

CHAPTER 8

From Regional Wars to Global Conflict, 1936–1946

In the historic Chinese city of Nanjing in 1937, the German businessman John Rabe witnessed what he considered to be indescribable and inexplicable atrocities committed by Japanese soldiers against the civilian population and against Chinese prisoners of war. By dozens and often by hundreds, helpless people were lined up before trenches, shot, dumped, and buried, whether alive or dead. Men were lined up with their hands tied behind their backs and slaughtered. Women were raped by marauding Japanese soldiers, then bayoneted. Babies were torn from their mothers' arms and tossed into the air to be impaled on swords or bayonets. Japanese officers hunted down Chinese men on the streets and beheaded them for sport.

Rabe was sickened by the violence and hoped to intervene. He imagined that he would be in an influential position because his nation, Nazi Germany, was an ally of Japan. But Rabe found that his reports were ignored. He appealed to U.S. missionaries for help in getting out the word about the atrocities in Nanjing. At every step his actions were frustrated, but he continued his attempts to restrain the Japanese soldiers and help the Chinese victims.

Unknown to Rabe, in Hungary the Japanese ambassador, Sugihara Chiune, was attempting his own efforts to relocate Lithuanian Jews. Sugihara had heard rumors of a planned systematic elimination of Jews and Slavs by the expanding Nazi regime, and he arranged passports that allowed nearly five thousand of the Hungarians who were most likely to become victims of the Nazis to escape to Shanghai. It was ironic that Shanghai was available as a haven for Sugihara's protégés only because Japan had occupied the city in 1937 after a series of brutal

invasions of Chinese cities by Japanese troops and prolonged urban warfare against Chinese defenders.

During The First World War I Sugihara and Rabe were among those who risked their comfort and at times their lives to intervene in what they saw as a widening and increasingly irrational network of degradation, enslavement, and death. They were not as well known in their time as the American Varian Fry, who helped scientists, artists, and writers escape from occupied France. Nor did they gain the international reputation of the Swedish diplomat Raoul Wallenberg, who actually went behind Nazi lines to escort prospective victims to freedom, and who died in Soviet detention after the war had ended. The many Europeans who protested the stigmatizing of Jews and who sheltered Jews in their homes were not known by name. Some German businessmen and even civilian officials throughout Europe helped to rescue Jews by passing on information to the resistance networks. Other remarkable incidents in Hungary, the Netherlands, Denmark, Bulgaria, Italy, and Finland demonstrated the general truth that individuals could act humanely in the midst of very dangerous and apparently unstoppable madness.

One of the most important instances of German civil resistance occurred in 1943, in the Rosenstrasse district of Berlin. Nearly two thousand men who had been identified as Jews who were married to women identified as “Aryan” were detained and marked for deportation to concentration camps. Their wives, families, neighbors, and sympathizers began to gather outside the building where the men were being detained, and the women began a sit-down demonstration that eventually attracted as many as six thousand protesters. Orders from the police to disperse were ignored, as were threats of arrest and gunfire directed over the heads of the women. In the end the local official, Josef Goebbels, agreed to release the prisoners. The released men were never rearrested, and nearly all of them survived the war.

The numbers of lives saved in actions such as these, nevertheless, do not compare with the horrific slaughter that proceeded in areas where civilians did not bother to protest. Though nearly all Danish Jews survived the Nazi occupation of their homeland, their total numbers were less than eight thousand. In Bulgaria, nearly fifty thousand Jews were rescued. These numbers have to be compared to the millions of Jews—perhaps as many as six million—who are known to have been executed or died of hardship under Hitler. And, as we will see below, the murder or removal of the Jewish population of Europe was only a part of the many mechanisms by which the Second World War produced a death toll of 70 to 100 million people.

The Wars of the Northern Hemisphere

When the Second World War came to a conclusion in 1945, large parts of Europe and Asia were in ruins, and the whole world was on the verge of political transformation. The causes of the two regional wars were vaguely connected by the effects

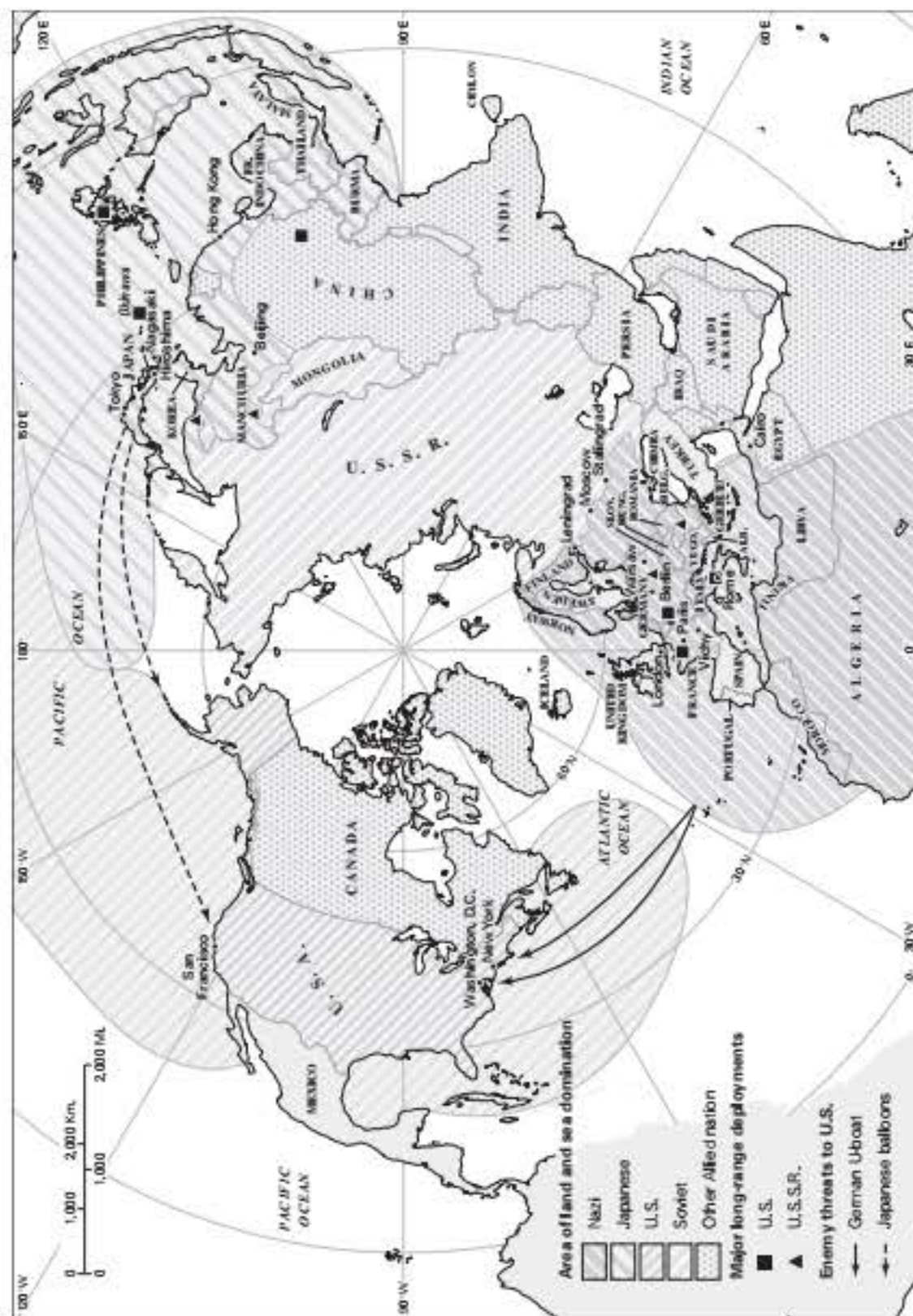
of the First World War and the global economic difficulties of the 1930s. But they became linked into a world war because of the participation of two countries that, in their geographical and political spans, united the Atlantic and the Pacific: the Soviet Union and the United States of America (see Map 8.1).

Although the roles and ambitions of the United States and the USSR in the later years of the war were similar, their experiences in the war contrasted starkly. One great difference was in the sheer numbers of people lost. Deaths in the Soviet Union are thought to have been roughly twenty million, somewhere between twenty-percent and forty-percent of the total losses in the war. Half of these were soldiers, but half were noncombatants who died of starvation, illness, exhaustion, and cold. Russians not only fought in Europe and in Asia but also experienced the horrors of having the war brought to their own cities and villages. The number of deaths among citizens of the Soviet Union was higher by far than the number for any other country—the next highest number of casualties, in China, may have been only half as great as the Russian losses. Germany's total deaths, in turn, were probably about half of China's, and Japan's about half of Germany's. American fatalities, in comparison, were probably around four hundred thousand—about one-fiftieth of the Russian cost (see Figure 8.1). Despite the enormous contrast between the USSR and the USA, these two nations in many ways defined the Second World War: They shaped not only the end stage of the war, but the political contours of the entire world for decades afterward.

