CHAPTER 3

The Meanings of Wars

U.S. soldier grieving for a lost friend.

*Man's body is so small, yet his capacity for suffering is so immense.*
—Rabindranath Tagore

*War is a series of catastrophes that results in a victor.*
—Georges Clemenceau

Most human activities—buying and selling, sowing and reaping, loving, learning, eating, sleeping, worshipping—take place with a minimum of overt conflict and without anything remotely like war. Warfare nonetheless has a special importance for human beings, particularly since the invention of nuclear weapons in 1945, which raised the very real possibility that war could
extinguish human civilization and, possibly, life on Earth. Peace researcher Quincy Wright began his *A Study of War* by noting that

to different people war may have very different meanings. To some it is a plague which ought to be eliminated; to some, a mistake which should be avoided; to others, a crime which ought to be punished; to still others, it is an anachronism which no longer serves any purpose. On the other hand, there are some who take a more receptive attitude toward war and regard it as an adventure which may be interesting, an instrument which may be useful, a procedure which may be legitimate and appropriate, or a condition of existence for which one must be prepared.

If wars are to be understood and, ultimately, overcome, we must first agree as to what they are. In this text, we will mainly consider “hot” wars—that is, overt violent conflicts between governments or rival subnational groups hoping to establish governments: in short international and civil wars. In recent times, an official declaration of war has been relatively rare; nonetheless, in many cases, “wars” can still easily be recognized, not only between different nation-states but also as civil wars and so-called wars of liberation. We shall largely exclude feuds, disputes, or cases of banditry, as well as trade wars, propaganda wars, or “cold” wars, except insofar as these have a bearing on hot wars.

### Defining Wars

According to *Webster’s Third New International Dictionary*, the term *war* ultimately derives from the Old High English noun *werra*, meaning “confusion.” This term is perhaps derived from an ancient Greek verb meaning “to go to ruin.” The modern English noun *war*, according to *Webster’s*, denotes two such “confusing” and/or “ruinous” conditions. The first is a state of hostile and armed conflict between such political units as states, countries, and nations, while the second is a more general state of conflict, opposition, and antagonism between “mental, physical, social, or other forces.”

Many people have tried to compile data on wars throughout history, both to help identify the issue and to test various empirical hypotheses about the causes of war. However, researchers have not always agreed which armed struggles deserve to be included in such a compilation. There is little doubt, for example, that World Wars I and II are major examples, but what about the War of the Bavarian Succession (1778–1779)? In this “war,” fully armed Prussian and Austrian troops marched while drums rolled, but not a shot was fired. War was declared, but no one died. By contrast, consider the Korean War, in which more than 2 million people (military and civilian) were killed: The United States and China were major protagonists during the Korean “War,” and yet war was never declared. (In fact, neither was peace. This conflict is still officially unresolved, with an ongoing armed truce.) Instead, it was
officially known as a United Nations (UN) “police action.” Similarly for the Vietnam War, in which, once again, no official state of war was ever acknowledged.

Quincy Wright considered a war to have taken place either when it was formally declared or when a certain number of troops were involved; he suggested 50,000 as a baseline. Lewis Richardson, another pioneering peace researcher, sought to define war by the number of deaths incurred. J. D. Singer and M. Small have focused on a minimum of 1,000 combat-related fatalities. According to the Uppsala Conflict Data Analysis Project (UCDP), an armed conflict is “a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths in one calendar year.” Whatever the technicalities involved, most people might agree that war can be described in much the same way as a jurist’s observation about pornography: “I may not be able to define it, but I know it when I see it.”

Similarly, there can be debate over exactly when a given war began. The United States entered World War II in December 1941, after the Japanese attack on Pearl Harbor. The Soviet Union had entered the war 6 months earlier, after it had been attacked by Germany in June. Most historians (and virtually all Europeans), however, believe that World War II began with Hitler’s invasion of Poland in 1939, after which France and Great Britain declared war on Germany. On the other hand, some argue that World War II began with Italy’s invasion of Ethiopia (1935) or even earlier, with Japan’s initial incursion into northern China (1931). And some historians have even maintained that in fact World War II began when World War I ended, with the Treaty of Versailles (1919), which created great resentment among many Germans, leading ultimately to a resumption of armed hostilities 20 years later. The long Cold War (1945–1991) between the United States and the Soviet Union was never declared; but when the Soviet Union collapsed, it was widely considered to have been “won” by the United States. This induced considerable resentment among many Russians, leading, in part, to the current “new Cold War” between Russia and much of the West.

Psychologically, the essence of war is found in the intensely hostile attitudes among two or more contending groups. Economically, war often involves the forced diversion of major resources from civilian to military pursuits. Sociologically, it frequently results in a rigid structuring of society, with prominence given to military functions. Perhaps the most famous definition of war, however, speaks to its political significance.

Karl von Clausewitz (1780–1831), a Prussian army officer best known for the treatise *On War*, defined it as “an act of violence intended to compel our opponents to fulfill our will.” He further emphasized that war was “the continuation of politics by other means,” by which he meant war should not simply reflect senseless fury; rather, it should be an orchestrated action, with a particular political goal in mind. Very often, that political goal is the preservation of the power of those statesmen and other elites who orchestrate and hope to benefit from a particular war. It is the victors among warring elites who, in its aftermath, will normally declare the war to have been “good” and/or “just.” The losers and victims of wars generally have a different view.
The Frequency and Intensity of Wars

By some measures, wars have been relatively infrequent. Based on the number of nation-states existing since 1815, there have been between 16,000 and 20,000 nation-years, and during this time, war has occupied about 4% of the possible total. The 20th century was a very warlike one, with, by one count, about 87 million war deaths (60/40 civilian to military fatalities). But more than 85% of these occurred during the two World Wars, and since 1945, according to the scholar Joshua Goldstein, “war has decreased . . . and stands at perhaps at an all-time low” (due, according to Goldstein, principally to the “UN system in general and peacekeeping in particular”). And modern warfare, even with its enormous devastation, was directly responsible for fewer than about 2% of all deaths occurring during the past century. Note, however, that there have also been many indirect casualties of war, since wars and the preparations for wars divert resources that might be directed against other causes of death, such as disease and starvation.

In Iraq, for example, between 1991, when the first Gulf War began, and late 2015, the number of civilian casualties occurring as a result of these factors—initiated during the devastating Gulf War, aggravated by sanctions imposed on Iraq by the United Nations under prodding by the United States, and compounded since the U.S.-led coalition invasions of Afghanistan and Iraq in 2002 and 2003, respectively—has far exceeded the number of military and civilian deaths that occurred during the wars themselves. According to a recent analysis of studies conducted by Physicians for Social Responsibility and other credible non-governmental organizations, total deaths from Western interventions in Iraq and Afghanistan since the 1990s—from direct killings and the longer-term impact of war-imposed deprivation—likely constitute around 4 million (2 million in Iraq from 1991 to 2003, plus 2 million from the “war on terror”), and could be as high as 6 million to 8 million people when accounting for higher avoidable death estimates in Afghanistan. Although these figures could be too high, we will never know for sure, since U.S. and United Kingdom armed forces, as a matter of policy, refuse to track the civilian death toll of military operations.

Scholars estimate that between 1500 and 1942 there was an average of nearly one formally declared war per year. This does not count armed revolutions, of which between 1900 and 1965 there were approximately 350, an average of 5 or more per year. According to Lewis Richardson, there were at least 59 million deaths from human violence between 1820 and 1946, of which fewer than 10 million were attributable to individual and small-group violence; the remainder occurred as a result of wars.

Unfortunately, wars between nations in the contemporary world are ongoing in many places and imminent in many others. Since 1955, the number of armed conflicts has ranged from about 20 (in the late 1950s) to nearly 60 (in the late 1980s). During the 1990s and until 2002, the overall number of wars declined somewhat but remained between 30 and 40 per year.

Between 1946 and 2010, 246 armed conflicts were active, according to the Uppsala Conflict Data Program (UCDP). In 2010, according to the UCDP, the
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global total of major and minor inter- and intrastate armed conflicts was 30, which is a substantial reduction from the 36 active conflicts recorded in 2009 and the lowest number of active conflicts since 2003. In 2014, however, the number of ongoing armed conflicts had risen to more than 40, of which five had reached the intensity level of “war,” meaning that, by the UCDP’s criterion, more than 1,000 battle-related deaths were recorded in the conflict throughout the year. These armed conflicts were the ones in Afghanistan, Iraq, Pakistan, Syria, and Somalia.5

Recent data from the UCDP show that over 126,000 people were killed in organized violence in 2014, which is the highest fatality count in 20 years. The UCDP’s data are based on three categories of organized violence—state-based conflict, conflict between nonstate actors, and one-sided killings of civilians—for the quarter century 1989 to 2014. The death count from organized violence had not exceeded 100,000 since 1994, when the Rwandan genocide took place.

Unsurprisingly, the Middle East is currently the most violent region, with violent conflicts in Syria and Iraq mainly responsible for driving up the death toll. But over the quarter century from 1989 to 2014, Africa has been the most violent region by far, according to the UCDP.

Nonetheless, the level of violence in 2014 was still much lower than the previous peak in 1994. Moreover, in the earlier post–World War II period there were many years with large wars and genocides, which resulted in much higher death tolls. Even the exploding violence in the most recent years does not contradict the trend that overall levels of organized violence are declining.

Indirect Killing

In addition to the direct casualties, war kills indirectly, particularly by disease among armed forces personnel as well as by starvation as a result of disrupted food production and distribution services. For example, more than 8 million soldiers and 1 million civilians died during World War I, with approximately 18 million additional people dying during the influenza epidemic of 1918. Historically, in fact, more soldiers have died of diseases and of exposure than from enemy fire: More than eight times as many French soldiers died from cholera during the Crimean War (1853–1856) than from battle. Similarly, of Napoleon’s forces who invaded Russia in 1812, many more died from the cold and pneumonia than from Russian military resistance. During the Thirty Years’ War (1618–1648), the armies of Gustavus Adolphus and Albrecht von Wallenstein, facing each other outside Nuremberg, lost 18,000 men to typhus and scurvy and then separated without a shot having been fired.

In modern times, deaths due to disease have become less prominent during times of war, as a result of improved medical technology. At the same time, advances in military technology have made wars themselves more deadly, especially for nearby civilians: Military deaths were roughly the same in World Wars I and II (about 17 million in each war), but civilian deaths in World War II (approximately 35 million) were about seven times greater than in World War I. In the past, civilians often suffered horribly during wars, notably during the Thirty Years’ War,
when an estimated third of the German population was killed, and during the sack-
ing of fallen cities, such as Carthage at the end of its long Punic Wars with Rome. But through most of human history, war casualties were overwhelmingly concen-
trated among military forces. With advances in military technology, not only have casualties generally increased but the ratio of civilian to military deaths also rose to unprecedented levels during the 20th century; this trend appears to be continuing in the 21st century. In the event of nuclear or biochemical war, whether deliberate or accidental, the casualties could well include essentially all the civilian population on both sides—and possibly billions of bystanders in other countries as well.

The Waste of War

The sheer wastefulness of war has been appalling, even with conventional (non-
nuclear) weapons. During the Battle of the Somme (1916) in World War I, for example, the British sought to pierce the German lines, gaining a mere 120 square miles at a cost of 420,000 men while the Germans lost 445,000. At the Battle of Ypres (1917), the British advanced 45 square miles, in the process losing 370,000 men. During World War I alone, Europe lost virtually an entire generation of young men. Here is F. Scott Fitzgerald's description of the Somme battlefield:

See that little stream—we could walk to it in two minutes. It took the British
a month to walk to it—a whole empire walking very slowly, dying in front and
pushing forward behind. And another empire walked very slowly backward,
a few inches a day, leaving the dead like a million bloody rugs.6

Numbers can be numbing. For example, of the 2,900,000 men and women who
served in the U.S. armed forces during the Vietnam War (average age 19), 300,000
were wounded and about 55,000 were killed. Yet these figures convey very little of
the war's significance or of its horror, both for those who served and for the country
at large—especially for the people of Vietnam. They also ignore the war's devastat-
ing socioeconomic consequences for Vietnam, Laos, and Cambodia, as well as for
the United States, where it had profound social effects, including widespread alien-
ation of millions of young people and massive antiwar demonstrations around the
country. There were also political consequences, not all of them negative, including
a hesitancy to engage U.S. servicemen and servicewomen in foreign conflicts (the
“Vietnam syndrome”). In Vietnam itself, the economy and natural environment
were devastated, and several million Vietnamese were killed. Decades after it has
ended, the Iraq, Afghanistan, and Syrian wars may similarly have devastating con-
sequences not only for the millions of Iraqis, Afghans, and Syrians displaced, killed,
or maimed by the conflict but also for coalition soldiers and civilians who return
home only to be afflicted by posttraumatic stress disorder and other indicators of
an "Iraq/Afghan syndrome.”

