noted in the introduction, it has already passed 400 ppm.

To address the problem of global warming, over the past twenty years the United Nations has convened several conferences to get the sovereign states of the world to cooperate in setting limits to the emission of greenhouse gases, starting with the Kyoto Summit in 1997. Getting agreement among the independent states has been difficult, at first because developing countries led by China and India complained that limiting their use of fossil fuels for energy production would hinder their economic development, and because the U.S. Congress refused to ratify the Kyoto agreement. In 2015, though, it appeared that a breakthrough had been achieved, preceded by a prior bilateral agreement in 2014 between the presidents of the United States, Barack Obama, and of China, Xi Jinping, to limit and then reduce their greenhouse gas emissions by 2030.<sup>87</sup> With the leaders of the two countries responsible for 40 percent of the entire amount of carbon dioxide released into the atmosphere, and hence for global warming, agreeing to sign the Paris accords, 174 other countries (plus the European Union) signed onto that agreement. At the December 2018 Katowice (Poland) Climate Change Conference (also known as COP24), the participants agreed to a range of matters necessary for implementing the Paris Agreement,<sup>88</sup> the one that U.S. president Trump has pulled out of.

The effects of rising average global temperatures to date have been felt mostly in polar or cold regions with melting glaciers and thawing permafrost. A greater danger, though, is that it is not known how much more global temperatures will rise and whether the rise at some point will have a sudden, unexpected, and catastrophic consequence. That is why climatologists have set 1.5C as the safe limit for an increase in global temperatures. Rising ocean levels are already causing problems in Alaska, low-lying Pacific Islands, and Bangladesh and threatening coastal areas everywhere, even Boca Raton in Florida. Not everyone will be adversely affected by global warming. Some parts of the world might see the growing season lengthened and agricultural output grow, assuming rainfall patterns aren't also disrupted. What the world has seen is increasingly variable weather patterns probably caused by global warming: more intense rainstorms, tornados, typhoons, and hurricanes; and



higher summer temperatures in many places, and colder lower winter temperatures, among other kinds of highly variable weather events.

Human activity in pursuit of economic growth and development has affected other natural processes as well. Besides disrupting the nitrogen cycle and global climate, humans have ripped up vast swaths of the Earth's surface for the coal, copper, gold, bauxite, and other natural resources that lie beneath. Cropland now takes up 20 percent of the Earth's total landmass, and nearly every river has been dammed, with humans controlling half of the world's freshwater drainage basins. Acid rain sterilizes lakes in the eastern United States, northeast China, and Japan. Lakes and oceans fill with nitrogen fertilizer runoff and bloom with algae, sucking oxygen from the water and creating dead zones. Additionally, expanding consumption of beef has increased the global cattle population to two billion eating, drinking, defecating, and gas-emitting animals that also contribute to global warming.

Forests in general and tropical forests in particular contain the most plant and animal species of any other ecosystem. The loss of forests thus correlates with the extinction of other species as well. In fact, since so much forest has been lost since the end of World War II, so too has the world lost increasing numbers of other species in "the Great Acceleration" of the Anthropocene. Some biologists are now calling this spasm of anthropogenic species loss "the sixth mass extinction" and an "extinction crisis," with species loss at hundreds of times the natural rate. Alarming, as many as 30–50 percent of all species may be heading toward extinction by the middle of the twenty-first century,<sup>89</sup> and the number of animals has declined by 60 percent between 1970 and 2014.<sup>90</sup>

In addition to supporting a large number of plant and animal species, forests and forest soils are one of the great sinks for carbon, taking carbon dioxide out of the atmosphere and transforming it through photosynthesis into cellulose, a major component of wood. As forests disappear, so too does one way natural processes removed carbon dioxide from the atmosphere, making our challenges in dealing with global warming all the more complicated. Moreover, scientists are beginning to understand that trees and forests are much more complex living things than previously thought, with relationships with other trees and species traced through root systems, and abilities to send signals (communicate) to other trees via scents and vibration.<sup>91</sup> We are beginning to see forests as living organisms,<sup>92</sup> the loss of which saddens humans as much as the extinction of snub-nosed monkeys or tigers.

