PREFACE

This book is about what may be the most important thing that has ever happened in human history. Believe it or not—and I know that most people do not—violence has declined over long stretches of time, and today we may be living in the most peaceable era in our species' existence. The decline, to be sure, has not been smooth; it has not brought violence down to zero; and it is not guaranteed to continue. But it is an unmistakable development, visible on scales from millennia to years, from the waging of wars to the spanking of children.

No aspect of life is untouched by the retreat from violence. Daily existence is very different if you always have to worry about being abducted, raped, or killed, and it's hard to develop sophisticated arts, learning, or commerce if the institutions that support them are looted and burned as quickly as they are built.

The historical trajectory of violence affects not only how life is lived but how it is understood. What could be more fundamental to our sense of meaning and purpose than a conception of whether the strivings of the human race over long stretches of time have left us better or worse off? How, in particular, are we to make sense of *modernity*—of the erosion of family, tribe, tradition, and religion by the forces of individualism, cosmopolitanism, reason, and science? So much depends on how we understand the legacy of this transition: whether we see our world as a nightmare of crime, terrorism, genocide, and war, or as a period that, by the standards of history, is blessed by unprecedented levels of peaceful coexistence.

The question of whether the arithmetic sign of trends in violence is positive or negative also bears on our conception of human nature. Though theories of human nature rooted in biology are often associated with fatalism about violence, and the theory that the mind is a blank slate is associated with progress, in my view it is the other way around. How are we to understand the natural state of life when our species first emerged and the processes of history began? The belief that violence has increased suggests that the world we made has contaminated us, perhaps irretrievably. The belief that it has

decreased suggests that we started off nasty and that the artifices of civilization have moved us in a noble direction, one in which we can hope to continue.

This is a big book, but it has to be. First I have to convince you that violence really has gone down over the course of history, knowing that the very idea invites skepticism, incredulity, and sometimes anger. Our cognitive faculties predispose us to believe that we live in violent times, especially when they are stoked by media that follow the watchword "If it bleeds, it leads." The human mind tends to estimate the probability of an event from the ease with which it can recall examples, and scenes of carnage are more likely to be beamed into our homes and burned into our memories than footage of people dying of old age.[1] No matter how small the percentage of violent deaths may be, in absolute numbers there will always be enough of them to fill the evening news, so people's impressions of violence will be disconnected from the actual proportions.

Also distorting our sense of danger is our moral psychology. No one has ever recruited activists to a cause by announcing that things are getting better, and bearers of good news are often advised to keep their mouths shut lest they lull people into complacency. Also, a large swath of our intellectual culture is loath to admit that there could be anything good about civilization, modernity, and Western society. But perhaps the main cause of the illusion of ever-present violence springs from one of the forces that drove violence down in the first place. The decline of violent behavior has been paralleled by a decline in attitudes that tolerate or glorify violence, and often the attitudes are in the lead. By the standards of the mass atrocities of human history, the lethal injection of a murderer in Texas, or an occasional hate crime in which a member of an ethnic minority is intimidated by hooligans, is pretty mild stuff. But from a contemporary vantage point, we see them as signs of how low our behavior can sink, not of how high our standards have risen.

In the teeth of these preconceptions, I will have to persuade you with numbers, which I will glean from datasets and depict in graphs. In each case I'll explain where the numbers came from and do my best to interpret the ways they fall into place. The problem I have set out to understand is the reduction in violence at many scales—in the family, in the neighborhood, between tribes and other armed factions, and among major nations and states. If the history of violence at each level of granularity had an idiosyncratic trajectory, each would belong in a separate book. But to my repeated astonishment, the global trends in almost all of them, viewed from the vantage point of the present, point downward. That calls for documenting the various trends between a single pair of covers, and seeking commonalities in when, how, and why they have occurred.

Too many kinds of violence, I hope to convince you, have moved in the same direction for it all to be a coincidence, and that calls for an explanation. It is natural to recount the history of violence as a moral saga—a heroic struggle

of justice against evil—but that is not my starting point. My approach is scientific in the broad sense of seeking explanations for why things happen. We may discover that a particular advance in peacefulness was brought about by moral entrepreneurs and their movements. But we may also discover that the explanation is more prosaic, like a change in technology, governance, commerce, or knowledge. Nor can we understand the decline of violence as an unstoppable force for progress that is carrying us toward an omega point of perfect peace. It is a collection of statistical trends in the behavior of groups of humans in various epochs, and as such it calls for an explanation in terms of psychology and history: how human minds deal with changing circumstances.

A large part of the book will explore the psychology of violence and nonviolence. The theory of mind that I will invoke is the synthesis of cognitive science, affective and cognitive neuroscience, social and evolutionary psychology, and other sciences of human nature that I explored in *How the Mind Works*, *The Blank Slate*, and *The Stuff of Thought*. According to this understanding, the mind is a complex system of cognitive and emotional faculties implemented in the brain which owe their basic design to the processes of evolution. Some of these faculties incline us toward various kinds of violence. Others—"the better angels of our nature," in Abraham Lincoln's words—incline us toward cooperation and peace. The way to explain the decline of violence is to identify the changes in our cultural and material milieu that have given our peaceable motives the upper hand.

Finally, I need to show how our history has engaged our psychology. Everything in human affairs is connected to everything else, and that is especially true of violence. Across time and space, the more peaceable societies also tend to be richer, healthier, better educated, better governed, more respectful of their women, and more likely to engage in trade. It's not easy to tell which of these happy traits got the virtuous circle started and which went along for the ride, and it's tempting to resign oneself to unsatisfying circularities, such as that violence declined because the culture got less violent. Social scientists distinguish "endogenous" variables—those that are inside the system, where they may be affected by the very phenomenon they are trying to explain—from the "exogenous" ones—those that are set in motion by forces from the outside. Exogenous forces can originate in the practical realm, such as changes in technology, demographics, and the mechanisms of commerce and governance. But they can also originate in the intellectual realm, as new ideas are conceived and disseminated and take on a life of their own. The most satisfying explanation of a historical change is one that identifies an exogenous trigger. To the best that the data allow it, I will try to identify exogenous forces that have engaged our mental faculties in different ways at different times and that thereby can be said to have caused the declines in violence.

The discussions that try to do justice to these questions add up to a big book—big enough that it won't spoil the story if I preview its major

conclusions. *The Better Angels of Our Nature* is a tale of six trends, five inner demons, four better angels, and five historical forces.

Six Trends (chapters 2 through 7). To give some coherence to the many developments that make up our species' retreat from violence, I group them into six major trends.

The first, which took place on the scale of millennia, was the transition from the anarchy of the hunting, gathering, and horticultural societies in which our species spent most of its evolutionary history to the first agricultural civilizations with cities and governments, beginning around five thousand years ago. With that change came a reduction in the chronic raiding and feuding that characterized life in a state of nature and a more or less fivefold decrease in rates of violent death. I call this imposition of peace the Pacification Process.

The second transition spanned more than half a millennium and is best documented in Europe. Between the late Middle Ages and the 20th century, European countries saw a tenfold-to-fiftyfold decline in their rates of homicide. In his classic book *The Civilizing Process*, the sociologist Norbert Elias attributed this surprising decline to the consolidation of a patchwork of feudal territories into large kingdoms with centralized authority and an infrastructure of commerce. With a nod to Elias, I call this trend the Civilizing Process.

The third transition unfolded on the scale of centuries and took off around the time of the Age of Reason and the European Enlightenment in the 17th and 18th centuries (though it had antecedents in classical Greece and the Renaissance, and parallels elsewhere in the world). It saw the first organized movements to abolish socially sanctioned forms of violence like despotism, slavery, dueling, judicial torture, superstitious killing, sadistic punishment, and cruelty to animals, together with the first stirrings of systematic pacifism. Historians sometimes call this transition the Humanitarian Revolution.

The fourth major transition took place after the end of World War II. The two-thirds of a century since then have been witness to a historically unprecedented development: the great powers, and developed states in general, have stopped waging war on one another. Historians have called this blessed state of affairs the Long Peace.[2]

The fifth trend is also about armed combat but is more tenuous. Though it may be hard for news readers to believe, since the end of the Cold War in 1989, organized conflicts of all kinds—civil wars, genocides, repression by autocratic governments, and terrorist attacks—have declined throughout the world. In recognition of the tentative nature of this happy development, I will call it the New Peace.

Finally, the postwar era, symbolically inaugurated by the Universal Declaration of Human Rights in 1948, has seen a growing revulsion against aggression on smaller scales, including violence against ethnic minorities, women, children, homosexuals, and animals. These spin-offs from the concept

of human rights—civil rights, women's rights, children's rights, gay rights, and animal rights—were asserted in a cascade of movements from the late 1950s to the present day which I will call the Rights Revolutions.

Five Inner Demons (chapter 8). Many people implicitly believe in the Hydraulic Theory of Violence: that humans harbor an inner drive toward aggression (a death instinct or thirst for blood), which builds up inside us and must periodically be discharged. Nothing could be further from a contemporary scientific understanding of the psychology of violence. Aggression is not a single motive, let alone a mounting urge. It is the output of several psychological systems that differ in their environmental triggers, their internal logic, their neurobiological basis, and their social distribution. Chapter 8 is devoted to explaining five of them. *Predatory* or *instrumental violence* is simply violence deployed as a practical means to an end. *Dominance* is the urge for authority, prestige, glory, and power, whether it takes the form of macho posturing among individuals or contests for supremacy among racial, ethnic, religious, or national groups. *Revenge* fuels the moralistic urge toward retribution, punishment, and justice. *Sadism* is pleasure taken in another's suffering. And *ideology* is a shared belief system, usually involving a vision of utopia, that justifies unlimited violence in pursuit of unlimited good.

Four Better Angels (chapter 9). Humans are not innately good (just as they are not innately evil), but they come equipped with motives that can orient them away from violence and toward cooperation and altruism. *Empathy* (particularly in the sense of sympathetic concern) prompts us to feel the pain of others and to align their interests with our own. *Self-control* allows us to anticipate the consequences of acting on our impulses and to inhibit them accordingly. The *moral sense* sanctifies a set of norms and taboos that govern the interactions among people in a culture, sometimes in ways that decrease violence, though often (when the norms are tribal, authoritarian, or puritanical) in ways that increase it. And the faculty of *reason* allows us to extricate ourselves from our parochial vantage points, to reflect on the ways in which we live our lives, to deduce ways in which we could be better off, and to guide the application of the other better angels of our nature. In one section I will also examine the possibility that in recent history *Homo sapiens* has literally evolved to become less violent in the biologist's technical sense of a change in our genome. But the focus of the book is on transformations that are strictly environmental: changes in historical circumstances that engage a fixed human nature in different ways.

Five Historical Forces (chapter 10). In the final chapter I try to bring the psychology and history back together by identifying exogenous forces that favor our peaceable motives and that have driven the multiple declines in violence.

The *Leviathan*, a state and judiciary with a monopoly on the legitimate use of force, can defuse the temptation of exploitative attack, inhibit the impulse for revenge, and circumvent the self-serving biases that make all parties believe they are on the side of the angels. *Commerce* is a positive-sum game in which everybody can win; as technological progress allows the exchange of goods and ideas over longer distances and among larger groups of trading partners, other people become more valuable alive than dead, and they are less likely to become targets of demonization and dehumanization. *Feminization* is the process in which cultures have increasingly respected the interests and values of women. Since violence is largely a male pastime, cultures that empower women tend to move away from the glorification of violence and are less likely to breed dangerous subcultures of rootless young men. The forces of *cosmopolitanism* such as literacy, mobility, and mass media can prompt people to take the perspective of people unlike themselves and to expand their circle of sympathy to embrace them. Finally, an intensifying application of knowledge and rationality to human affairs—the *escalator of reason*—can force people to recognize the futility of cycles of violence, to ramp down the privileging of their own interests over others', and to reframe violence as a problem to be solved rather than a contest to be won.

As one becomes aware of the decline of violence, the world begins to look different. The past seems less innocent; the present less sinister. One starts to appreciate the small gifts of coexistence that would have seemed utopian to our ancestors: the interracial family playing in the park, the comedian who lands a zinger on the commander in chief, the countries that quietly back away from a crisis instead of escalating to war. The shift is not toward complacency: we enjoy the peace we find today because people in past generations were appalled by the violence in their time and worked to reduce it, and so we should work to reduce the violence that remains in our time. Indeed, it is a recognition of the decline of violence that best affirms that such efforts are worthwhile. Man's inhumanity to man has long been a subject for moralization. With the knowledge that something has driven it down, we can also treat it as a matter of cause and effect. Instead of asking, "Why is there war?" we might ask, "Why is there peace?" We can obsess not just over what we have been doing wrong but also over what we have been doing right. Because we *have* been doing something right, and it would be good to know what, exactly, it is.

Many people have asked me how I became involved in the analysis of violence. It should not be a mystery: violence is a natural concern for anyone who studies human nature. I first learned of the decline of violence from Martin Daly and Margo Wilson's classic book in evolutionary psychology, *Homicide*, in which they examined the high rates of violent death in nonstate societies and the decline in homicide from the Middle Ages to the present. In several of my

previous books I cited those downward trends, together with humane developments such as the abolition of slavery, despotism, and cruel punishments in the history of the West, in support of the idea that moral progress is compatible with a biological approach to the human mind and an acknowledgment of the dark side of human nature.[3] I reiterated these observations in response to the annual question on the online forum www.edge.org, which in 2007 was "What Are You Optimistic About?" My squib provoked a flurry of correspondence from scholars in historical criminology and international studies who told me that the evidence for a historical reduction in violence is more extensive than I had realized.[4] It was their data that convinced me that there was an underappreciated story waiting to be told.

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6

THE NEW PEACE

Macbeth's self-justifications were feeble—and his conscience devoured him. Yes, even Iago was a little lamb too. The imagination and the spiritual strength of Shakespeare's evildoers stopped short at a dozen corpses. Because they had no *ideology.*

—Aleksandr Solzhenitsyn

You would think that the disappearance of the gravest threat in the history of humanity would bring a sigh of relief among commentators on world affairs. Contrary to expert predictions, there was no invasion of Western Europe by Soviet tanks, no escalation of a crisis in Cuba or Berlin or the Middle East to a nuclear holocaust.[1] The cities of the world were not vaporized; the atmosphere was not poisoned by radioactive fallout or choked with debris that blacked out the sun and sent *Homo sapiens* the way of the dinosaurs. Not only that, but a reunified Germany did not turn into a fourth reich, democracy did not go the way of monarchy, and the great powers and developed nations did not fall into a third world war but rather a long peace, which keeps getting longer. Surely the experts have been acknowledging the improvements in the world's fortunes from a few decades ago.

But no—the pundits are glummer than ever! In 1989 John Gray foresaw "a return to the classical terrain of history, a terrain of great power rivalries . . . and irredentist claims and wars."[2] A *New York Times* editor wrote in 2007 that this return had already taken place: "It did not take long [after 1989] for the gyre to wobble back onto its dependably blood-soaked course, pushed along by fresh gusts of ideological violence and absolutism."[3] The political scientist Stanley Hoffman said that he has been discouraged from teaching his course on international relations because after the end of the Cold War, one heard "about nothing but terrorism, suicide bombings, displaced people, and genocides."[4] The pessimism is bipartisan: in 2007 the conservative writer Norman Podhoretz published a book called *World War IV* (on "the long struggle against Islamofascism"), while the liberal columnist Frank Rich wrote that the world was "a more dangerous place than ever."[5] If Rich is correct, then the world was

more dangerous in 2007 than it was during the two world wars, the Berlin crises of 1949 and 1961, the Cuban Missile Crisis, and all the wars in the Middle East. That's pretty dangerous.

Why the gloom? Partly it's the result of market forces in the punditry business, which favor the Cassandras over the Pollyannas. Partly it arises from human temperament: as David Hume observed, "The humour of blaming the present, and admiring the past, is strongly rooted in human nature, and has an influence even on persons endowed with the profoundest judgment and most extensive learning." But mainly, I think, it comes from the innumeracy of our journalistic and intellectual culture. The journalist Michael Kinsley recently wrote, "It is a crushing disappointment that Boomers entered adulthood with Americans killing and dying halfway around the world, and now, as Boomers reach retirement and beyond, our country is doing the same damned thing."[6] This assumes that 5,000 Americans dying is the same damned thing as 58,000 Americans dying, and that a hundred thousand Iraqis being killed is the same damned thing as several million Vietnamese being killed. If we don't keep an eye on the numbers, the programming policy "If it bleeds it leads" will feed the cognitive shortcut "The more memorable, the more frequent," and we will end up with what has been called a false sense of insecurity.[7]

This chapter is about three kinds of organized violence that have stoked the new pessimism. They were given short shrift in the preceding chapter, which concentrated on wars among great powers and developed states. The Long Peace has not seen an end to these other kinds of conflict, leaving the impression that the world is "a more dangerous place than ever."

The first kind of organized violence embraces all the other categories of war, most notably the civil wars and wars between militias, guerrillas, and paramilitaries that plague the developing world. These are the "new wars" or "low-intensity conflicts" that are said to be fueled by "ancient hatreds."[8] Familiar images of African teenagers with Kalashnikovs support the impression that the global burden of war has not declined but has only been displaced from the Northern to the Southern Hemisphere.

The new wars are thought to be especially destructive to civilians because of the hunger and disease they leave in their wake, which are omitted from most counts of war dead. According to a widely repeated statistic, at the beginning of the 20th century 90 percent of war deaths were suffered by soldiers and 10 percent by civilians, but by the end of the century these proportions had reversed. Horrifying estimates of fatalities from famines and epidemics, rivaling the death toll of the Nazi Holocaust, have been reported in war-torn countries such as the Democratic Republic of the Congo.

The second kind of organized violence I will track is the mass killing of ethnic and political groups. The hundred-year period from which we have recently escaped has been called "the age of genocide" and "a century of genocide." Many commentators have written that ethnic cleansing emerged with

modernity, was held at bay by the hegemony of the superpowers, returned with a vengeance with the end of the Cold War, and today is as prevalent as ever.

The third is terrorism. Since the September 11, 2001, attacks on the United States, the fear of terrorism has led to a massive new bureaucracy, two foreign wars, and obsessive discussion in the political arena. The threat of terrorism is said to pose an "existential threat" to the United States, having the capacity to "do away with our way of life" or to end "civilization itself."[9]

Each of these scourges, of course, continues to take a toll in human lives. The question I will ask in this chapter is exactly how big a toll, and whether it has increased or decreased in the past few decades. It's only recently that political scientists have tried to measure these kinds of destruction, and now that they have, they have reached a surprising conclusion: *All these kinds of killing are in decline*.[10] The decreases are recent enough—in the past two decades or less—that we cannot count on them lasting, and in recognition of their tentative nature I will call this development the New Peace. Nonetheless the trends are genuine declines of violence and deserve our careful attention. They are substantial in size, opposite in sign to the conventional wisdom, and suggestive of ways we might identify what went right and do more of it in the future.

THE TRAJECTORY OF WAR IN THE REST OF THE WORLD

What was the rest of the world doing during the six hundred years when the great powers and European states went through their Ages of Dynasties, Religions, Sovereignty, Nationalism, and Ideology; were racked by two world wars; and then fell into a long peace? Unfortunately the Eurocentric bias of the historical record makes it impossible to trace out curves with any confidence. Before the advent of colonialism, large swaths of Africa, the Americas, and Asia were host to predation, feuding, and slave-raiding that slunk beneath the military horizon or fell in the forest without any historian hearing them. Colonialism itself was implemented in many imperial wars that the great powers waged to acquire their colonies, suppress revolts, and fend off rivals. Throughout this era there were plenty of wars. For the period from 1400 through 1938, Brecke's Conflict Catalog lists 276 violent conflicts in the Americas, 283 in North Africa and the Middle East, 586 in sub-Saharan Africa, 313 in Central and South Asia, and 657 in East and Southeast Asia.[11] Historical myopia prevents us from plotting trustworthy trends in the frequency or deadliness of the wars, but we saw in the preceding chapter that many were devastating. They included civil and interstate wars that were proportionally (and in some cases absolutely) more lethal than anything taking place in Europe, such as the American Civil War, the Taiping Rebellion in China, the War of the Triple Alliance in South America, and the conquests of Shaka Zulu in southern Africa.

In 1946, just when Europe, the great powers, and the developed world started racking up their peaceful zeroes, the historical record for the world as a whole snaps into focus. That is the first year covered in a meticulous dataset compiled by Bethany Lacina, Nils Petter Gleditsch, and their colleagues at the Peace Research Institute of Oslo called the PRIO Battle Deaths Dataset.[12] The dataset includes every known armed conflict that killed as few as twenty-five people in a year. The conflicts that rise to the level of a thousand deaths a year are promoted to "wars," matching the definition used in the Correlates of War Project, but they are otherwise given no special treatment. (I will continue to use the word *war* in its nontechnical sense to refer to armed conflicts of all sizes.)

The PRIO researchers aim for criteria that are as reliable as possible, so that analysts can compare regions of the world and plot trends over time using a fixed yardstick. Without strict criteria—when analysts use direct battlefield deaths for some wars but include indirect deaths from epidemics and famines in others, or when they count army-against-army wars in some regions but throw in genocides in others—comparisons are meaningless and are too easily used as propaganda for one cause or another. The PRIO analysts comb through histories, media stories, and reports from government and human rights organizations to tally deaths from war as objectively as possible. The counts are conservative; indeed, they are certainly underestimates, because they omit all deaths that are merely conjectured or whose causes cannot be ascertained with confidence. Similar criteria, and overlapping data, are used in other conflict datasets, including those of the Uppsala Conflict Data Project (UCDP), whose data begin in 1989; the Stockholm International Peace Research Institute (SIPRI), which uses adjusted UCDP data; and the Human Security Report Project (HSRP), which draws on both the PRIO and UCDP datasets.[13]

Like Lewis Richardson, the new conflict-counters have to deal with failures of thinginess, and so they divide the conflicts into categories using obsessive-compulsive criteria.[14] The first cut distinguishes three kinds of mass violence that vary in their causes and, just as importantly, in their countability. The concept of "war" (and its milder version, "armed conflict") applies most naturally to multiple killing that is organized and socially legitimated. That invites a definition in which a "war" must have a government on at least one side, and the two sides must be contesting some identifiable resource, usually a territory or the machinery of government. To make this clear, the datasets call wars in this narrow sense "state-based armed conflicts," and they are the only conflicts for which data go all the way back to 1946.

The second category embraces "nonstate" or "intercommunal" conflict, and it pits warlords, militias, or paramilitaries (often aligned with ethnic or religious groups) against each other.

The third category has the clinical name "one-sided violence" and embraces genocides, politicides, and other massacres of unarmed civilians, whether

perpetrated by governments or by militias. The exclusion of one-sided violence from the PRIO dataset is in part a tactical choice to divide violence into categories with different causes, but it is also a legacy of historians' long-standing fascination with war at the expense of genocide, which only recently has been recognized as more destructive of human life.[15] Rudolph Rummel, the political scientist Barbara Harff, and the UCDP have collected datasets of genocides, which we will examine in the next section.[16]

The first of the three categories, state-based conflicts, is then subdivided according to whom the government is fighting. The prototypical war is the *interstate* war, which pits two states against each other, such as the Iran-Iraq War of 1980–88. Then there are *extrastate* or *extrasystemic* wars, in which a government wages war on an entity outside its borders that is not a recognized state. These are generally imperial wars, in which a state fights indigenous forces to acquire a colony, or colonial wars, in which it fights to retain one, such as France in Algeria from 1954 to 1962.

Finally there are civil or *intrastate* wars, in which the government fights an insurrection, rebellion, or secessionist movement. These are further subdivided into civil wars that are completely internal (such as the recently concluded war in Sri Lanka between the government and the Tamil Tigers) and the *internationalized intrastate* wars in which a foreign army intervenes, usually to help a government defend itself against the rebels. The wars in Afghanistan and Iraq both began as interstate conflicts (the United States and its allies against Taliban-controlled Afghanistan, and the United States and its allies against Baathist-controlled Iraq), but as soon as the governments were toppled and the invading armies remained in the country to support the new governments against insurgencies, the conflicts were reclassified as internationalized intrastate conflicts.

Now there's the question of which deaths to count. The PRIO and UCDP datasets tally direct or *battle-related deaths*—the people who are shot, stabbed, clubbed, gassed, blown up, drowned, or deliberately starved as part of a contest in which the perpetrators themselves have to worry about getting hurt.[17] The victims may be soldiers, or they may be civilians who were caught in the crossfire or killed in "collateral damage." The battle-related death statistics exclude *indirect deaths* arising from disease, starvation, stress, and the breakdown of infrastructure. When indirect deaths are added to direct deaths to yield the entire toll attributable to the war, the sum may be called *excess deaths*.

Why do the datasets exclude indirect deaths? It's not to write these kinds of suffering out of the history books, but because direct deaths are the only ones that can be counted with confidence. Direct deaths also conform to our basic intuition of what it means for an agent to be responsible for an effect that it causes, namely that the agent foresees the effect, intends for it to happen, and makes it happen via a chain of events that does not have too many uncontrollable intervening links.[18] The problem with estimating indirect deaths is that it

requires us to undertake the philosophical exercise of simulating in our imagination the possible world in which the war didn't occur and estimating the number of deaths that took place in that world, which then is used as a baseline. And that requires something close to omniscience. Would a postwar famine have taken place even if the war had not broken out because of the ineptitude of the overthrown government? What if there was a drought that year—should the famine deaths be blamed on the war or on the weather? If the rate of death from hunger was going down in the years before a war, should we assume that it would have declined even further if the war hadn't occurred, or should we freeze it at its level in the last year before the war? If Saddam Hussein had not been deposed, would he have gone on to kill more political enemies than the number of people who died in the intercommunal violence following his defeat? Should we add the 40 to 50 million victims of the 1918 influenza pandemic to the 15 million who were killed in World War I, because the flu virus would not have evolved its virulence if the war hadn't packed so many troops into trenches?[19] Estimating indirect deaths requires answering these sorts of questions in a consistent way for hundreds of conflicts, an impossible undertaking.

Wars, in general, tend to be destructive in many ways at once, and the ones that kill more people on the battlefield also generally lead to more deaths from famine, disease, and the disruption of services. To the extent that they do, trends in battle deaths can serve as a proxy for trends in overall destructiveness. But they don't in every case, and later in the chapter we will ask whether developing nations, with their fragile infrastructure, are more vulnerable to knock-on effects than advanced nations, and whether this ratio has changed over time, making battle deaths a misleading index of trends in the human toll of conflict.

Now that we have the precision instrument of conflict datasets, what do they tell us about the recent trajectory of war in the entire world? Let's begin with the bird's-eye view of the 20th century in figure 6–1. The viewing was arranged by Lacina, Gleditsch, and Russett, who retrofitted numbers from the Correlates of War Project from 1900 to 1945 to the PRIO dataset from 1946 to 2005, and divided the numbers by the size of the world's population, to yield an individual's risk of dying in battle over the century.

The graph reminds us of the freakish destructiveness of the two world wars. They were not steps on a staircase, or swings of a pendulum, but massive spikes poking through a bumpy lowland. The drop-off in the rate of battle deaths after the early 1940s (peaking at 300 per 100,000 people per year) has been precipitous; the world has seen nothing close to that level since.

Eagle-eyed readers will spot a decline within the decline, from some small peaks in the immediate postwar decade to the low-lying flats of today. Let's zoom in on this trend in figure 6–2, while also subdividing the battle deaths according to the type of war that caused them.