It is deceptively easy to present a sanitized summary, often in statistical form, of
incalculable carnage and misery, thereby synopsizing ineffable horrors in a few
well-chosen words. In this book, we plead guilty to this form of euphemism and
linguistic sanitation, offering only the excuse that the demands of space (and cost) do not permit the reproduction of photos that could reveal the atrocity of warfare infinitely better than a written text.

Historical Trends in War

The following list of (admittedly bloodless) facts and figures should give some idea of how war has evolved over the past half-millennium. Consider, for example, these trends:

1. An increase in the human, environmental, and economic costs of wars; a decrease in the casualty rate among combatants; and an increase in the number of civilian casualties. In the Middle Ages, for example, the defeated side, typically the one that broke and ran, would be cut down by the victors, often losing as many as 50% of its fighting men. By modern standards, however, the actual numbers in question were small: thousands or, at most, tens of thousands involved in combat, as opposed to modern armies numbering in the hundreds of thousands. Up to the 16th century, about 25% of combatants died; by the 17th century, this proportion was about 20%, dwindling to 15% in the 18th century, 10% in the 19th century, and 6% in the 20th century (perhaps fewer in the first decade and a half of the 21st century). This is partly because with modern technology, a larger proportion of “combatants” are engaged in support and supply rather than actual fighting. In addition, the proportion of combat injuries leading to death had decreased because of better medical care for the wounded. And disease, once a major scourge during wartime, now causes fewer combat fatalities (although the indirect effects of combat may kill many civilians, as in Iraq since 1991 and Syria since 2011). On the other hand, the proportion of the civilian population in the armed services has increased, and since the number and duration of battles has increased as well, the percentage of the national population dying in war has also gone up. In France, for example, approximately 11 out of every 1,000 deaths during the 17th century were due to military service; in the 18th century, this number had increased to 27; by the 19th century, 30; and in the 20th century, 63. The 20th century also witnessed the initiation of large-scale attacks on civilian shipping, especially with the use of submarines. Attacks on noncombatants became particularly pronounced with the use of air bombardment—of Ethiopians by Italy; of Spanish Loyalists by German and Italian “volunteers” during the Spanish Civil War; of Chinese by Japan; of Poles, Dutch, and English by Germany; of Finns by the USSR; of Japanese and Germans by the United States and Britain during World War II; and of Iraq, Afghanistan, Serbia, Syria, and Libya by the United States and its allies (especially Saudi Arabia, which has bombed many civilian quarters in Yemen) during the 1990s and first years of the 21st century. The ratio of civilian to military casualties at Hamburg, Dresden, Tokyo, Hiroshima, and Nagasaki was on the order of thousands to one.
2. An increase in the speed at which wars spread to additional belligerents, in the number of belligerents involved in a given war, and in the area covered. In ancient times, battles typically took place in, and were named for, cities or mountain passes: the Battles of Thermopylae, Waterloo, Gettysburg. During the 15th and 16th centuries, each war had, on average, just slightly more than two collective participants. By the 20th century, the number of states involved had jumped to five. In World War II, many battles had expanded yet more, to whole countries, even continents or oceans: the Battle of Britain, the Battle of the Atlantic; on land, the tides of battle swept across all of Europe, as well as across much of northern Africa, East Asia, and the Pacific Ocean. Following this tradition, a World War III involving the use of weapons of mass destruction would almost certainly be global.

3. Since World War II, an increase in the frequency of so-called low-intensity conflicts (LICs), in which the United States and the former Soviet Union, especially, became indirectly involved in Third World conflicts, revolutions, and counterrevolutions. Both the United States and to a lesser degree the former Soviet Union tended to consider that their “national interests” included the outcome of struggles taking place virtually anywhere on the globe. Often, they interpreted strictly indigenous conflicts, especially those reflecting revolutionary nationalism, as evidence of meddling by the other side and regarded the nations involved, therefore, as pawns in the East-West conflict. As war has become potentially more destructive and more likely to engulf nuclear powers, military strategy has focused increasingly on fighting comparatively limited wars—for example, U.S. support for the contras in Nicaragua and for the mujahideen in Afghanistan—that are perceived as less threatening to the major powers but that nonetheless allowed them to carry on their rivalry on someone else’s soil. The U.S. experience in the Vietnam War (and quite possibly, the Russian experiences in Afghanistan and Chechnya) also sensitized government leaders to the difficulties of conducting wars that are expensive, in terms of money as well as lives, and that do not enjoy strong public support. As a result, one might expect increased interest in the 21st century by the great powers in orchestrating LICs that are comparatively low profile and hence less controversial and domestically disruptive.

At the same time, the phrase low-intensity conflict is a euphemism, dangerously misleading as to the death and misery it may produce. Similar euphemisms would include the “police action” in Korea (1950–1953) and Vietnam (1962–1974), “peacekeeping” in the Dominican Republic (1965), and the “rescue operation” in Grenada (1983). To many defense strategists in the United States, who by the late 1980s were especially committed to the concept, a LIC is really a war, typically in the Third World, in which the number of U.S. combatants and casualties is kept low; for those directly affected, by contrast, the damage can be staggering. For example, consider the death toll in Nicaragua during the U.S.-sponsored contra war of the 1980s: more than 29,000. To gain a better perspective on this, imagine that Nicaragua’s population (3.5 million) were that of the United States (about 285 million, at the time). A comparable cost to the United States would have been more than 2 million lives. Proportionately, the Nicaraguan death toll in this “low-intensity war” exceeded all U.S. losses in all the wars of its history, from the Revolutionary War to Iraq and Afghanistan.
Even “small” conventional wars can be devastating: For example, the Six-Day War between Israel and its Arab opponents in 1967 resulted in 21,000 battle-related deaths, far greater than the rate of killing per day that occurred during the Korean War. And between 1980 and 1988, the war between Iran and Iraq, generally considered a minor conflagration, may have claimed more than a million lives. Between 1991 and 2000, wars and “ethnic cleansing” in Rwanda, Burundi, Iraq, East Timor, and some parts of the former Soviet Union and Yugoslavia claimed vast numbers of civilian casualties. Millions of Iraqis, Afghans, and Syrians have been displaced, wounded, or killed since 1991. The civil war in Sudan, between an Islamic government in the northern part of that country and Christian and animist secessionists in the south, has claimed perhaps 2 million lives, both from direct fighting and from subsequent disease and mass starvation.

4. The continuing increase in “asymmetrical” conflicts between nations or empires on the one hand and guerrillas, “freedom fighters,” and/or “terrorists” on the other hand. During the late 18th and early 19th centuries, the Napoleonic era of revolutionary wars initiated the phenomenon of “anti-imperialist,” guerrilla warfare. Resistance and “terrorist” fighters had existed since antiquity; best known, perhaps, were the Zealots, dagger-wielding Jewish opponents of Roman rule in ancient Palestine. But the concept of guerrilla warfare as an organized if rather informal uprising on a national scale originated with the Spanish resistance to Napoleon. In fact, during the 5 years of French occupation, Spanish guerrillas (aided by English forces in Portugal) accounted for as many French casualties as Napoleon’s forces suffered during their ill-fated Russian campaign.

5. An increase in religiously inspired armed conflicts since the Israeli occupation of Arab lands in 1967. The phenomenon of resistance to imperial dominion by dedicated fighters in small groups has taken on an increasingly religious cast since the Euro-American and former Soviet occupation of much of the Middle East. The Soviet occupation of Afghanistan during the 1980s and the American-led occupations of Afghanistan and Iraq (and emplacement of military bases throughout the Middle East and Islamic world more generally) have been met by fierce resistance on the part of “freedom fighters” and “God’s warriors” who believe that “Christian-Jewish crusaders,” and their “infidel” Muslim backers, have desecrated the Islamic “holy land.” Jihadists claim that they are defending their faith from an American-led attack against Islam itself. On the other hand, some conservative Western commentators have called militant Islam “Islamo-Fascism.” While militant Islamists believe their “holy war” (jihad) to be a just struggle against “imperialists and infidels,” many Westerners consider the global “War on Terror(ism)” to be a “just war” against “barbarism.” “God’s warriors” come in all denominations, and the escalation of violence by all of “God’s warriors” has had infernal consequences for countless victims caught in the “divinely inspired” crossfire.

6. Finally, although the future—by definition—cannot be predicted with certainty, many experts anticipate extension of certain recent trends, such as the following: use of child soldiers, especially in impoverished regions (as in sub-Saharan Africa) that are better endowed with people than with financial resources; and
increased reliance on robotically controlled munitions, space-based weapons (both “defensive” and “offensive”), and private, mercenary armed forces, especially by wealthier countries.

Modern Weaponry

We can identify four major eras of weaponry: (1) the earliest period (encompassing the entire preindustrial period), based primarily on muscle power; (2) an intermediate period (from approximately the Renaissance until the first half of the 20th century in the West and still the case in most of the rest of the world), powered by chemicals, especially gunpowder, as well as steam and internal combustion engines; (3) the second half of the 20th century, dominated by the threat of nuclear weapons and other weapons of potential mass destruction (especially biochemical weapons), and (4) the early 21st century, which, while preserving the dubious legacy of the late 20th century, may also be increasingly characterized by military adaptations of such cutting-edge technologies as robotics, drones (devices of unmanned “precision” killing at a distance), nanotechnology, space-based weaponry, and cyberwarfare. This “advance” from stone ax to hydrogen bomb and satellite gives particular urgency to peace and impels us to understand the instruments of war so as to appreciate the need for developing alternative, non-lethal “instruments” of peace.

Before 1939, it was assumed by many strategic thinkers that World War II would largely be a replay of the static trench warfare of World War I. Instead, the German Army used quick-moving armored forces closely coordinated with air strikes, in a new style of rapidly penetrating battle known as the Blitzkrieg, or “lightning war,” which benefited the offense. In contrast with trench warfare, there were relatively few casualties in the Nazi conquest of Poland, the Low Countries (Holland, Belgium, and Luxembourg), and France. The major loss of life in the European theater during World War II occurred during prolonged fighting on the eastern front, where the Soviet Union suffered more than 20 million casualties and Germany sustained nearly 90% of its wartime losses.

Toxic gas was used extensively by both sides during World War I. Japan employed chemical weapons against unprepared Chinese forces during the 1930s; Italy did the same in Ethiopia. Subsequently, advances in chemical and biological warfare (CBW) have raised new fears about the potentially devastating consequences of future wars, along with their possible use by terrorists (as in the 1995 attack on the Tokyo subway system by Aum Shinrikyo, a religious cult). Iraqi forces apparently used chemical weapons (mustard gases) in their war with Iran during the 1980s, as well as against Kurdish rebels inside Iraq itself, in both cases violating international law. And there may well be biochemical attacks on civilians in the United States and elsewhere during the ongoing “War on Terror(ism)” being conducted around the world.

There have been many innovations in war-fighting technology within the past hundred years: breech-loading artillery, landmines, grenades, torpedoes, machine guns, tanks, chemical warfare, powered ships (first steam, later diesel), iron-hulled
ships, submarines, and aircraft, including fighters and bombers. Also, advances in rocketry have permitted swift, stealthy, and relatively accurate attacks on distant targets. The Battle of Leyte Gulf, during World War II, for example, was the greatest naval engagement of all time: In 5 days, Japan lost 4 aircraft carriers, 3 battleships, 6 heavy cruisers, and 11 destroyers (and, of course, many thousands of sailors), all destroyed by torpedoes launched by submarines or by bombs dropped by airplanes; there were no direct encounters between the surface vessels of the two sides.

Other developments in conventional weaponry involve improved armor plating for tanks and ships, as well as highly accurate precision-guided munitions—relatively inexpensive, highly accurate rocket-propelled devices that can be fired by small groups of soldiers and that endanger costly targets, such as tanks or aircraft. Many military analysts believe that the future will see further development of highly lethal munitions and robots, used on an increasingly automated, even electronic, battlefield, possibly conducted in space as well. These trends have culminated in what is probably the most important technological development in war making, the invention and high-speed delivery of nuclear weapons.