The First War: Japanese Invasion of China

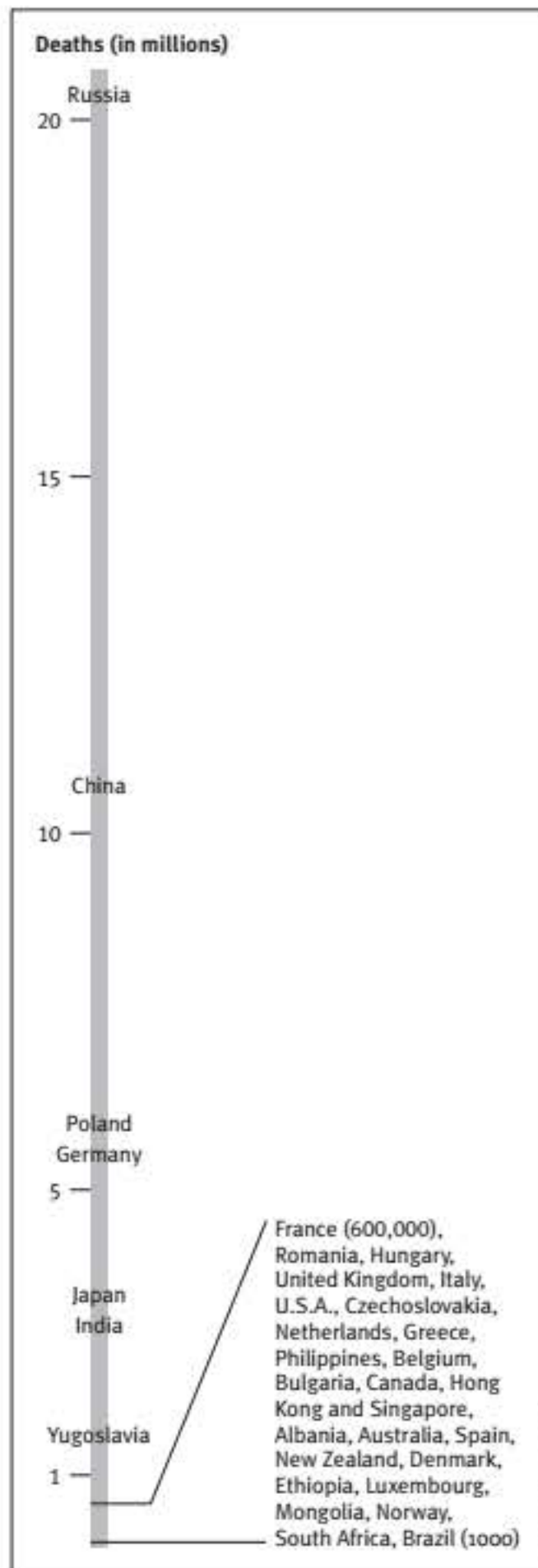
When militarists in Japan finally achieved total control of the country in 1937 and created a government headed by Prince Konoye and General Hideki Tojo, they felt that the time had come to mount a massive invasion of China. Some Chinese military leaders understood the urgency of forming a united front—a temporary alliance—between the Nationalists and the Communists. But during the middle 1930s, China's leader Chiang Kai-shek had the fixed idea that the Communists would have to be eliminated before effective resistance could be mounted against Japan, which had already seized the resource-rich and industrialized region of Manchuria and converted it into the puppet state of Manchukuo. A Chinese warlord who had been a supporter of Chiang Kai-shek was so overcome with disgust at the ineffectiveness of the Chinese war effort that, in 1936, he kidnapped Chiang from a rural command base and flew him to forced negotiations with the Communists. Chiang promised to cooperate with the Communists against the Japanese. But in fact it was not until the gruesome events of the Nanjing Massacre that the Chinese side was galvanized into focusing on the war against Japan.

Chinese cities and the countryside were open to Japanese assault from the air and with heavy artillery, and the Japanese had effective troop transport by rail and by motor vehicle. China's best hope was intervention by a force capable of containing or reversing the momentum of the Japanese conquest. The nearest real prospect was the Soviet Union, which had been friendly to both



MAP 8.1 The War of the Northern Hemisphere.

Prior to 1941, the two regional wars in East Asia and in Europe were distinct. Beginning in 1941, the involvement of both the USSR and the United States as combatant nations meant that the entire Northern Hemisphere was at war. As this map suggests, the USSR mostly fought a defensive war, keeping its forces within its own borders. The United States was most involved in sustained, long-range deployment of troops and weapons and least vulnerable to attack from enemy forces.



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FIGURE 8.1

Comparative death rates during World War II (numbers on the left represent deaths in millions). These are very general numbers; the conditions under which people died during the war make the exact numbers a continual source of disagreement among historians.

the Chinese Communist Party and the Nationalist government. In 1936 Germany and Japan signed a pact of alliance against the international communist movement—the Comintern—which in practice meant that they were both enemies of the Soviet Union. In 1939, Japan and the Soviet Union engaged in several battles in Mongolia, where both were rivals for dominance. The Japanese were decisively defeated there, and afterward they focused their attention on China even more intensely.

Not only were Chinese hopes in 1939 for intervention by the Soviet Union realistic, but the signs were very encouraging. The Soviet Union was a leader in the development of tank technology and had shown a willingness to deploy its tanks abroad during the Spanish Civil War. Unfortunately for the Chinese, Stalin unexpectedly concluded a nonaggression pact with Germany in 1939, and this seemed to eliminate finally any hope of Soviet intervention on behalf of China against Germany's ally, Japan. As a result, the United States was China's only real hope. While U.S. opinion gravitated toward support of China, the Nationalist Party, and Chiang Kai-shek, the U.S. government resisted providing direct support. One reason was the series of Neutrality Acts drafted and passed by the U.S. Congress between 1935 and 1939. Japan continued to expand its control from Shanghai and Nanjing westward along the Yangtze River, and from Manchuria westward toward Beijing.

Germany's Expansion in Europe

Chapter 7 described how the economic pressures of the 1920s and very early 1930s fostered authoritarian political movements in Europe. In Spain, a government attempt to ease economic difficulties through socialist land reform policies incited a rightist backlash that culminated in a coup d'état by General Francisco Franco in 1936. Franco intended to smash the socialist movement by imposing a military dictatorship and reinstating the power of the Catholic Church. As civil war between the Spanish Republicans and Franco's Falangists split the country, other nations in Europe chose sides. The pattern of alliances foreshadowed the pattern of the Second World War: Italy and Germany supported the Falangists, and German air forces bombed the Basque town of Guernica, whose sufferings were immortalized in the painting of the same name by Pablo Picasso. The USSR supported the Republicans, and Britain and France were neutral. In 1939, Franco forced an agreement on the Republicans and became leader of the country for the rest of his life.

Italy and Germany were surprised and encouraged by the lack of reaction from Britain and France to the Spanish conflict. By the 1930s Mussolini was attempting to resolve some of Italy's persisting problems by advocating—and, when possible, practicing—aggressive military expansion. In 1935, Italy invaded Ethiopia. Mussolini was careful not to step on the toes of Britain (which dominated Egypt) or France (which had colonized Algeria), and so those countries shrugged off the invasion of Ethiopia. The lesson was not lost on Hitler, who realized that a large war in Europe would inevitably encompass



The Art Archive/Corbis

Guernica by Pablo Picasso. In late April of 1937, Fascist forces in the Spanish Civil War destroyed the Basque town of Guernica (in northern Spain) by aerial bombardment. In Paris, the Spanish painter Pablo Picasso was inspired to paint this mural, full of images of chaos, wanton death, and victimization, on the walls of the Spanish Pavilion at the Paris Exhibition. Completed only three months later, the painting was popularly received as a protest against both the brutality of the attack and the Fascist overthrow of the elected Spanish government.

North Africa too, including the Suez Canal in Egypt. In March 1936 Germany confronted its neighbors with a more direct action than Italy's: It occupied the Rhineland, which it had been explicitly prohibited from doing by the provisions ending the First World War. There was no protest from other governments; as a result, Hitler was convinced that he had implicit permission from his European rivals to continue to arm and expand. On July 19, 1936, he formalized an alliance—the Axis—with Italy.

In March 1938, Hitler's forces occupied Austria—also prohibited under the provisions ending the First World War. Hitler then demanded permission in advance to conquer Czechoslovakia, and British Prime Minister Neville Chamberlain agreed, ratifying the occupation at the Munich conference. Hitler then turned his sights toward Poland. The most important acquiescence now came from the Soviet Union, which proceeded to sign the mutual nonaggression pact with Germany in August, 1939. In return, Germany approved of the Soviet Union's invasion and occupation of Finland. But this time, Britain and France did not agree so easily. They opposed the invasion of Poland by declaring war on Germany, although it was nearly a year before either Britain or France took any military action at all.

Memories of the horrors of the First World War, combined with the economic constraints of the worldwide depression, evidently caused leaders in Britain and France particularly to seek to avoid another war at all costs. In addition, there was a certain ambivalence about fascism. As we saw in Chapter 7, the economic crises of the early 1930s had been met in a variety of ways by assertive, highly

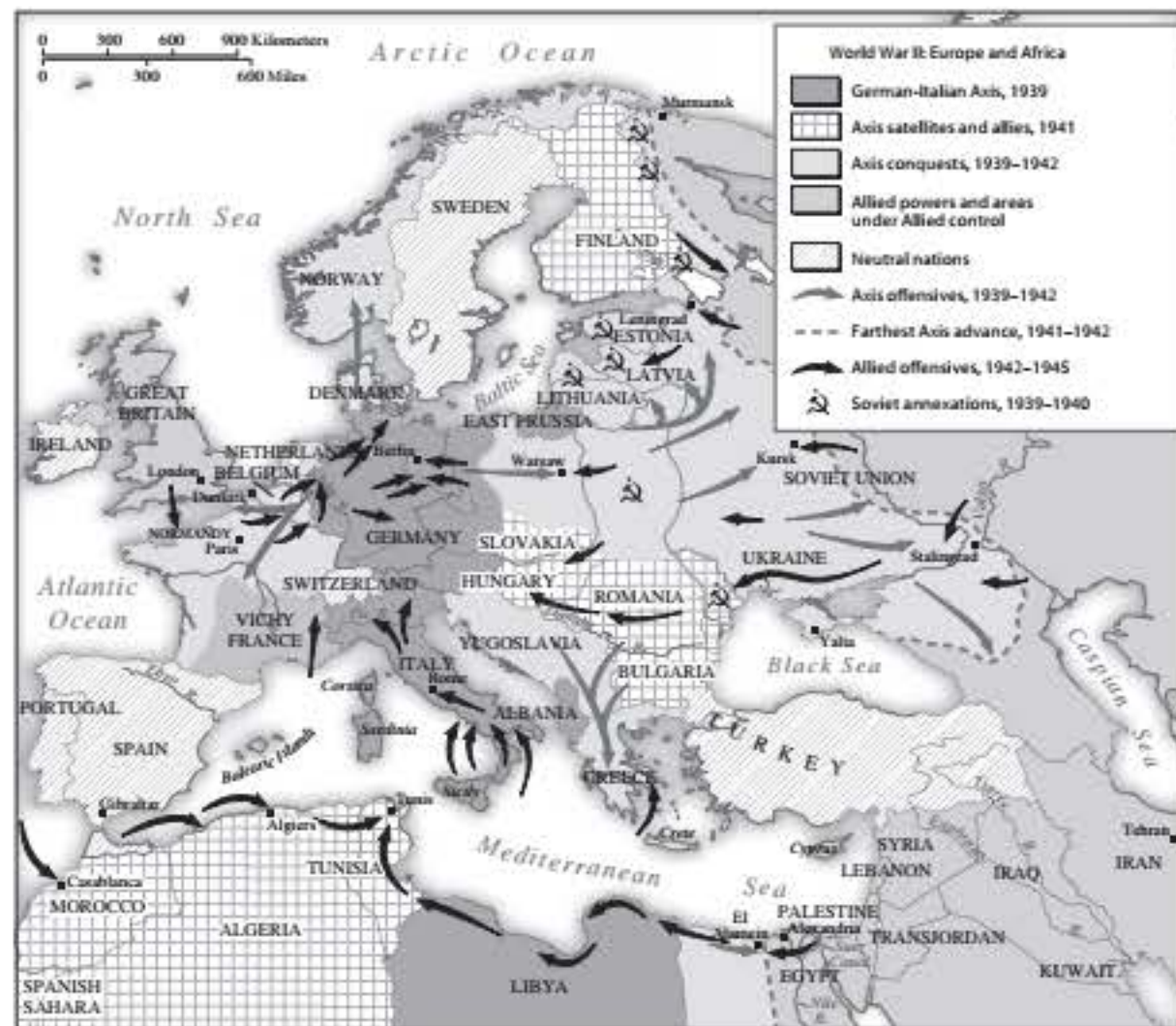
centralized governments, many of which used authoritarian policies to suppress political reactions to social and economic distress. Most of the European democracies, and the United States as well, had some sort of Fascist movement, even if it was marginal or short-lived. Although Hitler's Fascism added a strain of racism (a political combination that was first practiced in Romania in the 1920s), which had not been very important in Spanish or Italian Fascism, it was nevertheless regarded by many foreign observers as a tolerable response to Germany's social and economic ills.