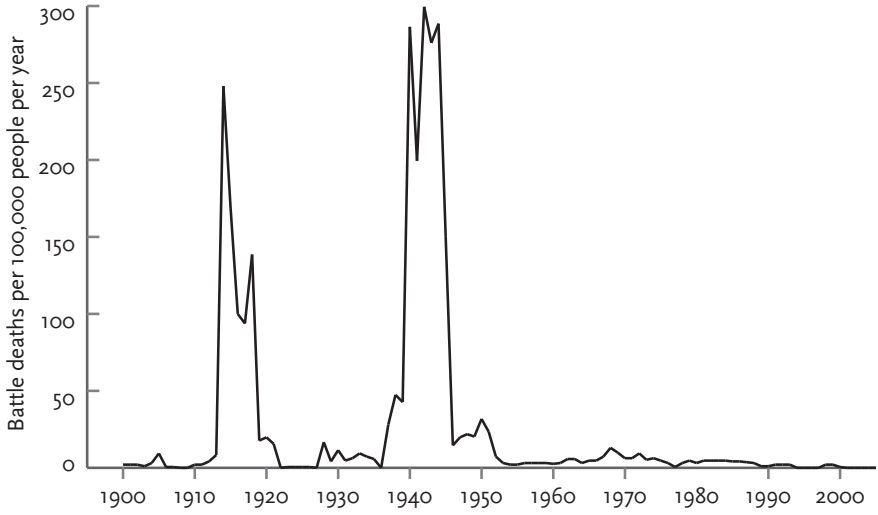

FIGURE 6–1. Rate of battle deaths in state-based armed conflicts, 1900–2005
Source: Graph from Russett, 2008, based on Lacina, Gleditsch, & Russett, 2006.

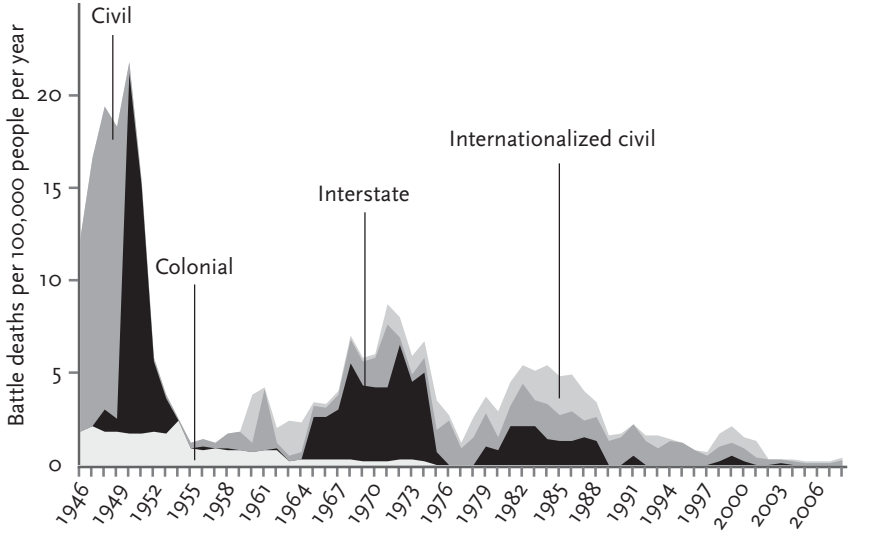

FIGURE 6–2. Rate of battle deaths in state-based armed conflicts, 1946–2008
Civilian and military battle deaths in state-based armed conflicts, divided by world population. *Sources:* UCDP/PRIO Armed Conflict Dataset; see Human Security Report Project, 2007, based on data from Lacina & Gleditsch, 2005, updated in 2010 by Tara Cooper. "Best" estimate used when available; otherwise the geometric mean of the "High" and "Low" estimates is used. World population figures from U.S. Census Bureau, 2010c. Population data for 1946–49 were taken from McEvedy & Jones, 1978, and multiplied by 1.01 to make them commensurable with the rest.

This is an area graph, in which the thickness of each layer represents the rate of battle deaths for a particular kind of state-based conflict, and the height of the stack of layers represents the rate for all the conflicts combined. First take a moment to behold the overall shape of the trajectory. Even after we have lopped off the massive ski-jump from World War II, no one could miss another steep falloff in the rate of getting killed in battle that has taken place over the past sixty years, with a paper-thin laminate for the first decade of the 21st century at the end. This period, even with thirty-one ongoing conflicts in that mid-decade (including Iraq, Afghanistan, Chad, Sri Lanka, and Sudan), enjoyed an astoundingly low rate of battle deaths: around 0.5 per 100,000 per year, falling below the homicide rate of even the world's most peaceable societies.[20] The figures, granted, are lowballs, since they include only reported battle deaths, but that is true for the entire time series. And even if we were to multiply the recent figures by five, they would sit well below the world's overall homicide rate of 8.8 per 100,000 per year.[21] In absolute numbers, annual battle deaths have fallen by more than 90 percent, from around half a million per year in the late 1940s to around thirty thousand a year in the early 2000s. So believe it or not, from a global, historical, and quantitative perspective, the dream of the 1960s folk songs has come true: the world has (almost) put an end to war.

Let's take our jaws off the table and look more closely at what happened category by category. We can start with the pale patch at the bottom left, which represents a kind of war that has vanished off the face of the earth: the extrastate or colonial war. Wars in which a great power tried to hang on to a colony could be extremely destructive, such as France's attempts to retain Vietnam between 1946 and 1954 (375,000 battle deaths) and Algeria between 1954 and 1962 (182,500 battle deaths).[22] After what has been called "the greatest transfer of power in world history," this kind of war no longer exists.

Now look at the black layer, for wars between states. It is bunched up in three large patches, each thinner than its predecessor: one which includes the Korean War from 1950 to 1953 (a million battle deaths spread over four years), one which includes the Vietnam War from 1962 to 1975 (1.6 million battle deaths spread over fourteen years), and one which includes the Iran-Iraq War (645,000 battle deaths spread over nine years).[23] Since the end of the Cold War, there have been only two significant interstate wars: the first Gulf War, with 23,000 battle deaths, and the 1998–2000 war between Eritrea and Ethiopia, with 50,000. By the first decade of the new millennium, interstate wars had become few in number, mostly brief, and relatively low in battle deaths (India-Pakistan and Eritrea-Djibouti, neither of which counts as a "war" in the technical sense of having a thousand deaths a year, and the quick overthrow of the regimes in Afghanistan and Iraq). In 2004, 2005, 2006, 2007, and 2009, there were no interstate conflicts at all.

The Long Peace—an avoidance of major war among great powers and developed states—is spreading to the rest of the world. Aspiring great powers no longer feel the need to establish their greatness by acquiring an empire or

picking on weaker countries: China boasts of its "peaceful rise" and Turkey of a policy it calls "zero problems with neighbors"; Brazil's foreign minister recently crowed, "I don't think there are many countries that can boast that they have 10 neighbors and haven't had a war in the last 140 years."[24] And East Asia seems to be catching Europe's distaste for war. Though in the decades after World War II it was the world's bloodiest region, with ruinous wars in China, Korea, and Indochina, from 1980 to 1993 the number of conflicts and their toll in battle deaths plummeted, and they have remained at historically unprecedented lows ever since.[25]

As interstate war was being snuffed out, though, civil wars began to flare up. We see this in the enormous dark gray wedge at the left of figure 6–2, mainly representing the 1.2 million battle deaths in the 1946–50 Chinese Civil War, and a fat lighter gray bulge at the top of the stack in the 1980s, which contains the 435,000 battle deaths in the Soviet Union–bolstered civil war in Afghanistan. And snaking its way through the 1980s and 1990s, we find a continuation of the dark gray layer with a mass of smaller civil wars in countries such as Angola, Bosnia, Chechnya, Croatia, El Salvador, Ethiopia, Guatemala, Iraq, Liberia, Mozambique, Somalia, Sudan, Tajikistan, and Uganda. But even this slice tapers down in the 2000s to a slender layer.

To get a clearer picture of what the numbers here are telling us, it helps to disaggregate the death tolls into the two main dimensions of war: how many there were, and how lethal each kind was. Figure 6–3 shows the raw totals of

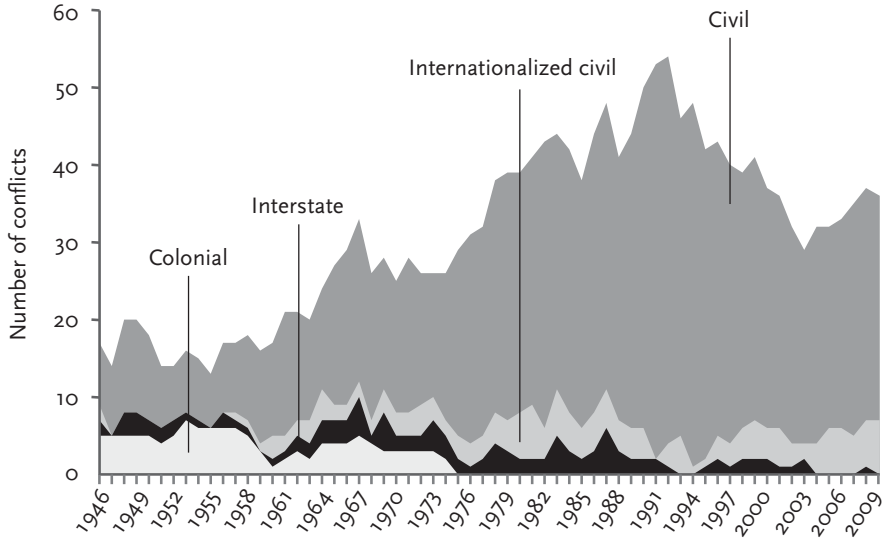

FIGURE 6–3. Number of state-based armed conflicts, 1946–2009

Sources: UCDP/PRIO Armed Conflict Dataset; see Human Security Report Project, 2007, based on data from Lacina & Gleditsch, 2005, updated in 2010 by Tara Cooper.

the conflicts of each kind, disregarding their death tolls, which, recall, can be as low as twenty-five. As colonial wars disappeared and interstate wars were petering out, internationalized civil wars vanished for a brief instant at the end of the Cold War, when the Soviet Union and the United States stopped supporting their client states, and then reappeared with the policing wars in Yugoslavia, Afghanistan, Iraq, and elsewhere. But the big news was an explosion in the number of purely internal civil wars that began around 1960, peaked in the early 1990s, and then declined through 2003, followed by a slight bounce.

Why do the sizes of the patches look so different in the two graphs? It's because of the power-law distribution for wars, in which a small number of wars in the tail of the L-shaped distribution are responsible for a large percentage of the deaths. More than half of the 9.4 million battle deaths in the 260 conflicts between 1946 and 2008 come from just five wars, three of them between states (Korea, Vietnam, Iran-Iraq) and two within states (China and Afghanistan). Most of the downward trend in the death toll came from reeling in that thick tail, leaving fewer of the really destructive wars.

In addition to the differences in the contributions of wars of different *sizes* to the overall death tolls, there are substantial differences in the contributions of the wars of different *kinds*. Figure 6–4 shows the second dimension of war, how many people an average war kills.

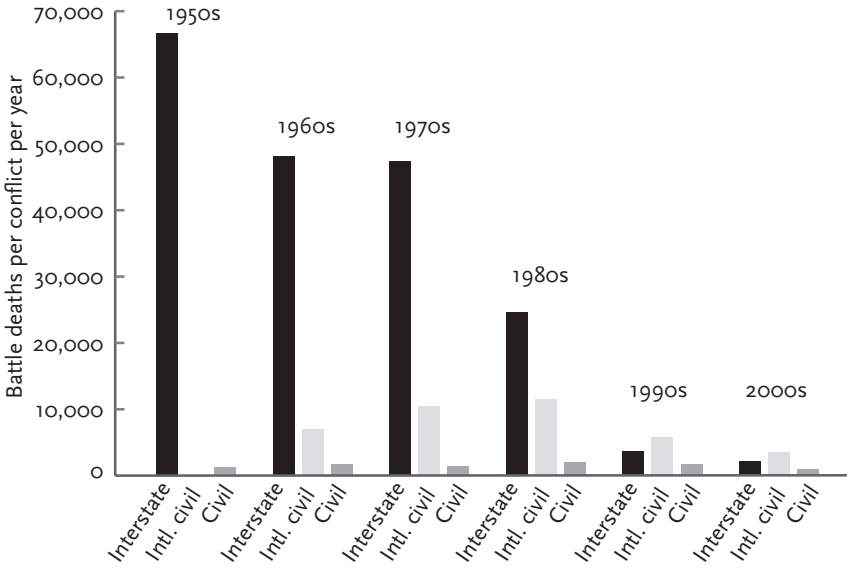

FIGURE 6–4. Deadliness of interstate and civil wars, 1950–2005

Sources: UCDP/PRIO Armed Conflict Dataset, Lacina & Gleditsch, 2005; adapted by the Human Security Report Project; Human Security Centre, 2006.

Until recently the most lethal kind of war *by far* was the interstate war. There is nothing like a pair of Leviathans amassing cannon fodder, lobbing artillery shells, and pulverizing each other's cities to rack up truly impressive body counts. A distant second and third are the wars in which a Leviathan projects its might in some other part of the world to prop up a beleaguered government or keep a grip on its colonies. Pulling up the rear are the internal civil wars, which, at least since the Chinese slaughterhouse in the late 1940s, have been far less deadly. When a gang of Kalashnikov-toting rebels harasses the government in a small country that the great powers don't care about, the damage they do is more limited. And even these fatality rates have decreased over the past quarter-century.[26] In 1950 the average armed conflict (of any kind) killed thirty-three thousand people; in 2007 it killed less than a thousand.[27]

How can we make sense of the juddering trajectory of conflict since the end of World War II, easing into the lull of the New Peace? One major change has been in the theater of armed conflict. Wars today take place mainly in poor countries, mostly in an arc that extends from Central and East Africa through the Middle East, across Southwest Asia and northern India, and down into Southeast Asia. Figure 6–5 shows ongoing conflicts in 2008 as black dots, and shades in the countries containing the "bottom billion," the people with the lowest income. About half of the conflicts take place in the countries with the poorest sixth of the people. In the decades before 2000, conflicts were scattered in other poor parts of the world as well, such as Central America and West Africa. Neither the economic nor the geographic linkage with war is a constant of history. Recall that for half a millennium the wealthy countries of Europe were constantly at each other's throats.

The relation between poverty and war in the world today is smooth but highly nonlinear. Among wealthy countries in the developed world, the risk of civil war is essentially zero. For countries with a per capita gross domestic product of around $1,500 a year (in 2003 U.S. dollars), the probability of a new conflict breaking out within five years rises to around 3 percent. But from there downward the risk shoots up: for countries with a per capita GDP of $750, it is 6 percent; for countries whose people earn $500, it is 8 percent; and for those that subsist on $250, it is 15 percent.[28]

A simplistic interpretation of the correlation is that poverty causes war because poor people have to fight for survival over a meager pool of resources. Though undoubtedly some conflicts are fought over access to water or arable land, the connection is far more tangled than that.[29] For starters, the causal arrow also goes in the other direction. War causes poverty, because it's hard to generate wealth when roads, factories, and granaries are blown up as fast as they are built and when the most skilled workers and managers are constantly being driven from their workplaces or shot. War has been called

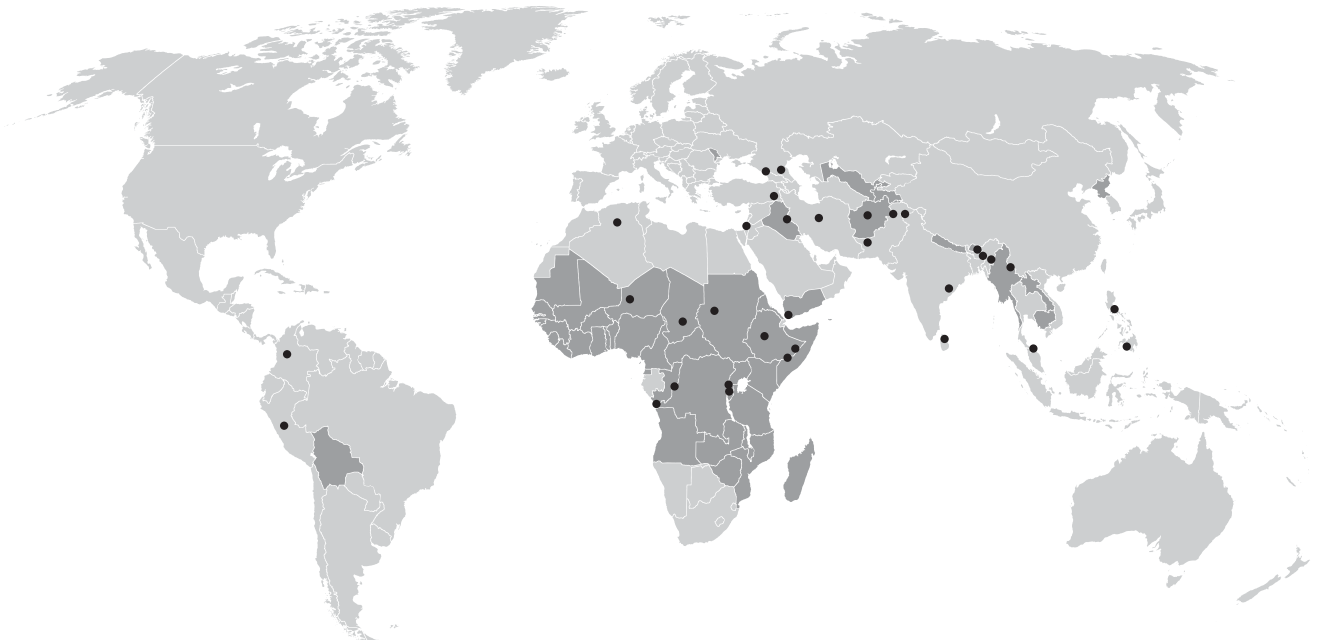

FIGURE 6–5. Geography of armed conflict, 2008

Countries in dark gray contain the "bottom billion" or the world's poorest people. Dots represent sites of armed conflict in 2008. *Sources:* Data from Håvard Strand and Andreas Forø Tollefsen, Peace Research Institute of Oslo (PRIO); adapted from a map by Halvard Buhaug and Siri Rustad in Gleditsch, 2008.

"development in reverse," and the economist Paul Collier has estimated that a typical civil war costs the afflicted country $50 billion.[30]

Also, neither wealth nor peace comes from having valuable stuff in the ground. Many poor and war-torn African countries are overflowing with gold, oil, diamonds, and strategic metals, while affluent and peaceable countries such as Belgium, Singapore, and Hong Kong have no natural resources to speak of. There must be a third variable, presumably the norms and skills of a civilized trading society, that causes both wealth and peace. And even if poverty does cause conflict, it may do so not because of competition over scarce resources but because the most important thing that a little wealth buys a country is an effective police force and army to keep domestic peace. The fruits of economic development flow far more to a government than to a guerrilla force, and that is one of the reasons that the economic tigers of the developing world have come to enjoy a state of relative tranquillity.[31]

Whatever effects poverty may have, measures of it and of other "structural variables," like the youth and maleness of a country's demographics, change too slowly to fully explain the recent rise and fall of civil war in the developing world.[32] Their effects, though, interact with the country's form of governance. The thickening of the civil war wedge in the 1960s had an obvious trigger: decolonization. European governments may have brutalized the natives when conquering a colony and putting down revolts, but they generally had a fairly well-functioning police, judiciary, and public-service infrastructure. And while they often had their pet ethnic groups, their main concern was controlling the colony as a whole, so they enforced law and order fairly broadly and in general did not let one group brutalize another with too much impunity. When the colonial governments departed, they took competent governance with them. A similar semianarchy burst out in parts of Central Asia and the Balkans in the 1990s, when the communist federations that had ruled them for decades suddenly unraveled. One Bosnian Croat explained why ethnic violence erupted only after the breakup of Yugoslavia: "We lived in peace and harmony because every hundred meters we had a policeman to make sure we loved each other very much."[33]

Many of the governments of the newly independent colonies were run by strongmen, kleptocrats, and the occasional psychotic. They left large parts of their countries in anarchy, inviting the predation and gang warfare we saw in Polly Wiessner's account of the decivilizing process in New Guinea in chapter 3. They siphoned tax revenue to themselves and their clans, and their autocracies left the frozen-out groups no hope for change except by coup or insurrection. They responded erratically to minor disorders, letting them build up and then sending death squads to brutalize entire villages, which only inflamed the opposition further.[34] Perhaps an emblem for the era was Jean-Bédel Bokassa of the Central African Empire, the name he gave to the small country formerly called the Central African Republic. Bokassa had seventeen

wives, personally carved up (and according to rumors, occasionally ate) his political enemies, had schoolchildren beaten to death when they protested expensive mandatory uniforms bearing his likeness, and crowned himself emperor in a ceremony (complete with a gold throne and diamond-studded crown) that cost one of the world's poorest countries a third of its annual revenue.

During the Cold War many tyrants stayed in office with the blessing of the great powers, who followed the reasoning of Franklin Roosevelt about Nicaragua's Anastasio Somoza: "He may be a son of a bitch, but he's our son of a bitch."[35] The Soviet Union was sympathetic to any regime it saw as advancing the worldwide communist revolution, and the United States was sympathetic to any regime that kept itself out of the Soviet orbit. Other great powers such as France tried to stay on the good side of any regime that would supply them with oil and minerals. The autocrats were armed and financed by one superpower, insurrectionists who fought them were armed by the other, and both patrons were more interested in seeing their client win than in seeing the conflict come to an end. Figure 6–3 reveals a second expansion of civil wars around 1975, when Portugal dismantled its colonial empire and the American defeat in Vietnam emboldened insurrections elsewhere in the world. The number of civil wars peaked at fifty-one in 1991, which, not coincidentally, is the year the Soviet Union went out of existence, taking the Cold War–stoked proxy conflicts with it.

Only a fifth of the decline in conflicts, though, can be attributed to the disappearance of proxy wars.[36] The end of communism removed another source of fuel to world conflict: it was the last of the antihumanist, struggle-glorifying creeds in Luard's Age of Ideologies (we'll look at a new one, Islamism, later in this chapter). Ideologies, whether religious or political, push wars out along the tail of the deadliness distribution because they inflame leaders into trying to outlast their adversaries in destructive wars of attrition, regardless of the human costs. The three deadliest postwar conflicts were fueled by Chinese, Korean, and Vietnamese communist regimes that had a fanatical dedication to outlasting their opponents. Mao Zedong in particular was not embarrassed to say that the lives of his citizens meant nothing to him: "We have so many people. We can afford to lose a few. What difference does it make?"[37] On one occasion he quantified "a few"—300 million people, or half the country's population at the time. He also stated that he was willing to take an equivalent proportion of humanity with him in the cause: "If the worse came to the worst and half of mankind died, the other half would remain while imperialism would be razed to the ground and the whole world would become socialist."[38]

As for China's erstwhile comrades in Vietnam, much has been written, often by the chastened decision-makers themselves, about the American miscalculations in that war. The most fateful was their underestimation of the ability of the North Vietnamese and Vietcong to absorb casualties. As the war unfolded, American strategists like Dean Rusk and Robert McNamara

were incredulous that a backward country like North Vietnam could resist the most powerful army on earth, and they were always confident that the next escalation would force it to capitulate. As John Mueller notes:

> If battle death rate as a percentage of pre-war population is calculated for each of the hundreds of countries that have participated in international and colonial wars since 1816, it is apparent that Vietnam was an extreme case. . . . The Communist side accepted battle death rates that were about twice as high as those accepted by the fanatical, often suicidal, Japanese in World War II, for example. Furthermore, the few combatant countries that did experience loss rates as high as that of the Vietnamese Communists were mainly those such as the Germans and Soviets in World War II, who were fighting to the death for their national existence, not for expansion like the North Vietnamese. In Vietnam, it seems, the United States was up against an incredibly well-functioning organization—patient, firmly disciplined, tenaciously led, and largely free from corruption or enervating self-indulgence. Although the communists often experienced massive military setbacks and periods of stress and exhaustion, they were always able to refit themselves, rearm, and come back for more. It may well be that, as one American general put it, "they were in fact the best enemy we have faced in our history."[39]

Ho Chi Minh was correct when he prophesied, "Kill ten of our men and we will kill one of yours. In the end, it is you who will tire." The American democracy was willing to sacrifice a tiny fraction of the lives that the North Vietnamese dictator was willing to forfeit (no one asked the proverbial ten men how they felt about this), and the United States eventually conceded the war of attrition despite having every other advantage. But by the 1980s, as China and Vietnam were changing from ideological to commercial states and easing their reigns of terror over their populations, they were less willing to inflict comparable losses in unnecessary wars.

A world that is less invigorated by honor, glory, and ideology and more tempted by the pleasures of bourgeois life is a world in which fewer people are killed. After Georgia lost a five-day war with Russia in 2008 over control of the tiny territories of Abkhazia and South Ossetia, Georgia's president Mikheil Saakashvili explained to a *New York Times* writer why he decided not to organize an insurgency against the occupation:

> We had a choice here. We could turn this country into Chechnya—we had enough people and equipment to do that—or we had to do nothing and stay a modern European country. Eventually we would have chased them away, but we would have had to go to the mountains and grow beards. That would have been a tremendous national philosophical and emotional burden.[40]

The explanation was melodramatic, even disingenuous—Russia had no intention of occupying Georgia—but it does capture one of the choices in the developing world that lies behind the New Peace: go to the mountains and grow beards, or do nothing and stay a modern country.

Other than the end of the Cold War and the decline of ideology, what led to the mild reduction in the number of civil wars during the past two decades, and the steep reduction in battle deaths of the last one? And why do conflicts persist in the developing world (thirty-six in 2008, all but one of them civil wars) when they have essentially disappeared in the developed world?

A good place to start is the Kantian triangle of democracy, open economies, and engagement with the international community. Russett and Oneal's statistical analyses, described in the preceding chapter, embrace the entire world, but they include only disputes between states. How well does the triad of pacifying factors apply to civil wars within developing countries, where most of today's conflicts take place? Each variable, it turns out, has an important twist.

One might think that if a lot of democracy is a good thing in inhibiting war, then a little democracy is still better than none. But with civil wars it doesn't work that way. Earlier in the chapter (and in chapter 3, when we examined homicide across the world), we came across the concept of anocracy, a form of rule that is neither fully democratic nor fully autocratic.[41] Anocracies are also known among political scientists as semidemocracies, praetorian regimes, and (my favorite, overheard at a conference) crappy governments. These are administrations that don't do anything well. Unlike autocratic police states, they don't intimidate their populations into quiescence, but nor do they have the more-or-less fair systems of law enforcement of a decent democracy. Instead they often respond to local crime with indiscriminate retaliation on entire communities. They retain the kleptocratic habits of the autocracies from which they evolved, doling out tax revenues and patronage jobs to their clansmen, who then extort bribes for police protection, favorable verdicts in court, or access to the endless permits needed to get anything done. A government job is the only ticket out of squalor, and having a clansman in power is the only ticket to a government job. When control of the government is periodically up for grabs in a "democratic election," the stakes are as high as in any contest over precious and indivisible spoils. Clans, tribes, and ethnic groups try to intimidate each other away from the ballot box and then fight to overturn an outcome that doesn't go their way. According to the *Global Report on Conflict, Governance, and State Fragility*, anocracies are "about six times more likely than democracies and two and one-half times as likely as autocracies to experience new outbreaks of societal wars" such as ethnic civil wars, revolutionary wars, and coups d'état.[42]

Figure 5–23 in the preceding chapter shows why the vulnerability of anocracies to violence has become a problem. As the number of autocracies in the

world began to decline in the late 1980s, the number of anocracies began to increase. Currently they are distributed in a crescent from Central Africa through the Middle East and West and South Asia that largely coincides with the war zones in figure 6–5.[43]

The vulnerability to civil war of countries in which control of the government is a winner-take-all jackpot is multiplied when the government controls windfalls like oil, gold, diamonds, and strategic minerals. Far from being a blessing, these bonanzas create the so-called resource curse, also known as the paradox of plenty and fool's gold. Countries with an abundance of nonrenewable, easily monopolized resources have slower economic growth, crappier governments, and more violence. As the Venezuelan politician Juan Pérez Alfonzo put it, "Oil is the devil's excrement."[44] A country can be accursed by these resources because they concentrate power and wealth in the hands of whoever monopolizes them, typically a governing elite but sometimes a regional warlord. The leader becomes obsessed with fending off rivals for his cash cow and has no incentive to foster the networks of commerce that enrich a society and knit it together in reciprocal obligations. Collier, together with the economist Dambisa Moyo and other policy analysts, has called attention to a related paradox. Foreign aid, so beloved of crusading celebrities, can be another poisoned chalice, because it can enrich and empower the leaders through whom it is funneled rather than building a sustainable economic infrastructure. Expensive contraband like coca, opium, and diamonds is a third curse, because it opens a niche for cutthroat politicians or warlords to secure the illegal enclaves and distribution channels.

