



## Terrorism and Bathtubs: Comparing and Assessing the Risks

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### ABSTRACT



The likelihood that anyone outside a war zone will be killed by an Islamist extremist terrorist is extremely small. In the United States, for example, some six people have perished each year since 9/11 at the hands of such terrorists—vastly smaller than the number of people who die in bathtub drownings. Some argue, however, that the incidence of terrorist destruction is low because counterterrorism measures are so effective. They also contend that terrorism may well become more frequent and destructive in the future as terrorists plot and plan and learn from experience, and that terrorism, unlike bathtubs, provides no benefit and exacts costs far beyond those in the event itself by damagingly sowing fear and anxiety and by requiring policy makers to adopt countermeasures that are costly and excessive. This article finds these arguments to be wanting. In the process, it concludes that terrorism is rare outside war zones because, to a substantial degree, terrorists don't exist there. In general, as with rare diseases that kill few, it makes more policy sense to expend limited funds on hazards that inflict far more damage. It also discusses the issue of risk communication for this hazard.

### KEYWORDS

Terrorism; Counter terrorism; risk; Cost-benefit

The likelihood that anyone outside a war zone will be killed by an Islamist extremist terrorist is extremely small. In the United States, for example, some six people have perished each year since 9/11 at the hands of such terrorists—for an annual fatality rate of about one in 50 million for the period.

This might be taken to suggest, as one writer has characterized it, that “terrorism is such a minor threat to American life and limb that it’s simply bizarre—just stupefyingly irrational and intellectually unserious—to suppose that it could even *begin* to justify the abolition of privacy rights as they have been traditionally understood in favour of the installation of a panoptic surveillance state.”<sup>1</sup> And terrorism specialist Marc Sageman characterizes the threat terrorists present in the United States as “rather negligible.”<sup>2</sup> The vast majority of what is commonly tallied as terrorism has occurred in war zones, and this is especially true for fatalities.<sup>3</sup> But even this has been exaggerated by conflating terrorism with war: civil war violence that would previously have been seen to be acts of insurgency are now often labeled terrorism.<sup>4</sup>

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Color versions of one or more of the figures in the article can be found online at [www.tandfonline.com/ftpv](http://www.tandfonline.com/ftpv).

In order to put the numbers in some context, it has often been pointed out that far more Americans are killed each year not only by such highly destructive hazards as drug overdoses or automobile accidents, but even by such comparatively minor ones as lightning, accident-causing deer, peanut allergies, or drowning in bathtubs. Some comparisons are arrayed in [Table 1](#).

In recent years, however, critics have attacked what they call “the bathtub fallacy.”<sup>5</sup>

First, they stress that it is important to keep in mind that bathtubs are not out to kill you while terrorism is a willful act carried out by diabolical, dedicated, and clever human beings. Thus, although the number of people Islamist terrorists have been able to kill in the West since 9/11 has thus far been quite limited, those terrorists, as they plot and plan and learn from experience, may very well become far more destructive in the future.

Second, the critics charge that the comparison of terrorism with bathtub drownings is incomplete in that it doesn’t consider the possibility that the incidence of terrorist destruction is low precisely because counterterrorism measures are so effective.

Third, it is argued that, unlike bathtub drownings, terrorism exacts costs far beyond those entailed in the event itself. It damagingly sows terror, fear, and anxiety; disturbs our