Cutting-Edge Military Technologies

In their never-ending search for the “winning weapons,” military strategists and planners have been busy developing new weapons systems and the means to deliver them. They have increasingly appropriated scientific, technological, and engineering innovations that have dual-use applications, that is, those for civilian and for military purposes. During the early 21st century, cutting-edge and futuristic military technologies include nanotechnological devices; drones, robots, and other “Terminator-like” weapons; chemical and biological warfare agents; cyberwarfare technologies; and satellites and other space-based weapons systems.

Nanotechnological Devices

Nanotechnology (sometimes shortened to “nanotech,” or NT) is the manipulation of matter, or the engineering of functional systems, on an atomic and molecular scale. Generally, NT deals with developing materials, devices, or other structures with at least one dimension sized from 1 to 100 nanometers (1 nanometer, or nm, is one billionth, or $10^{-9}$, of a meter). NT has a wide range of applications. Molecular manufacturing, also known as molecular nanotechnology, is a field of NT that involves the manufacturing of products that are built one atom or molecule at a time.

NT has military uses as well, especially for technologically advanced machinery and for soldiers. NT can be used to build materials and parts for machines and weapons; for soldiers, it can be used to build materials to enhance clothing, and, according to the Defense Advanced Research Projects Agency (DARPA), sensor microchips can be implanted in soldiers to monitor their health and vital signs during combat. According to DARPA, this technology could revolutionize war, as the
chips allow the U.S. military and its medical personnel to receive instant updates about any potential medical problems in soldiers, thus expediting medical evacuations. DARPA is also developing chips allowing for treatment of medical conditions from within the body. Whether these chips prove successful in relaying health information and possibly treating medical conditions remains to be seen; however, it is important to consider the future implications of such devices. Since these chips are meant for military uses, they could be developed to do harm to the body from the inside, potentially as a means of torture. There is also the possibility that NT could be developed for surveillance purposes (via nanoscale microphones or cameras) to be used for such covert military operations as spying.

Despite the possible benefits of molecular nanotechnology, such as the potential to improve medical procedures and treatments and to develop alternative energy sources, there are risks associated with its military applications. These risks include potential dangers to soldiers’ health; the threat of technologically “improved nuclear” warfare; social and economic disruption, and the threat of criminal or terrorist use of NT.

Nanoparticles used on weapons and machinery (i.e., drones, tanks, planes, etc.) to make surfaces harder, smoother, and more stealthy for covert military operations could erode and enter the body through the respiratory system, possibly leading to lung infections or cancers that could spread to the rest of the body and cause a multitude of health problems. NT that is used to improve human performance can also pose human health risks, especially if injected into the bloodstream. For example, artificial blood cells called respirocytes can greatly enhance a soldier’s performance on the battlefield, but such tampering of delicately balanced biological systems within the body could cause overheating of the body, dehydration, and even breakdown of tissues and organs if the immune system perceives the respirocytes as a threat. Another example of NT that can be used to improve human performance is the introduction of nanoscale receptor enhancers that are designed to increase alertness and reduce reaction times. With repeated use, however, these enhancers could cause addiction and, with chronic use, could lead to chronic fatigue syndrome, which in turn often leads to weakness, neural damage, and even to death. (The drug Provigil is already used by military pilots on long-range missions and has been employed by civilians seeking to keep themselves productive despite sleep deprivation.)

Perhaps the most terrifying risk of militarized NT lies in the possible increased likelihood of nuclear war due to the advent of sophisticated molecular nanotechnology. Nuclear war has the potential to be facilitated by nanotechnology devices (i.e., atomic firing, molecular-based lasers, etc.), and nanotechnology weapons can be developed to destroy specific targets with considerable ease and speed once NT itself has progressed to develop inexpensively manufactured military products. Because molecular nanotechnology focuses on the nanoscale, and because the advent of nuclear weapons has added to our knowledge of the atomic scale, the sophistication of nuclear warfare that incorporates elements of NT weapons has the potential to be not only devastating on the battlefield but also to become the driving force of a new and unstable arms race. Nanotechnology weapons could
themselves become part of this arms race, because NT is easier to use, easier to transport, easier to manufacture, and easier to develop into weaponry than most conventional and nuclear technologies. Unless restrictions are put on the applications of NT to nuclear weapons, the number of nations whose military forces are based on nanotechnology weapons could be much greater than the number of nations that have nuclear arsenals, thus increasing the likelihood that a regional conflict could arise as a result of an arms race. As nations are increasingly encouraged to get involved in nanotechnology research due to its implications for military weaponry, superpowers could well lose their current ability to “police” the international arena, thus encouraging the breakup of existing relationships and alliances between nations and contributing to additional global instability.7

Drones, Robots, and “Terminator”-Like Weapons

A drone, otherwise known as an unmanned aerial vehicle (UAV), is an aircraft without a human pilot onboard. Its flight is either controlled autonomously by computers in the vehicle or under the remote control of a navigator on the ground or in another vehicle. Although they are also used in a small but growing number of civil applications, such as firefighting or nonmilitary security work (e.g., the surveillance of pipelines), drones are most noted for their military applications and are often preferred for missions that are too dull, dirty, or dangerous for manned aircraft.

Between September 11, 2001, and early 2012, the Pentagon increased the drone inventory from a handful to 7,500, comprising approximately one-third of all U.S. military aircraft, of which a few hundred are Predator and Reaper drones used for military targeting purposes. As advances in artificial intelligence (AI) continue to be made, drones and other robotic systems designed for military use (e.g., ground-based robots assigned with a wide variety of tasks, such as evacuating wounded soldiers) may be able to make combat decisions without human input.8 In essence, the usefulness of these robots lies in the fact that they can carry out specific kinds of jobs that human forces would not be able to perform: dull jobs that go beyond the limitations of human endurance or involve extended patrolling; dirty jobs that involve work with hazardous materials or environments (e.g., underwater or even in space); and dangerous jobs that involve direct interaction with enemies or other hostiles. However, another kind of job could feasibly be assigned to these robots, namely the ability to act with dispassion; in other words, robots do not have the emotional capacity to prevent them from committing war crimes, nor be negatively affected by adrenaline, hunger, sleep deprivation, or anything else that has the potential to cloud human judgment. This could have the potential to remove human forces completely from the battlefield and therefore minimize casualties—something that is considered to be the top priority in combat situations. It could also generate serious problems.

This technology still has a long way to go. Taking its usefulness for granted could prove a horrible mistake, impacting relations with other countries. For example, in May 2012, a U.S. military aerial drone attacked a convoy of alleged al-Qaeda
militants in Yemen, killing 247 of the alleged militants, 55 military personnel, 18 local militiamen, and 18 civilians. In other cases, drone attacks on supposed Taliban operatives in Afghanistan as well as in Pakistan have instead targeted wedding parties and other purely civilian events, resulting in the deaths of dozens of innocent people and generating immense anger in the host countries. In such cases, official U.S. government policy is to pay reparations to surviving family members, which is consistent with local Islamic tradition in such regions. However, it is appropriate to ask whether the perceived benefit of remotely terminating alleged terrorists exceeds the cost of civilian lives, in addition to the added cost of antagonizing people whose hearts and minds are supposedly being courted. This is one of many ethical dilemmas arising from the military uses of such technologies.9

Another dilemma arises when considering accountability: Who is accountable for, say, the killing of civilians in a strike? The commander who can override its orders? The politician(s) who authorized its use? The manufacturer of the robot if its equipment is proven to be faulty? Since late 2012, authorization of drone attacks in Yemen and Afghanistan in particular has been handled by the Central Intelligence Agency, not the U.S. military command. In addition: (1) allowing machines to make life-and-death decisions during combat requires extensive legal and ethical constraints; (2) such constraints and policies must be put in place in order to guide future technological developments; and (3) using unmanned military technology removes major psychological barriers to wars (e.g., the cost of human lives, distances), making them easier to start.

Between President Obama’s inauguration in 2009 and late 2014, under presidential authority the CIA has launched 330 strikes on Pakistan; Obama’s predecessor, President George Bush, conducted 51 strikes in 4 years. And in Yemen, President Obama opened a new front in the secret drone war.

Across Pakistan, Yemen, and Somalia, the Obama administration launched more than 390 drone strikes in its first 5 years in office, many times as many as were launched in the entire Bush presidency. These strikes have killed more than 2,400 people, at least 273 of them reportedly civilians. Although drone strikes under Obama’s presidency have killed nearly six times as many people as were killed under Bush, the casualty rate—the number of people killed on average in each strike—has dropped from eight to six under Obama. The civilian casualty rate has fallen, too. Strikes during the Bush years killed more than three civilians in each strike on average. This has halved under Obama (1.43 civilians per strike on average). In fact, reported civilian casualties in Pakistan have fallen sharply since 2010, with no confirmed reports of civilian casualties in 2013. The decline in civilian casualties could be because of reported improvements in drone and missile technology, rising tensions between Pakistan and the United States over the drone campaign, and greater scrutiny of the covert drone campaign both at home and abroad.10

Space Technologies

No longer a part of science fiction, space technologies are becoming more useful for military purposes, including tiny disposable satellites, material breakthroughs to
maximize the efficiency of solar cells for satellites, and even small nuclear reactors for satellite systems and other spacecraft. An additional technology is the unmanned OTV (Orbital Test Vehicle), the U.S. Air Force's mysterious robotic X-37B space plane, a secret reusable spacecraft that looks like a miniature version of a space shuttle.

DARPA’s “SeeMe” program includes the use of tiny satellites that could swarm battlefields, allowing soldiers to have much wider and constant surveillance coverage from space and therefore be instantly updated during combat situations. It could also be very cost effective, much less expensive than the flying robots that comprise the U.S. military's drone fleet. According to DARPA, two dozen of these tiny satellites could be launched from missiles fired via aircraft into space, where they would maintain their orbit for a minimum of 45 days, sending updated images of the battlefield taken from space to soldiers on the ground via handheld devices within an hour and a half of receiving image requests. Although much of this technology is still in the works, its implications are far reaching. From an ethical standpoint, if successful, it would introduce to other nations the necessity of developing technology to shoot down the satellites in order to delay information relay to the battlefield. This could cause political conflict; also, any remaining debris in space could prove detrimental to other spacecraft as well as to soldiers on the ground if it falls through the Earth's atmosphere. In addition, if the technology gets in the wrong hands (i.e., that of terrorists or militant groups), it could be used for spying and theft of information.

Furthermore, the U.S. Air Force has plans to increase the amount of energy available for use by its satellite systems for military-based missions. As Mark Maybury, a chief scientist for the U.S. Air Force notes, “Space is the ‘ultimate high ground,’ providing access to every part of the globe. . . . Space also has the unique characteristic that once space assets reach space, they require comparatively small amounts of energy to perform their mission, much of which is renewable.” Additional technologies that can be utilized to provide energy for even ground-based facilities include small modular nuclear reactors and space tethers, which—when developed—could harvest energy from the Earth’s geomagnetic field. Although space tethers are in the far distant future, small modular nuclear reactors are not. In fact, nuclear energy has already been demonstrated for several satellite systems and has been shown to provide a consistent source of power at a much higher level than current technologies. As the size of these nuclear reactors decreases, their utility onboard satellite systems and other spacecraft increases. However, such a technology can easily have catastrophic consequences if not properly maintained or if it ends up in the wrong hands. For instance, it is possible that such technology could be used to build small nuclear weapons or more powerful conventional weapons. Attached to missiles, rockets, or even hand grenades, if small enough, such technology could prove extremely dangerous both physically and politically.

**Biological and Chemical Weapons**

Biological and chemical agents have been used during warfare throughout history. Today, such weapons are sometimes known as “the poor man's nuclear weapon” because of the ease of developing them compared with nuclear weapons.
Biological agents include pathogens or other microscopic organisms capable of causing disease, such as bacteria (e.g., anthrax), viruses (e.g., smallpox), fungi, and toxins. Biological agents differ from chemical agents in that their release and their effects are not immediately noticeable, simply because infection of the human body requires a certain amount of time to become an illness.\textsuperscript{12}

Chemical agents include (1) nerve agents (e.g., GB, or sarin), (2) blister agents (e.g., HD, or sulfur mustard), and (3) choking agents (e.g., CG, or phosgene). Nerve agents are particularly toxic, as with VX, or methylphosphonothioic acid, which causes death after 15 minutes of absorption, and GB, which can cause death in 1 to 2 minutes if enough is absorbed. Blister agents do not immediately kill like nerve agents; they are meant to limit fighting ability rather than to cause casualties, although exposure to such agents can be fatal. HD (sulfur mustard) is particularly toxic, due to its stability; it attacks not only the skin but also the eyes and the respiratory tract. Choking agents utilize chemical agents that attack lung tissue. Phosgene is the most dangerous of these agents, as it causes massive pulmonary edema and can result in death within 24 to 48 hours of exposure.