Collier observes that "the countries at the bottom coexist with the 21st century, but their reality is the 14th century: civil war, plague, ignorance."[45] The analogy to that calamitous century, which stood on the verge of the Civilizing Process before the consolidation of effective governments, is apt. In *The Remnants of War*, Mueller notes that most armed conflict in the world today no longer consists of campaigns for territory by professional armies. It consists instead of plunder, intimidation, revenge, and rape by gangs of unemployable young men serving warlords or local politicians, much like the dregs rounded up by medieval barons for their private wars. As Mueller puts it:

> Many of these wars have been labeled "new war," "ethnic conflict," or, most grandly, "clashes of civilizations." But in fact, most, though not all, are more nearly opportunistic predation by packs, often remarkably small ones, of criminals, bandits, and thugs. They engage in armed conflict either as mercenaries hired by desperate governments or as independent or semi-independent warlord or brigand bands. The damage perpetrated by these entrepreneurs of violence, who commonly apply ethnic, nationalist, civilizational, or religious rhetoric, can be extensive, particularly to the citizens who are their chief prey, but it is scarcely differentiable from crime.[46]

Mueller cites eyewitness reports that confirm that the infamous civil wars and genocides of the 1990s were largely perpetrated by gangs of drugged or drunken hooligans, including those in Bosnia, Colombia, Croatia, East Timor, Kosovo, Liberia, Rwanda, Sierra Leone, Somalia, Zimbabwe, and other countries in the African-Asian conflict crescent. Mueller describes some of the "soldiers" in the 1989–96 Liberian Civil War:

> Combatants routinely styled themselves after heroes in violent American action movies like *Rambo, Terminator,* and *Jungle Killer*, and many went under such fanciful noms de guerre as Colonel Action, Captain Mission Impossible, General Murder, Young Colonel Killer, General Jungle King, Colonel Evil Killer, General War Boss III, General Jesus, Major Trouble, General Butt Naked, and, of course, General Rambo. Particularly in the early years, rebels decked themselves out in bizarre, even lunatic attire: women's dresses, wigs, and pantyhose; decorations composed of human bones; painted fingernails; even (perhaps in only one case) headgear made of a flowery toilet seat.[47]

The political scientists James Fearon and David Laitin have backed up such vignettes with data confirming that civil wars today are fought by small numbers of lightly armed men who use their knowledge of the local landscape to elude national forces and intimidate informants and government sympathizers. These insurgencies and rural guerrilla wars may have any number of pretexts, but at heart they are less ethnic, religious, or ideological contests than turf battles between street gangs or Mafiosi. In a regression analysis of 122 civil wars between 1945 and 1999, Fearon and Laitin found that, holding per capita income constant (which they interpret as a proxy for government resources), civil wars were *not* more likely to break out in countries that were ethnically or religiously diverse, that had policies which discriminated against minority religions or languages, or that had high levels of income inequality. Civil wars were more likely to break out in countries that had large populations, mountainous terrain, new or unstable governments, significant oil exports, and (perhaps) a large proportion of young males. Fearon and Laitin conclude, "Our theoretical interpretation is more Hobbesian than economic. Where states are relatively weak and capricious, both fears and opportunities encourage the rise of local would-be rulers who supply a rough justice while arrogating the power to 'tax' for themselves and, often, a larger cause."[48]

Just as the uptick in civil warfare arose from the decivilizing anarchy of decolonization, the recent decline may reflect a recivilizing process in which competent governments have begun to protect and serve their citizens rather than preying on them.[49] Many African nations have traded in their Bokassa-style psychopaths for responsible democrats and, in the case of Nelson Mandela, one of history's greatest statesmen.[50]

The transition required an ideological change as well, not just in the affected countries but in the wider international community. The historian Gérard Prunier has noted that in 1960s Africa, independence from colonial rule became a messianic ideal. New nations made it a priority to adopt the trappings of sovereignty, such as airlines, palaces, and nationally branded institutions. Many were influenced by "dependency theorists" who advocated that third-world governments disengage from the global economy and cultivate self-sufficient industries and agrarian sectors, which most economists today consider a ticket to penury. Often economic nationalism was combined with a romantic militarism that glorified violent revolution, symbolized in two icons of the 1960s, the soft-color portrait of a glowing Mao and the hard-edged graphic of a dashing Che. When dictatorships by glorious revolutionaries lost their cachet, democratic elections became the new elixir. No one found much romance in the frumpy institutions of the Civilizing Process, namely a competent government and police force and a dependable infrastructure for trade and commerce. Yet history suggests that these institutions are necessary for the reduction of chronic violence, which is a prerequisite to every other social good.

During the past two decades the great powers, donor nations, and intergovernmental organizations (such as the African Union) have begun to press the point. They have ostracized, penalized, shamed, and in some cases invaded states that have come under the control of incompetent tyrants.[51] Measures to track and fight government corruption have become more common, as has the identification of barriers that penalize developing nations in global trade. Some combination of these unglamorous measures may have begun to reverse the governmental and social pathologies that had loosed civil wars on the developing world from the 1960s through the early 1990s.

Decent governments tend to be reasonably democratic and market-oriented, and several regression studies have looked at datasets on civil conflict for signs of a Liberal Peace like the one that helps explain the avoidance of wars between developed nations. We have already seen that the first leg of the peace, democracy, does not reduce the *number* of civil conflicts, particularly when it comes in the rickety form of an anocracy. But it does seem to reduce their *severity*. The political scientist Bethany Lacina has found that civil wars in democracies have fewer than half the battle deaths of civil wars in nondemocracies, holding the usual variables constant. In his 2008 survey of the Liberal Peace, Gleditsch concluded that "democracies rarely experience large-scale civil wars."[52] The second leg of the Liberal Peace is even stronger. Openness to the global economy, including trade, foreign investment, aid with strings attached, and access to electronic media, appears to drive down both the likelihood *and* the severity of civil conflict.[53]

The theory of the Kantian Peace places the weight of peace on three legs, the third of which is international organizations. One type of international

organization in particular can claim much of the credit for driving down civil wars: international peacekeeping forces.[54] In the postcolonial decades civil wars piled up not so much because they broke out at an increasing rate but because they broke out at a higher rate than they ended (2.2 outbreaks a year compared to 1.8 terminations), and thus began to accumulate.[55] By 1999 an average civil war had been going on for fifteen years! That began to change in the late 1990s and 2000s, when civil wars started to fizzle out faster than new ones took their place. They also tended to end in negotiated settlements, without a clear victor, rather than being fought to the bitter end. Formerly these embers would smolder for a couple of years and then flare up again, but now they were more likely to die out for good.

This burst of peace coincides with a burst of peacekeepers. Figure 6–6 shows that beginning in the late 1980s the international community stepped up its peacekeeping operations and, more importantly, staffed them with increasing numbers of peacekeepers so they could do their job properly. The end of the Cold War was a turning point, because at last the great powers were more interested in seeing a conflict end than in seeing their proxy win.[56] The rise of peacekeeping is also a sign of the humanist times. War is increasingly seen as repugnant, and that includes wars that kill black and brown people.

Peacekeeping is one of the things that the United Nations, for all its foibles, does well. (It doesn't do so well at preventing wars in the first place.) In *Does Peacekeeping Work?* the political scientist Virginia Page Fortna answers the question in her title with "a clear and resounding yes."[57] Fortna assembled a

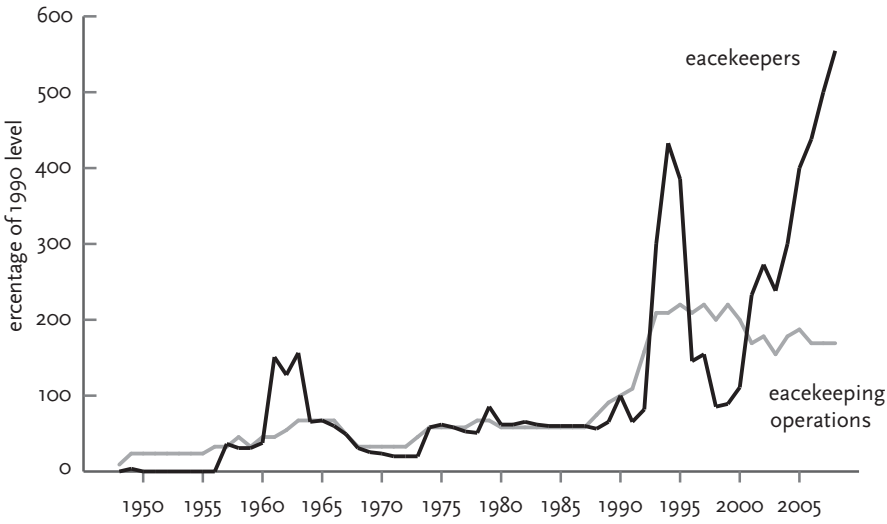

FIGURE 6–6. Growth of peacekeeping, 1948–2008

Source: Graph from Gleditsch, 2008, based on research by Siri Rustad.

dataset of 115 cease-fires in civil wars from 1944 to 1997 and examined whether the presence of a peacekeeping mission lowered the chances that the war would reignite. The dataset included missions by the UN, by permanent organizations such as NATO and the African Union, and by ad hoc coalitions of states. She found that the presence of peacekeepers reduced the risk of recidivism into another war by *80 percent*. This doesn't mean that peacekeeping missions are always successful—the genocides in Bosnia and Rwanda are two conspicuous failures—just that they prevent wars from restarting on average. Peacekeepers need not be substantial armies. Just as scrawny referees can pull apart brawling hockey players, lightly armed and even unarmed missions can get in between militias and induce them to lay down their weapons. And even when they don't succeed at that, they can serve as a tripwire for bringing in the bigger guns. Nor do peacekeepers have to be blue-helmeted soldiers. Functionaries who scrutinize elections, reform the police, monitor human rights, and oversee the functioning of bad governments also make a difference.

Why does peacekeeping work? The first reason comes right out of *Leviathan:* the larger and better-armed missions can retaliate directly against violators of a peace agreement on either side, raising the costs of aggression. The imposed costs and benefits can be reputational as well as material. A member of a mission commented on what led Afonso Dhlakama and his RENAMO rebel force to sign a peace agreement with the government of Mozambique: "For Dhlakama, it meant a great deal to be taken seriously, to go to cocktail parties and be treated with respect. Through the UN he got the government to stop calling RENAMO 'armed bandits.' It felt good to be wooed."[58]

Even small missions can be effective at keeping a peace because they can free the adversaries from a Hobbesian trap in which each side is tempted to attack out of fear of being attacked first. The very act of accepting intrusive peacekeepers is a costly (hence credible) signal that each side is serious about not attacking. Once the peacekeepers are in place, they can reinforce this security by monitoring compliance with the agreement, which allows them to credibly reassure each side that the other is not secretly rearming. They can also assume everyday policing activities, which deter the small acts of violence that can escalate into cycles of revenge. And they can identify the hotheads and spoilers who want to subvert the agreement. Even if a spoiler does launch a provocative attack, the peacekeepers can credibly reassure the target that it was a rogue act rather than the opening shot in a resumption of aggression.

Peacekeeping initiatives have other levers of influence. They can try to stamp out the trade in contraband that finances rebels and warlords, who are often the same people. They can dangle pork-barrel funding as an incentive to leaders who abide by the peace, enhancing their power and electoral popularity. As one Sierra Leonean said of a presidential candidate, "If Kabbah go, white man go, UN go, money go."[59] Also, since third-world soldiers (like premodern soldiers) are often paid in opportunities to plunder, the money can

be applied to "demobilization, disarmament, and reintegration" programs that aim to draw General Butt Naked and his comrades back into civil society. With guerrillas who have more of an ideological agenda, the fact that the bribes come from a neutral party rather than a despised enemy allows them to feel they have not sold out. Leverage can also be applied to force political leaders to open their governments to rival political or ethnic groups. As with the financial sweeteners, the fact that the concessions are made to a neutral party rather than to the hated foe provides the conceder with an opportunity to save face. Desmond Malloy, a UN worker in Sierra Leone, observed that "peacekeepers create an atmosphere for negotiations. [Concessions] become a point of pride—it's a human trait. So you need a mechanism that allows negotiations without losing dignity and pride."[60]

For all these encouraging statistics, news readers who are familiar with the carnage in the Democratic Republic of the Congo, Iraq, Sudan, and other deathtraps may not be reassured. The PRIO/UCDP data we have been examining are limited in two ways. They include only state-based conflicts: wars in which at least one of the sides is a government. And they include only battle-related deaths: fatalities caused by battlefield weapons. What happens to the trends when we start looking for the keys that don't fall under these lampposts?

The first exclusion consists of the nonstate conflicts (also called intercommunal violence), in which warlords, militias, mafias, rebel groups, or paramilitaries, often affiliated with ethnic groups, go after each other. These conflicts usually occur in failed states, almost by definition. A war that doesn't even bother to invite the government represents the ultimate failure of the state's monopoly on violence.

The problem with nonstate conflicts is that until recently war buffs just weren't interested in them. No one kept track, so there's nothing to count, and we cannot plot the trends. Even the United Nations, whose mission is to prevent "the scourge of war," refuses to keep statistics on intercommunal violence (or on any other form of armed conflict), because its member states don't want social scientists poking around inside their borders and exposing the violence that their murderous governments cause or their inept governments fail to prevent.[61]

Nonetheless, a broad look at history suggests that nonstate conflicts today must be far fewer than they were in decades and centuries past, when less of the earth's surface was controlled by states. Tribal battles, slave raids, pillagings by raiders and horse tribes, pirate attacks, and private wars by noblemen and warlords, all of them nonstate, were scourges of humanity for millennia. During China's "warlord era" from 1916 to 1928, more than 900,000 people were killed by competing military chieftains in just a dozen years.[62]

It was only in 2002 that nonstate conflicts began to be tabulated. Since then the UCDP has maintained a Non-State Conflict Dataset, and it contains three

revelations. First, nonstate conflicts are in some years as numerous as state-based conflicts—which says more about the scarcity of war than about the prevalence of intercommunal combat. Most of them, not surprisingly, are in sub-Saharan Africa, though a growing number are in the Middle East (most prominently, Iraq). Second, nonstate conflicts kill far fewer people than conflicts that involve a government, perhaps a quarter as many. Again, this is not surprising, since governments almost by definition are in the violence business. Third, the trend in the death toll from 2002 to 2008 (the most recent year covered in the dataset) has been mostly downward, despite 2007's being the deadliest year for intercommunal violence in Iraq.[63] So as best as anyone can tell, it seems unlikely that nonstate conflicts kill enough people to stand as a counterexample to the decline in the worldwide toll of armed conflict that constitutes the New Peace.

A more serious challenge is the number of indirect deaths of civilians from the hunger, disease, and lawlessness exacerbated by war. One often reads that a century ago only 10 percent of the deaths in war were suffered by civilians, but that today the figure is 90 percent. Consistent with this claim are new surveys by epidemiologists that reveal horrendous numbers of "excess deaths" (direct and indirect) among civilians. Rather than counting bodies from media reports and nongovernmental organizations, surveyors ask a sample of people whether they know someone who was killed, then extrapolate the proportion to the population as a whole. One of these surveys, published in the medical journal *Lancet* in 2006, estimated that 600,000 people died in the war in Iraq between 2003 and 2006—overwhelmingly more than the 80,000 to 90,000 battle deaths counted for that period by PRIO and by the Iraq Body Count, a respected nongovernmental organization.[64] Another survey in the Democratic Republic of the Congo put the death toll from its civil war at 5.4 million—about thirty-five times the PRIO battle-death estimate, and more than half of the total of *all* the battle deaths it has recorded in all wars since 1946.[65] Even granting that the PRIO figures are intended as lower bounds (because of the stringent requirements that deaths be attributed to a cause), this is quite a discrepancy, and raises doubts about whether, in the big picture, the decline in battle deaths can really be interpreted as an advance in peace.

Casualty figures are always moralized, and it's not surprising that these three numbers, which have been used to indict, respectively, the 20th century, Bush's invasion of Iraq, and the world's indifference to Africa, have been widely disseminated. But an objective look at the sources suggests that the revisionist estimates are not credible (which, needless to say, does not imply that anyone should be indifferent to civilian deaths in wartime).

First off, the commonly cited 10-percent-to-90-percent reversal in civilian casualties turns out to be completely bogus. The political scientists Andrew Mack (of HSRP), Joshua Goldstein, and Adam Roberts have each tried to track

down the source of this meme, since they all knew that the data needed to underpin it do not exist.[66] They also knew that the claim fails basic sanity checks. For much of human history, peasants have subsisted on what they could grow, producing little in the way of a surplus. A horde of soldiers living off the land could easily tip a rural population into starvation. The Thirty Years' War in particular saw not only numerous massacres of civilians but the deliberate destruction of homes, crops, livestock, and water supplies, adding up to truly horrendous civilian death tolls. The American Civil War, with its blockades, crop-burnings, and scorched-earth campaigns, caused an enormous number of civilian casualties (the historical reality behind Scarlett O'Hara's vow in *Gone With the Wind:* "As God is my witness, I'll never be hungry again").[67] During World War I the battlefront moved through populated areas, raining artillery shells on towns and villages, and each side tried to starve the other's civilians with blockades. And as I have mentioned, if one includes the victims of the 1918 flu epidemic as indirect deaths from the war, one could multiply the number of civilian casualties many times over. World War II, also in the first half of the 20th century, decimated civilians with a holocaust, a blitz, *Slaughterhouse-Five*–like firebombings of cities in Germany and Japan, and not one but two atomic explosions. It seems unlikely that today's wars, however destructive to civilians, could be substantially worse.

Goldstein, Roberts, and Mack traced the meme to a chain of garbled retellings in which different kinds of casualty estimates were mashed up: battle deaths in one era were compared with battle deaths, indirect deaths, injuries, and refugees in another. Mack and Goldstein estimate that civilians suffer around half of the battle deaths in war, and that the ratio varies from war to war but has not increased over time. Indeed, we shall see that it has recently decreased by a substantial margin.

The most widely noted of the recent epidemiological estimates is the *Lancet* study of deaths in Iraq.[68] A team of eight Iraqi health workers went door to door in eighteen regions and asked people about recent deaths in the family. The epidemiologists subtracted the death rate for the years before the 2003 invasion from the death rate for the years after, figuring that the difference could be attributed to the war, and multiplied that proportion by the size of the population of Iraq. This arithmetic suggested that 655,000 more Iraqis died than if the invasion had never taken place. And 92 percent of these excess deaths, the families indicated, were direct battle deaths from gunshots, airstrikes, and car bombs, not indirect deaths from disease or starvation. If so, the standard body counts would be underestimates by a factor of around seven.

Without meticulous criteria for selecting a sample, though, extrapolations to an entire population can be wildly off. A team of statisticians led by Michael Spagat and Neil Johnson found these estimates incredible and discovered that a disproportionate number of the surveyed families lived on major streets and

intersections—just the places where bombings and shootings are most likely.[69] An improved study conducted by the World Health Organization came up with a figure that was a quarter of the *Lancet* number, and even that required inflating an original estimate by a fudge factor of 35 percent to compensate for lying, moves, and memory lapses. Their unadjusted figure, around 110,000, is far closer to the battle-death body counts.[70]

Another team of epidemiologists extrapolated from retrospective surveys of war deaths in thirteen countries to challenge the entire conclusion that battle deaths have declined since the middle of the 20th century.[71] Spagat, Mack, and their collaborators have examined them and shown that the estimates are all over the map and are useless for tracking war deaths over time.[72]

What about the report of 5.4 million deaths (90 percent of them from disease and hunger) in the civil war in the Democratic Republic of the Congo?[73] It also turns out to be inflated. The International Rescue Committee (IRC) got the number by taking an estimate of the prewar death rate that was far too low (because it came from sub-Saharan Africa as a whole, which is better off than the DRC) and subtracting it from an estimate of the rate during the war that was far too high (because it came from areas where the IRC was providing humanitarian assistance, which are just the areas with the highest impact from war). The HSRP, while acknowledging that the indirect death toll in the DRC is high—probably over a million—cautions against accepting estimates of excess deaths from retrospective survey data, since in addition to all of their sampling pitfalls, they require dubious conjectures about what would have happened if a war had not taken place.[74]

Amazingly, the HSRP has collected evidence that death rates from disease and hunger have tended to go *down*, not up, during the wars of the past three decades.[75] It may sound like they are saying that war is healthy for children and other living things after all, but that is not their point. Instead, they document that deaths from malnutrition and hunger in the developing world have been dropping steadily over the years, and that the civil wars of today, which are fought by packs of insurgents in limited regions of a country, have not been destructive enough to reverse the tide. In fact, when medical and food assistance is rushed to a war zone, where it is often administered during humanitarian cease-fires, the progress can accelerate.

How is this possible? Many people are unaware of what UNICEF calls the Child Survival Revolution. (The revolution pertains to adult survival too, though children under five are the most vulnerable population and hence the ones most dramatically helped.) Humanitarian assistance has gotten smarter. Rather than just throwing money at a problem, aid organizations have adapted discoveries from the science of public health about which scourges kill the most people and which weapon against each one is the most cost-effective. Most childhood deaths in the developing world come from four causes: malaria; diarrheal diseases such as cholera and dysentery; respiratory infections

such as pneumonia, influenza, and tuberculosis; and measles. Each is preventable or treatable, often remarkably cheaply. Mosquito nets, antimalarial drugs, antibiotics, water purifiers, oral rehydration therapy (a bit of salt and sugar in clean water), vaccinations, and breast-feeding (which reduces diarrheal and respiratory diseases) can save enormous numbers of lives. Over the last three decades, vaccination alone (which in 1974 protected just 5 percent of the world's children and today protects 75 percent) has saved 20 million lives.[76] Ready-to-use therapeutic foods like Plumpy'nut, a peanutbutterish goop in a foil package that children are said to like, can make a big dent in malnutrition and starvation.

Together these measures have slashed the human costs of war and belied the worry that an increase in indirect deaths has canceled or swamped the decrease in battle deaths. The HSRP estimates that during the Korean War about 4.5 percent of the population died from disease and starvation in every year of the four-year conflict. During the DRC civil war, even if we accept the overly pessimistic estimate of 5 million indirect deaths, it would amount to 1 percent of the country's population per year, a reduction of more than fourfold from Korea.[77]

It's not easy to see the bright side in the developing world, where the remnants of war continue to cause tremendous misery. The effort to whittle down the numbers that quantify the misery can seem heartless, especially when the numbers serve as propaganda for raising money and attention. But there is a moral imperative in getting the facts right, and not just to maintain credibility. The discovery that fewer people are dying in wars all over the world can thwart cynicism among compassion-fatigued news readers who might otherwise think that poor countries are irredeemable hellholes. And a better understanding of what drove the numbers down can steer us toward doing things that make people better off rather than congratulating ourselves on how altruistic we are. Among the surprises in the statistics are that some things that sound exciting, like instant independence, natural resources, revolutionary Marxism (when it is effective), and electoral democracy (when it is not) can increase deaths from violence, and some things that sound boring, like effective law enforcement, openness to the world economy, UN peacekeepers, and Plumpy'nut, can decrease them.

THE TRAJECTORY OF GENOCIDE

Of all the varieties of violence of which our sorry species is capable, genocide stands apart, not only as the most heinous but as the hardest to comprehend. We can readily understand why from time to time people enter into deadly quarrels over money, honor, or love, why they punish wrongdoers to excess, and why they take up arms to combat other people who have taken up arms. But that someone should want to slaughter millions of innocents, including

women, children, and the elderly, seems to insult any claim we may have to comprehend our kind. Whether it is called genocide (killing people because of their race, religion, ethnicity, or other indelible group membership), politicide (killing people because of their political affiliation), or democide (any mass killing of civilians by a government or militia), killing-by-category targets people for what they *are* rather than what they *do* and thus seems to flout the usual motives of gain, fear, and vengeance.[78]

Genocide also shocks the imagination by the sheer number of its victims. Rummel, who was among the first historians to try to count them all, famously estimated that during the 20th century 169 million people were killed by their governments.[79] The number is, to be sure, a highball estimate, but most atrocitologists agree that in the 20th century more people were killed by democides than by wars.[80] Matthew White, in a comprehensive overview of the published estimates, reckons that 81 million people were killed by democide and another 40 million by man-made famines (mostly by Stalin and Mao), for a total of 121 million. Wars, in comparison, killed 37 million soldiers and 27 million civilians in battle, and another 18 million in the resulting famines, for a total of 82 million deaths.[81] (White adds, though, that about half of the democide deaths took place during wars and may not have been possible without them.)[82]

Killing so many people in so short a time requires methods of mass production of death that add another layer of horror. The Nazis' gas chambers and crematoria will stand forever as the most shocking visual symbols of genocide. But modern chemistry and railroads are by no means necessary for high-throughput killing. When the French revolutionaries suppressed a revolt in the Vendée region in 1793, they hit upon the idea of packing prisoners into barges, sinking them below the water's surface long enough to drown the human cargo, and then floating them up for the next batch.[83] Even during the Holocaust, the gas chambers were not the most efficient means of killing. The Nazis killed more people with their *Einsatzgruppen*, or mobile firing squads, which were foreshadowed by other teams of quick-moving soldiers with projectile weapons such as Assyrians in chariots and Mongols on horses.[84] During the genocide of Hutus by Tutsis in Burundi in 1972 (a predecessor of the reverse genocide in Rwanda twenty-two years later), a perpetrator explained:

> Several techniques, several, several. One can gather two thousand persons in a house—in a prison, let us say. There are some halls which are large. The house is locked. The men are left there for fifteen days without eating, without drinking. Then one opens. One finds cadavers. Not beaten, not anything. Dead.[85]

The bland military term "siege" hides the fact that depriving a city of food and finishing off the weakened survivors is a time-honored and cost-effective form of extermination. As Frank Chalk and Kurt Jonassohn point out in *The*

History and Sociology of Genocide, "The authors of history textbooks hardly ever reported what the razing of an ancient city meant for its inhabitants."[86] One exception is the Book of Deuteronomy, which offers a backdated prophecy that was based on the Assyrian or Babylonian conquest:

> In the desperate straits to which the enemy siege reduces you, you will eat the fruit of your womb, the flesh of your sons and daughters whom the LORD your God has given you. Even the most refined and gentle of men among you will begrudge food to his own brother, to the wife whom he embraces, and to the last of his remaining children, giving to none of them any of the flesh of his children whom he is eating, because nothing else remains to him, in the desperate straits to which the enemy siege will reduce you in all your towns. She who is the most refined and gentle among you, so gentle and refined that she does not venture to set the sole of her foot on the ground, will begrudge food to the husband whom she embraces, to her own son, and to her own daughter, begrudging even the afterbirth that comes out from between her thighs, and the children that she bears, because she will eat them in secret for lack of anything else, in the desperate straits to which the enemy siege will reduce you in your towns.[87]

Apart from numbers and methods, genocides sear the moral imagination by the gratuitous sadism indulged in by the perpetrators. Eyewitness accounts from every continent and decade recount how victims are taunted, tormented, and mutilated before being put to death.[88] In *The Brothers Karamazov*, Dostoevsky commented on Turkish atrocities in Bulgaria during the Russo-Turkish War of 1877–78, when unborn children were ripped from their mothers' wombs and prisoners were nailed by their ears to a fence overnight before being hanged: "People speak sometimes about the 'animal' cruelty of man, but that is terribly unjust and offensive to animals. No animal could ever be so cruel as a man, so artfully, so artistically cruel. A tiger simply gnaws and tears, that is all he can do. It would never occur to him to nail people by their ears overnight, even if he were able to do it."[89] My own reading of histories of genocide has left me with images to disturb sleep for a lifetime. I'll recount two that lodge in the mind not because of any gore (though such accounts are common enough) but because of their cold-bloodedness. Both are taken from the philosopher Jonathan Glover's *Humanity: A Moral History of the Twentieth Century*.