**Table 1.** Annual fatality risks.

Hazard	Territory	Period	Total fatalities for the period	Annual Fatalities	Annual fatality risk
Cancers	US	2015	589,000	589,000	1 in 545
All accidents	US	2014	136,000	136,000	1 in 2,350
Drug overdose	US	2015	52,404	52,404	1 in 6,100
Traffic accidents	US	2014	33,736	33,736	1 in 9,500
Homicide	US	2014	15,809	15,809	1 in 20,000
Terrorism	Northern Ireland	1970–2015	1,759	38	1 in 52,000
Industrial accidents	US	2014	4,821	4,821	1 in 66,000
Terrorism	US	2001	2,982	2,982	1 in 101,000
Natural disasters	US	1999–2008	6,294	630	1 in 480,000
Drowning in bathtub	US	2011	431	431	1 in 725,000
Terrorism	UK	1970–2016	2,198	47	1 in 1,300,000
Home appliances	US	yearly avg	200	200	1 in 1,600,000
Deer accidents	US	2012	200	200	1 in 1,600,000
Tornadoes	US	2008–2017	1,004	100	1 in 3,100,000
Terrorism	Western Europe	1970–2016	5,228	111	1 in 3,500,000
Terrorism	US	1970–2016	3,463	74	1 in 4,000,000
Terrorism	Canada	1970–2016	341	7	1 in 4,400,000
Terrorism	France	2002–2016	251	17	1 in 5,700,000
Peanut allergies	US	yearly avg	50–100	50–100	1 in 6,000,000
Terrorism	Great Britain	1970–2016	439	9	1 in 6,200,000
Terrorism	Australia	1970–2016	120	2.5	1 in 8,000,000
Terrorism	Western Europe	2002–2016	694	46	1 in 9,000,000
Lightning	US	2006–2015	314	31	1 in 9,800,000
Mass public shootings (not terrorism related)	US	1999–2013	433	29	1 in 10,000,000
Terrorism	UK	2002–2016	79	5	1 in 11,800,000
Terrorism	US	2002–2016	117	8	1 in 39,000,000

Source: Terrorism fatalities are taken from Global Terrorism Database (GTD 2015). It contains country-by-country information for more than 150,000 terrorist incidents from all sources (not just Islamist ones) that took place throughout the world between 1970 and 2015. Fatality data are based on GTD terrorist incidents that satisfied the following criteria: the act must be aimed at attaining a political, economic, religious, or social goal; there must be evidence of an intention to coerce, intimidate, or convey some other message to a larger audience (or audiences) than the immediate victims; the action must be outside the context of legitimate warfare activities; and there is essentially no doubt as to whether the incident is an act of terrorism. Terrorist incidents that did not satisfy these criteria were filtered out. We also added major attacks from 2016.

psychological well-being; undermines trust and openness within the society; and reduces our sense of intrinsic moral worth even as it increases a sense of helplessness.

They maintain, fourth, that the comparison is invalid because, unlike terrorism, bathtubs provide benefit.

And finally, they contend that terrorism costs are peculiarly high, particularly in a democratic society, because the fears it generates will necessarily need to be serviced by policy makers, and this pressure forces, or inspires, them to adopt countermeasures, both foreign and domestic, that are costly and sometimes even excessive.

In this article, we examine these five propositions and find all of them to be wanting. In the process, we conclude that terrorism is rare outside war zones because, to a substantial degree, terrorists don't exist there. In general, as with rare diseases that kill few, it makes more policy sense to expend limited funds on hazards that inflict far more damage.

### **Terrorism is willed and may well become more destructive**

Journalist Jeffrey Goldberg has suggested that “the fear of terrorism isn't motivated solely by what terrorists have done, but what terrorists hope to do.” Bathtubs are simply not “engaged in a conspiracy with other bathtubs to murder ever-larger numbers of Americans.” However, terrorists “in the Islamist orbit,” he insists, “seek unconventional weapons that would allow them to kill a far-larger number of Americans than died on Sept. 11.”<sup>6</sup> Or as Janan Ganesh of the *Financial Times* puts it, “Bathroom deaths could multiply by 50 without a threat to civil order. The incidence of terror could not.”<sup>7</sup>