Britain's attitude toward Hitler was in many ways reinforced by that of France, which was much closer to Germany and obviously would have been more easily threatened by German aggression. France had suffered profound material destruction during the First World War, resulting in agricultural underproduction and endemic housing shortages through the 1930s. Nevertheless, it was France that mounted the most expensive and most sophisticated technical military project of the time, one that seemed to make aggression from the direction of Germany almost impossible: the Maginot Line, completed in 1938. This phenomenal project involved a series of underground fortifications, superbly armed, encased in impenetrable concrete, and designed for long-term secure habitation, even being air-conditioned for comfort. These underground cities were connected by huge tunnels, essentially underground highways, that also included full-scale railway lines.

The amazing scope and technical innovations of the Maginot Line seemed to ensure that Germany could never again advance westward from the Rhineland into France or beyond to Britain. This fantasy of complete safety provided by the Maginot Line was punctured in 1939 when Germany rapidly destroyed Poland's formidable military resources, then rolled through and occupied Denmark, Norway, and the Netherlands. Finally, in April, Germany conquered Belgium and exposed the greatest fallacy of the Maginot Line: They had simply cut through the great Ardennes forest in Belgium and gone around the huge but immobile defense system.

With enormous numbers of infantry troops, with tanks that maneuvered very rapidly, and with innovative air power provided by the Stuka dive bombers, a German force of nearly five million combatants was now poised for a full invasion of France in June of 1940. British troops stationed in France and Belgium recognized the futility of engaging the German forces and beat a retreat to the port of Dunkirk, where German forces intended to apprehend them. But the British admiralty cobbled together an expedition of naval ships, fishing boats, and private craft that crossed the English Channel and rescued nearly two hundred fifty thousand British, French, and Belgian fighters before the Germans closed in.

French leaders surrendered two-thirds of the country to direct control of Germany and created an occupation government at Vichy to administer the remaining third of France and all of Algeria under the direct authority of Hitler. Marshall Philippe Pétain, one of the towering French national heroes of the First World War, signed the agreement that gave France to Germany in the same



MAP 8.2 World War II in Europe and North Africa.

Before the United States entered the European theater of the war in 1942, virtually all of Europe and North Africa was either under the control of the Axis powers Germany and Italy or had claimed neutrality. Britain was the only unoccupied country actively opposing the advance of the Axis. The arrows here show the major campaigns of 1942-1945, with the Allies north and west from the French coast and from the Mediterranean, while the Soviet Union came in from the east.

railway car in which German representatives had signed the armistice that had marked their surrender in The First World War. Those French leaders, including Charles de Gaulle, who opposed the surrender and were able to escape the country set up a French government-in-exile in Britain.

Clearly, Britain was Hitler's next target. Greece joined the British side by fighting Germany's ally, Italy, and by providing information and support to British forces whenever possible. But by early 1941, Greece was overwhelmed by the two-pronged German sweep through the Balkans and North Africa. Now Britain stood alone as the only nation in Europe opposing the Axis forces. The British government, led by the new prime minister, Winston Churchill, turned to the United States for support.

First Steps to a World War: The Soviet Union

The Soviet Union was the link between the European/North African war to its west and the Japanese/Chinese war to its east. Like the nations flanking it, the Soviet Union was in social crisis and in economic disarray in 1939. Hitler was aware that the Soviet Union was militarily formidable, and that it would not be reluctant to mobilize its forces in Eastern Europe. Hitler also knew that his virulent persecution of communists had made the Soviet Union leadership wary of him. Indeed, in 1935 Stalin had signed mutual assistance pacts with both France and Czechoslovakia to prevent Nazi expansion. To further his conquests now, Hitler had to not only avoid a conflict with the Soviet Union in the east but also prevent the Soviet Union from intervening in German campaigns in Western Europe.

To Stalin, accommodation of Hitler was as important as it had been to Chamberlain. Stalin was continuing to suppress opposition at home and force industrialization, but his control was tenuous. He knew that his society could not be mobilized to face devastation on the scale it had experienced in the First World War. Thus a solution to both sides' problems appeared to be found when they signed their nonaggression pact in 1939. The public provisions of this pact stated that neither country would attack the other, which meant that Hitler was free to concentrate his forces on his western front. Its secret provisions were that when Hitler conquered Poland, the Soviet Union would move to occupy eastern Poland, Lithuania, Latvia, Estonia, and part of Romania. All these things followed in early 1940. Finland, which bordered the Baltic republics, soon found Stalin's tanks at its borders; it briefly resisted the Soviet invasion before being conquered in 1941.

The Western European leaders and both Mao and Chiang in China were outraged at the Soviet actions. Hitler and the Japanese militarists were allies. Therefore, in the view of Chinese leaders, the Soviet Union should have refused to sign a pact with Nazi Germany. But Stalin replied that the British refusal to block Hitler's invasion of Czechoslovakia had left the Soviet Union no choice. It could not single-handedly contain Germany, and it could certainly do little except defend itself against Japan in Siberia and the Maritime Province.

Stalin knew that he had only bought time with Hitler because it was absolutely necessary for Hitler to gain oil for his armies and airplanes. And while Germany had no direct source to major oil deposits, the Soviet Union did: the supremely productive oil fields of the Caucasus region, particularly the city of Baku on the Caspian Sea. About 90 percent of all Russia's oil came from this region. Stalin knew that Hitler coveted the Baku resources, and that if the USSR refused him the oil, he would abandon the partnership. In Britain and the United States, too, analysts were alarmed at the possibility that through his connection to the USSR, Hitler might now have access to unlimited oil supplies.

When, in June 1941, Hitler indeed invaded the Soviet Union, his plans for moving toward Baku were already in place. In 1942 German troops seized the

less productive portions of the oil wells of the Caucasus, and Hitler ecstatically celebrated what he thought was his coming oil supremacy. But in fact Hitler had made a tactical error in dividing his armies between the Caucasus expedition and the simultaneous invasion of northern Russia. Nearly four million German and Axis troops under Hitler's command swept into the Ukraine, a portion of them ultimately heading for Stalingrad. The Soviet forces drew back, taking with them all the supplies, weapons, and building materials they could carry. They burned everything they left behind, giving the Germans nothing that they could not bring with them. By the winter of 1942, the Axis forces had been surrounded outside Stalingrad and defeated. But the Soviet Union could hardly claim victory. They had killed about one hundred fifty thousand Axis troops and captured more than ninety thousand, but it is estimated that as many as half a million Soviet soldiers died. After huge losses on both sides, the German forces were stopped at Stalingrad, and in the Caucasus they could not go the last few miles to take Baku. In the meantime Stalin moved the Soviet munitions industries thousands of miles to the east, into Central Asia and Siberia. It was one of the most daring of his many long-distance transfers, preserving the Soviet Union's remarkable core of military technology and offering a hope of effective struggle against Germany.

Realization of World War: The United States

Historians generally agree that President Franklin Roosevelt and his government advisers favored stronger action in both China and in Europe than American popular opinion would support. With respect to Britain, Roosevelt had the advantage of dealing with the new prime minister, Winston Churchill. Before 1940, Churchill had had a flamboyant but not very successful career as one of the champions of the British Empire, colonialism, imperialism, suppression of labor organizing, and constant warfare against nonwhite populations. But when elected prime minister in 1940, Churchill emerged as a magnificent orator, able to articulate tremendous sentiments of hopeful, courageous defiance of Hitler. The British public, which had been taken unawares by the speed and magnitude of Hitler's conquests, hung on Churchill's words. Roosevelt was also impressed with Churchill, but he was perhaps even more impressed with the critical position in which Britain now stood. Since the English Channel was only about thirty miles across at its narrowest point, the chances of Britain's surviving a combined Axis onslaught were slim. Roosevelt was eager to offer material assistance, but the American law of the time severely restricted his ability to do so.

Roosevelt imposed an embargo on the sale of scrap metal and of all weapons to Japan. When Japan took advantage of the fall of France to seize French territories in Vietnam, Roosevelt imposed an oil embargo as well, insisting that it would hold until the Japanese withdrew from China. American public opinion supported these actions, which in spirit were consistent with the

Neutrality Acts but which nevertheless appeared to be a strong brake on Japanese aggression. Certainly the Japanese government took them that way, protesting that the United States was interfering in Japan's pursuit of its national security.