During the Chinese Cultural Revolution of 1966–75, Mao encouraged marauding Red Guards to terrorize "class enemies," including teachers, managers, and the descendants of landlords and "rich peasants," killing perhaps 7 million.[90] In one incident:

> Young men ransacking an old couple's house found boxes of precious French glass. When the old man begged them not to destroy the glass, one of the

> group hit him in the mouth with a club, leaving him spitting out blood and teeth. The students smashed the glass and left the couple on their knees crying.[91]

During the Holocaust, Christian Wirth commanded a slave labor compound in Poland, where Jews were worked to death sorting the clothes of their murdered compatriots. Their children had been taken from them and sent to the death camps.

> Wirth allowed one exception. . . . One Jewish boy around ten was given sweets and dressed up as a little SS man. Wirth and he rode among the prisoners, Wirth on a white horse and the boy on a pony, both using machine-guns to kill prisoners (including the boy's mother) at close range.[92]

Glover allows himself a comment: "To this ultimate expression of contempt and mockery, no reaction of disgust and anger is remotely adequate."

How could people do these things? Making sense of killing-by-category, insofar as we can do so at all, must begin with the psychology of categories.[93]

People sort other people into mental pigeonholes according to their affiliations, customs, appearances, and beliefs. Though it's tempting to think of this stereotyping as a kind of mental defect, categorization is indispensable to intelligence. Categories allow us to make inferences from a few observed qualities to a larger number of unobserved ones. If I note the color and shape of a fruit and classify it as a raspberry, I can infer that it will taste sweet, satisfy my hunger, and not poison me. Politically correct sensibilities may bridle at the suggestion that a group of people, like a variety of fruit, may have features in common, but if they didn't, there would be no cultural diversity to celebrate and no ethnic qualities to be proud of. Groups of people cohere because they really do share traits, albeit statistically. So a mind that generalizes about people from their category membership is not ipso facto defective. African Americans today really are more likely to be on welfare than whites, Jews really do have higher average incomes than WASPs, and business students really are more politically conservative than students in the arts—on average.[94]

The problem with categorization is that it often goes beyond the statistics. For one thing, when people are pressured, distracted, or in an emotional state, they forget that a category is an approximation and act as if a stereotype applies to every last man, woman, and child.[95] For another, people tend to *moralize* their categories, assigning praiseworthy traits to their allies and condemnable ones to their enemies. During World War II, for example, Americans thought that Russians had more positive traits than Germans; during the Cold War they thought it was the other way around.[96] Finally, people tend to *essentialize* groups. As children, they tell experimenters that a baby whose parents

have been switched at birth will speak the language of her biological rather than her adoptive parents. As they get older, people tend to think that members of particular ethnic and religious groups share a quasi-biological essence, which makes them homogeneous, unchangeable, predictable, and distinct from other groups.[97]

The cognitive habit of treating people as instances of a category gets truly dangerous when people come into conflict. It turns Hobbes's trio of violent motives—gain, fear, and deterrence—from the bones of contention in an individual quarrel to the casus belli in an ethnic war. Historical surveys have shown that genocides are caused by this triad of motives, with, as we shall see, two additional toxins spiked into the brew.[98]

Some genocides begin as matters of convenience. Natives are occupying a desirable territory or are monopolizing a source of water, food, or minerals, and invaders would rather have it for themselves. Eliminating the people is like clearing brush or exterminating pests, and is enabled by nothing fancier in our psychology than the fact that human sympathy can be turned on or off depending on how another person is categorized. Many genocides of indigenous peoples are little more than expedient grabs of land or slaves, with the victims typed as less than human. Such genocides include the numerous expulsions and massacres of Native Americans by settlers or governments in the Americas, the brutalization of African tribes by King Leopold of Belgium in the Congo Free State, the extermination of the Herero by German colonists in South-West Africa, and the attacks on Darfuris by government-encouraged Janjaweed militias in the 2000s.[99]

When conquerors find it expedient to suffer the natives to live so that they can provide tribute and taxes, genocide can have a second down-to-earth function. A reputation for a willingness to commit genocide comes in handy for a conqueror because it allows him to present a city with an ultimatum to surrender or else. To make the threat credible, the invader has to be prepared to carry it out. This was the rationale behind the annihilation of the cities of western Asia by Genghis Khan and his Mongol hordes.

Once the conquerors have absorbed a city or territory into an empire, they may keep it in line with the threat that they will come down on any revolt like a ton of bricks. In 68 CE the governor of Alexandria called in Roman troops to put down a rebellion by the Jews against Roman rule. According to the historian Flavius Josephus, "Once [the Jews] were forced back, they were unmercifully and completely destroyed. Some were caught in the open field, others forced into their houses, which were plundered and then set on fire. The Romans showed no mercy to the infants, had no regard for the aged, and went on in the slaughter of persons of every age, until all the place was overflowed with blood, and 50,000 Jews lay dead."[100] Similar tactics have been used in 20th-century counterinsurgency campaigns, such as the ones by the Soviets in Afghanistan and right-wing military governments in Indonesia and Central America.

When a dehumanized people is in a position to defend itself or turn the tables, it can set a Hobbesian trap of group-against-group fear. Either side may see the other as an existential threat that must be preemptively taken out. After the breakup of Yugoslavia in the 1990s, Serbian nationalists' genocide of Bosnians and Kosovars was partly fueled by fears that they would be the victims of massacres themselves.[101]

If members of a group have seen their comrades victimized, have narrowly escaped victimization themselves, or paranoically worry they have been targeted for victimization, they may stoke themselves into a moralistic fury and seek vengeance on their perceived assailants. Like all forms of revenge, a retaliatory massacre is pointless once it has to be carried out, but a well-advertised and implacable *drive* to carry it out, regardless of its costs at the time, may have been programmed into people's brains by evolution, cultural norms, or both as a way to make the deterrent credible.

These Hobbesian motives don't fully explain why predation, preemption, or revenge should be directed against entire *groups* of people rather than the individuals who get in the way or make trouble. The cognitive habit of pigeonholing may be one reason, and another is explained in *The Godfather: Part II* when the young Vito Corleone's mother begs a Sicilian don to spare the boy's life:

> *Widow:* Don Francesco. You murdered my husband, because he would not bend. And his oldest son Paolo, because he swore revenge. But Vitone is only nine, and dumb-witted. He never speaks.
> *Francesco:* I'm not afraid of his words.
> *Widow:* He is weak.
> *Francesco:* He will grow strong.
> *Widow:* The child cannot harm you.
> *Francesco:* He will be a man, and then he will come for revenge.

And come for revenge he does. Later in the film the grown Vito returns to Sicily, seeks an audience with the don, whispers his name into the old man's ear, and cuts him open like a sturgeon.

The solidarity among the members of a family, clan, or tribe—in particular, their resolve to avenge killings—makes them all fair game for someone with a bone to pick with any one of them. Though equal-sized groups in frequent contact tend to constrain their revenge to an-eye-for-an-eye reciprocity, repeated violations may turn episodic anger into chronic hatred. As Aristotle wrote, "The angry man wishes the object of his anger to suffer in return; hatred wishes its object not to exist."[102] When one side finds itself with an advantage in numbers or tactics, it may seize the opportunity to impose a final solution. Feuding tribes are well aware of genocide's practical advantages. The anthropologist Rafael Karsten worked with the Jivaro of Amazonian Ecuador (a tribe

that contributed one of the long bars to the graph of rates of death in warfare in figure 2–2) and recounts their ways of war:

> Whereas the small feuds within the sub-tribes have the character of a private blood-revenge, based on the principle of just retaliation, the wars between the different tribes are in principle wars of extermination. In these there is no question of weighing life against life; the aim is to completely annihilate the enemy tribe. . . . The victorious party is all the more anxious to leave no single person of the enemy's people, not even small children, alive, as they fear lest these should later appear as avengers against the victors.[103]

Half a world away, the anthropologist Margaret Durham offered a similar vignette from an Albanian tribe that ordinarily abided by norms for measured revenge:

> In February 1912 an amazing case of wholesale justice was reported to me. . . . A certain family of the Fandi bairak [subtribe] had long been notorious for evil-doing—robbing, shooting, and being a pest to the tribe. A gathering of all the heads condemned all the males of the family to death. Men were appointed to lay in wait for them on a certain day and pick them off; and on that day the whole seventeen of them were shot. One was but five and another but twelve years old. I protested against thus killing children who must be innocent and was told: "It was bad blood and must not be further propagated." Such was the belief in heredity that it was proposed to kill an unfortunate woman who was pregnant, lest she should bear a male and so renew the evil.[104]

The essentialist notion of "bad blood" is one of several biological metaphors inspired by a fear of the revenge of the cradle. People anticipate that if they leave even a few of a defeated enemy alive, the remnants will multiply and cause trouble down the line. Human cognition often works by analogy, and the concept of an irksome collection of procreating beings repeatedly calls to mind the concept of vermin.[105] Perpetrators of genocide the world over keep rediscovering the same metaphors to the point of cliché. Despised people are rats, snakes, maggots, lice, flies, parasites, cockroaches, or (in parts of the world where they are pests) monkeys, baboons, and dogs.[106] "Kill the nits and you will have no lice," wrote an English commander in Ireland in 1641, justifying an order to kill thousands of Irish Catholics.[107] "A nit would make a louse," recalled a Californian settler leader in 1856 before slaying 240 Yuki in revenge for their killing of a horse.[108] "Nits make lice," said Colonel John Chivington before the Sand Creek Massacre, which killed hundreds of Cheyenne and Arapaho in 1864.[109] Cankers, cancers, bacilli, and viruses are other insidious biological agents that lend themselves as figures of speech in the poetics of

genocide. When it came to the Jews, Hitler mixed his metaphors, but they were always biological: Jews were viruses; Jews were bloodsucking parasites; Jews were a mongrel race; Jews had poisonous blood.[110]

The human mind has evolved a defense against contamination by biological agents: the emotion of disgust.[111] Ordinarily triggered by bodily secretions, animal parts, parasitic insects and worms, and vectors of disease, disgust impels people to eject the polluting substance and anything that looks like it or has been in contact with it. Disgust is easily moralized, defining a continuum in which one pole is identified with spirituality, purity, chastity, and cleansing and the other with animality, defilement, carnality, and contamination.[112] And so we see disgusting agents as not just physically repellent but also morally contemptible. Many metaphors in the English language for a treacherous person use a disease vector as their vehicle—*a rat, a louse, a worm, a cockroach.* The infamous 1990s term for forced displacement and genocide was *ethnic cleansing*.

Metaphorical thinking goes in both directions. Not only do we apply disgust metaphors to morally devalued peoples, but we tend to morally devalue people who are physically disgusting (a phenomenon we encountered in chapter 4 when considering Lynn Hunt's theory that a rise in hygiene in Europe caused a decline in cruel punishments). At one pole of the continuum, white-clad ascetics who undergo rituals of purification are revered as holy men and women. At the other, people living in degradation and filth are reviled as subhuman. The chemist and writer Primo Levi described this spiral during the transport of Jews to the death camps in Germany:

> The SS escort did not hide their amusement at the sight of men and women squatting wherever they could, on the platforms and in the middle of the tracks, and the German passengers openly expressed their disgust: people like this deserve their fate, just look how they behave. These are not *Menschen*, human beings, but animals, it's clear as the light of day.[113]

The emotional pathways to genocide—anger, fear, and disgust—can occur in various combinations. In *Worse than War*, a history of 20th-century genocide, the political scientist Daniel Goldhagen points out that not all genocides have the same causes. He classifies them according to whether the victim group is *dehumanized* (a target of moralized disgust), *demonized* (a target of moralized anger), both, or neither.[114] A dehumanized group may be exterminated like vermin, such as the Hereros in the eyes of German colonists, Armenians in the eyes of Turks, black Darfuris in the eyes of Sudanese Muslims, and many indigenous peoples in the eyes of European settlers. A demonized group, in contrast, is thought to be equipped with the standard human reasoning faculties, which makes them all the more culpable for embracing a heresy or rejecting the one true faith. Among these modern heretics were the victims of

communist autocracies, and the victims of their opposite number, the right-wing dictatorships in Chile, Argentina, Indonesia, and El Salvador. Then there are the out-and-out demons—groups that manage to be both repulsively subhuman *and* despicably evil. This is how the Nazis saw the Jews, and how Hutus and Tutsis saw each other. Finally, there may be groups that are not reviled as evil or subhuman but are feared as potential predators and eliminated in preemptive attacks, such as in the Balkan anarchy following the breakup of Yugoslavia.

So far I have tried to explain genocide in the following way. The mind's habit of essentialism can lump people into categories; its moral emotions can be applied to them in their entirety. The combination can transform Hobbesian competition among individuals or armies into Hobbesian competition among peoples. But genocide has another fateful component. As Solzhenitsyn pointed out, to kill by the millions you need an *ideology*.[115] Utopian creeds that submerge individuals into moralized categories may take root in powerful regimes and engage their full destructive might. For this reason it is ideologies that generate the outliers in the distribution of genocide death tolls. Divisive ideologies include Christianity during the Crusades and the Wars of Religion (and in an offshoot, the Taiping Rebellion in China); revolutionary romanticism during the politicides of the French Revolution; nationalism during the genocides in Ottoman Turkey and the Balkans; Nazism in the Holocaust; and Marxism during the purges, expulsions, and terror-famines in Stalin's Soviet Union, Mao's China, and Pol Pot's Cambodia.

Why should utopian ideologies so often lead to genocide? At first glance it seems to make no sense. Even if an actual utopia is unattainable for all kinds of practical reasons, shouldn't the quest for a perfect world at least leave us with a better one—a world that is 60 percent of the way to perfection, say, or even 15 percent? After all, a man's reach must exceed his grasp. Shouldn't we aim high, dream the impossible dream, imagine things that never were and ask "why not"?

Utopian ideologies invite genocide for two reasons. One is that they set up a pernicious utilitarian calculus. In a utopia, everyone is happy forever, so its moral value is infinite. Most of us agree that it is ethically permissible to divert a runaway trolley that threatens to kill five people onto a side track where it would kill only one. But suppose it were a hundred million lives one could save by diverting the trolley, or a billion, or—projecting into the indefinite future—infinitely many. How many people would it be permissible to sacrifice to attain that infinite good? A few million can seem like a pretty good bargain.

Not only that, but consider the people who learn about the promise of a perfect world yet nonetheless oppose it. They are the only things standing in the way of a plan that could lead to infinite goodness. How evil are they? You do the math.

The second genocidal hazard of a utopia is that it has to conform to a tidy blueprint. In a utopia, everything is there for a reason. What about the people? Well, groups of people are diverse. Some of them stubbornly, perhaps essentially, cling to values that are out of place in a perfect world. They may be entrepreneurial in a world that works by communal sharing, or bookish in a world that works by labor, or brash in a world that works by piety, or clannish in a world that works by unity, or urban and commercial in a world that has returned to its roots in nature. If you are designing the perfect society on a clean sheet of paper, why not write these eyesores out of the plans from the start?

In *Blood and Soil: A World History of Genocide and Extermination from Sparta to Darfur*, the historian Ben Kiernan notes another curious feature of utopian ideologies. Time and again they hark back to a vanished agrarian paradise, which they seek to restore as a healthful substitute for prevailing urban decadence. In chapter 4 we saw that after the Enlightenment had emerged from the intellectual bazaar of cosmopolitan cities, the German counter-Enlightenment romanticized the attachment of a people to their land—the blood and soil of Kiernan's title. The ungovernable metropolis, with its fluid population and ethnic and occupational enclaves, is an affront to a mindset that envisions a world of harmony, purity, and organic wholeness. Many of the nationalisms of the 19th and early 20th centuries were guided by utopian images of ethnic groups flourishing in their native homelands, often based on myths of ancestral tribes who settled the territory at the dawn of time.[116] This agrarian utopianism lay behind Hitler's dual obsessions: his loathing of Jewry, which he associated with commerce and cities, and his deranged plan to depopulate Eastern Europe to provide farmland for German city-dwellers to colonize. Mao's massive agrarian communes and Pol Pot's expulsion of Cambodian city-dwellers to rural killing fields are other examples.

Commercial activities, which tend to be concentrated in cities, can themselves be triggers of moralistic hatred. As we shall see in chapter 9, people's intuitive sense of economics is rooted in tit-for-tat exchanges of concrete goods or services of equivalent value—say, three chickens for one knife. It does not easily grasp the abstract mathematical apparatus of a modern economy, such as money, profit, interest, and rent.[117] In intuitive economics, farmers and craftsmen produce palpable items of value. Merchants and other middlemen, who skim off a profit as they pass goods along without causing new stuff to come into being, are seen as parasites, despite the value they create by enabling transactions between producers and consumers who are unacquainted or separated by distance. Moneylenders, who loan out a sum and then demand additional money in return, are held in even greater contempt, despite the service they render by providing people with money at times in their lives when it can be put to the best use. People tend to be oblivious to the intangible contributions of merchants and moneylenders and view them as bloodsuckers. (Once again the metaphor

comes from biology.) Antipathy toward individual middlemen can easily transfer to antipathy to ethnic groups. The capital necessary to prosper in middlemen occupations consists mainly of expertise rather than land or factories, so it is easily shared among kin and friends, and it is highly portable. For these reasons it's common for particular ethnic groups to specialize in the middleman niche and to move to whatever communities currently lack them, where they tend to become prosperous minorities—and targets of envy and resentment.[118] Many victims of discrimination, expulsion, riots, and genocide have been social or ethnic groups that specialize in middlemen niches. They include various bourgeois minorities in the Soviet Union, China, and Cambodia, the Indians in East Africa and Oceania, the Ibos in Nigeria, the Armenians in Turkey, the Chinese in Indonesia, Malaysia, and Vietnam, and the Jews in Europe.[119]

Democides are often scripted into the climax of an eschatological narrative, a final spasm of violence that will usher in millennial bliss. The parallels between the utopian ideologies of the 19th and 20th centuries and the apocalyptic visions of traditional religions have often been noticed by historians of genocide. Daniel Chirot, writing with the social psychologist Clark McCauley, observes:

> Marxist eschatology actually mimicked Christian doctrine. In the beginning, there was a perfect world with no private property, no classes, no exploitation, and no alienation—the Garden of Eden. Then came sin, the discovery of private property, and the creation of exploiters. Humanity was cast from the Garden to suffer inequality and want. Humans then experimented with a series of modes of production, from the slave, to the feudal, to the capitalist mode, always seeking the solution and not finding it. Finally there came a true prophet with a message of salvation, Karl Marx, who preached the truth of Science. He promised redemption but was not heeded, except by his close disciples who carried the truth forward. Eventually, however, the proletariat, the carriers of the true faith, will be converted by the religious elect, the leaders of the party, and join to create a more perfect world. A final, terrible revolution will wipe out capitalism, alienation, exploitation, and inequality. After that, history will end because there will be perfection on earth, and the true believers will have been saved.[120]

Drawing on the work of the historians Joachim Fest and George Mosse, they also comment on Nazi eschatology:

> It was not an accident that Hitler promised a Thousand Year Reich, a millennium of perfection, similar to the thousand-year reign of goodness promised in Revelation before the return of evil, the great battle between good and evil, and the final triumph of God over Satan. The entire imagery of his Nazi Party and regime was deeply mystical, suffused with religious, often

> Christian, liturgical symbolism, and it appealed to a higher law, to a mission decreed by fate and entrusted to the prophet Hitler.[121]

Finally, there are the job requirements. Would you want the stress and responsibility of running a perfect world? Utopian leadership selects for monumental narcissism and ruthlessness.[122] Its leaders are possessed of a certainty about the rectitude of their cause and an impatience for incremental reforms or on-the-fly adjustments guided by feedback from the human consequences of their grand schemes. Mao, who had his image plastered all over China and his little red book of sayings issued to every citizen, was described by his doctor and only confidant Li Zhisui as voracious for flattery, demanding of sexual servicing by concubines, and devoid of warmth and compassion.[123] In 1958 he had a revelation that the country could double its steel production in a year if peasant families contributed to the national output by running backyard smelters. On pain of death for failing to meet the quotas, peasants melted down their woks, knives, shovels, and doorknobs into lumps of useless metal. It was also revealed to him that China could grow large quantities of grain on small plots of land, freeing the rest for grasslands and gardens, if farmers planted the seedlings deep and close together so that class solidarity would make them grow strong and thick.[124] Peasants were herded into communes of 50,000 to implement this vision, and anyone who dragged his feet or pointed out the obvious was executed as a class enemy. Impervious to signals from reality informing him that his Great Leap Forward was a great leap backward, Mao masterminded a famine that killed between 20 million and 30 million people.

The motives of leaders are critical in understanding genocide, because the psychological ingredients—the mindset of essentialism; the Hobbesian dynamic of greed, fear, and vengeance; the moralization of emotions like disgust; and the appeal of utopian ideologies—do not overcome an entire population at once and incite them to mass killing. Groups that avoid, distrust, or even despise each other can coexist without genocide indefinitely.[125] Think, for example, of African Americans in the segregated American South, Palestinians in Israel and the occupied territories, and Africans in South Africa under apartheid. Even in Nazi Germany, where anti-Semitism had been entrenched for centuries, there is no indication that anyone but Hitler and a few fanatical henchmen thought it was a good idea for the Jews to be exterminated.[126] When a genocide *is* carried out, only a fraction of the population, usually a police force, military unit, or militia, actually commits the murders.[127]

In the 1st century CE, Tacitus wrote, "A shocking crime was committed on the unscrupulous initiative of a few individuals, with the blessing of more, and amid the passive acquiescence of all." According to the political scientist Benjamin Valentino in *Final Solutions,* that division of labor applies to the genocides of the 20th century as well.[128] A leader or small clique decides that

the time for genocide is right. He gives the go-ahead to a relatively small force of armed men, made up a mixture of true believers, conformists, and thugs (often recruited, as in medieval armies, from the ranks of criminals, drifters, and other unemployable young men). They count on the rest of the population not to get in their way, and thanks to features of social psychology that we will explore in chapter 8, they generally don't. The psychological contributors to genocide, such as essentialism, moralization, and utopian ideologies, are engaged to different degrees in each of these constituencies. They consume the minds of the leaders and the true believers but have to tip the others only enough to allow the leaders to make their plans a reality. The indispensability of leaders to 20th-century genocide is made plain by the fact that when the leaders died or were removed by force, the killings stopped.[129]

If this analysis is on the right track, genocides can emerge from toxic reactions among human nature (including essentialism, moralization, and intuitive economics), Hobbesian security dilemmas, millennial ideologies, and the opportunities available to leaders. The question now is: how has this interaction changed over the course of history?

It's not an easy question to answer, because historians have never found genocide particularly interesting. Since antiquity the stacks of libraries have been filled with scholarship on war, but scholarship on genocide is nearly nonexistent, though it killed more people. As Chalk and Jonassohn point out of ancient histories, "We know that empires have disappeared and that cities were destroyed, and we suspect that some wars were genocidal in their results; but we do not know what happened to the bulk of the populations involved in these events. Their fate was simply too unimportant. When they were mentioned at all, they were usually lumped together with the herds of oxen, sheep, and other livestock."[130]

As soon as one realizes that the sackings, razings, and massacres of past centuries are what we would call genocide today, it becomes utterly clear that genocide is not a phenomenon of the 20th century. Those familiar with classical history know that the Athenians destroyed Melos during the 5th-century-BCE Peloponnesian War; according to Thucydides, "the Athenians thereupon put to death all who were of military age and made slaves of the women and children." Another familiar example is the Romans' destruction of Carthage and its population during the Third Punic War in the 3rd century BCE, a war so total that the Romans, it was said, sowed salt into the ground to make it forever unfarmable. Other historical genocides include the real-life bloodbaths that inspired the ones narrated in the *Iliad*, the *Odyssey*, and the Hebrew Bible; the massacres and sackings during the Crusades; the suppression of the Albigensian heresy; the Mongol invasions; the European witch hunts; and the carnage of the European Wars of Religion.

The authors of recent histories of mass killing are adamant that the idea of

an unprecedented "century of genocide" (the 20th) is a myth. On their first page Chalk and Jonassohn write, "Genocide has been practiced in all regions of the world and during all periods in history," and add that their eleven case studies of pre-20th-century genocides "are not intended to be either exhaustive or representative."[131] Kiernan agrees: "A major conclusion of this book is that genocide indeed occurred commonly before the twentieth century." One can see what he means with a glance at the first page of his table of contents:

Part One: Early Imperial Expansion

1. Classical Genocide and Early Modern Memory
2. The Spanish Conquest of the New World 1492–1600
3. Guns and Genocide in East Asia 1400–1600
4. Genocidal Massacres in Early Modern Southeast Asia

Part Two. Settler Colonialism

5. The English Conquest of Ireland, 1565–1603
6. Colonial North America, 1600–1776
7. Genocidal Violence in Nineteenth-Century Australia
8. Genocide in the United States
9. Settler Genocides in Africa, 1830–1910[132]

Rummel has fitted a number to his own conclusion that "the mass murder by emperors, kings, sultans, khans, presidents, governors, generals, and other rulers of their own citizens or of those under their protection or control is very much part of our history." He counts 133,147,000 victims of sixteen democides before the 20th century (including ones in India, Iran, the Ottoman Empire, Japan, and Russia) and surmises that there may have been 625,716,000 democide victims in all.[133]

These authors did not compile their lists by indiscriminately piling up every historical episode in which a lot of people died. They are careful to note, for example, that the Native American population was decimated by disease rather than by a program of extermination, while particular incidents *were* blatantly genocidal. In an early example, Puritans in New England exterminated the Pequot nation in 1638, after which the minister Increase Mather asked his congregation to thank God "that on this day we have sent six hundred heathen souls to Hell."[134] This celebration of genocide did not hurt his career. He later became president of Harvard University, and the residential house with which I am currently affiliated is named after him (motto: Increase Mather's Spirit!).