Thus far, 9/11 stands out as an extreme outlier: scarcely any terrorist act, before or after, in war zones or outside them, has inflicted even one-tenth as much total destruction. That is, contrary to common expectations, the attack has thus far been an aberration, not a harbinger.<sup>8</sup> And al-Qaeda central, the group responsible for the attack, has, in some respects at least, proved to resemble President John Kennedy's assassin, Lee Harvey Oswald—an entity of almost trivial proportions that got horribly lucky once. The tiny group of perhaps 100 or so does appear to have served as something of an inspiration to some Muslim extremists. They may have done some training, may have contributed a bit to the Taliban's far larger insurgency in Afghanistan, and may have participated in a few terrorist acts in Pakistan. In his examination of the major terrorist plots against the West since 9/11, Mitchell Silber finds only two—the shoe bomber attempt of 2001 and the effort to blow up transatlantic airliners with liquid bombs in 2006—that could be said to be under the “command and control” of al-Qaeda central (as opposed to ones suggested, endorsed, or inspired by the organization), and there are questions about how full its control was even in these two instances, both of which, as it happens, failed miserably.<sup>9</sup> And, although some al-Qaeda affiliates have committed substantial damage in the Middle East, usually in the context of civil wars, their efforts to carry out terrorism in the West have been rare and completely ineffective.<sup>10</sup> Even under siege, it is difficult to see why al-Qaeda could not have carried out attacks at least as costly and shocking as the shooting rampages (organized by other groups) that took place in Mumbai in 2008 or at a shopping center in Kenya in 2013. Neither took huge resources, presented major logistical challenges, required the organization of a large number of perpetrators, or needed extensive planning.

However, there is of course no guarantee that things will remain that way, and the 9/11 attacks inspired the remarkable extrapolation that, because the terrorists were successful with box cutters, they might soon be able to turn out weapons of mass destruction—particularly nuclear ones—and then detonate them in an American city. For example, in his influential 2004 book, *Nuclear Terrorism*, Harvard's Graham Allison relayed his "considered judgment" that "on the current path, a nuclear terrorist attack on America in the decade ahead is more likely than not."<sup>11</sup> Allison has had a great deal of company in his alarming pronouncements. In 2007, the distinguished physicist Richard Garwin put the likelihood of a nuclear explosion on an American or European city by terrorist or other means at 20 percent per year, which would work out to 91 percent over the eleven-year period to 2018.<sup>12</sup>

Allison's time is up, and so is Garwin's. These oft-repeated warnings have proven to be empty. And it is important to point out that not only have terrorists failed to go nuclear, but as William Langewiesche, who has assessed the process in detail, put it in 2007, "The best information is that no one has gotten anywhere near this. I mean, if you look carefully and practically at this process, you see that it is an enormous undertaking full of risks for the would-be terrorists."<sup>13</sup> That process requires trusting corrupted foreign collaborators and other criminals, obtaining and transporting highly guarded material, setting up a machine shop staffed with top scientists and technicians, and rolling the heavy, cumbersome, and untested finished product into position to be detonated by a skilled crew, all the while attracting no attention from outsiders.

Nor have terrorist groups been able to steal existing nuclear weapons—characteristically burdened with multiple safety devices and often stored in pieces at separate secure locales—from existing arsenals as was once much feared. And they certainly have not been able to cajole leaders in nuclear states to palm one off to them—though a war inflicting more death than Hiroshima and Nagasaki combined was launched against Iraq in 2003 in major part under the spell of fantasies about such a handover.<sup>14</sup>

More generally, the actual terrorist "adversaries" in the West scarcely deserve accolades for either dedication or prowess. It is true, of course, that sometimes even incompetents can get lucky, but such instances, however tragic, are rare. For the most part, terrorists in the United States are a confused, inadequate, incompetent, blundering, and gullible bunch, only occasionally able to get their act together. Most seem to be far better at frenetic and often self-deluded scheming than at actual execution. A summary assessment by RAND's Brian Jenkins is apt: "their numbers remain small, their determination limp, and their competence poor."<sup>15</sup> And much the same holds for Europe and the rest of the developed world.<sup>16</sup> Also working against terrorist success in the West is the fact that almost all are amateurs: they have never before tried to do something like this. Unlike criminals they have not been able to develop street smarts.