American opinion had also changed somewhat on the question of aid to Britain, the USSR, and China. Congress appropriated very large sums for enlargement of the navy and for new army weaponry. Roosevelt managed to give Churchill fifty battered warships in exchange for ninety-nine-year leases on British territories in the Caribbean and in Latin America. And he took a further economic step. By law, noncombatant foreign nations (which Britain certainly was at this time) could buy U.S. weapons only by paying cash (the so-called Cash-and-Carry policy). During 1939 and early 1940, Britain paid out nearly all its cash for U.S. munitions. Roosevelt arranged for Britain to have credit through the innovative Lend Lease Act. In return for Congress's cooperation, Roosevelt had to promise that no U.S. ships would enter battle zones.

Britain had surprising success in resisting the German attacks, which commenced in July 1940 with German airplanes attacking British ships in the English Channel. Historians now believe that two factors were primarily responsible for Britain's effective defense. The first was Britain's use of radar. The new device allowed British forces to track the oncoming aircraft and shoot them down at a very efficient rate (two German planes were downed for every British plane lost). While this helped pare down Germany's material advantage, it hardly was enough in itself to change the course of the Battle of Britain, given Germany's superiority in weaponry.

An even more determinative factor may have been a strategic error on Hitler's part. His air war advisers decided to change their focus from the British military installations on the coast to London itself. Their evident plan was to demoralize the London population, perhaps even causing the fall of Churchill's government. This idea of "terror bombings" (the contemporary phrase for attacking civilian targets in the hope of destroying political support for the enemy government) was a novel tactic of the war, and it would later be used by Britain and the United States against German and Japanese cities.

But the effect was the opposite of what was intended. Churchill's popularity deepened, and the bond between leader and people was only further consolidated. Britons worked continually to provide their own defenses by organizing warning patrols to spot enemy planes, staffing hospital aid stations, and even training themselves to shoot pistols in case of ground attacks by German paratroopers. When the government's resources ran too low to keep the little Spitfire planes (which at the time cost about \$25,000 each, or about \$392,000 in today's dollars) in good repair and fueled, private citizens or groups of citizens banded together to sponsor individual planes with their own funds. Kennel clubs, cricket teams, women's organizations, red-haired men, and families of prisoners of war named and sponsored their

own planes. Queen Wilhelmina of the Netherlands sponsored an entire British squadron.

In the meantime, the shaky alliance between Hitler and Stalin had broken down, and Hitler's financial losses in the failed attacks against the Ukraine and the Caucasus were considerable. The result was a marked reduction in what could be done against Britain. Roosevelt signed up China and the USSR for Lend Lease and began to send supplies across Iran to Stalin's base areas. Churchill realized that he now had the military strength and endurance of the Soviet Union on his side, which forced Hitler to divert his thoughts and resources to a new front.

But what Churchill most wished for was the active involvement of the United States, and by the time the Nazis were mired in Ukraine, the United States was indeed part of the war, although the participants were careful to observe the letter of the Neutrality Acts. American pilots were serving in their own volunteer "Eagle Squadrons" in the British Royal Air Force. American naval convoys had been accompanying British supply ships carrying weapons across the Atlantic, turning back before entering contested waters. But this task was not as safe as Congress may have imagined. The Roosevelt government knew that technological change had eaten away at America's famous geographical invulnerability. German submarines (U-boats) roamed the Atlantic as far as the east coast of the United States. Many nations, including Japan, were capable of mounting explosive devices on high-altitude balloons that could penetrate at least some portion of U.S. airspace. It was only a matter of time before American ships or planes suffered the direct effects of the military conflicts in Europe and in Asia.

As it happened, the event that brought American involvement came in the Pacific. For decades the United States had intervened to limit or pre-empt Japanese expansion in the Pacific, and in recent months Roosevelt had actively worked to undercut Japan's material resources. Japanese army commanders were eager to take action against the United States if possible. Naval leaders in Japan were cautious and advised against any direct confrontation with the United States. But the army leaders argued that the oil issue would force a showdown between Japan and the United States. Since this conflict was inevitable, and since Japan was the weaker party, Japan must strike before its resources were further depleted. It would be best, they suggested, to make a surprise attack. Their research confirmed a surprising thing: American naval and air forces were concentrated at the Pearl Harbor base in Hawaii, and defenses there were lax. A Japanese air strike launched from aircraft carriers in the north Pacific, they argued, could immobilize the entire American Pacific force. The naval leaders reviewed the plan and considered it possible, though risky. They described the United States as a sleeping tiger: You can kill it only when it is asleep.

The first Japanese naval pilot to drop his bombs on Pearl Harbor on December 7, 1941, radioed back the taunt, "Tiger! Tiger! Tiger!"

The Pearl Harbor attack did indeed deliver a massive and temporarily crippling blow to American forces in the Pacific. Five battleships were sunk and three made inoperable; a dozen other major sea vessels were severely damaged; one hundred eighty aircraft (parked wing to wing on the open tarmac) were

destroyed; nearly twenty-five hundred men were killed and half that number wounded. While the United States was immobilized that same day, Japan bombed Clark Field in the Philippines, destroying half of the remaining American air power in the Pacific. The Japanese forces then proceeded to conquer the Philippines, swept quickly into Indonesia (where only Australian troops were present to represent the Allied side), and then moved into the British colonies of Hong Kong and Malaya.

The active involvement of first the USSR and now the United States quickly changed the major trends in the conflicts that had raged since the late 1930s. Although the damage to existing U.S. ships and planes in the Japanese strikes of December 1941 was severe, the two aircraft carriers based at Pearl Harbor were away on maneuvers at the time of the attack. American technicians managed to get several damaged battleships seaworthy almost immediately, providing capabilities that Japan did not expect. More important, U.S. factories had been working at full capacity building ships, tanks, planes, military transport, guns, and ammunition since the beginning of 1941 when the Lend Lease Acts had been passed and a large demand for U.S. armaments was expected. U.S. ships in the Pacific were replaced with surprising speed, and in short order U.S. weapons were being pumped to allies in both Europe and Asia.

In 1942 a second supply route to the USSR across the northern Pacific supplemented the one that had already been opened through Iran. American oil production jumped to 184 million metric tons in 1942, compared to 7.7 million tons for Germany and 236,000 tons for Japan (down from 301,000 tons the previous year). American warplane production shot upward continuously until the end of the war, so that by 1944 the United States had produced nearly 300,000 planes—a third again as many as Britain had produced in nearly eight years. Within a year of the Pearl Harbor attack, the United States had more than six million men enrolled in the armed forces and ready for combat; by the end of the war, more than sixteen million Americans would have served. At full strength, the United States fielded as many troops as the USSR. In weapons, materiel, and fresh forces, the United States provided the key to defeating the Axis powers.

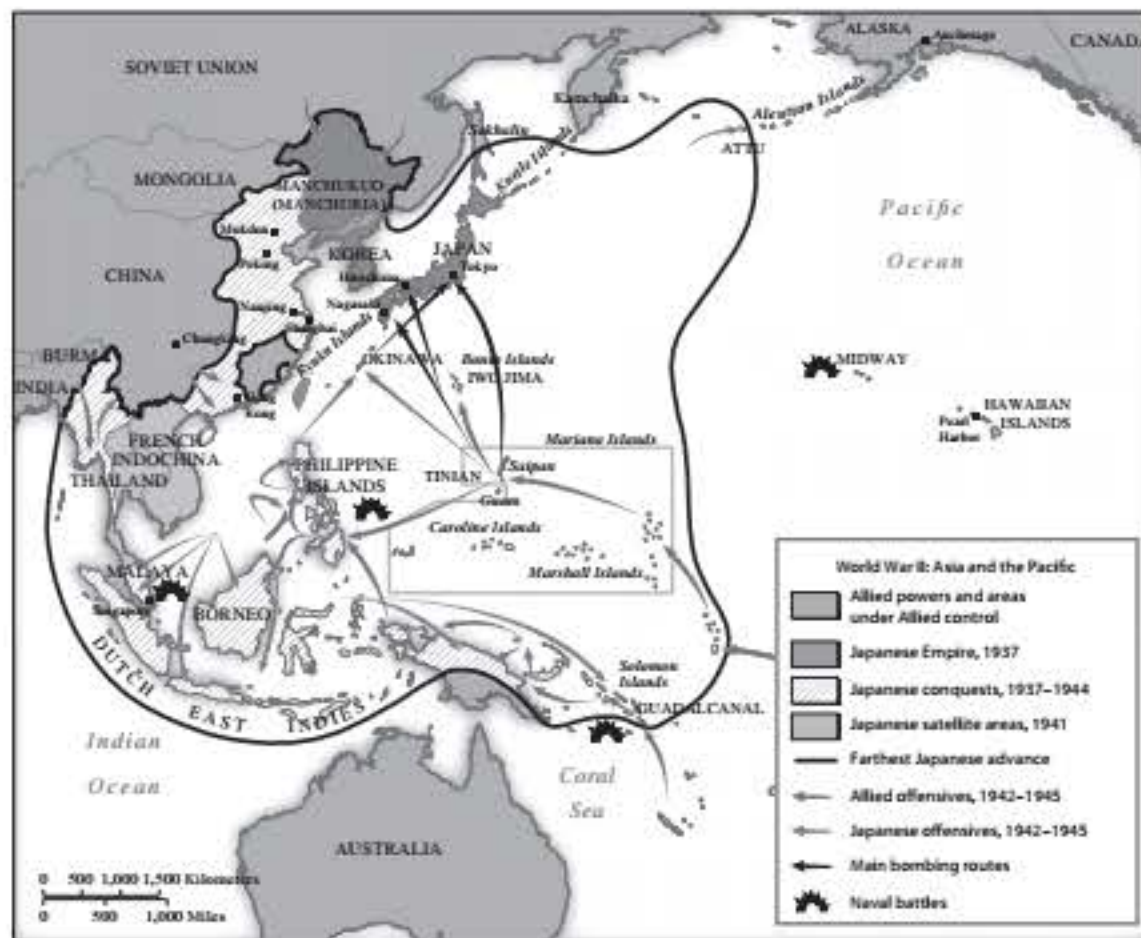
Japanese forces had alleviated some of their energy crisis with the seizure of most of Indonesia, and they quickly extended the air war to Sri Lanka (then Ceylon) and the northern coast of Australia. But the speed of the U.S. rearmament and restoration of the Pacific force stunned the Japanese planners. By the middle of 1942, American forces deflected Japan from Australia, while massive landings of American combat infantry began to challenge the Japanese forces in the Pacific islands and in the Philippines. Japan was forced for the first time to pour massive resources of men and weapons into the conquest of Southeast Asia, which in time took a toll on its efforts to extend its conquests in China. Overall, the Japanese military efforts in the Pacific and Southeast Asia had been underfunded. In total, Japan would spend the equivalent of about \$56 billion on the war, approximately one-sixth of the total American expenditure. Japanese resources were stretched to the limit before Pearl Harbor, and thereafter the Japanese forces functioned with only a fraction of the energy resources and weaponry available to the United States.