Clearly, the use of these weapons against human beings is a significant ethical issue, although it is worth considering why such things should be considered less tolerable than traditional explosive or penetrating weaponry based on gunpowder. Concerning biological agents: (1) they can spread very easily and rapidly if not contained, resulting in secondary infections far from the initial site of release, and (2) advances in biotechnology have made it easier to develop possibly dangerous agents with fewer resources, increasing worries about bioterrorism.

The Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction (usually referred to as the Biological Weapons Convention, or the BWC, or Biological and Toxin Weapons Convention, or BTWC) was the first multilateral disarmament treaty banning the production of an entire category of weapons. It was the result of prolonged efforts by the international community to establish a new instrument that would supplement the 1925 Geneva Protocol, which prohibited use but not possession or development of chemical and biological weapons. The BWC became effective in 1975. It currently commits the 173 states (but not Israel, Kazakhstan, and about 20 other nations) as of mid-2015 that are party to it to prohibit the development, production, and stockpiling of biological and toxin weapons. However, the absence of any formal verification regime to monitor compliance has limited the effectiveness of the Convention. The Chemical Weapons Convention (CWC) is a similar arms control agreement outlawing the production, stockpiling, and use of chemical weapons. As of September 2015, 192 states had given their consent to be bound by the CWC. Israel has signed but not ratified the agreement. Egypt, North Korea, and South Sudan have neither signed nor acceded to the treaty. Angola deposited its instrument of accession to the CWC in September 2015. And as of October 2015, about 90% of the world’s declared stockpile of chemical weapons had been destroyed. The convention also has provisions for systematic evaluation of chemical and military production facilities, as well as for investigating allegations of use and production of chemical weapons.
Chapter 3  The Meanings of Wars

Chemical agents, like NT and drones, pose their own array of grave ethical, legal, and political concerns. Would their use be the most efficient way to eradicate such alleged enemies as groups of terrorists? What about civilians caught in the crossfire? Is it ethically acceptable to wipe out villages with toxic nerve agents, for instance, in order to kill terrorist groups that have the potential to kill many more people? Also, what about countries that possess chemical weapons but are not under any legal imperatives to surrender them or to allow for their inspection and control? Although the Syrian government recently signed the CWC and authorized the removal of its declared stock of mustard gas and the VX nerve agent, it is nonetheless widely believed to have used chemical weapons against opposition forces and civilians, and the Assad regime may have hidden part of its stockpile from the inspectors.

Cyberwarfare

Cyberwarfare refers to politically and/or criminally motivated computer hacking. It is a form of information warfare sometimes seen as analogous to conventional warfare. Richard A. Clarke, former National Coordinator for Security and Counterterrorism and Special Adviser to the President for Cyber Security, defines "cyberwarfare" as "actions by a nation-state to penetrate another nation's computers or networks for the purposes of causing damage or disruption." The Economist describes cyberspace as "the fifth domain of warfare," and William J. Lynn, U.S. deputy secretary of defense, states that "as a doctrinal matter, the Pentagon has formally recognized cyberspace as a new domain in warfare . . . which has become just as critical to military operations as land, sea, air, and space." In 2009, President Barack Obama declared America's digital infrastructure to be a "strategic national asset," and in 2010, the Pentagon set up its new U.S. Cyber Command (USCYBERCOM) to defend American military networks and attack other countries' systems. The European Union has set up the European Network and Information Security Agency (ENISA). The United Kingdom has also set up a cyber security and "operations centre." The USCYBERCOM is intended to protect only military assets, whereas civilian government and corporate infrastructures are primarily the responsibility of the Department of Homeland Security and private companies, respectively.

Numerous key sectors of national economies are currently at risk, including cyberthreats to public and private facilities, banking and finance, transportation, manufacturing, medicine, education, and government, all of which are dependent on computers for daily operations. In 2009, President Obama stated that "cyber intruders have probed our electrical grids." The Economist wrote that China has plans for "winning informationised wars by the mid-21st century." It claims that other countries are likewise organizing for cyberwar, among them Russia, Israel, and North Korea. Iran may have one of the world's largest cyberarmies, along with the United States, China, and Russia. But not withstanding recent publicized cyberattacks attributed to Chinese Army hackers on American corporations, Iran has been the subject of more cyberattacks than has any other country, reflecting efforts by Israel and the United States to interrupt Iranian nuclear programs.
Cyberwarfare is often depicted in movies as intense yet easy; with just one click of the mouse and a few keystrokes, the “good guys” (or the “bad guys”) successfully hack into a multimillion dollar security system or insert a computer virus undetected. In reality, however, cyberattacks are much more complicated, time-consuming, and expensive. Also, cyberweapons are quite flexible and can be used for a variety of purposes, including propaganda, espionage, and even impersonation, in addition to destroying physical infrastructures (e.g., factories, power plants, or nuclear enrichment centrifuges, in the case of Iran).

There is also the prospect of cyberterrorism. Many important infrastructures and services rely on the Internet to function, and so in theory can be controlled or manipulated from the Internet. Potentially, the most serious form of cyberwarfare is a targeted attack, designed to breach defenses and disable computerized functions of an individual, company, or organization. Highly sophisticated attacks, such as one against Google in 2009, succeed, despite top security efforts and procedures. In December 2014, there was a massive breach of data concerning many U.S. government employees in the Office of Personnel Management. As long as people—whether an individual, a small business, or even a large pharmaceutical company or corporation—have something of interest to attackers (e.g., source code, intellectual property), they are at risk of being victimized by a cyberattack.

Defensive measures against such attacks include not only such standard techniques as security software, firewalls, and encryption but also procedures for what to do after an attack has been successful. Preventive measures include backing up information to a secure outside source, developing advanced analytic software, and setting up network intelligence systems to create awareness of possible attacks and develop means of defense against them. Identification of a highly sophisticated targeted attack involves three steps: (1) detection, or recognizing the attack; (2) situational awareness, or determining the context of the situation (i.e., what information is being stolen); and (3) intelligence, or finding the solution to the problem. Most successful targeted attacks are designed to take advantage of vulnerabilities in software or programs.

Although sophisticated cyberattacks against Iran’s nuclear facilities began under the Bush administration in 2006, President Obama accelerated the program under the code name “Olympic Games.” Most conspicuously, an American and Israeli cybereffort (later called “Stuxnet” by computer security experts) attacked Iran’s Natanz nuclear plant. Additional attacks in the weeks following the initial assault temporarily disabled approximately 1,000 of the 5,000 uranium-enrichment centrifuges in that facility.

The implications of Stuxnet’s success in disabling a significant part of Natanz’s operations are considerable, including the fact that the United States, whose economy relies greatly on computer networks, would appear to have the most to lose if and when cyberattack capability becomes widespread. With such cybertechnology, plans and programs in other countries can also be disrupted or sabotaged; however, it is not an easy matter, for there are significant disadvantages associated with using any cyberweapon.

First, cyberweapons are very time consuming in their development as well as in their transfer to the physical site of the target. The team that developed Stuxnet had
to physically transfer it via thumb drives into the Natanz facility, an operation that was both risky and time-consuming. Because many Middle Eastern infrastructure systems aren’t accessible via the Internet, other measures have to be taken in order to infect them; this is why using a cyberweapon to attack Syrian armed forces, for instance, might be futile. The Pentagon may have developed equipment that utilizes radio signals to insert computer code into system hardware that is offline and therefore inaccessible from the Internet.

Second, cyberweapons have shown the capability to jump from one computer system to another and should therefore be extremely limited in their use as well as intended targets. The implications of this can be seen with Stuxnet’s “escape” into the Internet; if Stuxnet were capable of targeting anything else but nuclear centrifuges, the possible damage that could occur might be catastrophic. Third, although unreliable, cyberweapons can be used as leverage to exert dominion over other nations. For instance, the ostensible reason for the cyberattacks against Iran was to prevent war between Israel and Iran.

Although the nature of computer networks limits the kinds of cyber attacks that can be carried out, cyberwarfare is nonetheless coming to the forefront of weapons strategies. Similarly, cybersecurity measures and defenses are also becoming increasingly important, as DARPA and the USCYBERCOM are given billions of dollars for building and managing new cyberweapons as well as state of the art cybersecurity.

Like other new cutting-edge military technologies, for good and ill, future developments of cyberwarfare are unpredictable, risky, and ethically contentious. To paraphrase the noted ethicist Peter Singer, the growth of technology is exponential whereas that of human institutions and societies grows at a much slower—even glacial—pace. Cyberweapons are currently being developed outside any regulatory framework. The “Stuxnet” computer worm was essentially the starting gun of what will likely become a unique kind of international competition. Unlike nuclear weapons, for example, in which countries enter into arms races while ostensibly hoping that those weapons will not be used, cyberwarfare is already upon us: Countries are not only developing various computer worms, viruses, and so on and then storing them for possible use in the future, they are actually using these weapons right now, without any overt state of war.

Has Technology Made War Obsolete?

In the age of nuclear and biochemical weapons, some people claim that the destructiveness of these devices has made war obsolete. It is interesting to note, however, that this suggestion is not unique to contemporary weapons of mass destruction: Throughout history, people have regularly claimed that the latest advances in weaponry, by their very deadliness, will somehow prevent war. And then comes the next one. (This brings to mind Mark Twain’s comment: “It is easy to stop smoking; I’ve done it many times.”)
Following the invention of the bayonet, for example, an English editor wrote in 1715 that “perhaps Heaven hath in Judgment inflicted the Cruelty of this invention on purpose to fright Men into Amity and Peace, and into an Abhorrence of the Tumult and Inhumanity of War.” Similarly, Alfred Nobel hoped that his new invention, dynamite, would make war impossible. In 1910, an Englishman, Norman Angell, wrote a best-selling book, *The Great Illusion*, in which he argued that because of the economic interconnectedness of nations, as well as the increased destructiveness of modern military forces, war had finally become impossible. The “great illusion” was that no one could rationally conceive of or wage war in the 20th century; ironically, World War I began just 3 years after the publication of Angell’s book. And in that conflict, the invention of the machine gun made neither people nor war obsolete. Rather, it led to the deaths of hundreds of thousands, often in just a single military engagement, such as the Battle of the Somme.

Since the dawn of the nuclear age in 1945, some observers of the global military scene have once again suggested that since war has become unacceptably destructive—to a would-be aggressor and even to a supposed “victor”—the likelihood of war has actually decreased. Although this line of reasoning may appear somewhat comforting, it is also seriously flawed. Let us grant that nuclear war, because of its potential for global annihilation, is in a sense its own deterrent. States possessing nuclear weapons (especially the major superpowers) may well be especially cautious in any conflict with other nuclear weapons states. But at the same time, theories of mutual nuclear deterrence seem to have produced the expectation that because of the seriousness of nuclear war, each side can count on the other to refrain from anything resembling a nuclear provocation, which in turn makes the world yet more “safe for conventional war.”

In addition, there is the great danger that in a nuclear confrontation, each side will presume that the other will be deterred by the prospect of annihilation and, therefore, expect the other to back down, while remaining determined to stand firm itself. Moreover, nuclear weapons carry with them an inherent ambiguity: Since the consequences of using them are so extreme, the threat to do so lacks credibility. As a result, although technological “progress” in war making has undeniably made war—especially nuclear war—horrifically destructive, it remains uncertain whether such developments have actually made war any less likely. In fact, it may well be true that a nuclear conflict, detonation, or accident is more, not less, likely in this century than in the previous one. This is because of the increased likelihood of “accidental” local (or theater) nuclear wars, as well as the likely proliferation of small nuclear devices (possibly deliverable in suitcases) and of “rogue states” and “terrorists” seeking to acquire and deploy them.

Perhaps most disturbing of all, the fact remains that human beings, including decision makers, are influenced by many things beyond a cool, rational calculation of their perceived best interests. Wars have been initiated for many reasons, often including mistaken judgment or faulty information. And when war takes place, the combatants make use of whatever weapons they have. Never in the history of human warfare to date has an effective weapon been invented and then allowed to rust without at some time being used.
Historically, the impact of “war is obsolete” reasoning has also been ironic: It has not so much discouraged governments from waging war as diminished whatever hesitation scientists, engineers, and industrialists might otherwise have had about lending their talents to the production of ever-more-destructive weapons. Even the liberal view of the perfectibility of human nature helped justify science's contribution to the manufacture of cannons, no less than steam engines or new techniques of manufacturing metal alloys. And from the late 1980s until the present, many scientists similarly justify their participation in “Star Wars” (Strategic Defense Initiative–Ballistic Missile Defense–related) research.