Except perhaps for the use of vehicles to deliver mayhem (though this idea is by no means new in the history of terrorism), there has been remarkably little innovation in terrorist weaponry or methodology since 9/11.<sup>17</sup> Like their predecessors, they have continued to rely on bombs (many of which fail to detonate or do much damage) and bullets.<sup>18</sup>

There is another aspect to this argument. It is held that, whereas the number of bathtub deaths does not fluctuate much from year to year, terrorism deaths are not very evenly distributed over time and this quality somehow makes the phenomenon unpredictable and unstable. It is a "fat-tailed distribution" in which there are many small events and a

few “outliers that are really important.”<sup>19</sup> Thus, we should give up, suggests Bloomberg’s Justin Fox: “Five or 10 or even 50 years of data isn’t necessarily enough to allow one to predict with confidence what is going to happen next year.”<sup>20</sup>

The frequency and destructiveness of terrorism and terrorism cases is indeed anything but uniform. In 2016 there were some two dozen cases of Islamist terrorism in the United States and 49 deaths. In 2008 there was only one case and no deaths.<sup>21</sup> However, many natural hazards show the same pattern as terrorism. For example, the frequency and destructiveness of tornados range widely: the death count can vary by up to twenty-fold from year to year. Moreover, they are also far more likely than terrorism to kill. However, the lumpiness doesn’t preclude sensible analysis.

Concern about this unevenness, as bathtub critics Justin Fox and Kenneth Anderson both note, stems from a book by Nassim Nicholas Taleb that stresses the importance of extreme events which he calls “Black Swans.” Taleb argues that “almost everything in social life is produced by rare but consequential shocks and jumps” and “our world is dominated by the extreme, the unknown, and the extremely improbable.”<sup>22</sup> However, Taleb’s account focuses on those unexpected and emotion-engaging events and phenomena (like 9/11) that became consequential (and therefore Black Swans), while ignoring ones that failed to do so. It accordingly suffers from what is called “selection bias.” Moreover, insofar as Black Swan events carry an “extreme impact,” this quality derives not so much from their unexpectedness or from the emotions they initially trigger as from the reaction or overreaction they generate. These reactions are sometimes as unexpected as the event itself, and often they do not correlate well with the event’s size or with its objective historical importance. Moreover, although some unexpected and emotion-engaging events do have considerable consequences, much consequential development in human history—probably most of it—stems not from such events, but from changes in thinking and behavior that are decidedly gradual and often little noticed as they occur.<sup>23</sup>

### **Terrorism is low because of the effectiveness of counterterrorism measures**

It is possible to argue that the damage inflicted by terrorists since 9/11 outside of war zones is low because “defensive measures are working,” as the journalist Peter Bergen has suggested.<sup>24</sup> At the extreme are the repeated assertions of former Vice President Dick Cheney that security measures put into place after 9/11 have saved thousands of lives, a figure he had escalated by 2009 to “perhaps hundreds of thousands of lives.”<sup>25</sup>

In this argument, the bathtub comparison fails: the terrorism death toll, to which it is compared, is low only because terrorism has very effectively been reduced by countermeasures designed to do exactly that.

There have been few efforts to refute or even examine such extravagant and evidence-free claims—for the most part, they are simply allowed to lie there.<sup>26</sup> But even applying a high estimate for the value of human life and a low one for US counterterrorism expenditures, the expenditures would have had to save 11,797 lives per year to begin to be justified.<sup>27</sup> Or they would have had to avert more than one 9/11 attack every other year.<sup>28</sup>

### **Disclosed plots**

To begin to assess, and parse, this argument, one can look at the 124 plots by Islamist extremists, many of them inspired by al-Qaeda or ISIS, seeking to commit terrorism in the United States since 9/11 through 2017.<sup>29</sup> Of these, 27 have been carried out in some form or other. Terrorists managed to kill people in ten of these, resulting in the average of six deaths per year as noted above.<sup>30</sup>

The remaining 97 plots were rolled up by authorities. For the most part, the capacities of the people involved in these plots are singularly unimpressive, however. When those cases are examined, the vast majority of the offenders (though perhaps not quite all) turn out to have been naive, amateurish, and gullible. Their schemes, especially when unaided by facilitating FBI infiltrators, have been incoherent and inept, their capacity to accumulate weaponry rudimentary, and their organizational skills close to non-existent.