Mather was neither the first nor the last to thank God for genocide. As we saw in chapter 1, Yahweh ordered the Hebrew tribes to carry out dozens of them, and in the 9th century BCE the Moabites returned the favor by massacring the inhabitants of several Hebrew cities in the name of *their* god,

Ashtar-Chemosh.[135] In a passage from the Bhagavad-Gita (written around 400 CE), the Hindu god Krishna upbraids the mortal Arjuna for being reluctant to slay an enemy faction that included his grandfather and tutor: "There is no better engagement for you than fighting on religious principles; and so there is no need for hesitation. . . . The soul can never be cut to pieces by any weapon, nor burned by fire. . . . [Therefore] you are mourning for what is not worthy of grief."[136] Inspired by the conquests of Joshua, Oliver Cromwell massacred every man, woman, and child in an Irish town during the reconquest of Ireland, and explained his actions to Parliament: "It has pleased God to bless our endeavour at Drogheda. The enemy were about 3,000 strong in the town. I believe we put to the sword the whole number."[137] The English Parliament passed a unanimous motion "that the House does approve of the execution done at Drogheda as an act of both justice to them and mercy to others who may be warned of it."[138]

The shocking truth is that until recently most people didn't think there was anything particularly wrong with genocide, as long as it didn't happen to them. One exception was the 16th-century Spanish priest Antonio de Montesinos, who protested the appalling treatment of Native Americans by the Spanish in the Caribbean—and who was, in his own words, "a voice of one crying in the wilderness."[139] There were, to be sure, military codes of honor, some from the Middle Ages, that ineffectually attempted to outlaw the killing of civilians in war, and occasional protests by thinkers of early modernity such as Erasmus and Hugo Grotius. But only in the late 19th century, when citizens began to protest the brutalization of peoples in the American West and the British Empire, did objections to genocide become common.[140] Even then we find Theodore Roosevelt, the future "progressive" president and Nobel Peace laureate, writing in 1886, "I don't go so far as to think that the only good Indians are the dead Indians, but I believe nine out of ten are, and I shouldn't like to inquire too closely in the case of the tenth."[141] The critic John Carey documents that well into the 20th century the British literary intelligentsia viciously dehumanized the teeming masses, whom they considered to be so vulgar and soulless as not to have lives worth living. Genocidal fantasies were not uncommon. In 1908, for example, D. H. Lawrence wrote:

> If I had my way, I would build a lethal chamber as big as the Crystal Palace, with a military band playing softly, and a Cinematograph working brightly; then I'd go out in the back streets and main streets and bring them in, all the sick, the halt, and the maimed; I would lead them gently, and they would smile me a weary thanks; and the band would softly bubble out the "Hallelujah Chorus."[142]

During World War II, when Americans were asked in opinion polls what should be done with the Japanese after an American victory, 10 to 15 percent volunteered the solution of extermination.[143]

The turning point came after the war. The English language did not even have a word for genocide until 1944, when the Polish lawyer Raphael Lemkin coined it in a report on Nazi rule in Europe that would be used a year later to brief the prosecutors at the Nuremberg Trials.[144] In the aftermath of the Nazi destruction of European Jewry, the world was stunned by the enormity of the death toll and by horrific images from the liberated camps: assembly-line gas chambers and crematoria, mountains of shoes and eyeglasses, bodies stacked up like cordwood. In 1948 Lemkin got the UN to approve a Convention on the Prevention and Punishment of the Crime of Genocide, and for the first time in history genocide, regardless of who the victims were, was a crime. James Payne notes a perverse sign of progress. Today's Holocaust deniers at least feel compelled to deny that the Holocaust took place. In earlier centuries the perpetrators of genocide and their sympathizers boasted about it.[145]

No small part in the new awareness of the horrors of genocide was a willingness of Holocaust survivors to tell their stories. Chalk and Jonassohn note that these memoirs are historically unusual.[146] Survivors of earlier genocides had treated them as humiliating defeats and felt that talking about them would only rub in history's harsh verdict. With the new humanitarian sensibilities, genocides became crimes against humanity, and survivors were witnesses for the prosecution. Anne Frank's diary, which recorded her life in hiding in Nazi-occupied Amsterdam before she was deported to her death in Bergen-Belsen, was published by her father shortly after the war. Memoirs of deportations and death camps by Elie Wiesel and Primo Levi were published in the 1960s, and today Frank's *Diary* and Wiesel's *Night* are among the world's most widely read books. In the years that followed, Aleksandr Solzhenitsyn, Anchee Min, and Dith Pran shared their harrowing memories of the communist nightmares in the Soviet Union, China, and Cambodia. Soon other survivors—Armenians, Ukrainians, Gypsies—began to add their stories, joined more recently by Bosnians, Tutsis, and Darfuris. These memoirs are a part of a reorientation of our conception of history. "Throughout most of history," Chalk and Jonassohn note, "only the rulers made news; in the twentieth century, for the first time, it is the ruled who make the news."[147]

Anyone who grew up with Holocaust survivors knows what they had to overcome to tell their stories. For decades after the war they treated their experiences as shameful secrets. On top of the ignominy of victimhood, the desperate straits to which they were reduced could remove the last traces of their humanity in ways they could be forgiven for wanting to forget. At a family occasion in the 1990s, I met a relative by marriage who had spent time in Auschwitz. Within seconds of meeting me he clenched my wrist and recounted this story. A group of men had been eating in silence when one of them slumped over dead. The others fell on his body, still covered in diarrhea, and pried a piece of bread from his fingers. As they divided it, a fierce argument broke out when some of the men felt their share was an imperceptible crumb

smaller than the others'. To tell a story of such degradation requires extraordinary courage, backed by a confidence that the hearer will understand it as an accounting of the circumstances and not of the men's characters.

Though the abundance of genocides over the millennia belies the century-of-genocide claim, one still wonders about the trajectory of genocide before, during, and since the 20th century. Rummel was the first political scientist to try to put some numbers together. In his duology *Death by Government* (1994) and *Statistics of Democide* (1997) he analyzed 141 regimes that committed democides in the 20th century through 1987, and a control group of 73 that did not. He collected as many independent estimates of the death tolls as he could find (including ones from pro- and antigovernment sources, whose biases, he assumed, would cancel each other out) and, with the help of sanity checks, chose a defensible value near the middle of the range.[148] His definition of "democide" corresponds roughly to the UCDP's "one-sided violence" and to our everyday concept of "murder" but with a government rather than an individual as the perpetrator: the victims must be unarmed, and the killing deliberate. Democides thus include ethnocides, politicides, purges, terrors, killings of civilians by death squads (including ones committed by private militias to which the government turns a blind eye), deliberate famines from blockades and confiscation of food, deaths in internment camps, and the targeted bombing of civilians such as those in Dresden, Hamburg, Hiroshima, and Nagasaki.[149] Rummel excluded the Great Leap Forward from his 1994 analyses, on the understanding that it was caused by stupidity and callousness rather than malice.[150]

Partly because the phrase "death by government" figured in Rummel's definition of democide and in the title of his book, his conclusion that almost 170 million people were killed by their governments during the 20th century has become a popular meme among anarchists and radical libertarians. But for several reasons, "governments are the main cause of preventable deaths" is not the correct lesson to draw from Rummel's data. For one thing, his definition of "government" is loose, embracing militias, paramilitaries, and warlords, all of which could reasonably be seen as a sign of too little government rather than too much. White examined Rummel's raw data and calculated that the median democide toll by the twenty-four pseudo-governments on his list was around 100,000, whereas the median death toll caused by recognized governments of sovereign states was 33,000. So one could, with more justification, conclude that governments, on average, cause three times *fewer* deaths than alternatives to government.[151] Also, most governments in recent periods do not commit democides at all, and they prevent a far greater number of deaths than the democidal ones cause, by promoting vaccination, sanitation, traffic safety, and policing.[152]

But the main problem with the anarchist interpretation is that it isn't

governments in general that kill large numbers of people but a handful of governments of a specific type. To be exact, three-quarters of all the deaths from all 141 democidal regimes were committed by just four governments, which Rummel calls the dekamegamurderers: the Soviet Union with 62 million, the People's Republic of China with 35 million, Nazi Germany with 21 million, and 1928–49 nationalist China with 10 million.[153] Another 11 percent of the total were killed by eleven megamurderers, including Imperial Japan with 6 million, Cambodia with 2 million, and Ottoman Turkey with 1.9 million. The remaining 13 percent of the deaths were spread out over 126 regimes. Genocides don't exactly fall into a power-law distribution, if for no other reason than that the smaller massacres that would go into the tall spine tend not to be counted as "genocides." But the distribution is enormously lopsided, conforming to an 80:4 rule—80 percent of the deaths were caused by 4 percent of the regimes.

Also, deaths from democide were overwhelmingly caused by *totalitarian* governments: the communist, Nazi, fascist, militarist, or Islamist regimes that sought to control every aspect of the societies they ruled. Totalitarian regimes were responsible for 138 million deaths, 82 percent of the total, of which 110 million (65 percent of the total) were caused by the communist regimes.[154] Authoritarian regimes, which are autocracies that tolerate independent social institutions such as businesses and churches, came in second with 28 million deaths. Democracies, which Rummel defines as governments that are open, competitive, elected, and limited in their power, killed 2 million (mainly in their colonial empires, together with food blockades and civilian bombings during the world wars). The skew of the distribution does not just reflect the sheer number of potential victims that totalitarian behemoths like the Soviet Union and China had at their disposal. When Rummel looked at percentages rather than numbers, he found that totalitarian governments of the 20th century racked up a death toll adding up to 4 percent of their populations. Authoritarian governments killed 1 percent. Democracies killed four tenths of 1 percent.[155]

Rummel was one of the first advocates of the Democratic Peace theory, which he argues applied to democides even more than to wars. "At the extremes of Power," Rummel writes, "totalitarian communist governments slaughter their people by the tens of *millions;* in contrast, many democracies can barely bring themselves to execute even serial murderers."[156] Democracies commit fewer democides because their form of governance, by definition, is committed to inclusive and nonviolent means of resolving conflicts. More important, the power of a democratic government is restricted by a tangle of institutional restraints, so a leader can't just mobilize armies and militias on a whim to fan out over the country and start killing massive numbers of citizens. By performing a set of regressions on his dataset of 20th-century regimes, Rummel showed that the occurrence of democide correlates with a lack of

democracy, even holding constant the countries' ethnic diversity, wealth, level of development, population density, and culture (African, Asian, Latin American, Muslim, Anglo, and so on).[157] The lessons, he writes, are clear: "The problem is Power. The solution is democracy. The course of action is to foster freedom."[158]

What about the historical trajectory? Rummel tried to break down his 20th-century democides by year, and I've reproduced his data, scaled by world population, in the gray upper line in figure 6–7. Like deaths in wars, deaths in democides were concentrated in a savage burst, the midcentury Hemoclysm.[159] This blood-flood embraced the Nazi Holocaust, Stalin's purges, the Japanese rape of China and Korea, and the wartime firebombings of cities in Europe and Japan. The left slope also includes the Armenian genocide during World War I and the Soviet collectivization campaign, which killed millions of Ukrainians and kulaks, the so-called rich peasants. The right slope embraces the killing of millions of ethnic Germans in newly communized Poland, Czechoslovakia, and Romania, and the victims of forced collectivization in China. It's uncomfortable to say that there's anything good in the trends shown in the graph, but in an important sense there is. The world has seen nothing close

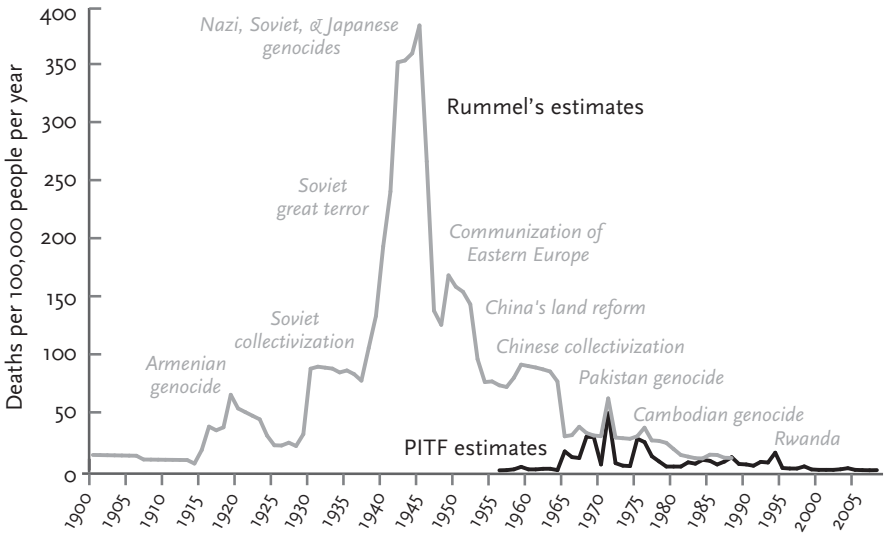

FIGURE 6–7. Rate of deaths in genocides, 1900–2008

Sources: Data for the gray line, 1900–1987, from Rummel, 1997. Data for the black line, 1955–2008, from the Political Instability Task Force (PITF) State Failure Problem Set, 1955–2008, Marshall, Gurr, & Harff, 2009; Center for Systemic Peace, 2010. The death tolls for the latter were geometric means of the ranges in table 8.1 in Harff, 2005, distributed across years according to the proportions in the Excel database. World population figures from U.S. Census Bureau, 2010c. Population figures for the years 1900–1949 were taken from McEvedy & Jones, 1978, and multiplied by 1.01 to make them commensurable with the rest.

to the bloodletting of the 1940s since then; in the four decades that followed, the rate (and number) of deaths from democide went precipitously, if lurchingly, downward. (The smaller bulges represent killings by Pakistani forces during the Bangladesh war of independence in 1971 and by the Khmer Rouge in Cambodia in the late 1970s.) Rummel attributes the falloff in democide since World War II to the decline of totalitarianism and the rise of democracy.[160]

Rummel's dataset ends in 1987, just when things start to get interesting again. Soon communism fell and democracies proliferated—and the world was hit with the unpleasant surprise of genocides in Bosnia and Rwanda. In the impression of many observers, these "new wars" show that we are still living, despite all we should have learned, in an age of genocide.

The historical thread of genocide statistics has recently been extended by the political scientist Barbara Harff. During the Rwanda genocide, some 700,000 Tutsis were killed in just four months by about 10,000 men with machetes, many of them drunkards, addicts, ragpickers, and gang members hastily recruited by the Hutu leadership.[161] Many observers believe that this small pack of *génocidaires* could easily have been stopped by a military intervention by the world's great powers.[162] Bill Clinton in particular was haunted by his own failure to act, and in 1998 he commissioned Harff to analyze the risk factors and warning signs of genocide.[163] She assembled a dataset of 41 genocides and politicides between 1955 (shortly after Stalin died and the process of decolonization began) and 2004. Her criteria were more restrictive than Rummel's and closer to Lemkin's original definition of genocide: episodes of violence in which a state or armed authority intends to destroy, in whole or in part, an identifiable group. Only five of the episodes turned out to be "genocide" in the sense in which people ordinarily understand the term, namely an ethnocide, in which a group is singled out for destruction because of its ethnicity. Most were politicides, or politicides combined with ethnocides, in which members of an ethnic group were thought to be aligned with a targeted political faction.

In figure 6–7 I plotted Harff's PITF data on the same axes with Rummel's. Her figures generally come in well below his, especially in the late 1950s, for which she included far fewer victims of the executions during the Great Leap Forward. But thereafter the curves show similar trends, which are downward from their peak in 1971. Because the genocides from the second half of the 20th century were so much less destructive than those of the Hemoclysm, I've zoomed in on her curve in figure 6–8. The graph also shows the death rates in a third collection, the UCDP One-Sided Violence Dataset, which includes any instance of a government or other armed authority killing at least twenty-five civilians in a year; the perpetrators need not intend to destroy the group per se.[164]

The graph shows that the two decades since the Cold War have *not* seen a recrudescence of genocide. On the contrary, the peak in mass killing (putting

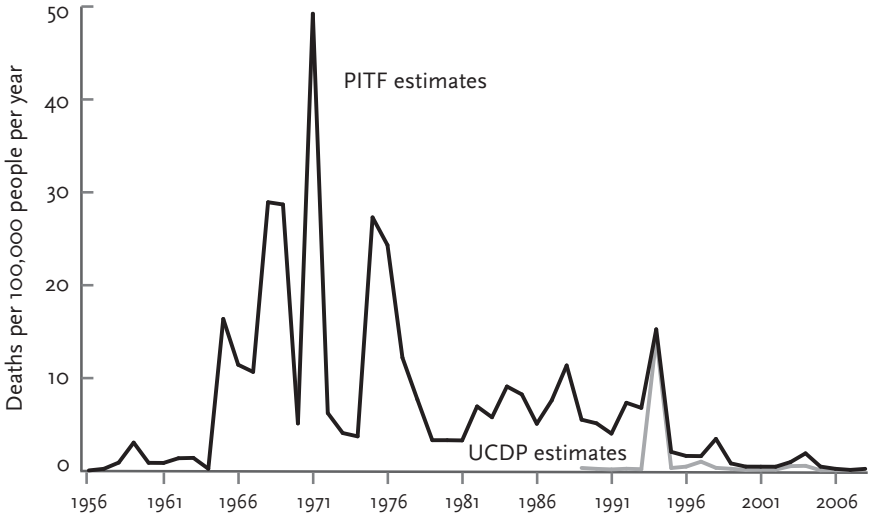

FIGURE 6–8. Rate of deaths in genocides, 1956–2008

Sources: PITF estimates, 1955–2008: same as for figure 6–7. UCDP, 1989–2007: "High Fatality" estimates from http://www.pcr.uu.se/research/ucdp/datasets/ (Kreutz, 2008; Kristine & Hultman, 2007) divided by world population from U.S. Census Bureau, 2010c.

aside China in the 1950s) is located in the mid-1960s to late 1970s. Those fifteen years saw a politicide against communists in Indonesia (1965–66, "the year of living dangerously," with 700,000 deaths), the Chinese Cultural Revolution (1966–75, around 600,000), Tutsis against Hutus in Burundi (1965–73, 140,000), Pakistan's massacre in Bangladesh (1971, around 1.7 million), north-against-south violence in Sudan (1956–72, around 500,000), Idi Amin's regime in Uganda (1972–79, around 150,000), the Cambodian madness (1975–79, 2.5 million), and a decade of massacres in Vietnam culminating in the expulsion of the boat people (1965–75, around half a million).[165] The two decades since the end of the Cold War have been marked by genocides in Bosnia from 1992 to 1995 (225,000 deaths), Rwanda (700,000 deaths), and Darfur (373,000 deaths from 2003 to 2008). These are atrocious numbers, but as the graph shows, they are spikes in a trend that is unmistakably downward. (Recent studies have shown that even some of these figures may be overestimates, but I will stick with the datasets.)[166] The first decade of the new millennium is the most genocide-free of the past fifty years. The UCDP numbers are restricted to a narrower time window and, like all their estimates, are more conservative, but they show a similar pattern: the Rwanda genocide in 1994 leaps out from all the other episodes of one-sided killing, and the world has seen nothing like it since.

Harff was tasked not just with compiling genocides but with identifying their risk factors. She noted that virtually all of them took place in the

aftermath of a state failure such as a civil war, revolution, or coup. So she assembled a control group with 93 cases of state failure that did *not* result in genocide, matched as closely as possible to the ones that did, and ran a logistic regression analysis to find out which aspects of the situation the year before made the difference.

Some factors that one might think were important turned out not to be. Measures of ethnic diversity didn't matter, refuting the conventional wisdom that genocides represent the eruption of ancient hatreds that inevitably explode when ethnic groups live side by side. Nor did measures of economic development matter. Poor countries are more likely to have political crises, which are necessary conditions for genocides to take place, but among the countries that did have crises, the poorer ones were no more likely to sink into actual genocide.

Harff did discover six risk factors that distinguished the genocidal from the nongenocidal crises in three-quarters of the cases.[167] One was a country's previous history of genocide, presumably because whatever risk factors were in place the first time did not vanish overnight. The second predictor was the country's immediate history of political instability—to be exact, the number of regime crises and ethnic or revolutionary wars it had suffered in the preceding fifteen years. Governments that feel threatened are tempted to eliminate or take revenge on groups they perceive to be subversive or contaminating, and are more likely to exploit the ongoing chaos to accomplish those goals before opposition can mobilize.[168] A third was a ruling elite that came from an ethnic minority, presumably because that multiplies the leaders' worries about the precariousness of their rule.

The other three predictors are familiar from the theory of the Liberal Peace. Harff vindicated Rummel's insistence that democracy is a key factor in preventing genocides. From 1955 to 2008 autocracies were three and a half times more likely to commit genocides than were full or partial democracies, holding everything else constant. This represents a hat trick for democracy: democracies are less likely to wage interstate wars, to have large-scale civil wars, and to commit genocides. Partial democracies (anocracies) are more likely than autocracies to have violent political crises, as we saw in Fearon and Laitin's analysis of civil wars, but when a crisis does occur, the partial democracies are less likely than autocracies to become genocidal.

Another trifecta was scored by openness to trade. Countries that depend more on international trade, Harff found, are less likely to commit genocides, just as they are less likely to fight wars with other countries and to be riven by civil wars. The inoculating effects of trade against genocide cannot depend, as they do in the case of interstate war, on the positive-sum benefits of trade itself, since the trade we are talking about (imports and exports) does not consist in exchanges with the vulnerable ethnic or political groups. Why, then, should trade matter? One possibility is that Country A might take a communal

or moral interest in a group living within the borders of Country B. If B wants to trade with A, it must resist the temptation to exterminate that group. Another is that a desire to engage in trade requires certain peaceable attitudes, including a willingness to abide by international norms and the rule of law, and a mission to enhance the material welfare of its citizens rather than implementing a vision of purity, glory, or perfect justice.

The last predictor of genocide is an exclusionary ideology. Ruling elites that are under the spell of a vision that identifies a certain group as the obstacle to an ideal society, putting it "outside the sanctioned universe of obligation," are far more likely to commit genocide than elites with a more pragmatic or eclectic governing philosophy. Exclusionary ideologies, in Harff's classification, include Marxism, Islamism (in particular, a strict application of Sharia law), militaristic anticommunism, and forms of nationalism that demonize ethnic or religious rivals.

Harff sums up the pathways by which these risk factors erupt into genocide:

> Almost all genocides and politicides of the last half-century were either ideological, exemplified by the Cambodian case, or retributive, as in Iraq [Saddam Hussein's 1988–91 campaign against Iraqi Kurds]. The scenario that leads to *ideological genocide* begins when a new elite comes to power, usually through civil war or revolution, with a transforming vision of a new society purified of unwanted or threatening elements. *Retributive genopoliticides* occur during a protracted internal war . . . when one party, usually the government, seeks to destroy its opponent's support base [or] after a rebel challenge has been militarily defeated.[169]

The decline of genocide over the last third of a century, then, may be traced to the upswing of some of the same factors that drove down interstate and civil wars: stable government, democracy, openness to trade, and humanistic ruling philosophies that elevate the interests of individuals over struggles among groups.

For all the rigor that a logistic regression offers, it is essentially a meat grinder that takes a set of variables as input and extrudes a probability as output. What it hides is the vastly skewed distribution of the human costs of different genocides—the way that a small number of men, under the sway of a smaller number of ideologies, took actions at particular moments in history that caused outsize numbers of deaths. Shifts in the levels of the risk factors certainly pushed around the likelihood of the genocides that racked up thousands, tens of thousands, and even hundreds of thousands of deaths. But the truly monstrous genocides, the ones with tens of millions of victims, depended not so much on gradually shifting political forces as on a few contingent ideas and events.

The appearance of Marxist ideology in particular was a historical tsunami that is breathtaking in its total human impact. It led to the dekamegamurders by Marxist regimes in the Soviet Union and China, and more circuitously, it contributed to the one committed by the Nazi regime in Germany. Hitler read Marx in 1913, and although he detested Marxist socialism, his National Socialism substituted races for classes in its ideology of a dialectical struggle toward utopia, which is why some historians consider the two ideologies "fraternal twins."[170] Marxism also set off reactions that led to politicides by militantly anticommunist regimes in Indonesia and Latin America, and to the destructive civil wars of the 1960s, 1970s, and 1980s stoked by the Cold War superpowers. The point is not that Marxism should be morally blamed for these unintended consequences, just that any historical narrative must acknowledge the sweeping repercussions of this single idea. Valentino notes that no small part of the decline of genocide is the decline of *communism*, and thus "the single most important cause of mass killing in the twentieth century appears to be fading into history."[171] Nor is it likely that it will come back into fashion. During its heyday, violence by Marxist regimes was justified with the saying "You can't make an omelet without breaking eggs."[172] The historian Richard Pipes summarized history's verdict: "Aside from the fact that human beings are not eggs, the trouble is that no omelet has emerged from the slaughter."[173] Valentino concludes that "it may be premature to celebrate 'the end of history,' but if no similarly radical ideas gain the widespread applicability and acceptance of communism, humanity may be able to look forward to considerably less mass killing in the coming century than it experienced in the last."[174]

On top of that singularly destructive ideology were the catastrophic decisions of a few men who took the stage at particular moments in the 20th century. I have already mentioned that many historians have joined the chorus "No Hitler, no Holocaust."[175] But Hitler was not the only tyrant whose obsessions killed tens of millions. The historian Robert Conquest, an authority on Stalin's politicides, concluded that "the nature of the whole Purge depends in the last analysis on the personal and political drives of Stalin."[176] As for China, it is inconceivable that the record-setting famine of the Great Leap Forward would have occurred but for Mao's harebrained schemes, and the historian Harry Harding noted of the country's subsequent politicide that "the principal responsibility for the Cultural Revolution—a movement that affected tens of millions of Chinese—rests with one man. Without a Mao, there could not have been a Cultural Revolution."[177] With such a small number of data points causing such a large share of the devastation, we will never really know how to explain the most calamitous events of the 20th century. The ideologies prepared the ground and attracted the men, the absence of democracy gave them the opportunity, but tens of millions of deaths ultimately depended on the decisions of just three individuals.

THE TRAJECTORY OF TERRORISM

Terrorism is a peculiar category of violence, because it has a cockeyed ratio of fear to harm. Compared to the number of deaths from homicide, war, and genocide, the worldwide toll from terrorism is in the noise: fewer than 400 deaths a year since 1968 from international terrorism (where perpetrators from one country cause damage in another), and about 2,500 a year since 1998 from domestic terrorism.[178] The numbers we have been dealing with in this chapter have been at least two orders of magnitude higher.

But after the September 11, 2001, attacks, terrorism became an obsession. Pundits and politicians turned up the rhetoric to eleven, and the word *existential* (generally modifying *threat* or *crisis*) had not seen as much use since the heyday of Sartre and Camus. Experts proclaimed that terrorism made the United States "vulnerable" and "fragile," and that it threatened to do away with the "ascendancy of the modern state," "our way of life," or "civilization itself."[179] In a 2005 essay in *The Atlantic,* for example, a former White House counterterrorism official confidently prophesied that by the tenth anniversary of the 9/11 attacks the American economy would be shut down by chronic bombings of casinos, subways, and shopping malls, the regular downing of commercial airliners by shoulder-launched missiles, and acts of cataclysmic sabotage at chemical plants.[180] The massive bureaucracy of the Department of Homeland Security was created overnight to reassure the nation with such security theater as color-coded terrorist alerts, advisories to stock up on plastic sheeting and duct tape, obsessive checking of identification cards (despite fakes being so plentiful that George W. Bush's own daughter was arrested for using one to order a margarita), the confiscation of nail clippers at airports, the girding of rural post offices with concrete barriers, and the designation of eighty thousand locations as "potential terrorist targets," including Weeki Wachee Springs, a Florida tourist trap in which comely women dressed as mermaids swim around in large glass tanks.