**Total War**

One of the most important changes in modern war has been the combination of (1) increased destructiveness of the weapons and (2) decreased selectivity as to their targets. The weapons, in short, have become more deadly while at the same time been increasingly directed toward civilians, even as their actual targeting has become more accurate. Traditionally, noncombatants have been granted immunity during war—in theory, if not always in practice. In his book *A Sentimental Journey Through France and Italy*, English author Laurence Sterne recounted how, in the 18th century, he went to France, entirely omitting the fact that at the time England and France were fighting the Seven Years' War. There was a time when states engaged in war without the lives of all their citizens poisoned, corrupted, or otherwise focused by the conflict. In 1808, for example, with the Napoleonic Wars raging, the French Institute conferred its gold medal on Sir Humphry Davy, an Englishman, who blithely crossed the English Channel to accept his award to the enthusiastic cheers of the great scientists of France. However, this separation between civilian and military, between the lives of the people and the behavior of their states, has changed dramatically with the “hardening” of political boundaries as well as the advent of what has come to be called *total war*.

Although to some extent military forces have long been raised by taxing the population at large, armies in the field had largely supported themselves by foraging, purchasing, or pillaging. With the advent of immense national forces that employed advanced technology and were unable to provide for themselves, it became necessary to mobilize the “home front” in order to provide needed food, clothing, and munitions. As entire populations were enlisted in the war effort, it became increasingly difficult to distinguish between combatants and noncombatants. After all, it was argued, how can the enemy be limited to the person who pulls a trigger, ignoring those who build the bombs, guns, ships, and other articles of war? Furthermore, why shouldn't war also be waged against those who make the clothing used in military uniforms or even those who grow the food, without which no military force can be maintained?

During the Russian retreat before Napoleon's invading French army, partisans destroyed crops and other civilian articles that might be useful to the invader, and the Russians even permitted Moscow to be burned, in order to ensnare the French into remaining in the heart of Russia during a cruel winter. And toward the end of
the War Between the States, also known as the Civil War in the United States, the Union's General Sherman marched destructively through Georgia, punishing the civilians in that part of the Confederacy no less than the rebel military. Total war was therefore not unknown by the 20th century; civilians, moreover, have in many cases suffered greatly after their side was militarily defeated, especially if their city was sacked. New in 20th- and early-21st-century total war, however, was the organized use of military force directly and explicitly against an opponent's homeland in order to win the war.

Total war became institutionalized during World War I, with the first use of the term "home front" and the direct and deliberate targeting of civilians maintaining that front. Italy initiated military bombing of noncombatants during its 1911 campaign in Libya, but Germany's use of zeppelins to bomb London was the first major attack on a home front. To appreciate some of the ambivalence that this tactic raised among the perpetrators, consider the following letter from Captain Peter Strasser, chief of Germany's naval airship division, to his mother:

We who strike the enemy where his heart beats have been slandered as "baby-killers" and "murderers of women." . . . What we do is repugnant to us too, but necessary. Very necessary. Nowadays there is no such animal as a non-combatant; modern warfare is total warfare. A soldier cannot function at the front without the factory worker, the farmer and all the other providers behind him. You and I, mother, have discussed this subject, and I know you understand what I say. My men are brave and honorable. Their cause is holy, so how can they sin while doing their duty? If what we do is frightful, then may frightfulness be Germany's salvation.16

Loosening of Restraints

The tendency toward total war at that time was widespread and certainly not limited to Germany. For example, the British naval blockade of Germany during World War I caused great suffering and widespread malnutrition, leading to an estimated 800,000 additional civilian deaths. As the historian John Nef put it, "One consequence of industrialization was to loosen the restraints upon war. With the growing material power to make war, what was needed was more politeness, more art, more wit in the conduct of international relations. What came was more grossness."17

What also came, as a result of national commitment to total war, was an inability on the part of the belligerents to call a halt to the carnage. Thus, for example, the disputes leading up to World War I were in their own way no more serious than those of the 18th century, which were resolved with much less bloodshed. What happened in part was that, according to the military historian Gwynne Dyer,

the techniques of war had completely overpowered the ability of governments to limit their commitment to it. The axiom that force can only be overcome by greater force drove them to make war total, and the scale of the sacrifices they then had to demand of their citizens required that the purposes of the
war must also be great. . . When the people's willingness to go on making sacrifices has been sustained in every country by hate propaganda that depicts the war as a moral crusade against fathomless evil—then governments cannot just stop the fighting, sort out the petty and obscure Balkan quarrel that triggered it, swap around a few colonies and trade routes, and thank the surviving soldiers and send them home. Total war requires the goal of total victory, and so the propaganda has become the truth: the future of the nation (or at least the survival of the regime) really does depend on victory, no matter what the war's origins were.  

Strategic Bombing

The invention of airplanes, and with it the possibility of long-range, strategic bombing, opened up yet another phase in the march of total war. Following the horrors of trench warfare in World War I, some military analysts initially welcomed the possibility of attacking an enemy's homeland as a means of guaranteeing that future wars would be short and, on balance, less destructive than in the recent past. Foremost among these theorists was Italian Air Force General Guido Douhet (1869–1930), who emphasized that air power, applied directly to an enemy's industry and to the workforce that sustained its war effort, would destroy that side's "will to resist" and break its morale, resulting in a relatively quick and painless victory:

A complete breakdown of the social structure cannot but take place in a country being subjected to . . . merciless pounding from the air. The time would soon come when, to put an end to horror and suffering, the people themselves, driven by the instinct of self-preservation, would rise up and demand an end to the war.  

In pursuit of total war, during the 1930s and continuing through World War II, numerous civilian targets were attacked. German bombers targeted Rotterdam (Holland) as well as Coventry and London (Britain), while British and American strategic bombers eventually retaliated and then exceeded the initial German bombings, conducting large-scale raids against many German urban areas, including notably the firebombings of Hamburg and Dresden. In the Far East, U.S. bombers attacked Japanese civilian targets, culminating in the firebombing of Tokyo and the use of atomic bombs against the cities of Hiroshima and Nagasaki.

With the possible exceptions of these latter two cases, there is no evidence that the national will to resist was ever seriously shaken by total war; on the contrary, national will was typically hardened by such attacks (as in Iraq since the coalition's invasion and occupation of that country in 2003 and Serbia's resistance to NATO's bombing during the 1990s), even as the civilian casualty toll mounted. It is estimated, for example, that German bombs killed 60,000 British civilians during World War II and that Allied bombs killed more than 500,000 Germans and 500,000 Japanese. Perhaps most troubling of all, today many decision makers and others take civilian casualties for granted, as "collateral damage," even as they
ostensibly attempt to minimize them. Admittedly, however, we have not yet reached Shakespeare's prediction in *Julius Caesar*:

_Blood and destruction shall be so in use_  
_And dreadful objects so familiar,_  
_That mothers shall but smile when they behold_  
_Their infants quartered with the hands of war._ (III, i)

### Wars, Empires, Colonialism, and National Liberation

To some extent, the history of war is the history of civilization or, more accurately, a history of failures in our struggle to be civilized. The earliest peace treaties known are clay tablets dating from about 3000 BCE, which resulted from wars among the city-states of the Tigris and Euphrates valley. The rise and fall of empires and states have been marked—if not specifically caused—by a pattern of military successes followed eventually by defeats. Empires that rose by the sword generally died by the sword.

#### Some Ancient Empires

In the ancient Near East, for example, the Sumerian empire was established around 2500 BCE and replaced by that of Sargon of Akkad, which in turn ended around 2000 BCE. Hammurabi then forged a Babylonian empire, which lasted about 200 years, until it was conquered by the Mitanni and the Assyrians around 1400 BCE. Egypt began uniting in approximately 3000 BCE, whereupon it spread via conquest and contacted the Mitanni, signing a nonaggression pact with them and with the Hittites around 1400 BCE. But the Assyrians eventually conquered Egypt as they did the Babylonians. In turn, the Assyrian capital of Nineveh was destroyed by the revivified Egyptians and Medes in 612 BCE.

Next to rise to prominence were the Persians, who conquered Babylon in 538 BCE. The Persian Empire under Darius I in the 5th century BCE extended from what is now southern Russia to southern Egypt and from the Danube to the Indus Rivers. But the Greeks held off the Persians, and following its rather unexpected victory, Athenian Greece entered into its Golden Age, 500–400 BCE. However, this period of prosperity and cultural creativity was shattered by the devastating Peloponnesian War between Sparta and Athens, and the Greeks never regained their civic and military glory.

Ultimately, the Greeks were defeated by the Macedonians under Philip. Philip's son, Alexander the Great, unified the Greek city-states and enabled the Greeks to conquer Egypt and virtually everything previously held by the Persians. Meanwhile, Rome developed as a major force, conquering Macedonia and Greece and defeating its rival Carthage in the Punic Wars by the 3rd century BCE. The ensuing *Pax Romana* lasted about 500 years, but the western Roman Empire ceased to exist after CE 476, because of successful attacks by such “barbarians” as the Huns, Visigoths, and Vandals. The eastern (Byzantine) part of the Roman Empire later came under
attack by Muslim Saracens and ultimately fell to the Turks in 1453. Before this, Islamic forces had conquered Egypt, northern Africa, Palestine, and Spain and were engaged in periodic wars with the Christian Crusaders.

**Medieval to Modern Empires**

Muslim armies, however, were stopped in their advance into Europe at Tours, in modern-day France, by forces under the leadership of Charles Martel. Charlemagne, Martel’s grandson, was subsequently crowned Holy Roman Emperor by the pope, in the forlorn hope of rekindling the power of ancient Rome. Several centuries later, in the 12th century, Genghis Khan, leader of nomadic Mongol herdsmen from central Asia, established the largest land empire ever known, while massacring perhaps tens of millions of people. Although Genghis Khan’s army was never conclusively defeated, the Mongol empire eventually gave way as well, largely because the various subdued peoples retained their cultural identity even as they assimilated certain Mongol traditions.

As the Mongol and Islamic empires receded, others gained prominence, each relying heavily on military power and each relatively short-lived. Thus, the Italian city-states, as well as Spain, Portugal, and the Netherlands, have all had their periods as major world powers, especially through their trading activities, secured by naval power. England and France contested the spoils of the New and Old Worlds for centuries, essentially to a draw. Napoleon, and, in more recent times, Hitler, attempted to conquer large parts of the known world, and although they succeeded briefly (at least in continental Europe), their imperial ambitions were defeated by countervailing military force.

From the 18th to the mid-20th centuries, Britain was the dominant world power, but the British Empire also declined, in large measure hastened by the bloodletting and economic costs of World Wars I and II. Neither the “thousand-year Reich” (Hitler’s imperial design for Germany) nor the “greater east Asia co-prosperity sphere” (Japan’s euphemism for its imperial sway over Asia) lasted for more than a few years. World War I brought about the end of most European monarchy and four empires. World War II left the United States and the Soviet Union as the two preeminent global powers; soon thereafter, the Cold War was initiated between them. The end of European colonialism in the 20th century was hastened by numerous wars of national liberation. In the 21st century, what some regard as American Imperialism may be challenged by China’s rise to global hegemony.

**Wars and Social Change**

Although wars have been crucial to many of the major political changes, paradoxically, they have often also served to prevent significant social and economic changes. In this sense, the threat of war has helped maintain the status quo. The *Pax Romana*, during the period of Roman hegemony, was due largely to the ability of Rome to act essentially as (Western) world police. The same was true, but to a lesser extent, during the so-called *Pax Britannica*, from the late 18th century to the early
20th century. Following World War II, the United States attempted to forge a kind of *Pax Americana*; some would claim it succeeded. But it may well be that the only kind of peace likely to be truly lasting and socially significant will have to be something as yet unknown in modern times, a *Pax Mundi*—that is, a global peace associated not with an individual nation but with the entire world, and designed to protect and enhance human, not simply national, security.

Owing largely to their advantages in science, socioeconomic and educational development, and military technology, the major European powers—and, to a lesser extent, the United States and the former Soviet Union—were able to conquer, or at least to dominate militarily and politically, large areas of the globe. In the early stages of European colonial expansion, such indigenous peoples as Native Americans, Africans, and Chinese had numerical superiority, but they lacked modern firearms and often the necessary social and political organization to resist effectively. Cortés, for example, conquered 8 million Aztecs with 400 men with muskets, 16 horses, and 3 cannons. Pizarro was similarly successful in Peru, as was Clive in India. Commodore Perry “opened” Japan with a handful of naval vessels. An Englishman, Hilaire Belloc, offered this sardonic commentary on the crucial role of technology in 19th-century British imperial conquest:

> Whatever happens we have got  
> The Maxim gun, and they have not.