Left on their own, it is certainly possible that a few of the plotters in the 97 foiled plots would have been able to get their act together and actually do something. But it seems unlikely that the total damage would increase by anywhere near enough to suggest that terrorism presents a substantial threat, much less the one imagined by Cheney: the yearly death toll might be pushed up to 12 or perhaps even 18.

### **Undisclosed plots**

It is frequently argued by officials that many terrorist plots have been thwarted in addition to the ones that have entered the public record but that information about these cases cannot be disclosed for various reasons.

In working on an extensive report about how US intelligence efforts (and budgets) were massively increased after 9/11, the *Washington Post's* Dana Priest says that she frequently heard this claim. In response, she says she “asked them to share with us anything they could, plots that were foiled that we could put in the paper because we didn’t have many examples. We said, give us things, just in generalities.” But “we didn’t receive anything back.”<sup>31</sup>

Terrorism specialist Marc Sageman has had the relevant background (and clearances) to comment authoritatively on the matter: “As a member of the Intelligence Community, who kept abreast of all the plots in the US,” he says, “I have not seen any significant terrorist plots that have been disrupted and not disclosed. On the contrary, the government goes out of its way to take credit for non-plots, such as their sting operations.”<sup>32</sup> Glenn Carle, who was Deputy National Intelligence Officer for Transnational Threats at the CIA for several years before his retirement in 2008 after 23 years of service, is more terse. He characterizes the claim that there are a great many thwarted terrorist plots that have gone undisclosed in three (or six) words: “Bullshit. Bullshit. Bullshit.”<sup>33</sup>

### **Disclosed minor plots**

In addition to those prosecuted on terrorism charges, authorities have apprehended a considerable number, perhaps hundreds, of loud-mouthed aspirational terrorists within the United States, and, lacking enough evidence to convict them on terrorism charges, the authorities have levied lesser ones to jail or to deport them.

For the most part, these plots or aspirations are even less likely to lead to notable violence than the ones that have resulted in terrorism trials. Further, the bulk of people who are jailed on terrorism-associated prosecutions serve short terms and, accordingly, are soon set free to commit terrorism if they want to do so. Yet, none have attempted to do so.

## **Deterrence**

Nor is it likely that much terrorism has been deterred by security measures.

Extensive and costly security measures have undoubtedly taken some targets off the list for just about all terrorists. In particular, since most of them have been impelled toward terrorism by hostility to American military policy in the Middle East, many of them have sought out military targets.<sup>34</sup> Although some have contemplated attacking individual soldiers in the street or military recruitment centers in shopping malls—or have actually done so—few have considered attacking military bases themselves. That is, they have likely been deterred from attacking their preferred target. The same can be said for another target: aviation.<sup>35</sup>

However, while deterred from attacking some targets, no dedicated would-be terrorist should have much difficulty finding other ones if the goal is to kill people or destroy property to make a statement—the world is filled with such targets. Shooting up a mall, or derailling a train, or setting a building or forest on fire, or detonating a homemade bomb in a crowd can garner great attention and can have substantial consequence—as has been seen with the Boston Marathon bombings of 2013, with the shootings in Paris in 2015, or with the destruction in Manchester, England, in 2017.

Thus, the fact that there has been so little Islamist terrorism in the United States and the West can't be because would-be terrorists have been deterred by security measures.

And much the same can be said for the related argument maintaining that we have much to fear because we only catch the dummies, while all the smart ones get away to wait for the right opportunity to commit terrorist mayhem. But if that is so, why don't they eventually actually *do* something? If they are so smart, they surely know that the longer they wait, the more likely they are to be detected.<sup>36</sup>

There may also be something of a grand or ultimate deterrent at work, but it has little to do with security measures. Although one shouldn't give most terrorists all that much credit for careful and especially for long-term thinking, that terrorism is such a rare phenomenon in the developed world may derive at least in part from the fact that terrorism simply doesn't recommend itself as a course of practical political action because of the futility and fundamental absurdity of the enterprise. In general, in fact, it tends to be counterproductive.<sup>37</sup> Maybe at least a few terrorists have figured that out and have given up early.