Logging and farmland expansion denude vast rain forests in Africa, Asia, and Latin America, altering local climates and driving thousands of species

to extinction. The chainsaw has become an exceptionally destructive force since the end of World War II. To be sure, people have been burning or cutting down trees since the end of the last Ice Age and the beginning of agriculture 10,000 years ago. Advanced biological old regime economies in China and England, for instance, had effectively deforested their lands by 1800. The pace quickened in the nineteenth century with the felling of North American, Russian, and Baltic forests, before slowing with war and the Great Depression in the first half of the twentieth century. But the fifty years after the end of World War II have seen the most ferocious attacks on forests in human history: *half* of all deforestation in human history has occurred in the last half century, prompting historian Michael Williams to call it “The Great Onslaught.”<sup>93</sup> Nearly all of that recent deforestation has been in the tropical zones of Africa, Asia, and Latin America, where most of the world’s poor live. With the loss of thousands of animal and plant species, natural ecosystems are being radically simplified and hence becoming less diverse and resilient.

The result, in the words of climatologist William Ruddiman, is that “humans have now become the major environmental force on Earth.”<sup>94</sup> Historian John L. Brooke agrees:

The arc of history since the end of the Second World War constitutes a fundamental new departure in the human condition. . . . The Anthropocene has arrived . . . in the course of single lifetime, since the end of World War II. The rapidity of this change is sobering, but its blinding speed may suggest that humanity can—and should—change course in yet another lifetime.<sup>95</sup>

The effect of human technologies reconfiguring the biosphere has had a massive effect on other species. Those selected by us multiply (e.g., beef cattle), while the populations of wildlife species have declined dramatically—there are now 50 percent fewer wild animals than there were in 1970<sup>96</sup>—and many have been driven to extinction. The role of human action in driving species extinction is now so great that it exceeds that of natural processes, leading many analysts to call the current situation “the sixth extinction,” indicating that the rate of species extinctions now caused by humans is equivalent to the five previous natural episodes of mass species extinctions in Earth history.<sup>97</sup> The loss of biodiversity not only has adverse environmental effects: anthropogenic species extinction is arguably immoral.

Will it be our fate to poison our world with the unwanted pollutants of the industrial world? Will “island Earth” go the way of the Easter Islanders,

who used up their natural resources and saw their population decline and descend into warring, cannibalistic groups huddling in cold, dark caves?<sup>98</sup> If the world we live in is contingent upon what has happened in the past and the choices that people made, then so too is the future contingent upon choices and actions we make today. To be sure, the two major problems the world faces are daunting: on the one hand, providing a decent standard of living for a rapidly growing world population; and on the other, halting and then reversing the degradation of the environment caused by twentieth-century models of industrial development. Is the modern world, structured as it is, capable of addressing these global problems? Maybe.<sup>99</sup>

The fundamental problem is the prevailing view of the relationship of global economic growth to the environment.<sup>100</sup> Economic activity, which is essential for humans to exist, has always been dependent upon and hence part of natural processes. The major difference between the past century and all preceding human history is that the earlier human impact on the environment was so small or so local that modern economic theorists (beginning in the eighteenth century) developed models of how the world works that do not account for the uses or services to humans of the natural environment. In the twentieth century and to this very day, advocates of global free trade, developmentalism, consumerism, and (until recently) productionism assume that the global economic system is separate from the global ecological system.<sup>101</sup> That is proving to be a colossal mistake. The biosphere and the anthroposphere became inextricably linked during the twentieth century, with human activity increasingly driving biospheric changes in directions that can neither be known nor predicted. Albert Einstein once famously said that God does not play dice with the universe; apparently the same cannot be said about humans and the Earth.

## Conclusion

The last century thus marks a major departure from the past in regard to the relationship of human beings to the global environment, and, relatedly, in terms of the number of humans on the planet. Neither of these were intended outcomes of the modern world, and we may well wonder whether the constituent elements of that system—sovereign territorial states linked globally by free markets that foster continued economic “growth” at the expense of protecting the environment—are capable of addressing the global issues that they raise for all of us.