The resulting hardships not only wore down the soldiers but also sapped the welfare of the Japanese civilian population. Japanese sacrificed more and more in economic terms to support the war, and also supplied increasing numbers of young males—some of them now teenagers or less than physically fit for service—to the imperial forces. The thin economic foundation of the Japanese military machine also took its toll on the thousands of Asian, American, and European prisoners of war. Germany took slightly less than 100,000 prisoners during the war, of whom about one percent died in captivity. Japan took perhaps 35,000, of whom nearly a fourth died of starvation, exposure, or exhaustion from being used as slave labor.

In China, Chiang Kai-shek's army had withdrawn from northern and coastal regions in the east to the remote city of Chongqing (Chungking), on the upper reaches of the Yangtze River. By 1942 the base of Chinese resistance there was losing its ability to acquire food and supplies as the Japanese extended their control of the ports and main communications channels. The U.S. commanders organized a group of pilots—called volunteers but actually all selected from the Army Air Corps—to fly from the British colony of Burma (now Myanmar) over the Himalayan Mountains. These “Flying Tigers” kept the Nationalist forces in supplies, and also in communication with American military planners. By late 1942, American advisers had been flown in, and the Chinese Nationalist government was in effect allied with the United States and Britain against Japan and Germany (the USSR still had not declared war on Japan). The Chinese Communists, in the meantime, were supplying additional resistance against the Japanese in North China, without benefit of American aid. And in its colony of Korea, Japan faced a new challenge. Nationalist rebels, encouraged and supported by the Soviet Union, were sabotaging railways and organizing resistance against the occupiers.

The fight to contain and beat back the Japanese conquest was very bloody throughout Southeast Asia and the Pacific. Until 1945, the anti-Japanese force consisted primarily of American infantry and American planes, aircraft carriers, and battleships at sea, supported when possible by troops from Australia and in all venues by local guerrillas fighting to destroy Japanese imperialism. This was particularly true in the Philippines, where U.S. land forces and Filipino freedom fighters formed a close partnership. The Japanese forces on land were tenacious, and both sides were afflicted by the diseases and discomforts of the tropics. Progress was agonizing, and the Allies were discouraged by the discovery that American prisoners captured in the Philippines and British prisoners captured in Southeast Asia at the time of the Japanese conquest had been abused, tortured, or murdered. But by the end of 1943, Japanese power in the Philippines had been broken, thanks in large part to the Filipino guerrilla fighters.

The turning point at sea also came in June 1942, at Midway Island in the central Pacific, where U.S. aircraft destroyed four Japanese aircraft carriers. Thereafter, the Japanese navy and its air forces dwindled quickly, leaving Japan with worsening scarcity of ships, weapons, and fuel. By 1944 the Japanese navy resorted to the desperate *kamikaze* (“divine wind”) air tactics. These were suicide flights in which very young pilots who had been psychologically conditioned to sacrifice their lives flew very small, very light, very rudimentarily constructed air-



MAP 8.3 World War II in Asia and the Pacific.

Before problems with oil supplies and the entry of the United States into the war in 1942 stalled their expansion, Japanese forces controlled most of northern, central and south China, all of continental Southeast Asia, and most of island Southeast Asia. They were driven back from Midway Island in 1943 and thereafter Allied forces and local resistance movements weakened and fragmented Japanese occupiers.

planes directly into the decks of aircraft carriers or battleships. In many instances the dives missed or the expected explosions did not occur. Nevertheless, the Japanese navy continued to use the *kamikaze* flights because they did not require the fuel for a return flight.

Outside the Battlefields

In nearly all the societies involved in the war, unprecedented opportunities for women arose in industry and in some areas of the military, as the war drew men away from skilled, high-paying jobs in manufacturing. Women served as military pilots for the first time. In the U.S. and British forces, women flew only to deliver planes from one location to another, behind the lines. But in the Soviet Air Force there was an entire regiment of women combat fliers, who shot down thirty-eight German planes. Opportunities that were first offered to women

in the military or the armaments industries created skills and expectations that carried over into civilian life. Although women after the war could not retain the status or the wages they had enjoyed during the war, the independence and responsibility they experienced clearly changed life for them and their children.

Despite the new opportunities enjoyed by some, the general story of life for noncombatants in the Northern Hemisphere was one of anxiety, loss, and no small amount of outright suffering. But in the First World War, only about five percent of all casualties were civilian. In the Second World War, nearly 70 percent of all casualties were civilian—fourteen times the proportion of noncombatant deaths in the earlier war. These figures omit the million or more people killed in the conflicts leading up to the Second World War—for example, the approximately three hundred thousand killed during the Japanese conquest of Manchuria, the five hundred thousand killed in the Spanish Civil War, and the two hundred thousand killed in the Italian invasion of Ethiopia. Nor do the totals normally include deaths from famine in areas that were affected by the war but are not usually considered part of the war, such as Bengal province of India, where more than a million people died of starvation in 1943, and Vietnam, where more than a million died in 1945.

The extent of the human loss is not directly related to geographical proximity to the conflict. For instance, France, which was a contested region and was located squarely in the middle of the European war theater, had many fewer than a million deaths. This was partly due to the fact that France capitulated to Germany early, and for more than three years was not an area in which the Allies chose to fight the Germans. But it is also related to the fact that France's agriculture remained intact, food and information could be supplied from nearby countries when necessary, and the French climate is mild enough that the relatively small number of displaced persons had a strong chance of surviving.

The opposite was true of the Soviet Union: A huge swath of its western territories was invaded by Germany, the USSR fought the Germans longest and most consistently of any of the Allies, and the Russian climate was such that its agricultural infrastructure could be easily damaged, with shattering results for the population. Soviet territories such as Ukraine and Belarus were savage battlefields, and the Battle of Stalingrad, which destroyed the city and its inhabitants, raged from July 1942 to February 1943. Ukraine is also an example of what can happen when areas change hands in the course of war. Under German occupation in 1941, masses of Jews, suspected or proved resistance fighters, and perceived weaklings who could not contribute to the war effort were exterminated. When the Russians returned to control in 1943, suspected collaborators and economic opportunists were executed by the thousands.

Death from Above

The starkest difference between North Americans and others in the Second World War was that North Americans did not live with the fear of being bombed by planes raiding from overhead. Japan tried to bomb North America, sending many hundreds of helium balloons with explosives attached drifting across the

Pacific. A few hundred actually landed, but only a handful of people were killed by them. In contrast, well over 50,000 people in Britain were killed and well over 60,000 wounded by bombings from planes and rockets. Although German bombs over Britain were deadly, Britain and the United States together dropped twenty times as many tons of explosive on German cities, killing approximately six hundred thousand people.

The Allies raised the killing of noncombatants to a new level by deliberately producing firestorms—carpet bombing so intense that the fires fed upon themselves, producing flames and heat too powerful to be contained. The first German city to be made an example of in this way was Hamburg, which was set ablaze in the summer of 1943. In the center of the fire, temperatures reached as high as 1400 degrees Fahrenheit (about 800 degrees Celsius), causing a plume of flame to rise three miles above the city and winds from the surrounding countryside to rush toward the fire at 150 miles an hour. Escape was impossible, and death from suffocation, decompression, or combustion was instantaneous. In a few days of bombing, 30,000 people were killed. Soon afterward, Dresden was subjected to the same treatment. But firebombing became even more efficient after the introduction of napalm as an accelerant in 1944. On a single night in March 1945, nearly 300 American planes flew over Tokyo, dropping 19,000 bombs. Eighty thousand Tokyo residents died in this single incident, and by the end of the war about as many Japanese as Germans had died in firebombing.

In addition to the loss of life and cultural treasures in these bombings, there was terrible ecological devastation. The tree-lined avenues and great urban parks for which Europe was renowned were destroyed, assaulted first by fire and then by desperate urban residents eager to build and outfit makeshift dwellings or to gain fuel for warmth. Very little that was made of wood managed to survive in any of the attacked zones. Houses that were not destroyed became uninhabitable, with perforated windows, ruined plumbing, and unsafe stairways. City sanitation systems could be inoperative for weeks at a time. Power was frequently not available, or was strictly rationed. City dwellers who survived bombings were forced to double up with friends or relatives, flee into the countryside, or just sleep amid the rubble.

Cities subjected to this treatment were usually totally destroyed, and the casualties—by definition overwhelmingly civilian, with no distinction being made between adults and children, and many people dying of malnutrition or disease long after the attack itself—were spectacular. The idea behind these bombings was, as in Hitler's bombing of London, that the populations would be demoralized and the government would fall. The outcome, however, was different. These firebombings only unified the population and renewed their defiance at a time when they might otherwise have considered withdrawing real support from their leaders. They adjusted their habits and had to help their neighbors in order to survive. During the London Blitz in 1940, at least 250,000 people were homeless. In London, working people who were afraid to sleep in multistory apartment houses slept in the underground (subway) stations, imagining that they would be safe. Several of these stations took direct hits, killing dozens or even a hundred people at a time. Unexploded

bombs lay exposed in ruined houses, parks, gardens, and fields—on a single day in November 1940, three thousand huge bombs were waiting in various areas of London for the disposal teams to get around to them.

Many people fled such dangers. Others were relocated forcibly, perhaps for political reasons, perhaps for strategic reasons. Some moved toward conditions of greater safety, but huge numbers were forced toward greater privation, danger, and death. Destruction from the air or from the ground fighting left millions of people homeless, often as refugees in distant lands with no knowledge of the fate of their families and friends. In the late stages of the war, as brutalized victims turned on their aggressors, the levels of violence spiraled upward and outward. By the end of the war, there was hardly a resident of Europe, Asia, or the USSR who was not scarred by its direct or indirect effects.