That there is so little terrorism, then, is not because of the efficacy of security measures or because it is so difficult to pull off—lucrative targets are ubiquitous and headline-grabbing mayhem is easy to commit. To a considerable degree, terrorism is rare because terrorists, unlike bathtubs, don't exist. As Bruce Schneier puts it bluntly, “there isn't much of a threat of terrorism to defend against.”<sup>38</sup>

## Terrorism damagingly affects behavior and increases fear and anxiety

It is certainly true that, unlike bathtub drownings, acts of terrorism create widespread fear and anxiety. As Fox puts it, “terrorism is designed to, you know, sow terror.”<sup>39</sup> However, the degree to which fears about terrorism outside war zones have actually exacted behavioral costs—changed behavior significantly or undermined society—needs to be more fully assessed and seems to have been exaggerated.

In addition, it should be pointed out that the comparison of terrorism with bathtub deaths is only a first cut. A fuller analysis requires a full cost-benefit assessment of terrorism that includes the costs not only of the lives lost and of the direct damage inflicted by the hazard, but longer term effects of the fear factor including a consideration of the degree to which the hazard, unlike bathtub drownings, is random, intentional, vicious, graphic, substantially unpredictable, fails to generate compensating benefits, and is visited upon victims who did not in any sense volunteer for the risk. This fuller analysis is conducted at the end of this section. It concludes that, even assuming that terrorism exacts huge behavioral costs, counterterrorism measures fail to be cost-effective: they do not reduce the risk enough to justify their cost.

### *The consequences of the fear of terrorism*

Both public opinion poll data and behavioral data can be used to assess the degree to which terrorism fears generate longer term consequences.

#### *Poll data*

Considerable numbers of Americans claim in polls that terrorism has affected their lives and behavior. Since 2002, around a quarter of them have maintained that it has permanently changed the way they live (Figure 1). Many in polls say they feel themselves to be less safe from terrorism than before 9/11 (Figure 2), and a considerable minority continues to say that, as a result of terrorism, they are “less willing” to fly on airplanes, go into skyscrapers, travel overseas, or attend events where there are thousands of people (Figure 3). These percentages have not changed much in the decade and a half after 2001.<sup>40</sup>

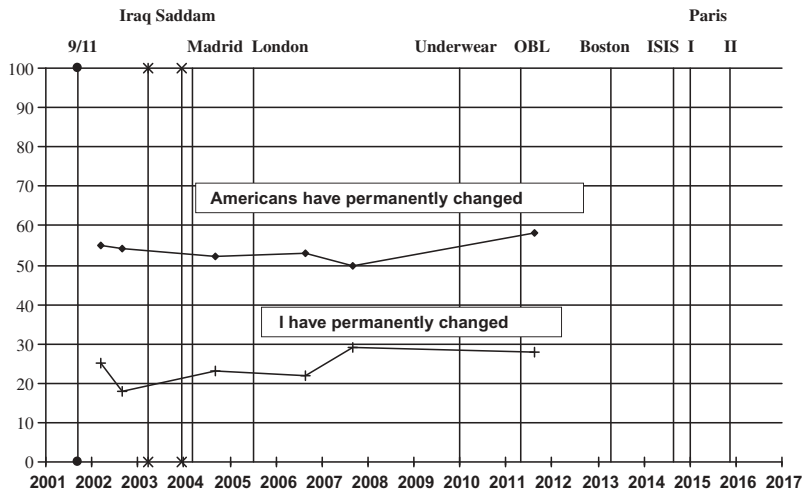
However, poll data strongly challenge the notion that “terrorism disrupts one’s sense of being safe within one’s own community.”<sup>41</sup>

As it happens, 9/11 did not cause Americans to fear for their personal safety more generally. The satisfaction level on that score was remarkably high before 9/11—88 percent said they were very or somewhat satisfied with their “safety from physical harm or violence”—and it actually *rose* a bit after the attacks and has remained high ever since (Figure 4). Presumably, absent a specific reference to terrorism on this question, respondents mostly thought about crime. But the results certainly do not suggest that 9/11 and the terrorism fears it spawned have undermined Americans’ general sense of safety.