The last century also marked a departure in the shift of the locus of global wealth and power from the West European core to the United States. Some have argued that the twentieth century thus was the American Century. To be sure, the United States had the largest and most productive economy at the beginning of the century, although few understood it at the time. It took the profound Thirty-Year Crisis of two world wars and the Great Depression to prepare the United States to step up to the leadership position in the capitalist world system. And when it finally did after World War II, challenging it was the Soviet Union, which like the United States had devoted massive resources to defeating Nazi Germany. Indeed, one could make the claim that the twentieth century was as much a Soviet Century as an American one, for without the Soviet Union, there is little about the course of the twentieth century that would have been the same.<sup>102</sup>

Moreover, labeling the twentieth century an American Century obscures the rise of East Asia over the past forty years. Japan's economic resurgence after World War II; the Chinese communist revolution, which led first to a powerful military and now to an industrial economy; the industrialization of the "Four Tigers"—Taiwan, South Korea, Singapore, and Hong Kong (and the democratization of the first three); coupled with changes in India and Southeast Asia, have shifted the global center of both economic production and population back toward Asia. After the United States, the next two largest economies in the world are in East Asia—China and Japan.

Indeed, the rise of China's political, military, and economic power constitutes a challenge to U.S. interests and influence in Asia, and there seems to be little doubt that China intends to assert its historic weight in East Asia and increasingly elsewhere in the world.<sup>103</sup> That may make Japan, Korea, and Vietnam uneasy and prompt them to seek close ties to the United States, bringing rising tensions between the United States and China. But in contrast to the Cold War between the Soviet Union and the United States, where there was little trade between the two, each year China sells a hundred billion dollars' worth of manufactured goods to the United States, making it a major trade partner. And while the United States sells much less to China, it does invest there, and Chinese imports help to hold down the cost of living in the United States. The world may well be witnessing the beginning of an "Asian Century," although whether it will be one with Chinese or Indian characteristics remains to be seen. China is following the tried-and-true method of a strong state driving rapid economic growth for global strategic purposes and has little interest or desire in taking its citizens' views of the

process into account. Indeed, China is so confident of its model of development that it is exporting it. In the words of Francis Fukuyama, “an historic contest is underway over competing development models—that is, strategies to promote economic growth—between China, on the one hand, and the US and other Western countries on the other. Although this contest has been largely hidden from public view, the outcome will determine the fate of much of Eurasia for decades to come.”<sup>104</sup>

In India, on the other hand, a democratic state has opened its economy to global forces, and because it is democratic, the Indian government does listen to the voices of its rural population. As a result, there are now more well-to-do individuals living in India’s 650,000 villages, and there is less pressure to migrate to the cities. So far, India’s economic growth has been slower than China’s, but its democratic institutions may make change deeper, better supported, and more widespread than is the case in China, where an authoritarian system suppresses the voices of the rural poor.

To the extent that the twenty-first century witnesses the “rise of Asia,” world history may well revert to the previous pattern of the dominance of Asia from 1400 to 1800. But will it be the same Asia, appearing penitence-like through the layers obscured by European and American dominance of the last two centuries? No. For just as the re-creation of an Islamic caliphate is not possible, so too the world will not see Asian empires based on productive agricultures, as was the case in the early modern world (see chapter 2). The world has so changed that the secrets of wealth and power are unlocked by powerful states directing industrial economies. Whether China, India, and the rest of the developing world will be able to pursue the oil-dependent, car-and-consumer culture of the United States, though, is open to question given the increasingly obvious environmental costs of following that path.

In the long run, then, the question of who will “own” the twenty-first century may well shrink in importance as our changed relationship to the Earth’s environment rises in significance. For it was not just the industrialization of the capitalist world that contributed to that “Great Departure,” but so did the productionism of the communist model, the developmentalism of India and China, and the rural impoverishment of much of the third world. Intentionally or not, we are all exhausting the Earth.<sup>105</sup>