But just as Native Americans eventually obtained rifles (especially during the late 19th century), anti-junta rebels in El Salvador during the 1980s captured large amounts of military hardware, provided initially by the United States to the repressive, neocolonial Salvadoran government. Much of Saddam Hussein’s Iraqi arsenal, as well as the arms controlled by the anti-Soviet mujahideen in Afghanistan, came by way of their eventual U.S. enemies. And when the American-trained and equipped Iraqi Army collapsed under pressure from ISIS in 2014, the latter obtained large amounts of modern, U.S.-supplied military hardware.

Revolutionary nationalism, especially in the form of guerrilla warfare, has been very successful, particularly since World War II, in evicting the weakened European powers from such regions as eastern Africa, Algeria, Vietnam, and Indonesia. By contrast, revolutionary forces have only rarely triumphed over locally based, nationalist governments, except when those governments were corrupt and generally out of touch with their citizenry, as happened in Russia in 1917, China in 1949, Cuba in 1959, and Nicaragua and Iran in 1979.

### The Desirability of Peace Versus Justifications for Wars

Given the positive response that most people have to the word *peace*, it is fair to question why for almost all human cultures and for most of our history we have never attained it; at least, not for long. In fact, for many centuries, war has been
considered acceptable, even honorable, by large numbers of people and many governments. How can one explain the conundrum that the same human beings who say they want peace will nonetheless kill other human beings, sometimes ruthlessly and indiscriminately, to obtain it and to protect their own “vital interests” and “national security”? What justifications are provided for violent conflicts, and what are the motivations that underlie decisions made by leaders who make war?

Biological Justifications for Wars

War has long been an ultimate arbiter of human disputes and a way of achieving glory, both for individuals and for entire peoples and nations. Ares, the Greek god of war (Mars was his Roman equivalent), was a major deity, whereas Irene, the Greek goddess of peace, was a minor figure at best. According to Heraclitus, the pre-Socratic philosopher, war (or strife) “is the father of all things.” And an influential 19th- and 20th-century intellectual movement, Social Darwinism, maintained that war was not only rewarding, virtuous, and manly but also biologically appropriate.

Social Darwinism attempted to apply (or misapply) the evolutionary concept of natural selection to human political and social activities by providing a biological rationale for national conquests, imperialism, military dictatorships, and the subjugation of “weaker” by “stronger” peoples. But in fact, Social Darwinism is not scientifically valid, since natural selection and thus the process of organic evolution favor living things that are most successful reproductively, not necessarily those that are the most aggressive. Moreover, there is no objective basis for assuming that just because something is the case in the biological world, it is therefore socially desirable, ethically defensible, or even characteristic of the human world. AIDS and typhoid fever, for example, are both “natural” and “organic,” yet virtually all people agree that neither is desirable.

Social and Political Justifications for Wars

Some influential Western philosophers, including Hobbes, Hegel, and “philosophical” precursors of and contributors to Fascist, Nazi, and Maoist political ideologies, have at times expressed views that deem war not merely natural but beneficial to humanity because, in Hegel’s words (partially intended as a critique of Immanuel Kant’s pathbreaking essay *Perpetual Peace*), “war prevents a corruption of nations which a perpetual, let alone an eternal peace would produce.”

Although this view may be in disrepute today, throughout most of the “civilized” world, the fact is that wars have frequently shaken up the existing (and often unjust) sociopolitical order and have resulted in many changes, not all of them for the worse. Through revolutionary wars and wars of national liberation, many peoples have won their independence from colonial powers, both by overthrowing despotic governments and by repulsing the efforts of other powers to force them back into subjugation. In some cases, however, revolutionary struggles have resulted in newer forms of autocracy, as in the Iranian revolution of 1979, in which the despotic pro-Western Shah was overthrown, only to be replaced by the despotic Islamic
fundamentalist Ayatollah Khomeini. Still, revolts against oppression should not automatically be condemned because they sometimes go astray after the insurrectionary groups have seized state power.

Thus, wars, especially those fought to throw off the shackles of despotic indigenous regimes or the sometimes less visible controls of imperial global powers, may at times serve the enticing ends of enhancing, at least for a short time, national self-determination and political liberty. Indigenous peoples, no less than those in advanced technological societies, also tend to “rally ‘round the flag” in times of perceived military danger, and this sense of patriotic fervor and national unity is usually achieved at the cost of projecting a stereotyped, and often dehumanized, image of “the enemy.” Indeed, domestic political elites often employ the unifying effect of war and the threat of war to distract their citizenry from domestic problems and scandals in order to increase electoral support for themselves.

Social Justice and War

Social injustices, such as economic exploitation and political autocracy, are important not only as contributors to structural violence but also as major factors in the outbreak of wars. Perhaps ironically, although the United States of America originally arose following a war of independence from Great Britain in the late 18th century, during the final decades of the 20th century and continuing into the first decades of the 21st, the United States became widely perceived as both an antirevolutionary force and a “status quo power,” the “policeman of the world.” Not coincidentally, for most American citizens, as well as for privileged Europeans and other economic elites in less affluent societies, the military, cultural, and political hegemony of the United States at the beginning of this millennium is welcomed as the guarantor of their wealth, power, and status. For them, peace means the continuation of things as they now are, with the additional hope that overt violence will be minimized or prevented altogether. Others—perhaps a majority of the world’s present population—yearn for dramatic social and economic change from the status quo. And for some of the most militant people, peace is something to kill and die for if it can bring about greater social justice and economic equity. As a Central American peasant is reported to have said, “I am for peace, but not peace with hunger.”

The great 18th-century French philosopher Denis Diderot was convinced that a world of justice and plenty would mean a world free from tyranny and war. Hence, in his treatise, the *Encyclopédie*, Diderot hoped to establish peace by disseminating globally all of humanity’s accumulated scientific and technical knowledge, from beekeeping and leather tanning to iron forging. Similar efforts continue today, although few advocates of economic and social development and equity claim that the problem of war can be solved simply by spreading knowledge or even by keeping everyone’s belly full. It is indeed disquieting that in a time of historically unprecedented affluence in many nations (despite the global economic downturn commencing in 2008) and of the increasing global dissemination of Western
(particularly American) economic and cultural ideals, the inhabitants of this planet continue to dissipate their resources and lives fighting among themselves, or preparing to do so, for an increased share of Earth's abundance. Although there is nothing new in the human experience about recourse to war and political violence, what is new, as we shall see, is the global risk involved in these potentially cataclysmic squabbles.

**Political Ideologies and Militarism**

The noted British historian Michael Howard introduced the term *bellicist* to refer to cultures “almost universal in the past, far from extinct in our own day, in which the settling of contentious issues by armed conflict is regarded as natural, inevitable and right.” For example, Howard continues, bellicism during World War I “accounts not only for the demonstrations of passionate joy that greeted the outbreak of war but sustained the peoples of Europe uncomplainingly through years of hardship and suffering.”

While this account may overstate the “peoples of Europe’s” tolerance of horrific loss of life, it does point to the fact that many people are inclined (or manipulated) to identify perceived adversaries as bellicist, while claiming that they (and their governments) are peace loving, if not pacifist. The latter is a term of opprobrium hurled by many political leaders against opponents they wish to caricature as weak. Not coincidentally, certain political ideologies, notably Fascism and Nazism, have openly glorified war, not only as a means to alleged national political goals but also as a desirable end in itself.

**Some Conservative Viewpoints**

In contrast with more liberal and progressive political worldviews, conservatism has long tended to look upon war more favorably. Nonetheless, even most conservative ideologies have espoused a preference for peace and war prevention. The mainstream Anglo-American conservative tradition, for example, traces its roots to a rather pessimistic, even bellicose, view of human nature. One of the philosophical founders of this tradition, the great 17th-century English philosopher Thomas Hobbes, warned that because of humanity's ostensibly inherent, competitive, and sinful nature, life for humans in what Hobbes termed “the state of nature” consisted of *bellum omnium contra omnes* (the war of everyone against everyone). For Hobbes, this “natural state” of war required people who wished to avoid violent death to impose on themselves an autocratic governmental authority (which he called the "Leviathan").

More than 2,000 years earlier, Socrates had also argued against democracy and popular sovereignty, though for very different reasons. Socrates claimed that the great majority of Athenian citizens were inclined to be misled and duped by political and religious demagogues and hence could not be trusted to make rational decisions (an assembly of Socrates’ peers in fact condemned him to death for
“impiety” and “misleading the young”). So, in Plato’s Republic, Socrates is depicted as arguing that only philosopher-kings should rule, rather than the people as a whole. Plato also concluded from the Peloponnesian War that city-states must be hierarchically and stringently organized if they are to survive in a violent, unruly world in which war seems an unavoidable fact of life.

The mainstream Western conservative tradition also suggests that strong moral and governmental controls over individual conduct are necessary if social order and peace are to be secured. To many conservatives, wars usually occur because we are, at bottom, predatory and aggressive animals by nature and also because social order and political stability constantly threaten to break down. Since social organizations are regarded by most conservatives as basically unstable and often irrational; peace, security, and stability can be safeguarded only by strong laws and the efficacious use of force, thereby achieving a desirable combination of deterrence (to prevent breaches of the peace) and punishment (in case deterrence fails).

For Hobbes, and for many in the mainstream Western conservative tradition, virtually nothing justifies the overthrow of a monarch or duly elected political authority. From this perspective, the “state of nature” is so dangerous and abhorrent that the people make a social contract with political authority, whereby they cede to the Leviathan their allegiance (and forgo their right to rebel) in return for protection against real and alleged enemies, foreign and domestic. This is a contract whose purpose is to minimize the risk of anarchy (lack of order) within a nation-state. But Hobbes also noted that states interacted with other nations in what was essentially an anarchic situation. “The state of Commonwealths considered in themselves is natural, that is to say, hostile,” he declared in The Citizen, and so “neither if they cease from fighting, is it therefore to be called peace; but rather a breathing time.”

According to mainstream Western conservative political ideology, if power is properly and securely held and wielded, there should be little reason for war or insurrection, except perhaps for occasional brief wars to adjust the “international state system”—that is, for what has come to be called “reasons of state.” War may be acceptable, even laudable, if it serves to prevent civic and moral breakdown. For example, the Roman historian Livy (59 BCE to CE 17) reported approvingly in The Early History of Rome that the Roman Senate had “ordered an immediate raising of troops and a general mobilization on the largest possible scale” in the hope that the revolutionary proposals that some Roman tribunes were bringing forth might be forgotten in the bustle and excitement of three imminent military campaigns against Rome’s perceived enemies. The Roman general Vegetius is first credited with having coined the phrase si vis pacem, para bellum (“if you wish peace, prepare for war”). And in more recent times, the doctrines of “balance of power,” “peace through strength,” “national security,” and “Realpolitik” have continued this line of conservative political thought.

Probably the most articulate spokesperson for conservative political theory in the English-speaking world was the 18th-century orator and statesman Edmund Burke. Reacting to the violent extremes of the French Revolution, Burke articulated
mainstream Anglo-American conservative political doctrine by stressing the primacy of “community” and “tradition,” the importance of preserving existing institutional order, and skepticism about the perfectibility of human societies and individual persons. According to Burke, society is a partnership “not only between those who are living, but between those who are living, those who are dead, and those who are to be born.”23 This philosophy has long been motivated by a lack of trust in the rational potential of autonomous individual citizens and by a deep suspicion of democracy.

Not surprisingly, most conservatives have long been especially concerned about the alleged threats of disorder and subversion being imported from abroad. Writing about the French Revolution, Burke observed, “It is a war between the partisans of the ancient, civil, moral, and political order of Europe the monarchy against a set of fanatical and ambitious atheists which means to change them all.” For most conservatives, the traditions inherited from past generations must be respected. Social cohesion and political stability are seen to come from reverence for, and deference to, established authority (which is one reason why K’ung fu-tzu, or Confucius, is also considered a conservative social thinker). Authority per se, and usually patriarchy and authoritarianism as well, are typically valued over equality, spontaneity, and change.