All this was in response to a threat that has killed a trifling number of Americans. The nearly 3,000 deaths from the 9/11 attacks were literally off the chart—way down in the tail of the power-law distribution into which terrorist attacks fall.[181] According to the Global Terrorism Database of the National Consortium for the Study of Terrorism and Responses to Terrorism (the major publicly available dataset on terrorist attacks), between 1970 and 2007 only one other terrorist attack in the entire world has killed as many as 500 people.[182] In the United States, Timothy McVeigh's bombing of a federal office building in Oklahoma City in 1995 killed 165, a shooting spree by two teenagers at Columbine High School in 1999 killed 17, and no other attack has killed as many as a dozen. Other than 9/11, the number of people killed by terrorists on American soil during these thirty-eight years was 340, and the number killed after 9/11—the date that inaugurated the so-called Age of Terror—was 11.

While some additional plots were foiled by the Department of Homeland Security, many of their claims have turned out to be the proverbial elephant repellent, with every elephant-free day serving as proof of its effectiveness.[183]

Compare the American death toll, with or without 9/11, to other preventable causes of death. Every year more than 40,000 Americans are killed in traffic accidents, 20,000 in falls, 18,000 in homicides, 3,000 by drowning (including 300 in bathtubs), 3,000 in fires, 24,000 from accidental poisoning, 2,500 from complications of surgery, 300 from suffocation in bed, 300 from inhalation of gastric contents, and 17,000 by "other and unspecified nontransport accidents and their sequelae."[184] In fact, in every year but 1995 and 2001, more Americans were killed by lightning, deer, peanut allergies, bee stings, and "ignition or melting of nightwear" than by terrorist attacks.[185] The number of deaths from terrorist attacks is so small that even minor measures to avoid them can *increase* the risk of dying. The cognitive psychologist Gerd Gigerenzer has estimated that in the year after the 9/11 attacks, 1,500 Americans died in car accidents because they chose to drive rather than fly to their destinations out of fear of dying in a hijacked or sabotaged plane, unaware that the risk of death in a plane flight from Boston to Los Angeles is the same as the risk of death in a car trip of twelve miles. In other words the number of people who died by avoiding air travel was six times the number of people who died in the airplanes on September 11.[186] And of course the 9/11 attacks sent the United States into two wars that have taken far more American and British lives than the hijackers did, to say nothing of the lives of Afghans and Iraqis.

The discrepancy between the panic generated by terrorism and the deaths generated by terrorism is no accident. Panic is the whole point of terrorism, as the word itself makes clear. Though definitions vary (as in the cliché "One man's terrorist is another man's freedom fighter"), terrorism is generally understood as premeditated violence perpetrated by a nonstate actor against noncombatants (civilians or off-duty soldiers) in pursuit of a political, religious, or social goal, designed to coerce a government or to intimidate or convey a message to a larger audience. The terrorists may want to extort a government into capitulating to a demand, to sap people's confidence in their government's ability to protect them, or to provoke massive repression that will turn people against their government or bring about violent chaos in which the terrorist faction hopes to prevail. Terrorists are altruistic in the sense of being motivated by a cause rather than by personal profit. They act by surprise and in secrecy; hence the ubiquitous appellation "cowardly." And they are communicators, seeking publicity and attention, which they manufacture through fear.

Terrorism is a form of asymmetrical warfare—a tactic of the weak against the strong—which leverages the psychology of fear to create emotional damage that is disproportionate to its damage in lives or property. Cognitive psychologists such as Tversky, Kahneman, Gigerenzer, and Slovic have shown that the perceived danger of a risk depends on two mental hobgoblins.[187] The

first is fathomability: it's better to deal with the devil you know than the devil you don't. People are nervous about risks that are novel, undetectable, delayed in their effects, and poorly understood by the science of the day. The second contributor is dread. People worry about worst-case scenarios, the ones that are uncontrollable, catastrophic, involuntary, and inequitable (the people exposed to the risk are not the ones who benefit from it). The psychologists suggest that the illusions are a legacy of ancient brain circuitry that evolved to protect us against natural risks such as predators, poisons, enemies, and storms. They may have been the best guide to allocating vigilance in the prenumerate societies that predominated in human life until the compilation of statistical databases within the past century. Also, in an era of scientific ignorance these apparent quirks in the psychology of danger may have brought a secondary benefit: people exaggerate threats from enemies to extort compensation from them, to recruit allies against them, or to justify wiping them out preemptively (the superstitious killing discussed in chapter 4).[188]

Fallacies in risk perception are known to distort public policy. Money and laws have been directed at keeping additives out of food and chemical residues out of water supplies which pose infinitesimal risks to health, while measures that demonstrably save lives, such as enforcing lower highway speeds, are resisted.[189] Sometimes a highly publicized accident becomes a prophetic allegory, an ominous portent of an apocalyptic danger. The 1979 accident at the Three Mile Island nuclear power plant killed no one, and probably had no effect on cancer rates, but it halted the development of nuclear power in the United States and thus will contribute to global warming from the burning of fossil fuels for the foreseeable future.

The 9/11 attacks also took on a portentous role in the nation's consciousness. Large-scale terrorist plots were novel, undetectable, catastrophic (compared to what had come before), and inequitable, and thus maximized both unfathomability and dread. The terrorists' ability to gain a large psychological payoff for a small investment in damage was lost on the Department of Homeland Security, which outdid itself in stoking fear and dread, beginning with a mission statement that warned, "Today's terrorists can strike at any place, at any time, and with virtually any weapon." The payoff was not lost on Osama bin Laden, who gloated that "America is full of fear from its north to its south, from its west to its east," and that the $500,000 he spent on the 9/11 attacks cost the country more than half a trillion dollars in economic losses in the immediate aftermath.[190]

Responsible leaders occasionally grasp the arithmetic of terrorism. In an unguarded moment during the 2004 presidential campaign, John Kerry told a *New York Times* interviewer, "We have to get back to the place we were, where terrorists are not the focus of our lives, but they're a nuisance. As a former law-enforcement person, I know we're never going to end prostitution. We're never going to end illegal gambling. But we're going to reduce it, organized

crime, to a level where it isn't on the rise. It isn't threatening people's lives every day, and fundamentally, it's something that you continue to fight, but it's not threatening the fabric of your life."[191] Confirming the definition of a *gaffe* in Washington as "something a politician says that is true," George Bush and Dick Cheney pounced on the remark, calling Kerry "unfit to lead," and he quickly backpedaled.

The ups and downs of terrorism, then, are a critical part of the history of violence, not because of its toll in deaths but because of its impact on a society through the psychology of fear. In the future, of course, terrorism really could have a catastrophic death toll if the hypothetical possibility of an attack with nuclear weapons ever becomes a reality. I will discuss nuclear terrorism in the next section but for now will stick to forms of violence that have actually taken place.

Terrorism is not new. After the Roman conquest of Judea two millennia ago, a group of resistance fighters furtively stabbed Roman officials and the Jews who collaborated with them, hoping to force the Romans out. In the 11th century a sect of Shia Muslims perfected an early form of suicide terrorism by getting close to leaders who they thought had strayed from the faith and stabbing them in public, knowing they would immediately be slain by the leader's bodyguards. From the 17th to the 19th century, a cult in India strangled tens of thousands of travelers as a sacrifice to the goddess Kali. These groups did not accomplish any political change, but they left a legacy in their names: the Zealots, the Assassins, and the Thugs.[192] And if you associate the word *anarchist* with a black-clad bomb-thrower, you are recalling a movement around the turn of the 20th century that practiced "propaganda of the deed" by bombing cafés, parliaments, consulates, and banks and by assassinating dozens of political leaders, including Czar Alexander II of Russia, President Sadi Carnot of France, King Umberto I of Italy, and President William McKinley of the United States. The durability of these eponyms and images is a sign of the power of terrorism to lodge in cultural consciousness.

Anyone who thinks that terrorism is a phenomenon of the new millennium has a short memory. The romantic political violence of the 1960s and 1970s included hundreds of bombings, hijackings, and shootings by various armies, leagues, coalitions, brigades, factions, and fronts.[193] The United States had the Black Liberation Army, the Jewish Defense League, the Weather Underground (who took their name from Bob Dylan's lyric "You don't need a weatherman to know which way the wind blows"), the FALN (a Puerto Rican independence group), and of course the Symbionese Liberation Army. The SLA contributed one of the more surreal episodes of the 1970s when they kidnapped newspaper heiress Patty Hearst in 1974 and brainwashed her into joining the group, whereupon she adopted "Tanya" as her nom de guerre, helped them rob a bank, and posed for a photograph in a battle stance with beret and machine

gun in front of their seven-headed cobra flag, leaving us one of the iconic images of the decade (together with Richard Nixon's victory salute from the helicopter that would whisk him from the White House for the last time, and the blow-dried Bee Gees in white polyester disco suits).

Europe, during this era, had the Provisional Irish Republican Army and the Ulster Freedom Fighters in the U.K., the Red Brigades in Italy, the Baader-Meinhof Gang in Germany, and the ETA (a Basque separatist group) in Spain, while Japan had the Japanese Red Army and Canada had the Front de Libération du Québec. Terrorism was so much a backdrop to European life that it served as a running joke in Luis Buñuel's 1977 love story *That Obscure Object of Desire*, in which cars and stores blow up at random and the characters barely notice.

Where are they now? In most of the developed world, domestic terrorism has gone the way of the polyester disco suits. It's a little-known fact that most terrorist groups fail, and that all of them die.[194] Lest this seem hard to believe, just reflect on the world around you. Israel continues to exist, Northern Ireland is still a part of the United Kingdom, and Kashmir is a part of India. There are no sovereign states in Kurdistan, Palestine, Quebec, Puerto Rico, Chechnya, Corsica, Tamil Eelam, or Basque Country. The Philippines, Algeria, Egypt, and Uzbekistan are not Islamist theocracies; nor have Japan, the United States, Europe, and Latin America become religious, Marxist, anarchist, or new-age utopias.

The numbers confirm the impressions. In his 2006 article "Why Terrorism Does Not Work," the political scientist Max Abrahms examined the twenty-eight groups designated by the U.S. State Department as foreign terrorist organizations in 2001, most of which had been active for several decades. Putting aside purely tactical victories (such as media attention, new supporters, freed prisoners, and ransom), he found that only 3 of them (7 percent) had attained their goals: Hezbollah expelled multinational peacekeepers and Israeli forces from southern Lebanon in 1984 and 2000, and the Tamil Tigers won control over the northeastern coast of Sri Lanka in 1990. Even that victory was reversed by Sri Lanka's rout of the Tigers in 2009, leaving the terrorist success rate at 2 for 42, less than 5 percent. The success rate is well below that of other forms of political pressure such as economic sanctions, which work about a third of the time. Reviewing its recent history, Abrahms noted that terrorism occasionally succeeds when it has limited territorial goals, like evicting a foreign power from land it had gotten tired of occupying, such as the European powers who in the 1950s and 1960s withdrew from their colonies en masse, terrorism or no terrorism.[195] But it never attains maximalist goals such as imposing an ideology on a state or annihilating it outright. Abrahms also found that the few successes came from campaigns in which the groups targeted military forces rather than civilians and thus were closer to being guerrillas than pure terrorists. Campaigns that primarily targeted civilians always failed.

In her book *How Terrorism Ends*, the political scientist Audrey Cronin

examined a larger dataset: 457 terrorist campaigns that had been active since 1968. Like Abrahms, she found that terrorism virtually never works. Terrorist groups die off exponentially over time, lasting, on average, between five and nine years. Cronin points out that "states have a degree of immortality in the international system; groups do not."[196]

Nor do they get what they want. No small terrorist organization has ever taken over a state, and 94 percent fail to achieve *any* of their strategic aims.[197] Terrorist campaigns meet their end when their leaders are killed or captured, when they are rooted out by states, and when they morph into guerrilla or political movements. Many burn out through internal squabbling, a failure of the founders to replace themselves, and the defection of young firebrands to the pleasures of civilian and family life.

Terrorist groups immolate themselves in another way. As they become frustrated by their lack of progress and their audiences start to get bored, they escalate their tactics. They start to target victims who are more newsworthy because they are famous, respected, or simply numerous. That certainly gets people's attention, but not in the way the terrorists intend. Supporters are repulsed by the "senseless violence" and withdraw their money, their safe havens, and their reluctance to cooperate with the police. The Red Brigades in Italy, for example, self-destructed in 1978 when they kidnapped the beloved former prime minister Aldo Moro, kept him in captivity for two months, shot him eleven times, and left his body in the trunk of a car. Earlier the FLQ overplayed its hand during the October Crisis of 1970 when it kidnapped Québec labor minister Pierre Laporte and strangled him with his rosary, also leaving his body in a trunk. McVeigh's killing of 165 people (including 19 children) in the bombing of a federal building in Oklahoma City in 1995 took the stuffing out of the right-wing antigovernment militia movement in the United States. As Cronin puts it, "Violence has an international language, but so does decency."[198]

Attacks on civilians can doom terrorists not just by alienating potential sympathizers but by galvanizing the public into supporting an all-out crackdown. Abrahms tracked public opinion during terrorist campaigns in Israel, Russia, and the United States and found that after a major attack on civilians, attitudes toward the group lurched downward. Any willingness to compromise with the group or to recognize the legitimacy of their grievance evaporated. The public now believed that the terrorists were an existential threat and supported measures that would snuff them out for good. The thing about asymmetric warfare is that one side, by definition, is a lot more powerful than the other. And as the saying goes, the race may not be given to the swift, nor the battle to the strong, but that's the way to bet.

Though terrorist campaigns have a natural arc that bends toward failure, new campaigns can spring up as quickly as old ones fizzle. The world contains an unlimited number of grievances, and as long as the perception that terrorism

works stays ahead of the reality, the terrorist meme may continue to infect the aggrieved.

The historical trajectory of terrorism is elusive. Statistics begin only around 1970, when a few agencies began to collect them, and they differ in their recording criteria and their coverage. It can be hard, even in the best of times, to distinguish terrorist attacks from accidents, homicides, and disgruntled individuals going postal, and in war zones the line between terrorism and insurgency can be fuzzy. The statistics are also heavily politicized: various constituencies may try to make the numbers look big, to sow fear of terrorism, or small, to trumpet their success in fighting terrorism. And while the whole world cares about international terrorism, governments often treat domestic terrorism, which kills six to seven times as many people, as no one else's business. The most comprehensive public dataset we have is the Global Terrorism Database, an amalgamation of many of the earlier datasets. Though we can't interpret every zig or zag in the graphs at face value, because some may represent seams and overlaps between databases with different coding criteria, we can try to get a general sense of whether terrorism really has increased in the so-called Age of Terror.[199]

The safest records are those for terrorist attacks on American soil, if for no other reason than that there are so few of them that each can be scrutinized. Figure 6–9 shows all of them since 1970, plotted on a logarithmic scale because

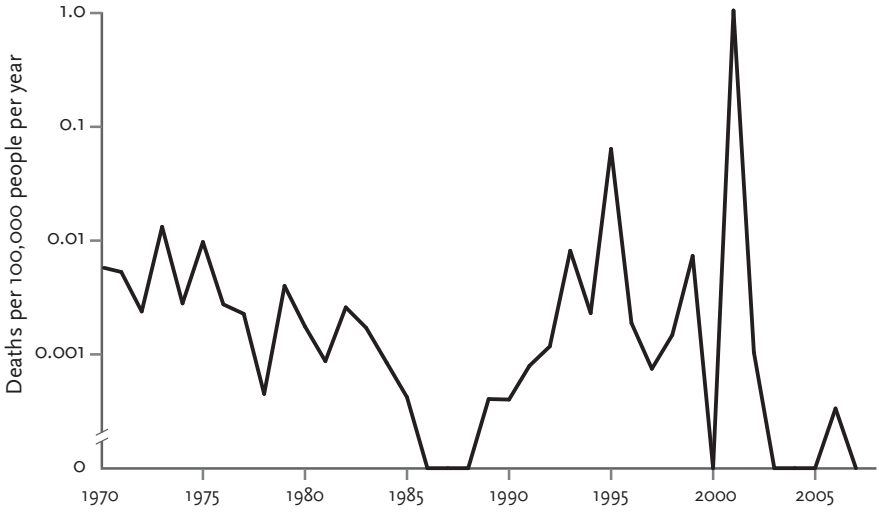

FIGURE 6–9. Rate of deaths from terrorism, United States, 1970–2007

Source: Global Terrorism Database, START (National Consortium for the Study of Terrorism and Responses to Terrorism, 2010, http://www.start.umd.edu/gtd/), accessed on April 6, 2010. The figure for 1993 was taken from the appendix to National Consortium for the Study of Terrorism and Responses to Terrorism, 2009. Since the log of 0 is undefined, years with no deaths are plotted at the arbitrary value 0.0001.

otherwise the line would be a towering spike for 9/11 poking through a barely wrinkled carpet. With the lower altitudes stretched out by the logarithmic scale, we can discern peaks for Oklahoma City in 1995 and Columbine in 1999 (which is a dubious example of "terrorism," but with a single exception, noted below, I never second-guess the datasets when plotting the graphs). Apart from this trio of spikes, the trend since 1970 is, if anything, more downward than upward.

The trajectory of terrorism in Western Europe (figure 6–10) illustrates the point that most terrorist organizations fail and all of them die. Even the spike from the 2004 Madrid train bombings cannot hide the decline from the glory years of the Red Brigades and the Baader-Meinhof Gang.

What about the world as a whole? Though Bush administration statistics released in 2007 seemed to support their warnings about a global increase in terrorism, the HSRP team noticed that their data include civilian deaths from the wars in Iraq and Afghanistan, which would be classified as civil war casualties if they had taken place anywhere else in the world. The picture is different when the criteria are kept consistent and these deaths are excluded. Figure 6–11 shows the worldwide annual rate of death from terrorism (as usual, per 100,000 population) without these deaths. The death tolls for the world as a whole have to be interpreted with caution, because they come from a hybrid dataset and can float up and down with differences in how many news sources

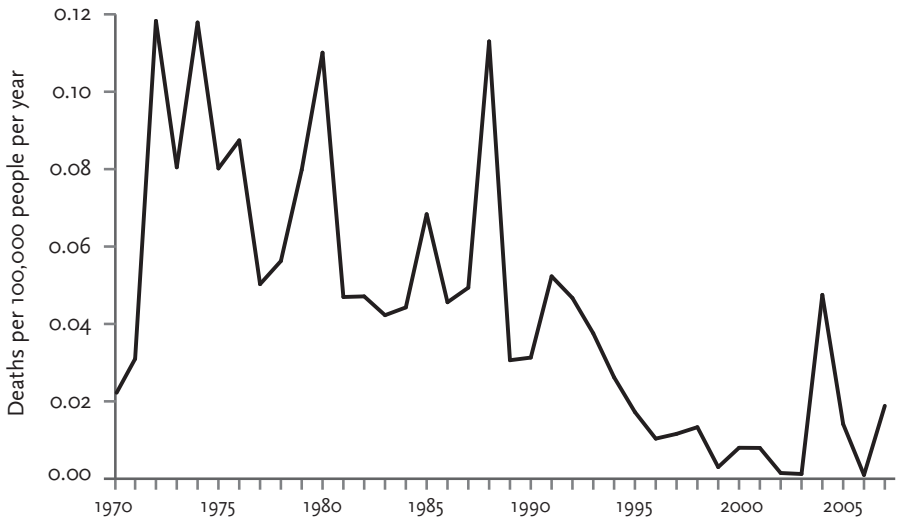

FIGURE 6–10. Rate of deaths from terrorism, Western Europe, 1970–2007

Source: Global Terrorism Database, START (National Consortium for the Study of Terrorism and Responses to Terrorism, 2010, http://www.start.umd.edu/gtd/), accessed on April 6, 2010. Data for 1993 are interpolated. Population figures from UN *World Population Prospects* (United Nations, 2008), accessed April 23, 2010; figures for years not ending in 0 or 5 are interpolated.

FIGURE 6–11. Rate of deaths from terrorism, worldwide, except Afghanistan 2001– and Iraq 2003–

Source: Global Terrorism Database, START (National Consortium for the Study of Terrorism and Responses to Terrorism, 2010, http://www.start.umd.edu/gtd/), accessed on April 6, 2010. Data for 1993 are interpolated. World population figures from U.S. Census Bureau, 2010c; the population estimate for 2007 is extrapolated.

were consulted in each of the contributing datasets. But the shapes of the curves turn out to be the same when they include only the larger terrorist events (those with death tolls of at least twenty-five), which are so newsworthy that they are likely to have been included in all the subdatasets.

Like the graphs we have seen for interstate wars, civil wars, and genocides, this one has a surprise. The first decade of the new millennium—the dawn of the Age of Terror—does not show a rising curve, or a new plateau, but a decrease from peaks in the 1980s and early 1990s. Global terrorism rose in the late 1970s and declined in the 1990s for the same reasons that civil wars and genocides rose and fell during those decades. Nationalist movements sprang up in the wake of decolonization, drew support from superpowers fighting the Cold War by proxy, and died down with the fall of the Soviet empire. The bulge in the late 1970s and early 1980s is mainly the handiwork of terrorists in Latin America (El Salvador, Nicaragua, Peru, and Colombia), who were responsible for 61 percent of the deaths from terrorism between 1977 and 1984. (Many of these targets were military or police forces, which the GTD includes in its database as long as the incident was intended to gain the attention of an audience rather than to inflict direct damage.)[200] Latin America kept up its contribution in the second rise from 1985 to 1992 (about a third of the deaths), joined by the Tamil Tigers in Sri Lanka (15 percent) and groups in India, the Philippines, and Mozambique. Though some of the terrorist activity in India

and the Philippines came from Muslim groups, only a sliver of the deaths occurred in Muslim countries: around 2 percent of them in Lebanon, and 1 percent in Pakistan. The decline of terrorism since 1997 was punctuated by peaks for 9/11 and by a recent uptick in Pakistan, mainly as a spillover from the war in Afghanistan along their nebulous border.

The numbers, then, show that we are not living in a new age of terrorism. If anything, aside from the wars in Iraq and Afghanistan, we are enjoying a *decline* in terrorism from decades in which it was less big a deal in our collective consciousness. Nor, until recently, has terrorism been a particularly Muslim phenomenon.

But isn't it today? Shouldn't we expect the suicide terrorists from Al Qaeda, Hamas, and Hezbollah to be picking up the slack? And what are we hiding by taking the civilian deaths in Iraq and Afghanistan, many of them victims of suicide bombers, out of the tallies? Answering these questions will require a closer look at terrorism, especially suicide terrorism, in the Islamic world.

Though 9/11 did not inaugurate a new age of terror, a case could be made that it foretold an age of Islamist suicide terror. The 9/11 hijackers could not have carried out their attacks had they not been willing to die in the process, and since then the rate of suicide attacks has soared, from fewer than 5 per year in the 1980s and 16 per year in the 1990s to 180 per year between 2001 and 2005. Most of these attacks were carried out by Islamist groups whose expressed motives were at least partly religious.[201] According to the most recent data from the National Counterterrorism Center, in 2008 Sunni Islamic extremists were responsible for almost two-thirds of the deaths from terrorism that could be attributed to a terrorist group.[202]

As a means of killing civilians, suicide terrorism is a tactic of diabolical ingenuity. It combines the ultimate in surgical weapon delivery—the precision manipulators and locomotors called hands and feet, controlled by the human eyes and brain—with the ultimate in stealth—a person who looks just like millions of other people. In technological sophistication, no battle robot comes close. The advantages are not just theoretical. Though suicide terrorism accounts for a minority of terrorist attacks, it is responsible for a majority of the casualties.[203] This bang for the buck can be irresistible to the leaders of a terrorist movement. As one Palestinian official explained, a successful mission requires only "a willing young man . . . nails, gunpowder, a light switch and a short cable, mercury (readily obtainable from thermometers), acetone. . . . The most expensive item is transportation to an Israeli town."[204] The only real technological hurdle is the willingness of the young man. Ordinarily a human being is unwilling to die, the legacy of half a billion years of natural selection. How have terrorist leaders overcome this obstacle?

People have exposed themselves to the risk of dying in wars for as long as there have been wars, but the key term is *risk*. Natural selection works on

averages, so a willingness to take a small chance of dying as part of an aggressive coalition that offers a large chance of a big fitness payoff—more land, more women, or more safety—can be favored over the course of evolution.[205] What cannot be favored is a willingness to die with certainty, which would take any genes that allow such willingness along with the dead body. It's not surprising that suicide missions are uncommon in the history of warfare. Foraging bands prefer the safety of raids and ambushes to the hazards of set-piece battles, and even then warriors are not above claiming to have had dreams and omens that conveniently keep them out of risky encounters planned by their comrades.[206]

Modern armies cultivate incentives for soldiers to increase the risk they take on, such as esteem and decorations for bravery, and disincentives for them to reduce the risk, such as the shaming or punishment of cowards and the summary execution of deserters. Sometimes a special class of soldier called file closers trails behind a unit with orders to kill any soldier who fails to advance. The conflicts of interest between war leaders and foot soldiers leads to the well-known hypocrisy of military rhetoric. Here is how a British general waxed about the carnage of World War I: "Not a man shirked going through the extremely heavy barrage, or facing the machine gun and rifle fire that finally wiped them out. . . . I have never seen, indeed could never have imagined, such a magnificent display of gallantry, discipline, and determination." A sergeant described it differently: "We knew it was pointless, even before we went over—crossing open ground like that. But you had to go. You were between the devil and the deep blue sea. If you go forward, you'll likely be shot. If you go back, you'll be court-martialed and shot. What can you do?"[207]

Warriors may accept the risk of death in battle for another reason. The evolutionary biologist J.B.S. Haldane, when asked whether he would lay down his life for his brother, replied, "No, but for two brothers or eight cousins." He was invoking the phenomenon that would later be known as kin selection, inclusive fitness, and nepotistic altruism. Natural selection favors any genes that incline an organism toward making a sacrifice that helps a blood relative, as long as the benefit to the relative, discounted by the degree of relatedness, exceeds the cost to the organism. The reason is that the genes would be helping copies of *themselves* inside the bodies of those relatives and would have a long-term advantage over their narrowly selfish alternatives. Critics who are determined to misunderstand this theory imagine that it requires that organisms consciously calculate their genetic overlap with their kin and anticipate the good it will do their DNA.[208] Of course it requires only that organisms be inclined to pursue goals that help organisms that are statistically likely to be their genetic relatives. In complex organisms such as humans, this inclination is implemented as the emotion of brotherly love.

The small-scale bands in which humans spent much of their evolutionary history were held together by kinship, and people tended to be related to their neighbors. Among the Yanomamö, for example, two individuals picked at

random from a village are related almost as closely as first cousins, and people who consider each other relatives are related, on average, even more closely.[209] The genetic overlap tilts the evolutionary payoff toward taking greater risks to life and limb if the risky act might benefit one's fellow warriors. One of the reasons that chimpanzees, unlike other primates, engage in cooperative raiding is that the females, rather than the males, disperse from the troop at sexual maturity, so the males in a troop tend to be related.[210]

As with all aspects of our psychology that have been illuminated by evolutionary theory, what matters is not *actual* genetic relatedness (it's not as if hunter-gatherers, to say nothing of chimpanzees, send off cheek swabs to a genotyping service) but the *perception* of relatedness, as long as the perception was correlated with the reality over long enough spans of time.[211] Among the contributors to the perception of kinship are the experience of having grown up together, having seen one's mother care for the other person, commensal meals, myths of common ancestry, essentialist intuitions of common flesh and blood, the sharing of rituals and ordeals, physical resemblance (often enhanced by hairdressing, tattoos, scarification, and mutilation), and metaphors such as *fraternity, brotherhood, family, fatherland, motherland,* and *blood*.[212] Military leaders use every trick in the book to make their soldiers feel like genetic relatives and take on the biologically predictable risks. Shakespeare made this clear in the most famous motivational speech in the literary history of war, when Henry V addresses his men on St. Crispin's Day:

> And Crispin Crispian shall ne'er go by,
> From this day to the ending of the world,
> But we in it shall be rememberèd—
> We few, we happy few, we band of brothers;
> For he today that sheds his blood with me
> Shall be my brother.