Hunger

Everywhere, the war put great pressure on agriculture, and failures in food production and distribution had devastating results. In the United States these effects were felt only mildly, mostly in the form of rationed gasoline and price controls on agricultural produce. In Western Europe, the countryside often came to be filled with urban refugees who needed to be fed but could not be profitably employed. In Eastern Europe, the western Soviet Union, and eastern and southern China, conflict left the fields scorched by design, or simply by the effects of battle. The source of food had itself been obliterated. In other parts of Asia, the destruction of roads made the movement of grain to where it was needed impossible, and shortages of oil meant that vehicles could not move over the roads even if they were open. Irrigation systems were destroyed, cattle needed for plowing were killed, and what little food could be produced was often violently appropriated by the occupying army.

The greatest danger to populations in war is exposure to nature without the benefits of food, clothing, shelter, and medicine. Half of China, for example, was engulfed in the war against Japan at one time or another. The Japanese invaders slaughtered Chinese men and boys in huge numbers as a matter of policy, and the homeless, drifting populations were unable to feed or shelter themselves. Survivors by the hundreds of thousands were herded into concentration camps and left to starve. Refugees flooded the unconquered cities, set out to sea in boats, or fled to the rugged mountains, where they did not have the skills to survive. During the war, regular maintenance of waterworks was neglected. Floods turned dangerous situations into crises and resulted in millions starving—or expiring of common illnesses because their health was so poor—without a shot being fired. In 1943 about 3,000,000 people died of the effects of drought, flood, and famine in central China alone. Such tragedies were repeated throughout Asia, but were also shared by Europeans. The harsh winter of 1944–1945 resulted in the starvation of about 18,000 men, women, and children in the Netherlands. Perhaps 50,000 more died as a result of secondary effects of malnutrition and exposure.

Relocation

During the war years, relocation could be caused by a variety of circumstances, but in all cases the results were that victims who did not lose their lives or their health certainly lost their property and their community. Many of the relocated were refugees, who had fled of their own volition from areas of fighting or from areas that were so devastated by fighting that they could not support normal life. Many tens of millions of people were on the move as refugees throughout Europe and Asia.

The earliest to migrate were Jews, who fled from Germany after Hitler's seizure of power in 1933. The flight of Jews to safety became more urgent after the *Kristallnacht* ("Crystal Night") attacks of 1938, in which Jewish homes, businesses, and synagogues were destroyed and Jews were personally threatened or attacked by roving gangs. Many Jews were successful in moving to Palestine, France, Britain, or the United States. However, their fate was not always in their own hands. Nearly a thousand Jewish emigrants chartered the German ocean liner *St. Louis* to take them to Cuba, thinking they would find a new home there. They were turned away, and then they were also turned away from Miami by U.S. authorities. Eventually the governments of Britain, France, the Netherlands, and Belgium agreed to take separate portions of the group. But a majority of those who were taken by France, the Netherlands, and Belgium ended up in Nazi death camps anyway after those countries fell.

Nearly all the countries involved in the war practiced some form of internment—the imprisonment of civilians in camps or walled compounds. The most obvious reason to intern civilians was suspicion that they would collaborate with the enemy by spying or sabotage. Hitler's regime was showing such distrust when it incarcerated 300,000 of its own "Aryan" citizens in 1939, and throughout the war Germany imprisoned a million people solely because of distrust due to their political or religious beliefs.

In Britain, its former colonies (the Commonwealth), and the United States, the idea arose early that people who came from one of the Axis countries, or whose parents might have come from one of these countries, would harbor loyalties to their ancestral land. Immediately after the declaration of war against Germany, the British government moved to identify "enemy aliens"—individuals who had come from Germany or Italy, or who were thought to be German or Italian. Of the nearly 80,000 who were identified, about 10,000 were put under curfew, forbidden to travel, and required to report regularly to the police. Some of the Germans swept up by the authorities were actually German or Austrian Jews who had immigrated to Britain to escape the Nazis.

At first, the British practice was to deport these aliens to Canada, Australia, or New Zealand for internment. However, Churchill's government was embarrassed when a boat loaded with 569 deportees headed for Canada was sunk by a German U-boat and all aboard were killed. The policy was changed to keep internees in Britain. That included Northern Ireland and the Isle of Man. The Republic of Ireland had declared itself neutral and denied Britain the use of its ports as military bases. Irish whose loyalty to Britain was suspect were liable to be interned until the war was over. After 1941, about a thousand Finns were added. They were joined

there by prominent British Fascists such as Oswald Mosley and his wife, Diana Mitford. Altogether, Britain interned about 27,000 civilians during the war.

Australia's internment camps not only served as termination points for British deportees but also received a good number of home-grown aliens. Like the North Americans, Australians were concerned by Asian as well as European enemies. At the time, Australia had an inflexible whites-only immigration policy, although temporary Asian laborers were admitted. Such Japanese as were present in Australia in 1940–1941 were rounded up, as were Germans, Austrians, and Italians. The Australian government determined that fully half of its non-British population was worthy of internment, and it incarcerated them in much higher numbers than did Britain. They were put to work enlarging the camps to receive Axis prisoners from Europe, although internal detainees outnumbered prisoners of war through the entire period.

In the United States, an order of January 1, 1942, required all Japanese, German, and Italian resident aliens to observe a curfew; to surrender all handguns, cameras, flashlights, and short-wave radios; and not to change their place of residence without permission from the police. In February 1942, Roosevelt issued an executive order for the internment of Americans of Japanese descent who lived within two hundred miles of the Pacific coast. Pursuant to this order, 120,000 Japanese-Americans or Japanese residents of the United States were forcibly relocated to camps in seven western states. About 11,000 Germans, German-Americans, and Eastern Europeans were interned in separate camps. The number of Italians and Italian-Americans interned has been estimated at over 50,000. In Canada, an order for internment of Japanese-Canadians was instituted at the same time as the American plan. About 23,000 people were moved to camps in British Columbia.

Internees of European descent tended to be kept in the eastern part of the United States, usually in existing buildings (as at Ellis Island). For internees of Japanese descent who were relocated to the harsh mountain climates of the Rockies or the southwestern deserts, living conditions in the internment camps of North America were a rough approximation of refugee life in Europe. Tarpaper huts with plywood siding were quickly slapped together as shelter for the prisoners. There was no plumbing or electric heat. On good days, there might be coal for a fire. Food rations were minimal, and all meals were taken in a mess hall with hundreds of other people. Inmates had no independence, no privacy, and no status, and everything they had worked to build for themselves on the outside was lost. In 1944, Roosevelt ordered the internments discontinued (though some internees of European descent were kept in custody until 1948).

Among the dangers for prisoners of the Allied countries was forced repatriation after the war. The most impressive number of returnees were Russian. More than two million Russian farmers and workers attempting to cross into Poland and deserting army officers were returned by the Allies, as were scholars and businessmen who had taken up residence in Western Europe. Most of them protested being returned; some committed suicide. Army officers were frequently shot as traitors when they were back in Soviet custody. Others were sent to labor camps in Central Asia or Siberia. A certain number of German-Americans were handed to Nazi authorities in exchange for non-German American civilian captives.

Relocation was also the fate of individuals from the conquered countries who were sent to work as slave labor in Germany. Hundreds of thousands of people from Poland and the Netherlands were put into slavery, most of the women as household servants, and the fate of such individuals is obscure, although it is believed that many tens of thousands never made it back to their homes after the war. Another form of relocation was the abduction of children for adoption into German families. In Poland, Ukraine, and Russia, children with blond hair and blue eyes—Aryan-looking, according to the Nazis—were taken from their parents and sent to Germany. In Poland, at least 200,000 children disappeared this way, and perhaps 50,000 were taken from Eastern Europe and Russia. It is estimated that only 20 percent of these children discovered during or after the war that they had been stolen from their families and were able to discover the whereabouts of their birthparents after the war.

Institutionalized Death

The most dramatic form of relocation was incarceration in the Nazi concentration and death camps, to which prisoners who were not executed outright were transported. As we saw in Chapter 7, conditions in Germany in the 1930s produced persecution of Jews, Romany (Gypsies), Poles and other Slavic peoples, homosexuals, leftists, communists, labor leaders, Christian dissidents, and other political opponents. Almost a third of those died at one single camp: Auschwitz, in Poland. Nearly 90 percent of all Jews living in Poland perished between 1940 and 1945. Nearly 250,000 Romany died along with Jews at Dachau and Auschwitz. Approximately 2 to 3 million Soviet prisoners of war also died in German camps. And as with other aspects of the Second World War, children suffered disproportionately. It is estimated that about a third of the Jewish population of Europe survived the war, but only about 11 percent of Jewish children.

The camps had been designed to work the inmate population to death, although they occasionally supplied experimental subjects to sadistic Nazi “scientists” investigating the particulars of every sort of death. Those who arrived weak were exterminated rather than having food and shelter spent on them. Carbon monoxide and simple smothering, which were the methods used in the camps at the beginning, were replaced at many installations by the lethal gas Zyklon B. Officials of many conquered nations, but particularly those of occupied France, Poland, and Hungary, aided the Nazis in the identification, incarceration, and murder of Jews and Romany.

After 1942, when war authorities in Britain and the United States learned the facts connected to the death camps, more and more people were murdered by the camps’ Nazi managers, partly to hide the evidence and eradicate the testimony of the suffering. As awareness of the death camps grew, so did the degree of resistance offered by those expecting to be sent to the camps, particularly in Eastern Europe, where both the camps and their potential victims were centered. At Warsaw, Poland, in April 1943, 60,000 Jews armed themselves to resist Nazi detention and slaughter. The Nazi campaigns against the Jews, however, were not slowed. The Warsaw Jewish community was obliterated; in all, somewhere between seven and eight million Europeans—of whom five to six million were Jews—were sent to their deaths in the camps.



Trinity Mirror/Magnum/Alamy

Churchill, Roosevelt and Stalin at Yalta, 1945 At the time of the February 1945 conference of the Allies at Yalta on the Black Sea, the Soviet Union had helped defeat Germany, but had not yet declared war on Japan. In order to convince Stalin to help in Asia and the Pacific, Roosevelt made concessions to Soviet interests in Europe and in China, and agreed to recognize the independence of the Mongolian People's Republic. Churchill attempted to be a voice for human rights in Europe, but the global role of his nation was fading, as Roosevelt and Stalin were designing the post-war world.