Social hierarchies have also been generally admired by most mainstream conservative political theorists. Hierarchical social and political relations are claimed by conservatives to provide a citizenry with necessary reference points and stability. In the 19th and 20th centuries, however, with the overthrow of hereditary monarchy in most of Europe, mainstream Western conservatism shifted its focus away from a prior veneration of established political authorities and began instead to concentrate more on the advocacy of “rugged individualism” and “free enterprise and free markets,” unimpeded by “state interference.” This is an ironic inversion of the classical Greco-Roman privileging of community and society over individualism. Many contemporary Anglo-American conservative thinkers in particular have also become ambivalent about the state, generally opposing big government (except in the realm of military expenditures and in support of what has been called “the prison-industrial complex”), yet also revering patriotism and loyalty to the state.

During the late 1990s and through the early 21st century, a new trend gained momentum within conservative circles, especially in the United States. So-called neo-cons (for “new conservatives”) advocated a pro-interventionist foreign policy aimed at toppling regimes deemed unfriendly to the United States and installing governments that are ostensibly sympathetic to both democracy and free enterprise via regime change. This approach differs from the older, “paleoconservative” perspective, which, although generally more bellicist than its liberal counterpart, takes a more pessimistic view of human nature and thus of the prospects of changing political and socioeconomic systems in other countries. Neo-cons were especially influential during the presidency of George W. Bush; however, their impact waned somewhat as the failures of the Iraq War became increasingly apparent even to traditional war-supporting conservatives.
Some Liberal Viewpoints

Most Anglo-American political liberals have valued highly the autonomous individual, free from political and ecclesiastical authority. Major liberal theorists in the Anglo-American tradition include John Locke, Thomas Jefferson, Jeremy Bentham, John Stuart Mill, John Maynard Keynes, John Kenneth Galbraith, and John Rawls. According to the mainstream liberal tradition in the English-speaking world, political and legal equality are more desirable than social hierarchy. The classical liberalism of the early 18th century (represented most keenly by Jefferson, Bentham, and J. S. Mill) was opposed to monarchism and in favor of free-market entrepreneurship. This early defense of capitalism by classical liberals may come as a surprise to many contemporary conservatives, who have associated liberalism with advocacy of the welfare state. But the two leading theorists and early defenders of capitalist economics, Adam Smith and David Ricardo, were considered the leading liberals of their day. The liberal theorist Norman Angell even claimed in 1910 that capitalists were necessarily opposed to war because “the capitalist has no country, and he knows . . . that arms and conquests and juggling with frontiers serve no ends of his and may very well defeat them, through the great destruction that such wars will generate.”

Another major strand in Western liberal political thought addresses the issue of peace from an economic perspective. In The Spirit of Laws, the 18th-century French political philosopher Montesquieu proposed that international trade and commerce would naturally tend to promote peace: “Two nations which trade with each other become reciprocally dependent; if it is to the advantage of one to buy, it is to the advantage of the other to sell; and all unions are founded on mutual needs.” (This foreshadows the widespread view, sometimes known as “liberal peace theory,” that democracies do not go to war against each other in large measure because their economic interests would be severely undermined by international conflicts.) Montesquieu also argued that trade leads to an improvement in manners and basic civility: “It is almost a general rule that wherever there are tender manners, there is commerce, and wherever there is commerce, there are tender manners.” In a similar vein, J. S. Mill claimed that “it is commerce which is rapidly rendering war obsolete, by strengthening and multiplying the personal interests which act in natural opposition to it.”

Mill’s and Montesquieu’s views soon became part of the liberal antiwar credo: By expanding commerce and spreading free-market capitalism around the world, as well as by promoting democracy and harnessing public opinion, war could be made obsolete. The leaders of the so-called Manchester School of British economic theory, Richard Cobden and John Bright, for example, in the mid- to late 19th century opposed foreign interventionism by the British crown and maintained that maximum free trade between peoples would serve to make war not only unnecessary but also impossible. As the process of economic globalization gathered steam at the beginning of the 21st century, its supporters have argued similarly that increased trade and economic interdependence would contribute not only to enhanced wealth for most nations but also to peace. The opponents of contemporary globalization disagree vehemently with these claims.
In a reversal of theoretical roles, however, 20th-century liberals, especially in the United States, placed greater emphasis on social responsibility and community than have the conservative champions of free enterprise and possessive individualism, except possibly in the area of civil liberties, where liberals defend individual rights and freedom and most conservatives prioritize traditional social units, such as the family, church, and state.

With regard to the establishment of peace and the reasons for wars, Anglo-American liberals have decried the excessive power of nation-states and their often imperious leaders. However, most liberals were also caught off guard by the rise of Fascist, racist, and xenophobic movements in 20th-century central Europe, especially in Austria, Germany, and Italy, and in the 21st century throughout much of Europe (where Roma, aka gypsies, have been particularly targeted by racists and xenophobes, and refugees from war-torn lands in the Middle East and Africa have received a mixed reception at best). Perhaps ironically, these countries were also the birthplace of many liberal and progressive ideas, social movements, and political parties. Nonetheless, a combination of right-wing populism, virulent nationalism, and xenophobic ethnocentrism led directly to political authoritarianism and militarist campaigns against perceived threats to the established political and social orders. With their optimistic view of human nature, most liberals have had great difficulty understanding how this could take place within advanced industrial societies with long-standing democratic traditions and humanistic cultural values.

After World War II, conservatives generally saw the rise of Communism in the former Soviet Union and in “Red China” as the chief peril to “the free world,” and they were prepared to use any military and propaganda means necessary to defeat it. By contrast, most Western liberals were less rhetorically aggressive in promoting the “war against Communism,” while nonetheless continuing to allocate massive expenditures to military and espionage activities aimed at defeating left-wing governments, many of which were more nationalist than “communist inspired.” Both liberals and conservatives applauded in triumphalist ways the apparent end of Soviet Marxism and the breakup of the former Soviet Union in 1991. Still, compared with conservatives, Anglo-American liberals tend to be more favorably disposed to arms control agreements with the Russians and other perceived threats to national security, and they place more hope in the peacemaking and peacekeeping roles of international organizations, such as the United Nations, than do most conservatives, who tend to be quite skeptical of any supranational institutions.

Liberals have on occasion supported specific wars. The Spanish Civil War (1936–1939), for example, was initially seen by virtually all Western progressives as an unambiguously just war, the defense of a popularly elected (socialist) government against an attack by reactionary forces aided by Fascist dictatorships in Germany and Italy. America’s entry into World War II occurred under the administration of perhaps the most liberal American president of the 20th century, Franklin Delano Roosevelt. Many liberals associated with the Kennedy and Johnson administrations initially supported America’s war in Southeast Asia. And virtually all prominent liberal congressional figures in the United States also were in favor of American involvement in the Persian Gulf War, the war in Kosovo, the
invasion of Afghanistan in late 2001, and the North Atlantic Treaty Organization's (NATO) intervention in Libya in 2011. At the same time, the rationale for American involvement in wars of the 1990s shifted from its previous anticommunist rhetoric to a defense of human rights in the face of potentially genocidal ethnic cleansing (a term initially employed to depict the actions by ethnic Serbs in Bosnia against Bosnian Muslims and Croats) or in defense of the republic against terrorists “and the states that support or harbor them.”

Liberals have typically been more ambivalent about war than most conservatives and usually require a “better rationale” for military action. Nonetheless, by the early 21st century, traditional liberal and conservative perspectives on war and peace had become even more fractionated. Some conservatives, for example, embraced an isolationist approach to international relations, while others, especially in the United States, favored selective military interventions in order to maintain and enhance the global military and economic preeminence of the United States. Some liberals favor military intervention for humanitarian purposes or to vanquish terrorism, while others oppose any military incursion into another country. Once again, the Iraq War created strange political bedfellows within the United States. Just as some old-line conservatives opposed that war (while neo-cons orchestrated it), an important contingent of “liberal internationalists” or “Wilsonian liberals” (named for their parallel to President Woodrow Wilson’s enthusiasm for World War I as a means of “making the world safe for democracy”) also supported the U.S. overthrow of Saddam Hussein. The ongoing conflict in Syria has also provoked liberal and conservative hawks alike to advocate the United States to intervene militarily and oppose both the Assad regime and such militant Islamist groups as ISIS and the al-Nusra front.

Some Progressive or Leftist Viewpoints

Political movements of the far right (and even some moderate right-wing or conservative parties) have rarely if ever professed peace as an important national political goal. By contrast, most left-wing (progressive and/or radical) thinkers and parties have traditionally claimed a strong association with world peace (although, as we have just seen, many of the less radical members of progressive political movements and parties have frequently approved of war under certain conditions). The most explicit and best-known example of a radical left-wing (communist) leader supporting war is Mao Tse-tung, who wrote,

Political power grows out of the barrel of a gun. . . . All things grow out of the barrel of a gun. . . . Some people ridicule us as advocates of the "omnipotence of war." Yes, we are advocates of the omnipotence of revolutionary war; that is good, not bad. . . . We are advocates of the abolition of war, we do not want war; but war can only be abolished through war, and in order to get rid of the gun it is necessary to take up the gun.27

Mao’s apparently paradoxical rationale for war (as the best means to abolish war) is the quintessential Realpolitik perspective, one that justifies war as the best means
to end class violence and social oppression. Ironically, whereas the purported goals of left-wing revolutionary wars differ from the espoused aims of right-wing military campaigns, people from all political perspectives have justified the use of organized state violence as a defensible (if sometimes regrettable) means of attaining allegedly “higher” political, social, and economic goals, such as freedom and national security.

Within left-wing political traditions, stemming from Karl Marx and continuing through Lenin, Mao, and Che Guevara to the present, there is a further justification for the selective use of revolutionary violence (and even of terror) against established “reactionary” regimes or in defense of “progressive” ones. This is found in the ostensibly humanistic social goals of the use of “selective” violence: the emancipation of workers and other oppressed peoples from capitalist domination and exploitation and the construction of socialism (leading eventually perhaps to a classless, or “communist,” society) both domestically and globally.

This radical political tradition is often in opposition to another viewpoint—namely, an antimilitarist, socialist-pacifist tradition, represented in the 20th-century European progressive movements by Rosa Luxemburg, Karl Liebknecht, and Bertrand Russell, and in the United States by Eugene V. Debs, Norman Thomas, Emma Goldman, and A. J. Muste. For Muste in particular, religious considerations loomed large, such as the necessity of personal, faith-based “witness” against war. Muste is particularly well known for his insistence that “there is no way to peace; peace is the way” and that “wars will end when men refuse to fight.”

Prior to World War I, European pacifists and socialists had hoped that worker solidarity would prevent the outbreak of war. But the war that erupted between 1914 and 1918 was an enormous blow to the optimism of many socialist-pacifists, especially since overwhelming majorities in the European Socialist and Social Democratic parties elected to support their governments’ war efforts (with such notable exceptions as Rosa Luxemburg and Karl Liebknecht), rather than to organize antiwar protests and demonstrations. Eighty-five years later, in 1999, many members of the European Left—especially those with important political offices in England and Germany—enthusiastically supported NATO’s bombing campaigns in Serbia and Kosovo, despite the protests of many more pacifistically inclined members of their own political parties (such as the Labour, Social Democratic, and Green Parties). And in response to the attacks on the United States in 2001, and on Madrid in 2004, London in 2005, Paris in 2015, and Brussels in 2016, many hitherto “pacifists” on the red/green left sanctioned the use of violence against terrorists in the Middle East and elsewhere.

Similarly troublesome issues arise when there is a significant disparity in wealth and power between two contending parties, with the militarily stronger one satisfied with the status quo and the weaker one, dissatisfied. This is largely the case, for example, in Israel and Palestine: Most Israelis want peace, as do most Palestinians. However, most Israelis are also content with the current situation, whereas most Palestinians are not. Peace, for most Israelis, therefore involves keeping things as they are, whereas for most Palestinians, peace requires change. As a result, insofar
as nonviolent means fail to induce such change, many Palestinians—as well as their sympathizers—have become increasingly convinced that only violence will get the other side's attention, never mind actually achieving their desired results.

From a mainstream Israeli perspective, as a senior adviser to the government has pointed out, Israel “cannot make peace while there is violence and when there is no violence it sees little reason to make peace.” The situation that emerges is like the paradox of when to repair a leaky roof: You don’t want to do it while it is raining (i.e., while violence is occurring, since this can appear to be appeasement), and when it isn’t raining, there seems little reason to do anything! This perpetuates a status quo that at least one major party in the conflict, the Palestinians, finds unacceptable and increases the risk of an escalation of violence by all parties.