Modern militaries too take pains to group soldiers into bands of brothers—the fire teams, squads, and platoons of half a dozen to several dozen soldiers that serve as a crucible for the primary emotion that moves men to fight in armies, brotherly love. Studies of military psychology have discovered that soldiers fight above all out of loyalty to their platoonmates.[213] The writer William Manchester reminisced about his experience as a Marine in World War II:

> Those men on the line were my family, my home. They were closer to me than I can say, closer than any friends had been or ever would be. They had never let me down, and I couldn't do it to them. . . . I had to be with them, rather than let them die and me live with the knowledge that I might have saved them. Men, I now knew, do not fight for flag or country, for the Marine Corps or glory or any other abstraction. They fight for one another.[214]

Two decades later, another Marine-turned-author, William Broyles, offered a similar reflection on his experience in Vietnam:

> The enduring emotion of war, when everything else has faded, is comradeship. A comrade in war is a man you can trust with anything, because you trust him with your life. . . . Despite its extreme right-wing image, war is the only utopian experience most of us ever have. Individual possessions and advantage count for nothing: the group is everything. What you have is shared with your friends. It isn't a particularly selective process, but a love that needs no reasons, that transcends race and personality and education—all those things that would make a difference in peace.[215]

Though in extremis a man may lay down his life to save a platoon of virtual brothers, it's rarer for him to calmly make plans to commit suicide at some future date on their behalf. The conduct of war would be very different if he did. To avoid panic and rout (at least in the absence of file closers), battle plans are generally engineered so that an individual soldier does not know that he has been singled out for certain death. At a bomber base during World War II, for example, strategists calculated that pilots would have a higher probability of survival if a few of them who drew the short straws in a lottery would fly off to certain death on one-way sorties rather than all of them taking their chances in the fuel-laden planes needed for round trips. But they opted for the higher risk of an unpredictable death over the lower risk of a death that would be preceded by a lengthy period of doom.[216] How do the engineers of suicide terrorism overcome this obstacle?

Certainly an ideology of an afterlife helps, as in the posthumous Playboy Mansion promised to the 9/11 hijackers. (Japanese kamikaze pilots had to make do with the less vivid image of being absorbed into a great realm of the spirit.) But modern suicide terrorism was perfected by the Tamil Tigers, and though the members grew up in Hinduism with its promise of reincarnation, the group's ideology was secular: the usual goulash of nationalism, romantic militarism, Marxism-Leninism, and anti-imperialism that animated 20th-century third-world liberation movements. And in accounts by would-be suicide terrorists of what prompted them to enlist, anticipation of an afterlife, with or without the virgins, seldom figures prominently. So while expectation of a pleasant afterlife may tip the perceived cost-benefit ratio (making it harder to imagine an atheist suicide bomber), it cannot be the only psychological driver.

Using interviews with failed and prospective suicide terrorists, the anthropologist Scott Atran has refuted many common misconceptions about them. Far from being ignorant, impoverished, nihilistic, or mentally ill, suicide terrorists tend to be educated, middle class, morally engaged, and free of obvious psychopathology. Atran concluded that many of the motives may be found in nepotistic altruism.[217]

The case of the Tamil Tigers is relatively easy. They use the terrorist equivalent of file closers, selecting operatives for suicide missions and threatening to kill their families if they withdraw.[218] Only slightly less subtle are the methods of Hamas and other Palestinian terrorist groups, who hold out a carrot rather than a stick to the terrorist's family in the form of generous monthly stipends, lump-sum payments, and massive prestige in the community.[219] Though in general one should not expect extreme behavior to deliver a payoff in biological fitness, the anthropologists Aaron Blackwell and Lawrence Sugiyama have shown that it may do so in the case of Palestinian suicide terrorism. In the West Bank and Gaza many men have trouble finding wives because their families cannot afford a bride-price, they are restricted to marrying parallel cousins, and many women are taken out of the marriage pool by polygynous marriage or by marriage up to more prosperous Arabs in Israel. Blackwell and Sugiyama note that 99 percent of Palestinian suicide terrorists are male, that 86 percent are unmarried, and that 81 percent have at least six siblings, a larger family size than the Palestinian average. When they plugged these and other numbers into a simple demographic model, they found that when a terrorist blows himself up, the financial payoff can buy enough brides for his brothers to make his sacrifice reproductively worthwhile.

Atran has found that suicide terrorists can also be recruited without these direct incentives. Probably the most effective call to martyrdom is the opportunity to join a happy band of brothers. Terrorist cells often begin as gangs of underemployed single young men who come together in cafés, dorms, soccer clubs, barbershops, or Internet chat rooms and suddenly find meaning in their lives by a commitment to the new platoon. Young men in all societies do foolish things to prove their courage and commitment, especially in groups, where individuals may do something they know is foolish because they think that everyone else in the group thinks it is cool.[220] (We will return to this phenomenon in chapter 8.) Commitment to the group is intensified by religion, not just the literal promise of paradise but the feeling of spiritual awe that comes from submerging oneself in a crusade, a calling, a vision quest, or a jihad. Religion may also turn a commitment to the cause into a sacred value—a good that may not be traded off against anything else, including life itself.[221] The commitment can be stoked by the thirst for revenge, which in the case of militant Islamism takes the form of vengeance for the harm and humiliation suffered by any Muslim anywhere on the planet at any time in history, or for symbolic affronts such as the presence of infidel soldiers on sacred Muslim soil. Atran summed up his research in testimony to a U.S. Senate subcommittee:

> When you look at young people like the ones who grew up to blow up trains in Madrid in 2004, carried out the slaughter on the London underground in 2005, hoped to blast airliners out of the sky en route to the United States in 2006 and 2009, and journeyed far to die killing infidels in Iraq, Afghanistan,

> Pakistan, Yemen or Somalia; when you look at whom they idolize, how they organize, what bonds them and what drives them; then you see that what inspires the most lethal terrorists in the world today is not so much the Koran or religious teachings as a thrilling cause and call to action that promises glory and esteem in the eyes of friends, and through friends, eternal respect and remembrance in the wider world that they will never live to enjoy. . . . Jihad is an egalitarian, equal-opportunity employer: . . . fraternal, fast-breaking, thrilling, glorious, and cool. Anyone is welcome to try his hand at slicing off the head of Goliath with a paper cutter.[222]

The local imams are of marginal importance in this radicalization, since young men who want to raise hell rarely look to community elders for guidance. And Al Qaeda has become more a global brand inspiring a diffuse social network than a centralized recruiting organization.

The up-close look at suicide terrorists at first seems pretty depressing, because it suggests we are fighting a multiheaded hydra that cannot be decapitated by killing its leadership or invading its home base. Remember, though, that all terrorist organizations follow an arc toward failure. Are there any signs that Islamist terrorism is beginning to burn out?

The answer is a clear yes. In Israel, sustained attacks on civilians have accomplished what they accomplish everywhere else in the world: erase all sympathy for the group, together with any willingness to compromise with it.[223] After the Second Intifada began, shortly after Yasir Arafat's rejection of the Camp David accords in 2000, the Palestinians' economic and political prospects steadily deteriorated. In the long run, Cronin adds, suicide terrorism is a supremely idiotic tactic because it makes the target nation unwilling to tolerate members of the minority community in their midst, never knowing which among them may be a walking bomb. Though Israel has faced international condemnation for building a security barrier, other countries faced with suicide terrorism, Cronin notes, have taken similar measures.[224] The Palestinian leadership on the West Bank has, more recently, disavowed violence and turned its energies toward competent governance, while Palestinian activist groups have turned to boycotts, civil disobedience, peaceful protests, and other forms of nonviolent resistance.[225] They have even enlisted Rajmohan Gandhi (grandson of Mohandas) and Martin Luther King III for symbolic support. It's too soon to know whether this is a turning point in Palestinian tactics, but a retreat from terrorism would not be historically unprecedented.

The bigger story, though, is the fate of Al Qaeda. Marc Sageman, a former CIA officer who has been keeping tabs on the movement, counted ten serious plots on Western targets in 2004 (many inspired by the invasion of Iraq) but just three in 2008.[226] Not only has Al Qaeda's base in Afghanistan been routed and its leadership decimated (including bin Laden himself in 2011), but in the world of

Muslim opinion its favorables have long been sinking, and its negatives have been rising.[227] In the past six years Muslims have become repulsed by what they increasingly see as nihilistic savagery, consistent with Cronin's remark that decency, not just violence, has an international language. The movement's strategic goals—a pan-Islamic caliphate, the replacement of repressive and theocratic regimes by even more repressive and theocratic regimes, the genocidal killing of infidels—begin to lose their appeal once people start thinking about what they really mean. And Al Qaeda has succumbed to the fatal temptation of all terrorist groups: to stay in the limelight by mounting ever bloodier attacks on ever more sympathetic victims, which in Al Qaeda's case includes tens of thousands of fellow Muslims. Attacks in the mid-2000s on a Bali nightclub, a Jordanian wedding party, an Egyptian resort, the London underground, and cafés in Istanbul and Casablanca massacred Muslims and non-Muslims alike for no discernible purpose. The franchise of the movement known as Al Qaeda in Iraq (AQI) proved to be even more depraved, bombing mosques, marketplaces, hospitals, volleyball games, and funerals, and brutalizing resisters with amputations and beheadings.

The jihad against the jihadis is being fought at many levels. Islamic states such as Saudi Arabia and Indonesia that once indulged Islamist extremists have decided that enough is enough and have begun to crack down. The movement's own gurus have also turned on it. In 2007 one of bin Laden's mentors, the Saudi cleric Salman al-Odah, wrote an open letter accusing him of "fostering a culture of suicide bombings that has caused bloodshed and suffering, and brought ruin to entire Muslim communities and families."[228] He was not afraid to get personal: "My brother Osama, how much blood has been spilt? How many innocent people, children, elderly, and women have been killed . . . in the name of Al Qaeda? Will you be happy to meet God Almighty carrying the burden of these hundreds of thousands or millions on your back?"[229] His indictment struck a chord: two-thirds of the postings on Web sites of Islamist organizations and television networks were favorable, and he has spoken to enthusiastic crowds of young British Muslims.[230] The grand mufti of Saudi Arabia, Abdulaziz al Ash-Sheikh, made it official, issuing a fatwa in 2007 forbidding Saudis to join foreign jihads and condemning bin Laden and his cronies for "transforming our youth into walking bombs to accomplish their own political and military aims."[231] That same year another sage of Al Qaeda, the Egyptian scholar Sayyid Imam Al Sharif (also known as Dr. Fadl), published a book called *Rationalization of Jihad* because, he explained, "Jihad . . . was blemished with grave Sharia violations during recent years. . . . Now there are those who kill hundreds, including women and children, Muslims and non-Muslims in the name of Jihad!"[232]

The Arab street agrees. In a 2008 online Q&A on a jihadist Web site with Ayman al-Zawahiri, Al Qaeda's day-to-day leader, one participant asked, "Excuse me, Mr. Zawahiri, but who is it who is killing, with Your Excellency's blessing, the innocents in Baghdad, Morocco, and Algeria?"[233] Public opinion

polls throughout the Islamic world have tapped the outrage. Between 2005 and 2010, the number of respondents in Jordan, Pakistan, Indonesia, Saudi Arabia, and Bangladesh who endorse suicide bombing and other violence against civilians has sunk like a stone, often to around 10 percent. Lest even this figure seem barbarically high, the political scientist Fawaz Gerges (who compiled the data) reminds us that no fewer than 24 percent of Americans tell pollsters that "bombing and other attacks intentionally aimed at civilians are often or sometimes justified."[234]

More important is public opinion in the war zones in which the terrorists rely on the support of the population.[235] In the North-West Frontier Province in Pakistan, support for Al Qaeda plummeted from 70 percent to 4 percent in just five months in late 2007, partly in reaction to the assassination of former prime minister Benazir Bhutto by a suicide bomber. In elections that year Islamists won 2 percent of the national vote—a fivefold decrease since 2002. In a 2007 ABC/BBC poll in Afghanistan, support for jihadist militants nosedived to 1 percent.[236] In Iraq in 2006 a large majority of Sunnis and an overwhelming majority of Kurds and Shias rejected AQI, and by December 2007 the opposition to their attacks on civilians had reached a perfect 100 percent.[237]

Public opinion is one thing, but does it translate into a reduction of violence? Terrorists depend on popular support, so it's highly likely that it does. The year 2007, the turning point in attitudes toward terrorism in the Islamic world, was also a turning point in suicide attacks in Iraq. The Iraq Body Count has documented that vehicle bombs and suicide attacks declined from 21 a day in 2007 to fewer than 8 a day in 2010—still too many, but a sign of progress.[238] Changes in Muslim attitudes do not deserve all the credit; the surge of American soldiers in the first half of 2007 and other military adjustments helped as well. But some of the military developments themselves depended on a shift in attitudes. Muqtada al-Sadr's Mahdi Army, a Shia militia, declared a cease-fire in 2007, and in what has been called the Sunni Awakening tens of thousands of young men have defected from an insurgency against the American-supported government and are participating in the suppression of Al Qaeda in Iraq.[239]

Terrorism is a tactic, not an ideology or a regime, so we will never win the "War on Terror," any more than we will achieve George W. Bush's larger goal (announced in the same post-9/11 speech) to "rid the world of evil." In an age of global media, there will always be an ideologue nursing a grievance somewhere who is tempted by the spectacular return on investment of terrorism—a huge windfall in fear from a trifling outlay in violence—and there will always be bands of brothers willing to risk everything for the comradeship and glory it promises. When terrorism becomes a tactic in a large insurgency, it can do tremendous damage to people and to civil life, and the hypothetical threat of nuclear terrorism (to which I will turn in the final section) gives new

meaning to the word *terror*. But in every other circumstance history teaches, and recent events confirm, that terrorist movements carry the seeds of their own destruction.

WHERE ANGELS FEAR TO TREAD

The New Peace is the quantitative decline in war, genocide, and terrorism that has proceeded in fits and starts since the end of the Cold War more than two decades ago. It has not been around for as long as the Long Peace, is not as revolutionary as the Humanitarian Revolution, and has not swept a civilization in the manner of the Civilizing Process. An obvious question is whether it will last. Though I am reasonably confident that during my lifetime France and Germany will not go to war, that cat-burning and the breaking wheel will not make a comeback, and that diners will not routinely stab each other with steak knives or cut off each other's noses, no prudent person could express a similar confidence when it comes to armed conflict in the world as a whole.

I am sometimes asked, "How do you know there won't be a war tomorrow (or a genocide, or an act of terrorism) that will refute your whole thesis?" The question misses the point of this book. The point is not that we have entered an Age of Aquarius in which every last earthling has been pacified forever. It is that substantial reductions in violence *have* taken place, and it is important to understand them. Declines in violence are caused by political, economic, and ideological conditions that take hold in particular cultures at particular times. If the conditions reverse, violence could go right back up.

Also, the world contains a lot of people. The statistics of power-law distributions and the events of the past two centuries agree in telling us that a small number of perpetrators can cause a great deal of damage. If somewhere among the world's six billion people there is a zealot who gets his hands on a stray nuclear bomb, he could single-handedly send the statistics through the roof. But even if he did, we would still need an explanation of why homicide rates fell a hundredfold, why slave markets and debtors' prisons have vanished, and why the Soviets and Americans did not go to war over Cuba, to say nothing of Canada and Spain over flatfish.

The goal of this book is to explain the facts of the past and present, not to augur the hypotheticals of the future. Still, you might ask, isn't it the essence of science to make falsifiable predictions? Shouldn't any claim to understanding the past be evaluated by its ability to extrapolate into the future? Oh, all right. I predict that the chance that a major episode of violence will break out in the next decade—a conflict with 100,000 deaths in a year, or a million deaths overall—is 9.7 percent. How did I come up with that number? Well, it's small enough to capture the intuition "probably not," but not so small that if such an event did occur I would be shown to be flat-out wrong. My point, of course, is that the concept of scientific prediction is meaningless when it comes to a

single event—in this case, the eruption of mass violence in the next decade. It would be another thing if we could watch many worlds unfold and tot up the number in which an event happened or did not, but this is the only world we've got.

The truth is, I don't know what will happen across the entire world in the coming decades, and neither does anyone else. Not everyone, though, shares my reticence. A Web search for the text string "the coming war" returns two million hits, with completions like "with Islam," "with Iran," "with China," "with Russia," "in Pakistan," "between Iran and Israel," "between India and Pakistan," "against Saudi Arabia," "on Venezuela," "in America," "within the West," "for Earth's resources," "over climate," "for water," and "with Japan" (the last dating from 1991, which you would think would make everyone a bit more humble about this kind of thing). Books with titles like *The Clash of Civilizations, World on Fire, World War IV,* and (my favorite) *We Are Doomed* boast a similar confidence.

Who knows? Maybe they're right. My aim in the rest of this chapter is to point out that maybe they're wrong. This isn't the first time we've been warned of certain ruin. The experts have predicted civilization-ending aerial gas attacks, global thermonuclear war, a Soviet invasion of Western Europe, a Chinese razing of half of humanity, nuclear powers by the dozen, a revanchist Germany, a rising sun in Japan, cities overrun by teenage superpredators, a world war fought over diminishing oil, nuclear war between India and Pakistan, and weekly 9/11-scale attacks.[240] In this section I'll look at four threats to the New Peace—a civilizational clash with Islam, nuclear terrorism, a nuclear Iran, and climate change—and for each one make the case for "maybe, but maybe not."

The Muslim world, to all appearances, is sitting out the decline of violence. More than two decades of headlines have shocked Westerners with acts of barbarity in the name of Islam. Among them are the 1989 clerical death threat against Salman Rushdie for portraying Muhammad in a novel, the 2002 sentencing of an unmarried pregnant woman in Nigeria to execution by stoning, the fatal stabbing in 2004 of Dutch filmmaker Theo van Gogh for producing Ayaan Hirsi Ali's film about the treatment of women in Islamic countries, the lethal 2005 riots after a Danish newspaper printed editorial cartoons that were disrespectful to the prophet, the jailing and threat of flogging of a British schoolteacher in Sudan who allowed her class to name a teddy bear Muhammad, and of course the 9/11 terrorist attacks, in which nineteen Muslims killed almost three thousand civilians.

The impression that the Muslim world indulges kinds of violence that the West has outgrown is not a symptom of Islamophobia or Orientalism but is borne out by the numbers. Though about a fifth of the world's population is Muslim, and about a quarter of the world's countries have a Muslim majority,

more than half of the armed conflicts in 2008 embroiled Muslim countries or insurgencies.[241] Muslim countries force a greater proportion of their citizens into their armies than non-Muslim countries do, holding other factors constant.[242] Muslim groups held two-thirds of the slots on the U.S. State Department's list of foreign terrorist organizations, and (as mentioned) in 2008 Sunni terrorists killed nearly two-thirds of the world's victims of terrorism whose perpetrators could be identified.[243]

In defiance of the rising tide of democracy, only about a quarter of Islamic countries elect their governments, and most of them are only dubiously democratic.[244] Their leaders receive farcically high percentages of the vote, and they exercise the power to jail opponents, outlaw opposition parties, suspend parliament, and cancel elections.[245] It's not just that Islamic countries happen to have risk factors for autocracy, such as being larger, poorer, or richer in oil. Even in a regression analysis that holds these factors constant, countries with larger proportions of Muslims have fewer political rights.[246] Political rights are very much a matter of violence, of course, since they amount to being able to speak, write, and assemble without being dragged off to jail.

The laws and practices of many Muslim countries seem to have missed out on the Humanitarian Revolution. According to Amnesty International, almost three-quarters of Muslim countries execute their criminals, compared to a third of non-Muslim countries, and many use cruel punishments such as stoning, branding, blinding, amputation of tongues or hands, and even crucifixion.[247] Every year more than a hundred million girls in Islamic countries have their genitals mutilated, and when they grow up they may be disfigured with acid or killed outright if they displease their fathers, their brothers, or the husbands who have been forced upon them.[248] Islamic countries were the last to abolish slavery (as recently as 1962 in Saudi Arabia and 1980 in Mauritania), and a majority of the countries in which people continue to be trafficked are Muslim.[249] In many Muslim countries, witchcraft is not just on the books as a crime but is commonly prosecuted. In 2009, for example, Saudi Arabia convicted a man for carrying a phone booklet with characters in an alphabet from his native Eritrea, which the police interpreted as occult symbols. He was lashed three hundred times and imprisoned for more than three years.[250]

Violence is sanctioned in the Islamic world not just by religious superstition but by a hyperdeveloped culture of honor. The political scientists Khaled Fattah and K. M. Fierke have documented how a "discourse of humiliation" runs through the ideology of Islamist organizations.[251] A sweeping litany of affronts—the Crusades, the history of Western colonization, the existence of Israel, the presence of American troops on Arabian soil, the underperformance of Islamic countries—are taken as insults to Islam and used to license indiscriminate vengeance against members of the civilization they hold responsible, together with Muslim leaders of insufficient ideological purity. The radical fringe of Islam harbors an ideology that is classically genocidal: history

is seen as a violent struggle that will culminate in the glorious subjugation of an irredeemably evil class of people. Spokesmen for Al Qaeda, Hamas, Hezbollah, and the Iranian regime have demonized enemy groups (Zionists, infidels, crusaders, polytheists), spoken of a millennial cataclysm that would usher in a utopia, and justified the killing of entire categories of people such as Jews, Americans, and those felt to insult Islam.[252]

The historian Bernard Lewis is not the only one who has asked, "What went wrong?" In 2002 a committee of Arab intellectuals under the auspices of the United Nations published the candid *Arab Human Development Report*, said to be "written by Arabs for Arabs."[253] The authors documented that Arab nations were plagued by political repression, economic backwardness, oppression of women, widespread illiteracy, and a self-imposed isolation from the world of ideas. At the time of the report, the entire Arab world exported fewer manufactured goods than the Philippines, had poorer Internet connectivity than sub-Saharan Africa, registered 2 percent as many patents per year as South Korea, and translated about a fifth as many books into Arabic as Greece translates into Greek.[254]

It wasn't always that way. During the Middle Ages, Islamic civilization was unquestionably more refined than Christendom. While Europeans were applying their ingenuity to the design of instruments of torture, Muslims were preserving classical Greek culture, absorbing the knowledge of the civilizations of India and China, and advancing astronomy, architecture, cartography, medicine, chemistry, physics, and mathematics. Among the symbolic legacies of this age are the "Arabic numbers" (adapted from India) and loan words such as *alcohol, algebra, alchemy, alkali, azimuth, alembic,* and *algorithm*. Just as the West had to come from behind to overtake Islam in science, so it was a laggard in human rights. Lewis notes:

> In most tests of tolerance, Islam, both in theory and in practice, compares unfavorably with the Western democracies as they have developed during the last two or three centuries, but very favorably with most other Christian and post-Christian societies and regimes. There is nothing in Islamic history to compare with the emancipation, acceptance, and integration of other-believers and non-believers in the West; but equally, there is nothing in Islamic history to compare with the Spanish expulsion of Jews and Muslims, the Inquisition, the *Auto da fé's*, the wars of religion, not to speak of more recent crimes of commission and acquiescence.[255]

Why did Islam blow its lead and fail to have an Age of Reason, an Enlightenment, and a Humanitarian Revolution? Some historians point to bellicose passages in the Koran, but compared to our own genocidal scriptures, they are nothing that some clever exegesis and evolving norms couldn't spin-doctor away.

Lewis points instead to the historical lack of separation between mosque and state. Muhammad was not just a spiritual leader but a political and military one, and only recently have any Islamic states had the concept of a distinction between the secular and the sacred. With every potential intellectual contribution filtered through religious spectacles, opportunities for absorbing and combining new ideas were lost. Lewis recounts that while works in philosophy and mathematics had been translated from classical Greek into Arabic, works of poetry, drama, and history were not. And while Muslims had a richly developed history of their own civilization, they were incurious about their Asian, African, and European neighbors and about their own pagan ancestors. The Ottoman heirs to classical Islamic civilization resisted the adoption of mechanical clocks, standardized weights and measures, experimental science, modern philosophy, translations of poetry and fiction, the financial instruments of capitalism, and perhaps most importantly, the printing press. (Arabic was the language in which the Koran was written, so printing it was considered an act of desecration.)[256] In chapter 4 I speculated that the Humanitarian Revolution in Europe was catalyzed by a literate cosmopolitanism, which expanded people's circle of empathy and set up a marketplace of ideas from which a liberal humanism could emerge. Perhaps the dead hand of religion impeded the flow of new ideas into the centers of Islamic civilization, locking it into a relatively illiberal stage of development. As if to prove the speculation correct, in 2010 the Iranian government restricted the number of university students who would be admitted to programs in the humanities, because, according to Supreme Leader Ayatollah Ali Khameini, study of the humanities "promotes skepticism and doubt in religious principles and beliefs."[257]

Whatever the historical reasons, a large chasm appears to separate Western and Islamic cultures today. According to a famous theory from the political scientist Samuel Huntington, the chasm has brought us to a new age in the history of the world: the clash of civilizations. "In Eurasia the great historic fault lines between civilizations are once more aflame," he wrote. "This is particularly true along the boundaries of the crescent-shaped Islamic bloc of nations, from the bulge of Africa to Central Asia. Violence also occurs between Muslims, on the one hand, and Orthodox Serbs in the Balkans, Jews in Israel, Hindus in India, Buddhists in Burma and Catholics in the Philippines. Islam has bloody borders."[258]

Though the dramatic notion of a clash of civilizations became popular among pundits, few scholars in international studies take it seriously. Too large a proportion of the world's bloodshed takes place within and between Islamic countries (for example, Iraq's war with Iran in the 1980s, and its invasion of Kuwait in 1990), and too large a proportion takes place within and between non-Islamic countries, for the civilizational fault line to be an accurate summary of violence in the world today. Also, as Nils Petter Gleditsch and

Halvard Buhaug have pointed out, even though an increasing *proportion* of the world's armed conflicts have involved Islamic countries and insurgencies over the past two decades (from 20 to 38 percent), it's not because those conflicts have increased in *number*. As figure 6–12 shows, Islamic conflicts continued at about the same rate while the rest of the world got more peaceful, the phenomenon I have been calling the New Peace.

Most important, the entire concept of "Islamic civilization" does a disservice to the 1.3 billion men and women who call themselves Muslims, living in countries as diverse as Mali, Nigeria, Morocco, Turkey, Saudi Arabia, Bangladesh, and Indonesia. And cutting across the divide of the Islamic world into continents and countries is another divide that is even more critical. Westerners tend to know Muslims through two dubious exemplars: the fanatics who grab headlines with their fatwas and jihads, and the oil-cursed autocrats who rule over them. The beliefs of the hitherto silent (and frequently silenced) majority make less of a contribution to our stereotypes. Can 1.3 billion Muslims really be untouched by the liberalizing tide that has swept the rest of the world in recent decades?