The war planners in Britain and the United States considered whether anything, short of outright and total obliteration of the camps and all their inhabitants, could be done to slow down the progress of this “Final Solution”—Hitler’s plan to eliminate Jews from Europe. They did not find a method that they thought could save the death camp victims, and there also was no consensus among international advisers on whether the most extreme and deadly methods should be employed. Though air reconnaissance and some human intelligence alerted the Allies to the existence and purpose of the death camps, they were still not prepared for the shock of seeing the real places and the few survivors who could be liberated as Allied forces captured Poland. Ironically, the American liberators of Dachau were the “Fighting 442nd” composed of about 1,200 enlisted men from the Japanese internment camps in the United States. Many could not hold back their tears as they tenderly helped the starving victims out of the filthy cells and holding pens.

Endgame

Hitler's expansion in Europe was contained by the end of 1942, and the challenge then was to take back territory from his occupation forces. Stalin insisted to Britain and the United States that direct engagement of the German forces, on land, was the only way to end the war. Up to that time, Stalin's own soldiers had been doing virtually all the real fighting with the Germans in Europe, and he did not see how he could fight the Germans as long as there was only one front. Churchill proposed that instead of confronting the Germans in Western Europe, the Allies attack from the south, destroying Nazi power in North Africa. His suggestion that North Africa become a pivot in the war strategy was the product of Britain's successful campaigns against the Italian forces in Ethiopia (which concluded in 1941) and against the brilliant German commander Erwin Rommel, who in a two-year game of tag had nearly driven the British out of Egypt before being defeated in 1942. The Allies had retained control of the Suez Canal and a great expanse of North Africa as well, and now Churchill recommended that it be exploited.

Things did not go as easily as Churchill had predicted, but the Allied landing on Sicily in 1943 shocked the Italian public and Italian leaders. Mussolini was dismissed from power and imprisoned, but German storm troopers rescued him and established him as head of a puppet government in north Italy in late 1943. This forced the Allies to conquer the whole of Italy, finally reaching and destroying Mussolini's base in 1945. Mussolini was executed by anti-Fascist Italian resistance fighters (with the permission of the Allies), and Italy changed sides in the war.

Europe/North Africa

At the first meeting of the new allies in Tehran, Iran, in 1943, Stalin had demanded that his allies set a date for sending an expedition into Europe. At this point, Roosevelt demanded that in return for the Allies' directly engaging the Nazis in Western Europe, Stalin would declare war against Japan and agree to an international peacekeeping organization of some kind after the war. According to remarks made by Roosevelt at the time, he saw the Tehran meeting as an eye-to-eye negotiation between the two decisive powers of the future, and he regarded Churchill as a valiant but dated defender of the days of European imperialism. The Allies agreed that they would mount their invasion of Western Europe in the summer of 1944.

The expedition of June 6, 1944 (D-Day), was as much a technological as an outright military feat. Portable wharves and breakwaters were towed across the English Channel to provide suitable landing points, and pipelines were laid across the seabed to assure an adequate supply of the critical ingredient, oil. A shrewd campaign of disinformation suggested that the invasion would take place at the most likely spot, Belgium, when in fact the Allied planners were secretly preparing to land in Normandy in France, a farther and less hospitable spot. The fighting, when it began, was terrible, and casualties among the landing force of Americans, Canadians, and Britons were high. But Paris was taken by August, and France was now an active participant on the Allied side.

The tide quickly turned against the Nazis. Hitler's war managers were forced to send boys and sick and unfit men into battle, where they quickly died or surrendered. In another desperate attempt to retake the initiative, German engineers built V-2 rockets to resume the bombing of Britain. The early V rockets were robot planes loaded with explosives that would fly the approximate distance to London or another major British city, then plummet to earth. The advanced V-2s flew faster (and even more expensively) toward London, but apart from raising the fear level did little to help the German war effort in its last eighteen months.

In the meantime, the forces of the Soviet Union were closing in on Hitler from the east. Ahead of them came a reputation for extreme brutality. In Eastern Europe, hundreds of thousands of civilians were rounded up and trucked into the Soviet Union to work as slaves in Soviet industries until the late 1940s. Hitler's own fortress in Bavaria was stormed by the Soviets on April 30, 1945, before the Allies arrived. Hitler shot himself and his mistress rather than face this enemy, and a week later Germany surrendered.

The reversal of the directions of attack and defense unleashed profound chaos in the cities and countryside. As the occupying Nazi troops withdrew, enraged mobs in Poland, Czechoslovakia, and Ukraine set upon neighbors who were of German descent or who spoke German, many of them people who had been born in the localities. Many thousands of women were raped and murdered; men and children were tortured, mutilated, and killed. Retreating soldiers were set upon and lynched, often being burned alive or mutilated before being shot. It is estimated that over two million Germans or people of German descent were killed in Eastern Europe by civilian mobs at the end of the war.

In Germany itself, hundreds of thousands of civilians who heard of the approach of the Soviet troops fled westward into liberated Denmark. There they were put into concentration camps. Though they were not intentionally harmed, they were at the bottom of the distribution list for scarce food and clothing. Tens of thousands died of malnutrition, dehydration, or disease—dysentery, malaria, measles, or pneumonia. Still, their fate was better than that of Germans who were arrested in Eastern Europe but not permitted to cross borders into Austria or Czechoslovakia. They were herded by the thousands into open fields and left to die of cold.

Japan and the Pacific

When Hitler died, the world was in the grip of a barrage of stunning and disorienting news, including the death of Franklin Roosevelt on April 12, 1945, after which Harry S. Truman became president. With Germany defeated, the Allies were eager to get out of the war business, but Britain, the USSR, and other Allies had also signed on as enemies of Japan, and Japan still had not surrendered. A British force drawn from the colonies, consisting of Nigerians, South Africans, and Indians, took up the fight to drive the Japanese out of Malaya and Indochina. Meanwhile, the United States concentrated on the battle in China, and on pursuing the Japanese fleets and dwindling air forces toward Okinawa and, if necessary, to Japan itself.

By the summer of 1945, Japan had not surrendered, although it had in effect been defeated throughout Asia and the Pacific, both by the forces of the Allies and by the

forces of nationalist guerrillas in the territories they had occupied. The United States and its allies were impatient for the war to end. The Japanese, like everybody else in the Northern Hemisphere, had suffered in the war, and in the final stages had suffered terribly. Their economy was destroyed, the young men had been ground down by the brutal and now pointless war, and civilians had suffered horrific bombings. Still, American military leaders found little concrete evidence that there was much sentiment for surrender in Japan and found no evidence of an opposition movement that might topple the government or assassinate its leaders. General Douglas MacArthur estimated that a land invasion of Japan would result in tens of thousands of American casualties, with Japanese civilian casualties incalculable. And time was also a factor. While Japan delayed, the USSR could elect to take unilateral action in eastern Asia, perhaps seizing Sakhalin Island and mounting its own invasion of Japan from the north. Communist-inspired insurgents in Japan's occupied lands could claim their own victories, and seize control.

The United States had been working on the development of a devastating weapon for most of the war, and especially since 1943. There were rumors that the Germans were working on a similar weapon, but their progress evidently did not match that of the secret American project at Los Alamos, New Mexico. President Truman had been in office less than two weeks when, to his surprise, he was given a handwritten message from the war officials stating that within four months the United States would have at its disposal "the most terrible weapon ever known in human history."¹ It was the atomic bomb—a weapon that generated previously unimaginable power through the forced disintegration of atomic nuclei and the conversion of atomic-level matter into energy. The destruction would be accompanied by radiation of such a magnitude that it would itself be intensely and protractedly destructive of all living beings in the vicinity.

The development of the bomb was an unprecedented technical achievement, but there were many difficulties involved in deploying it, particularly the weight of the bomb. The report to Truman indicated that all the practical problems had been solved, or nearly so. Truman and his advisers wondered if this was the answer to the problem of getting Japan to surrender. The United States could use the new weapon to shock Japan into capitulation before the USSR could invade and claim credit for ending the war. At the same time, a demonstration of America's new power could inspire the USSR to be more constructive in its postwar dealings with the United States and American interests throughout the world.

On one ground or another—historians debate the exact reasons for the decision—Truman ordered the bombing in rapid succession of two Japanese provincial cities, Hiroshima and Nagasaki. The bombings took place on August 6 and 9, 1945, respectively. About 50,000 people in Hiroshima died instantly; in Nagasaki, about 30,000. Many were vaporized; others were destroyed in the resulting wind and fire disasters. And unlike previous weapons, this one kept on killing. By the end of the

¹This widely quoted phrase is from Stimson's memo of April 25, 1945, and can be found in, among other sources, Stimson's diary, now at Yale University.



GLOBAL Technologies

Digital Communications

The Second World War not only marked the transition to a new structure of global power, but also a new structure of information processing and transmission. Concepts relating to information management from the 1930s were combined with innovations in mechanized calculation, rapidly producing not only the first computers but the first systems for programming the computers themselves.

From ancient philosophers in China, India and Greece in the eighteenth century, philosophers had realized that most arithmetic or physical conditions could be represented as a binary yes or no—by hand gestures, written symbols, flags up or down, or intermittent broadcast of sounds or smoke. In the eighteenth century Gottfried Leibniz suggested a standard scheme for representing numbers as binary strings of 0 and 1, which is essentially the system used for digitized communications today. Binary representation of letters

was based upon a reading system for the blind which also had very ancient roots but was refined by Louis Braille in the nineteenth century. It was also influenced by the Morse code system of using combinations of binary signals to transmit letters over cable systems. And since binary tags can be used to describe virtually any physical state, the foundation for digital reproduction of music, art, film, and abstract design was laid in the early twentieth century.

Digital expressions all depend upon distinct markers of initiation and conclusion, so secret messages could easily be nested within longer messages appearing to have a different meaning. This was only one of many tactics used in the Second World War to pass coded messages by radio and by cable. Both sides in the war also made use of complex geared machines to transpose one letter or number into another; the recipient of the message would use the same gears to reverse the code and interpret it on their own machines. German diplomats and businessmen were the first to use such a machine, called Enigma, in the 1930s. Japanese diplomats were using a cypher that was similar in concept, called Purple.