In summary, radical leftists and other political progressives have long advocated opposition to war in general, although many have believed that the abolition of war, the prevention of genocide, and the struggle against terrorism—even social justice itself—can be accomplished only via war. With the fall of the Soviet Union and the end of the 20th-century Cold War, many progressives have become more involved in local, often environmentally related movements, rather than in the mass antiwar and antinuclear movements with which they had been closely identified between 1950 and 1990, their opposition to the invasion and occupation of Iraq notwithstanding. Whether this continues in the first part of this millennium remains to be seen.

Is War Inevitable?

Many 19th-century liberals viewed war as a deplorable interruption in the linear progression of our species to a better, more peaceful world. Even today, many liberal views of the reasons for wars emphasize the role of misperceptions and cognitive errors (rather than human iniquity on the part of political leaders who initiate wars). War is, in this view, a blunder, the consequence of human fallibility: If decision makers would only operate more carefully and thoughtfully, most wars could be prevented.

In contrast, there is another, sterners tradition associated with conservative viewpoints. The emphasis here is on innate human weakness, sin, and/or the allegedly unalterable fact of “evil” in human nature. According to one of the most important conservative politicians of the 20th century, Winston Churchill, “The story of the human race is war.” From this perspective, wars do not in general occur because one side, presumably the more peace-loving one, misunderstands the other. Rather, wars are usually forced on otherwise rational and peace-loving national leaders because their “vital interests” have been assaulted or because they realistically perceive an impending threat to their “national security” and hence must defend themselves and others against those who would do them harm. According to this view, epitomized by the administration of George W. Bush but not in practice revoked by the Obama administration, the defense of freedom requires a political willingness by national statesmen to go to war if need be.
Regardless of one’s thinking about the ultimate, underlying reasons for wars, the belief that war is inevitable carries a great danger. Consider, for instance, the idea of a self-fulfilling prophecy, in which something that is not necessarily true may become true if enough people believe it will occur. Thus, if one believes that another person or country is an enemy and acts on this assumption, the belief may create a new reality. Similarly, if war is deemed inevitable and societies therefore prepare to fight against each other—by drafting an army, procuring and deploying weapons systems that threaten their neighbors, and/or engaging in bellicose foreign policy—war may well result. Such a war may then be cited as “proof” that it was inevitable from the start. Moreover, it may be used to justify similar bellicose behavior in the future (as was often the case during the Cold War of the late 20th century).

Importantly, many social practices once common and widely viewed by many as inevitable—such as slavery and dueling—are virtually unknown today. If opponents of slavery and dueling had simply conceded the inevitability (if undesirability) of this ancient social practice, they would not have struggled to end it. Nonetheless, it must be acknowledged that ending slavery and dueling may well have been easy compared with ending war, since these social changes were often feasible without regard to what other nation-states, especially the most heavily armed, were doing. A state that renounces war as a means of settling international conflicts may, by contrast, find itself vulnerable to demands and threats made by other, better-armed nations, particularly by nuclear states. In short, unlike the case of slavery in the United States, an end to war cannot be simply declared by a Lincoln-like “emancipation proclamation,” which is then unilaterally implemented. An end to war in this millennium seems to require a global will to do so, although this does not mean that individual countries are powerless in this respect until everyone agrees.

Can Nations Change?

There are some reasons for guarded optimism. For example, history provides many examples of societies changing dramatically from warlike to peaceful. During the early Middle Ages, the Swiss were among Europe’s most bellicose people, fighting successfully against the French in northern Italy and fighting for their own independence against the Holy Roman Empire. But Switzerland hasn’t fought a war since 1515, when it was defeated by France and adopted a policy of permanent neutrality. Today, Switzerland’s vaunted “neutrality” (most keenly compromised during World War II due to the support by many Swiss for Nazi Germany) is undergirded by a large, well-equipped, defensively oriented modern army and by a civilian network of underground shelters.

Japan has also changed notably over the centuries. It gave birth to one of the world’s great warrior traditions, the code of Bushidō and the very aggressive samurai. Within several decades after European firearms reached Japan via Portuguese traders (in 1542), Japanese musketry was among the most advanced in the world. But a century later, guns were virtually absent from all of Japan. And when Commodore Matthew Perry “opened” Japan (for Western trade) in 1853, Japanese warfare was technologically medieval.
The process of Japan's transformation had been remarkable. The 16th-century shogun Tokugawa, upon being victorious over his rivals, centralized all firearms manufacture and arranged for all gunpowder weapons gradually to be destroyed, without replacement. His decision was not based on a wholehearted devotion to peace; rather, it reflected the samurais' great distaste for muskets and cannons, which threatened to ruin the cult of the warrior/nobleman. Despite the reasons for this "conversion," the Japanese example is still inspiring, since it demonstrates that militarism can be curtailed and whole societies reorganized along more peaceful lines, once the authorities (and in democracies, the citizenry) consider such changes to be in their best interest.

However, demilitarization can be reversed, as was the case in Japan during the latter half of the 19th century. After being humiliated by Perry, Japan modernized very rapidly and initiated successful wars against China (1894) and Russia (1904–1905). But Japan's increasingly aggressive and warlike ventures, including its attacks on China and much of the rest of Asia in the late 1930s and on the United States in 1941 at Pearl Harbor, culminated in its defeat and the atomic devastation of Hiroshima and Nagasaki in 1945. Since the end of World War II, Japan has kept its military force considerably smaller than that of comparably affluent nations (in part because it has been “protected by America's nuclear umbrella”) and has instead devoted its energies to economic growth (although there is currently much internal debate about Japan increasing its military role).

Germany has been similarly variable in its war/peace behavior. After the devastating Thirty Years' War, the principalities and kingdoms in the German-speaking world went on to become the philosophical, musical, and scientific centers of central Europe, although militarism continued to flourish in Prussia, the most influential of the German states. Beginning around 1860, with the wars of German unification, the newly constituted state of Germany became increasingly militarized, a process culminating in Germany's military aggression during World War I and World War II and in its total defeat by the Allies in 1945. Since then, Germany (like Japan) has been comparatively demilitarized, although it participated directly in NATO's military strikes against Serbia in 1999 and has played a "support" role in Afghanistan, much to the consternation of Germany's considerable antiwar movement.

Peaceful traditions can be ruptured by war, just as peaceful societies can become militarized. For example, despite long-standing Jewish advocacy of peace and nonviolence, modern-day Israel expends about 30% of its gross national product on its military, and Israel has been involved in five wars (1948, 1956, 1967, 1974, and 2006), as well as many military incursions into Lebanon and Gaza, during its brief existence. On the other hand, nations that had previously been rent by war and domestic violence can renounce those behaviors, as did Costa Rica in 1948, when the government abolished its standing army.

War can become a national habit, and militarism a way of life. But so can peace. Long-standing traditions of war and conflict may, with sufficient popular support, give way to nonbellicose traditions. Great Britain and France, for example, which were bitter opponents for hundreds of years and had fought many devastating wars against each other, were close allies for much of the 20th century, as were other
longtime enemies, such as the United States and Great Britain. Kenneth Boulding, one of the founders of peace studies, has pointed out that a zone of “stable peace” has spread to include most of Western Europe (though notably not in the Balkans or in Northern Ireland and the Basque region of Spain), North America, and Oceania (Australia and New Zealand). Within this zone, war seems very unlikely to break out between democratically governed nation-states.

The case of Northern Ireland provides another, more recent example of a transition from war to peace. In 2005, the (Catholic) Irish Republican Army disarmed and pledged never to resume its unsuccessful, violent campaign to drive Britain out of Northern Ireland, while the (Protestant) Ulster Volunteer Force made a parallel commitment, with both sides agreeing to political power sharing. There has been violent conflict between Irish Catholics and Protestant English essentially since the Norman conquest in 1066, and more actively since Henry VIII sought to impose Protestantism and English land ownership on an overwhelmingly Catholic indigenous Irish population. It is certainly possible that the current agreement will break down at some point, but the fact that these belligerents have finally agreed to peace after literally centuries of violent animosity must be seen as a hopeful step and a powerful statement of the capacity of people to change.

**Are We “Winning the War Against War” and the “Fight Against Violence”?**

According to the noted psychologist Steven Pinker and the military historian Joshua Goldstein, the answer, perhaps surprisingly, is a qualified yes, because long-term historical trends indicate the following:

1. Wars today are measurably fewer and smaller than 35 years ago.
2. The number of people killed directly by war violence has decreased by 75% in that period.
3. Interstate wars have become very infrequent and relatively small.
4. Wars between “great powers” have not occurred for more than 50 years.
5. The number of civil wars is also shrinking, though less dramatically, as old ones end faster than new ones begin.

Based on these recent trends, Goldstein concludes, “For now peace is increasing. Year by year, we are winning the war on war.” Why? Because, according to Goldstein, of the “efforts of international peacekeepers, diplomats, peace movements, and other international organizations” (such as the UN, EU, NATO, African Union, as well as other nongovernmental actors and individuals) “in war-torn and postwar countries . . .” Bottom line: “World peace is not preordained and inevitable, but neither is a return to large-scale war.”

Pinker argues that “believe it or not . . . today we may be living in the most peaceable era in our species existence . . .” This “makes the present less sinister and
the past less innocent.” Pinker’s evidence for this possibly striking and counterintuitive claim includes the following facts:

1. Homicide rates in Europe have declined thirtyfold since the Middle Ages.

2. Human sacrifice, slavery, punitive torture, and mutilation have been abolished around the world.

3. Wars between developed countries have vanished, and even in the developing world (civil) wars kill a fraction of the numbers they did decades ago.

4. Rape, battering, hate crimes, deadly riots, child abuse, cruelty to animals—“every category of violence from deaths in war to the spanking of children to the number of motion pictures in which animals were harmed . . . declined.”

5. “Forms of institutionalized violence that can be eliminated by the stroke of a pen—such as capital punishment, the criminalization of homosexuality . . . and the corporal punishment of children in schools—will continue to decline.”

However one judges the merits of these claims, the desirability of peace or the legitimacy of (at least some) wars, and the defensibility of at least some forms of violence, such as “self-defense,” it should be clear that peace and war exist on a continuum of violent/nonviolent national behaviors and that they constantly fluctuate. Neither should be taken for granted, and neither is humanity’s “natural state.” The human condition—whether to wage war or to strive to build an enduring peace—is for us to decide.

The Nature and Functions of Conflict

We end this chapter with a brief discussion of various ways of conceptualizing conflict. The word rivalry, for example, originated with the Latin rivus (river or stream). Rivals were literally “those who use a stream in common.” Competitors, by contrast, are those who seek to obtain something that is present in limited supply, such as water, food, mates, or status. But the word enemy derives from the Latin in (not) plus amicus (friendly), and it implies a state of active hostility. Rivals necessarily compete, if there is a scarcity of a sought-after resource—this much is unavoidable—but they do not have to be enemies. The word conflict, on the other hand, derives from the Latin confligere, which means literally “to strike together.” It is impossible for two physical objects, such as two billiard balls, to occupy the same space. They conflict, and if either is in motion, the conflict will be resolved by a new position for both of them.

Within the human realm, conflict occurs when different social groups are rivals or otherwise in competition. Such conflicts can have many different outcomes: one side changed, one side eliminated, both sides changed, neither side changed, or (rarely) both sides eliminated. Conflicts can be resolved in many ways: by violence,
by the issues changing over time, by the deaths (natural or otherwise) of one or more of the conflicting parties, or by mutual agreement. Most people would agree that the latter is best.

A Final Note on War

Today’s armed conflicts, as previously noted, rarely involve a formal declaration of war, probably because, in general, diplomatic formalities are less prominent, and war is increasingly considered an illegitimate way to settle grievances. However, wars—often under various euphemisms—are still taking place, causing immense destruction and misery. Moreover, the threat of war remains great, with its likely consequences more severe and potentially far-reaching than ever.

The history of war in the 20th and early 21st centuries shows that human life certainly is not considered priceless. It also shows that some lives are valued more than others, especially those of white, Western male soldiers and decision makers when they choose to perform military “operations” on other people. Moreover, a great danger lurks in a very special kind of calamity—nuclear or chemical-biological war—that could be catastrophic not only for all humans but also, perhaps, for all life on Earth.

Notes

4. See more at http://www.middleeasteye.net/columns/unworthy-victims-western-wars-have-killed-four-million-muslims-1990–39149394#sthash.fPSg0Ivs.dpuf.

Questions for Further Reflection

1. Are there any persuasive justifications for war? If so, which ones? If not, why not?
2. Is it possible to end war? Why or why not?
3. Are some wars more “just” or “unjust”? Why?
4. Can and should there be ways of resolving bitter conflicts without going to war?
5. Do you think we, as a species, are becoming more or less belligerent and violent? Why or why not?

Suggestions for Further Reading