Part of the answer may be found in a massive Gallup poll conducted between 2001 and 2007 on the attitudes of Muslims in thirty-five countries representing 90 percent of the world's Islamic population.[259] The results confirm that most Islamic states will not become secular liberal democracies anytime soon. Majorities of Muslims in Egypt, Pakistan, Jordan, and Bangladesh

FIGURE 6–12. Islamic and world conflicts, 1990–2006

Source: Data from Gleditsch, 2008. "Islamic conflicts" involve Muslim countries or Islamic opposition movements or both. Data assembled by Halvard Buhaug from the UCDP/PRIO conflict dataset and his own coding of Islamic conflicts.

told the pollsters that Sharia, the principles behind Islamic law, should be the only source of legislation in their countries, and majorities in most of the countries said it should be at least one of the sources. On the other hand, a majority of Americans believe that the Bible should be one of the sources of legislation, and presumably they don't mean that people who work on Sunday should be stoned to death. Religion thrives on woolly allegory, emotional commitments to texts that no one reads, and other forms of benign hypocrisy. Like Americans' commitment to the Bible, most Muslims' commitment to Sharia is more a symbolic affiliation with moral attitudes they associate with the best of their culture than a literal desire to see adulteresses stoned to death. In practice, creative and expedient readings of Sharia for liberal ends have often prevailed against the oppressive fundamentalist readings. (The Nigerian woman, for example, was never executed.) Presumably that is why most Muslims see no contradiction between Sharia and democracy. Indeed, despite their professed affection for the idea of Sharia, a large majority believe that religious leaders should have no direct role in drafting their country's constitution.

Though most Muslims distrust the United States, it may not be out of a general animus toward the West or a hostility to democratic principles. Many Muslims feel the United States does *not* want to spread democracy in the Muslim world, and they have a point: the United States, after all, has supported autocratic regimes in Egypt, Jordan, Kuwait, and Saudi Arabia, rejected the election of Hamas in the Palestinian territories, and in 1953 helped overthrow the democratically elected Mossadegh in Iran. France and Germany are viewed more favorably, and between 20 and 40 percent say they admire the "fair political system, respect for human values, liberty, and equality" of Western culture. More than 90 percent would guarantee freedom of speech in their nation's constitution, and large numbers also support freedom of religion and freedom of assembly. Substantial majorities of both sexes in all the major Muslim countries say that women should be allowed to vote without influence from men, to work at any job, to enjoy the same legal rights as men, and to serve in the highest levels of government. And as we have seen, overwhelming majorities of the Muslim world reject the violence of Al Qaeda. Only 7 percent of the Gallup respondents approved the 9/11 attacks, and that was before Al Qaeda's popularity cratered in 2007.

What about mobilization for political violence? A team from the University of Maryland examined the goals of 102 grassroots Muslim organizations in North Africa and the Middle East and found that between 1985 and 2004 the proportion of organizations that endorsed violence dropped from 54 to 14 percent.[260] The proportion committed to nonviolent protests tripled, and the proportion that engaged in electoral politics doubled. These changes helped drive down the terrorism death curve in figure 6–11 and are reflected in the headlines, which feature far less terrorist violence in Egypt and Algeria than we read about a few years ago.

Islamic insularity is also being chipped at by a battery of liberalizing forces: independent news networks such as Al-Jazeera; American university campuses in the Gulf states; the penetration of the Internet, including social networking sites; the temptations of the global economy; and the pressure for women's rights from pent-up internal demand, nongovernmental organizations, and allies in the West. Perhaps conservative ideologues will resist these forces and keep their societies in the Middle Ages forever. But perhaps they won't.

In early 2011, as this book was going to press, a swelling protest movement deposed the leaders of Tunisia and Egypt and was threatening the regimes in Jordan, Bahrain, Libya, Syria, and Yemen. The outcome is unpredictable, but the protesters have been almost entirely nonviolent and non-Islamist, and are animated by a desire for democracy, good governance, and economic vitality rather than global jihad, the restoration of the caliphate, or death to infidels. Even with all these winds of change, it is conceivable that an Islamist tyrant or radical revolutionary group could drag an unwilling populace into a cataclysmic war. But it seems more probable that "the coming war with Islam" will never come. Islamic nations are unlikely to unite and challenge the West: they are too diverse, and they have no civilization-wide animus against us. Some Muslim countries, like Turkey, Indonesia, and Malaysia, are well on the way to becoming fairly liberal democracies. Some will continue to be ruled by SOBs, but they'll be our SOBs. Some will try to muddle through the oxymoron of a Sharia democracy. None is likely to be governed by the ideology of Al Qaeda. This leaves three reasonably foreseeable dangers to the New Peace: nuclear terrorism, the regime in Iran, and climate change.

Though conventional terrorism, as John Kerry gaffed, is a nuisance to be policed rather than a threat to the fabric of life, terrorism with weapons of mass destruction would be something else entirely. The prospect of an attack that would kill millions of people is not just theoretically possible but consistent with the statistics of terrorism. The computer scientists Aaron Clauset and Maxwell Young and the political scientist Kristian Gleditsch plotted the death tolls of eleven thousand terrorist attacks on log-log paper and saw them fall into a neat straight line.[261] Terrorist attacks obey a power-law distribution, which means they are generated by mechanisms that make extreme events unlikely, but not astronomically unlikely.

The trio suggested a simple model that is a bit like the one that Jean-Baptiste Michel and I proposed for wars, invoking nothing fancier than a combination of exponentials. As terrorists invest more time into plotting their attack, the death toll can go up exponentially: a plot that takes twice as long to plan can kill, say, four times as many people. To be concrete, an attack by a single suicide bomber, which usually kills in the single digits, can be planned in a few days or weeks. The 2004 Madrid train bombings, which killed around two hundred, took six months to plan, and 9/11, which killed three thousand, took two years.[262]

But terrorists live on borrowed time: every day that a plot drags on brings the possibility that it will be disrupted, aborted, or executed prematurely. If the probability is constant, the plot durations will be distributed exponentially. (Cronin, recall, showed that terrorist organizations drop like flies over time, falling into an exponential curve.) Combine exponentially growing damage with an exponentially shrinking chance of success, and you get a power law, with its disconcertingly thick tail. Given the presence of weapons of mass destruction in the real world, and religious fanatics willing to wreak untold damage for a higher cause, a lengthy conspiracy producing a horrendous death toll is within the realm of thinkable probabilities.

A statistical model, of course, is not a crystal ball. Even if we could extrapolate the line of existing data points, the massive terrorist attacks in the tail are still extremely (albeit not astronomically) unlikely. More to the point, we *can't* extrapolate it. In practice, as you get to the tail of a power-law distribution, the data points start to misbehave, scattering around the line or warping it downward to very low probabilities. The statistical spectrum of terrorist damage reminds us not to dismiss the worst-case scenarios, but it doesn't tell us how likely they are.

So how likely are they? What do you think the chances are that within the next five years each of the following scenarios will take place? (1) One of the heads of state of a major developed country will be assassinated. (2) A nuclear weapon will be set off in a war or act of terrorism. (3) Venezuela and Cuba will join forces and sponsor Marxist insurrection movements in one or more Latin American countries. (4) Iran will provide nuclear weapons to a terrorist group that will use one of them against Israel or the United States. (5) France will give up its nuclear arsenal.

I gave fifteen of these scenarios to 177 Internet users on a single Web page and asked them to estimate the probability of each. The median estimate that a nuclear bomb would be set off (scenario 2) was 0.20; the median estimate that a nuclear bomb would be set off in the United States or Israel by a terrorist group that obtained it from Iran (scenario 4) was 0.25. About half the respondents judged that the second scenario was more likely than the first. And in doing so, they committed an elementary blunder in the mathematics of probability. The probability of a conjunction of events (A and B both occurring) cannot be greater than the probability of either of them occurring alone. The probability that you will draw a red jack has to be lower than the probability that you will draw a jack, because some jacks you might draw are not red.

Yet Tversky and Kahneman have shown that most people, including statisticians and medical researchers, commonly make the error.[263] Consider the case of Bill, a thirty-four-year-old man who is intelligent but also unimaginative, compulsive, and rather dull. In school he was strong in mathematics but undistinguished in the arts and humanities. What are the chances that Bill plays jazz saxophone? What are the chances that he is an accountant who plays

jazz saxophone? Many people give higher odds to the second possibility, but the choice is nonsensical, because there are fewer saxophone-playing accountants than there are saxophone players. In judging probabilities, people rely on the vividness of their imaginations rather than thinking through the laws. Bill fits the stereotype of an accountant but not of a saxophonist, and our intuitions go with the stereotype.

The conjunction fallacy, as psychologists call it, infects many kinds of reasoning. Juries are more likely to believe that a man with shady business dealings killed an employee to prevent him from talking to the police than to believe that he killed the employee. (Trial lawyers thrive on this fallacy, adding conjectural details to a scenario to make it more vivid to a jury, even though every additional detail, mathematically speaking, ought to make it *less* probable.) Professional forecasters give higher odds to an unlikely outcome that is presented with a plausible cause (oil prices will rise, causing oil consumption to fall) than to the same outcome presented naked (oil consumption will fall).[264] And people are willing to pay more for flight insurance against terrorism than for flight insurance against all causes.[265]

You can see where I'm going. The mental movie of an Islamist terrorist group buying a bomb on the black market or obtaining it from a rogue state and then detonating it in a populated area is all too easy to play in our mind's eye. Even if it weren't, the entertainment industry has played it for us in nuclear terrorist dramas like *True Lies, The Sum of All Fears,* and *24*. The narrative is so riveting that we are apt to give it a higher probability than we would if we thought through all the steps that would have to go right for the disaster to happen and multiplied their probabilities. That's why so many of my survey respondents judged an Iran-sponsored nuclear terrorist attack to be more probable than a nuclear attack. The point is not that nuclear terrorism is impossible or even astronomically unlikely. It is just that the probability assigned to it by anyone but a methodical risk analyst is likely to be too high.

What do I mean by "too high"? "With certainty" and "more probable than not" strike me as too high. The physicist Theodore Taylor declared in 1974 that by 1990 it would be too late to prevent terrorists from carrying out a nuclear attack.[266] In 1995 the world's foremost activist on the risks of nuclear terrorism, Graham Allison, wrote that under prevailing circumstances, a nuclear attack on American targets was likely before the decade was out.[267] In 1998 the counterterrorism expert Richard Falkenrath wrote that "it is certain that more and more non-state actors will become capable of nuclear, biological, and chemical weapons acquisition and use."[268] In 2003 UN ambassador John Negroponte judged that there was a "high probability" of an attack with a weapon of mass destruction within two years. And in 2007 the physicist Richard Garwin estimated that the chance of a nuclear terrorist attack was 20 percent per year, or about 50 percent by 2010 and almost 90 percent within a decade.[269]

Like television weather forecasters, the pundits, politicians, and terrorism

specialists have every incentive to emphasize the worst-case scenario. It is undoubtedly wise to scare governments into taking extra measures to lock down weapons and fissile material and to monitor and infiltrate groups that might be tempted to acquire them. Overestimating the risk, then, is safer than underestimating it—though only up to a point, as the costly invasion of Iraq in search of nonexistent weapons of mass destruction proves. The professional reputations of experts have proven to be immune to predictions of disasters that never happen, while almost no one wants to take a chance at giving the all-clear and ending up with radioactive egg on his face.[270]

A few brave analysts, such as Mueller, John Parachini, and Michael Levi, have taken the chance by examining the disaster scenarios component by component.[271] For starters, of the four so-called weapons of mass destruction, three are far less massively destructive than good old-fashioned explosives.[272] Radiological or "dirty" bombs, which are conventional explosives wrapped in radioactive material (obtained, for example, from medical waste), would yield only minor and short-lived elevations of radiation, comparable to moving to a city at a higher altitude. Chemical weapons, unless they are released in an enclosed space like a subway (where they would still not do as much damage as conventional explosives), dissipate quickly, drift in the wind, and are broken down by sunlight. (Recall that poison gas was responsible for a tiny fraction of the casualties in World War I.) Biological weapons capable of causing epidemics would be prohibitively expensive to develop and deploy, as well as dangerous to the typically bungling amateur labs that would develop them. It's no wonder that biological and chemical weapons, though far more accessible than nuclear ones, have been used in only three terrorist attacks in thirty years.[273] In 1984 the Rajneeshee religious cult contaminated salad in the restaurants of an Oregon town with salmonella, sickening 751 people and killing none. In 1990 the Tamil Tigers were running low on ammunition while attacking a fort and opened up some chlorine cylinders they found in a nearby paper mill, injuring 60 and killing none before the gas wafted back over them and convinced them never to try it again. The Japanese religious cult Aum Shinrikyo failed in ten attempts to use biological weapons before releasing sarin gas in the Tokyo subways, killing 12. A fourth attack, the 2001 anthrax mailings that killed 5 Americans in media and government offices, turned out to be a spree killing rather than an act of terrorism.

It's really only nuclear weapons that deserve the WMD acronym. Mueller and Parachini have fact-checked the various reports that terrorists got "just this close" to obtaining a nuclear bomb and found that all were apocryphal. Reports of "interest" in procuring weapons on a black market grew into accounts of actual negotiations, generic sketches morphed into detailed blueprints, and flimsy clues (like the aluminum tubes purchased in 2001 by Iraq) were overinterpreted as signs of a development program.

Each of the pathways to nuclear terrorism, when examined carefully, turns

out to have gantlets of improbabilities. There may have been a window of vulnerability in the safekeeping of nuclear weapons in Russia, but today most experts agree it has been closed, and that no loose nukes are being peddled in a nuclear bazaar. Stephen Younger, the former director of nuclear weapons research at Los Alamos National Laboratory, has said, "Regardless of what is reported in the news, all nuclear nations take the security of their weapons very seriously."[274] Russia has an intense interest in keeping its weapons out of the hands of Chechen and other ethnic separatist groups, and Pakistan is just as worried about its archenemy Al Qaeda. And contrary to rumor, security experts consider the chance that Pakistan's government and military command will fall under the control of Islamist extremists to be essentially nil.[275] Nuclear weapons have complex interlocks designed to prevent unauthorized deployment, and most of them become "radioactive scrap metal" if they are not maintained.[276] For these reasons, the forty-seven-nation Nuclear Security Summit convened by Barack Obama in 2010 to prevent nuclear terrorism concentrated on the security of fissile material, such as plutonium and highly enriched uranium, rather than on finished weapons.

The dangers of filched fissile material are real, and the measures recommended at the summit are patently wise, responsible, and overdue. Still, one shouldn't get so carried away by the image of garage nukes as to think they are inevitable or even extremely probable. The safeguards that are in place or will be soon will make fissile materials hard to steal or smuggle, and if they went missing, it would trigger an international manhunt. Fashioning a workable nuclear weapon requires precision engineering and fabrication techniques well beyond the capabilities of amateurs. The Gilmore commission, which advises the president and Congress on WMD terrorism, called the challenge "Herculean," and Allison has described the weapons as "large, cumbersome, unsafe, unreliable, unpredictable, and inefficient."[277] Moreover, the path to getting the materials, experts, and facilities in place is mined with hazards of detection, betrayal, stings, blunders, and bad luck. In his book *On Nuclear Terrorism*, Levi laid out all the things that would have to go right for a terrorist nuclear attack to succeed, noting, "Murphy's Law of Nuclear Terrorism: What can go wrong might go wrong."[278] Mueller counts twenty obstacles on the path and notes that even if a terrorist group had a fifty-fifty chance of clearing every one, the aggregate odds of its success would be one in a million. Levi brackets the range from the other end by estimating that even if the path were strewn with only ten obstacles, and the probability that each would be cleared was 80 percent, the aggregate odds of success facing a nuclear terrorist group would be one in ten. Those are not our odds of becoming victims. A terrorist group weighing its options, even with these overly optimistic guesstimates, might well conclude from the long odds that it would better off devoting its resources to projects with a higher chance of success. None of this, to repeat,

means that nuclear terrorism is impossible, only that it is not, as so many people insist, imminent, inevitable, or highly probable.

If current pundits are to be believed, then as you are reading these words the New Peace will already have been shattered by a major war, perhaps a nuclear war, with Iran. At the time of this writing, tensions have been rising over the country's nuclear energy program. Iran is currently enriching enough uranium to fashion a nuclear arsenal, and it has defied international demands that it allow inspections and comply with other provisions of the Nuclear Nonproliferation Treaty. The president of Iran, Mahmoud Ahmadinejad, has taunted Western leaders, supported terrorist groups, accused the United States of orchestrating the 9/11 attacks, denied the Holocaust, called for Israel to be "wiped off the map," and prayed for the reappearance of the Twelfth Imam, the Muslim savior who would usher in an age of peace and justice. In some interpretations of Shi'a Islam, this messiah will show up after a worldwide eruption of war and chaos.

All this is, to say the least, disconcerting, and many writers have concluded that Ahmadinejad is another Hitler who will soon develop nuclear weapons and use them on Israel or furnish them to Hezbollah to do so. Even in less dire scenarios, he could blackmail the Middle East into acceding to Iranian hegemony. The prospect might leave Israel or the United States no choice but to bomb its nuclear facilities preemptively, even if it invited years of war and terrorism in response. A 2009 editorial in the *Washington Times* spelled it out: "War with Iran is now inevitable. The only question is: Will it happen sooner or later?"[279]

This chilling scenario of a nuclear attack by Iranian fanatics is certainly possible. But is it *inevitable*, or even highly likely? One can be just as contemptuous of Ahmadinejad, and just as cynical about his motives, while imagining less dire alternatives for the world ahead. John Mueller, Thomas Schelling, and many other foreign affairs analysts have imagined them for us and have concluded that the Iranian nuclear program is not the end of the world.[280]

Iran is a signatory to the Nuclear Nonproliferation Treaty, and Ahmadinejad has repeatedly declared that Iran's nuclear program is intended only for energy and medical research. In 2005 Supreme Leader Khameini (who wields more power than Ahmadinejad) issued a fatwa declaring that nuclear weapons are forbidden under Islam.[281] If the government went ahead and developed the weapons anyway, it would not be the first time in history that national leaders have lied through their teeth. But having painted themselves into this corner, the prospect of forfeiting all credibility in the eyes of the world (including major powers on whom they depend, like Russia, China, Turkey, and Brazil) might at least give them pause.

Ahmadinejad's musings about the return of the Twelfth Imam do not

necessarily mean that he plans to hasten it along with a nuclear holocaust. Two of the deadlines by which writers confidently predicted that he would set off the apocalypse (2007 and 2009) have already come and gone.[282] And for what it's worth, here is how he explained his beliefs in a 2009 television interview with NBC correspondent Ann Curry:

> *Curry:* You've said that you believe that his arrival, the apocalypse, would happen in your own lifetime. What do you believe that you should do to hasten his arrival?
>
> *Ahmadinejad:* I have never said such a thing. . . . I was talking about peace. . . . What is being said about an apocalyptic war and—global war, things of that nature. This is what the Zionists are claiming. Imam . . . will come with logic, with culture, with science. He will come so that there is no more war. No more enmity, hatred. No more conflict. He will call on everyone to enter a brotherly love. Of course, he will return with Jesus Christ. The two will come back together. And working together, they would fill this world with love. The stories that have been disseminated around the world about extensive war, apocalyptic wars, so on and so forth, these are false. [283]

As a Jewish atheist, I can't say I find these remarks completely reassuring. But with one obvious change they are not appreciably different from those held by devout Christians; indeed, they are milder, as many Christians do believe in an apocalyptic war and have fantasized about it in bestselling novels. As for the speech containing the phrase that was translated as "wiping Israel off the map," the *New York Times* writer Ethan Bronner consulted Persian translators and analysts of Iranian government rhetoric on the meaning of the phrase in context, and they were unanimous that Ahmadinejad was daydreaming about regime change in the long run, not genocide in the days ahead.[284] The perils of translating foreign bombast bring to mind Khrushchev's boast "We will bury you," which turned out to mean "outlive" rather than "entomb."

There is a parsimonious alternative explanation of Iran's behavior. In 2002 George W. Bush identified Iraq, North Korea, and Iran as the "axis of evil" and proceeded to invade Iraq and depose its leadership. North Korea's leaders saw the writing on the wall and promptly developed a nuclear capability, which (as they no doubt anticipated) has put an end to any musings about the United States invading them too. Shortly afterward Iran put its nuclear program into high gear, aiming to create enough ambiguity as to whether it possesses nuclear weapons, or could assemble them quickly, to squelch any thought of an invasion in the mind of the Great Satan.

If Iran does become a confirmed or suspected nuclear power, the history of the nuclear age suggests that the most likely outcome would be nothing. As we have seen, nuclear weapons have turned out to be useless for anything but

deterrence against annihilation, which is why the nuclear powers have repeatedly been defied by their nonnuclear adversaries. The most recent episode of proliferation bears this out. In 2004 it was commonly predicted that if North Korea acquired a nuclear capability, then by the end of the decade it would share it with terrorists and set off a nuclear arms race with South Korea, Japan, and Taiwan.[285] In fact, North Korea did acquire a nuclear capability, the end of the decade has come and gone, and nothing has happened. It's also unlikely that any nation would furnish nuclear ammunition to the loose cannons of a terrorist band, thereby giving up control over how they would be used while being on the hook for the consequences.[286]

In the case of Iran, before it decided to bomb Israel (or license Hezbollah to do so in an incriminating coincidence), with no conceivable benefit to itself, its leaders would have to anticipate a nuclear reprisal by Israeli commanders, who could match them hothead for hothead, together with an invasion by a coalition of powers enraged by the violation of the nuclear taboo. Though the regime is detestable and in many ways irrational, one wonders whether its principals are so indifferent to continuing their hold on power as to choose to annihilate themselves in pursuit of perfect justice in a radioactive Palestine or the arrival of the Twelfth Imam, with or without Jesus at his side. As Thomas Schelling asked in his 2005 Nobel Prize lecture, "What else can Iran accomplish, except possibly the destruction of its own system, with a few nuclear warheads? Nuclear weapons should be too precious to give away or to sell, too precious to waste killing people when they could, held in reserve, make the United States, or Russia, or any other nation, hesitant to consider military action."[287]

Though it may seem dangerous to consider alternatives to the worst-case scenario, the dangers go both ways. In the fall of 2002 George W. Bush warned the nation, "America must not ignore the threat gathering against us. Facing clear evidence of peril, we cannot wait for the final proof—the smoking gun—that could come in the form of a mushroom cloud." The "clear evidence" led to a war that has cost more than a hundred thousand lives and almost a trillion dollars and has left the world no safer. A cocksure certainty that Iran will use nuclear weapons, in defiance of sixty-five years of history in which authoritative predictions of inevitable catastrophes were repeatedly proven wrong, could lead to adventures with even greater costs.

These days one other gloomy scenario is on people's minds. Global temperatures are increasing, which in the decades ahead could lead to a rising sea level, desertification, droughts in some regions, and floods and hurricanes in others. Economies will be disrupted, leading to a competition for resources, and populations will migrate out of distressed regions, leading to friction with their unwelcoming hosts. A 2007 *New York Times* op-ed warned, "Climate stress may well represent a challenge to international security just as

dangerous—and more intractable—than the arms race between the United States and the Soviet Union during the Cold War or the proliferation of nuclear weapons among rogue states today."[288] That same year Al Gore and the Intergovernmental Panel on Climate Change were awarded the Nobel Peace Prize for their call to action against global warming because, according to the citation, climate change is a threat to international security. A rising fear lifts all the boats. Calling global warming "a force multiplier for instability," a group of military officers wrote that "climate change will provide the conditions that will extend the war on terror."[289]

Once again it seems to me that the appropriate response is "maybe, but maybe not." Though climate change can cause plenty of misery and deserves to be mitigated for that reason alone, it will not necessarily lead to armed conflict. The political scientists who track war and peace, such as Halvard Buhaug, Idean Salehyan, Ole Theisen, and Nils Gleditsch, are skeptical of the popular idea that people fight wars over scarce resources.[290] Hunger and resource shortages are tragically common in sub-Saharan countries such as Malawi, Zambia, and Tanzania, but wars involving them are not. Hurricanes, floods, droughts, and tsunamis (such as the disastrous one in the Indian Ocean in 2004) do not generally lead to armed conflict. The American dust bowl in the 1930s, to take another example, caused plenty of deprivation but no civil war. And while temperatures have been rising steadily in Africa during the past fifteen years, civil wars and war deaths have been falling. Pressures on access to land and water can certainly cause local skirmishes, but a genuine war requires that hostile forces be organized and armed, and that depends more on the influence of bad governments, closed economies, and militant ideologies than on the sheer availability of land and water. Certainly any connection to terrorism is in the imagination of the terror warriors: terrorists tend to be underemployed lower-middle-class men, not subsistence farmers.[291] As for genocide, the Sudanese government finds it convenient to blame violence in Darfur on desertification, distracting the world from its own role in tolerating or encouraging the ethnic cleansing.

In a regression analysis on armed conflicts from 1980 to 1992, Theisen found that conflict was more likely if a country was poor, populous, politically unstable, and abundant in oil, but not if it had suffered from droughts, water shortages, or mild land degradation. (Severe land degradation did have a small effect.) Reviewing analyses that examined a large number (N) of countries rather than cherry-picking one or two, he concluded, "Those who foresee doom, because of the relationship between resource scarcity and violent internal conflict, have very little support in the large-N literature." Salehyan adds that relatively inexpensive advances in water use and agricultural practices in the developing world can yield massive increases in productivity with a constant or even shrinking amount of land, and that better governance can mitigate the human costs of environmental damage, as it does in developed

democracies. Since the state of the environment is at most one ingredient in a mixture that depends far more on political and social organization, resource wars are far from inevitable, even in a climate-changed world.

No reasonable person would prophesy that the New Peace is going to be a long peace, to say nothing of a perpetual peace. There will certainly be wars and terrorist attacks in the decades to come, possibly large ones. On top of the known unknowns—militant Islamism, nuclear terrorists, environmental degradation—there are surely many unknown unknowns. Perhaps new leaders in China will decide to engulf Taiwan once and for all, or Russia will swallow a former Soviet republic or two, provoking an American response. Maybe an aggressive Chavismo will spill out of Venezuela and incite Marxist insurgencies and brutal counterinsurgencies throughout the developing world. Perhaps at this very moment terrorists from some liberation movement no one has heard of are plotting an attack of unprecedented destruction, or an eschatological ideology is fermenting in the mind of a cunning fanatic who will take over a major country and plunge the world back into war. As the *Saturday Night Live* news analyst Roseanne Roseannadanna observed, "It's always something. If it's not one thing, it's another."

But it is just as foolish to let our lurid imaginations determine our sense of the probabilities. It may always be something, but there can be fewer of those things, and the things that happen don't have to be as bad. The numbers tell us that war, genocide, and terrorism have declined over the past two decades—not to zero, but by a lot. A mental model in which the world has a constant allotment of violence, so that every cease-fire is reincarnated somewhere else as a new war, and every interlude of peace is just a time-out in which martial tensions build up and seek release, is factually mistaken. Millions of people are alive today because of the civil wars and genocides that did not take place but that would have taken place if the world had remained as it was in the 1960s, 1970s, and 1980s. The conditions that favored this happy outcome—democracy, prosperity, decent government, peacekeeping, open economies, and the decline of antihuman ideologies—are not, of course, guaranteed to last forever. But nor are they likely to vanish overnight.

Of course we live in a dangerous world. As I have emphasized, a statistical appreciation of history tells us that violent catastrophes may be improbable, but they are not astronomically improbable. Yet that can also be stated in a more hopeful way. Violent catastrophes may not be astronomically improbable, but they are improbable.