After Britain declared war on Germany, Britain appropriated the earlier work of Polish researchers and

year, a total of 140,000 had died in Hiroshima, and 70,000 in Nagasaki had died of the long-term effects of burning and radiation poisoning. By August 15, the emperor had instructed the Japanese war leaders and the Japanese people to surrender.

Between the destructions of Hiroshima and Nagasaki, the USSR finally declared war on Japan and began its sweep into Manchuria. Anti-Japanese fighters from the Mongolian People's Republic (a Soviet client state since its founding in 1921) and from some units of the Chinese Communist armies coordinated with

set up a deciphering center at Bletchley Park, a large community of 12,000 whose existence was a total secret for thirty years after the war. Their work was impressive, but it was the capture of a German code book that allowed Bletchley Park to make its first breakthrough in deciphering Enigma. In North Africa, in the Atlantic, and most decisively in the D-Day Allied invasion of Normandy, intelligence gleaned by the Bletchley Park staff was indispensable to the Allied victories. American researchers never captured a Purple machine from the Japanese and were able only to decode diplomatic messages. But in 1943, Americans achieved a mathematical breaking of the code, a factor in the rapid turn in war fortunes for Japan in that year. On the other hand, the American secret messages, supplied by Navajo speakers using coded language to translate reports and commands, were never broken by the other side.

Both the mathematical work and the mechanical innovations of Bletchley Park became influential in the development of post-war digitization. Wartime advances in informational abbreviation by Claude Shannon and Norbert Wiener were essential, but the development of programmable machines capable of very rapid calculations was also needed. The ancestor of modern

hardware was developed by the German Konrad Zuse in the late 1930s. Using binary numbers and instructions punched on strips of celluloid, Zuse's electronic rapid calculator, once adapted and deployed by both sides in the war, helped in the calculations necessary for the aiming of artillery and long-distance missiles, and maintaining supplies of fuel, food and medicine.

The final element in the creation of modern digitization was the creation of a method of instructing, or programming, computers. Alan Turing (a Bletchley alumnus) and the American mathematician John von Neumann were able to build on the insights of earlier logicians such as George Boole to give computers complex, editable instructions based on if-then or either-or statements, essentially allowing rapid computational machines to cross into the arena of independent, extended logical operation. To allow humans to avoid the cumbersome task of using binary code to instruct computers, mathematicians and computer engineers such as John Backus, Grace Hopper, John Kemeny and William Gates, among many others, worked on the design and execution of languages and mechanical compilers that have made digitized human intentions and perceptions interpretable by and through machines.

Soviet troops to surround the substantial Japanese forces. When the Japanese surrendered, the standard Soviet practice of transporting tens of thousands of prisoners to work camps in Siberia and Central Asia followed. Japanese officers and the Manchukuo "emperor" Puyi were taken away to the Soviet Union for imprisonment and eventual trial for war crimes.

The Manchurian conquest by this amalgamated force also opened a chapter of global history that continues to challenge our understanding of this era and its

relationship to our times. At Pingfan in Manchuria (headquarters of what is now notorious as Unit 731), records and material evidence were discovered that gave a detailed narrative of Japanese experimentation on prisoners of war, including Chinese, Okinawans, Koreans, Russians, Americans, Australians, and some Europeans. The horrors visited on the victims were inconceivable. They were frozen alive, vivisected, infected with fatal bacteria, and allowed to be fed upon by parasites while Japanese researchers coolly recorded the statistics. The results of the research were confiscated by the Allies and are known to have played a role in the development of many postwar health measures, including mass vaccination programs. But with very few exceptions, the perpetrators of scientific atrocities at Pingfan and related sites in Manchuria were never tried for war crimes as their military counterparts were. Indeed, the highest-ranking officers at the experimental complexes were given privileges, employment, and status after the war, and most of them lived comfortably until their natural deaths in the 1950s and 1960s.

As we will see, after the conclusion of the war, the victorious powers created various institutions to investigate and punish the atrocities perpetrated by the German and Japanese forces. The extent of these violations of humanity was not known until the end of the war, when the experimentation facilities in Manchuria, Poland, and Germany fell into Allied hands. It took some years for the leaders of the postwar era to comprehend the extent and the implications of the monstrous science of the Nazis and the Japanese militarists. Even in the late stages of the war, the daily horrors of displacement, starvation, mob violence, and exposure were enough to occupy the exhausted populations of Europe and Asia.

CONCLUSION

Although it is common to see the conclusion of the Second World War as the threshold for the bipolar global pattern of the following decades, it is more useful to see the bipolar world as beginning with the entry of the USSR and the United States into the wars against Germany and Japan. Their involvement in these wars was not the result of haphazard events that ensnared them in the fates of faraway places. Rather, it was the predictable outcome of their placement between the two centers—Europe/North Africa and East Asia. These two giants were drawn into the struggle with powers that, as of 1939–1940, had far fewer natural resources and far more brittle social and economic structures, and whose leaders had far less insight into the global dynamics that would follow the end of imperialism.

The USSR and the United States determined the outcome of the regional wars, escalated them to a new level of global war, and introduced the new technologies that would change both war and peace in the future. They emerged from the war acutely aware of the importance of oil and accustomed to long-range planning based on the location and the quantity of known oil reserves. They knew that the war—from the British resistance to German bombing, to the landing at Normandy, to the destructions of Hiroshima and Nagasaki—had been a

war of science, and that those who were pushing science toward new horizons would control the condition of much of humanity.

They also decided the questions remaining from the end of the conflicts. Nations throughout the world, but especially those in Africa and Asia who were emerging from the final stage of imperialism and from the direct control of Germany or Japan, were to have their independence either ratified or undermined by these two powers. Certain nations, such as Germany, Vietnam, and Korea, were partitioned between the two great powers. Other countries, such as China, ended the war in a state of civil war of their own, and the United States and the USSR would attempt to manipulate those situations for their separate advantage. The standards of guilt and the methods of punishment to be imposed on newly identified "war criminals" in Europe and in Asia were to be negotiated and imposed by the United States and the USSR. And those countries would take great care to monopolize the technologies of communication, construction, production, and death that would keep them at the pinnacle of global power and make them the arbiters of new questions of national and international scale for decades.

For Further Reading

- Paul Addison and Angus Calder, eds., *A Time to Kill: The Soldier's Experience of War in the West* (London: Pimlico, 1997). At present the single most comprehensive collection of personal narratives, encompassing both men and women soldiers of many national origins (limited to Europe, Russia, and North Africa).
- John Bierman, *Righteous Gentile: The Story of Raoul Wallenberg, Missing Hero of the Holocaust* (New York: Penguin USA, revised edition 1996). Story of the Swedish diplomat who worked to rescue Jews and other Nazi victims and then disappeared into Soviet custody after the war.
- Miriam Chaikin, *A Nightmare in History: The Holocaust 1933–1945* (New York: Clarion Books, 1987). A popular single volume that recounts the experiences of European Jews.
- Iris Chang, *The Rape of Nanking: The Forgotten Holocaust of World War II* (New York: Basic Books, 1997). On the atrocities in Nanjing and elsewhere in central China.
- Haruko Taya Cook and Theodore F. Cook, *Japan at War: An Oral History* (New York: The New Press, 1992). Based on interviews and oral reminiscences of Japanese soldiers and some civilians.
- John W. Dower, *War Without Mercy: Race and Power in the Pacific War* (New York: Pantheon, 1986). The most revered history in English of the Second World War in the Pacific.
- John Ellis, *World War II: A Statistical Survey* (New York: Facts on File, 1993). An invaluable reference that includes and compares varying estimates on casualties.
- Hillel Levine, *In Search of Sugihara: The Elusive Japanese Diplomat Who Risked His Life to Rescue 10,000 Jews from the Holocaust* (New York: Free Press, 1996). The only study of the Japanese diplomat who worked to rescue intended Nazi victims in Hungary.
- Andy Marino, *American Pimpernel* (London: Arrow, 2000). The story of Varian Fry, an American private citizen working to rescue Jewish writers and artists from Nazi-occupied territories.
- The Oxford Companion to the Second World War* (Oxford and New York: Oxford University Press, 2000). A very comprehensive illustrated reference source.

- The Oxford Illustrated History of Modern War* (Oxford and New York: Oxford University Press, 1998). Helps with understanding larger changes and comparing periods and places.
- John Rabe [John E. Woods, trans.], *The Good Man of Shanghai: The Diaries of John Rabe* (New York: Alfred A. Knopf, 1998). The story of a German businessman attempting to stop Japanese atrocities in China, based on his diaries.
- Ronald Takaki, *Double Victory: A Multicultural History of America in World War II* (New York: Little, Brown and Company, 2000). Covers complex experiences of African American and Asian American soldiers, including the dramatic stories of Japanese American intelligence officers in the Pacific War.
- Peter Williams and David Wallace, *Unit 731: Japan's Secret Biological Warfare in The First World War I* (London: Hodder and Stoughton, 1989). Studies of war atrocities by Japanese troops and scientists in Manchuria.
- Yoshimi Yoshiaki, [Suzanne O'Brien, trans.], *Comfort Women: Sexual Slavery in the Japanese Military During World War II* (New York: Columbia University Press, 2002). The plight of Asian women from many nations enslaved to Japan's army as "comfort women."

Related Websites

- BBC: Hitler's Invasion of Russia in World War Two
http://www.bbc.co.uk/history/worldwars/wwtwo/hitler_russia_invasion_01.shtml
- China – World War 2 on History
<http://www.history.co.uk/explore-history/ww2/china.html>
- China Defensive 1942–1945
<http://www.history.army.mil/brochures/72-38/72-38.htm>
- Jone Johnson Lewis, "Women and World War II"
<http://womenshistory.about.com/od/warwwii/a/overview.htm>
- The Legacy Project: Echoes of Guernica
<http://www.legacy-project.org/index.php?page=exhibitions>
- U.S. Holocaust Memorial Museum
<http://www.ushmm.org/education/foreducators>
- Virtual Tour of the Maginot Line
<http://www.maginot-line.com/>
- WGBH American Experience: Victory in the Pacific
<http://www.pbs.org/wgbh/americanexperience/films/pacific/>
- The First World War I in the Pacific
<http://www.ushmm.org/wlc/en/article.php?ModuleId=10005155>
- The First World War I Maps
http://www.lib.utexas.edu/maps/historical/history_ww2.html