Nor did 9/11 change the degree to which Americans have judged “the overall quality of life” to be satisfactory. This did decline in later years, but that was in response, presumably, to the economic recession that began in 2008. Evaluations of the overall quality of life rose again when the recession waned (Figure 5).<sup>42</sup>

These data suggest that the traumatic attacks of 9/11 did not really substantially undermine trust and openness, reduce the sense of intrinsic moral worth, increase a





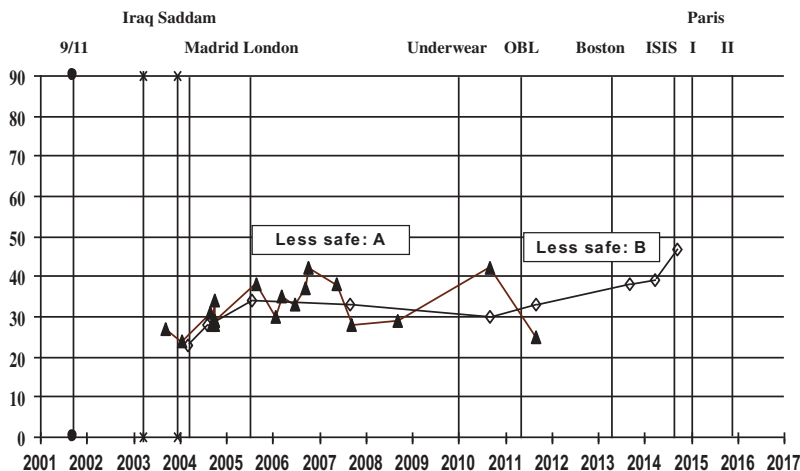
**Figure 1.** Permanently changed life due to 9/11.

As a result of the September 11th terrorist attacks, do you think Americans have permanently changed the way they live, or not? have you permanently changed the way you live, or not? Gallup/CNN/USA Today

OK City: Terrorist bombing in Oklahoma City, April 19, 1995  
 9/11: Terrorist attacks of September 11, 2001  
 Iraq: Beginning of the Iraq War, March 20, 2003  
 Saddam: Capture of Saddam Hussein, December 13, 2003  
 Madrid: Terrorist bombings in Madrid, March 11, 2004  
 London: Terrorist bombings in London, July 7, 2005  
 Underwear: Underwear bomber, December 25, 2009  
 OBL: Killing of Osama bin Laden, May 2, 2011  
 Boston: Terrorist bombings at Boston Marathon, April 15, 2013  
 ISIS: First beheading of an Americans by ISIS, August 19, 2014  
 Paris I: Charlie Hebdo shootings, January 15, 2015  
 Paris II: Multiple shootings, November 13, 2015, followed by the San Bernardino shootings 20 days later

sense of helplessness, or affect “basal security”—defined as the “unarticulated affective sense of safety and trust through which one (sometimes unconsciously) judges and assesses risks.”<sup>43</sup> Nor does terrorism seem to be a “threat to institutions that undergird a society’s common social life,” as Anderson puts it.<sup>44</sup> If anything, the attacks brought Americans (and their highly sympathetic Western allies) closer together, although this may have been accompanied by something of a wariness about Muslims.

It is also worth noting that, although Americans may profess to worry about terrorism and feel no safer from it than they did before 9/11, terrorism has dropped considerably in the degree to which it registers on questions about the most important problem facing the country today. As Figure 6 indicates, there were some upward spikes in concern at the time of official warnings in the run-up to the 2004 election about an imminent attack, and at the time of the terrorist attacks in London in 2005, the attempted attack by the underwear bomber in 2009, and the threat of ISIS in the last few years.<sup>45</sup> However, the percentage of Americans who counted terrorism as the country’s “most important problem” has not registered above 20 percent since 2002. Other concerns—the wars in the Middle East and, more recently, the economy—have dominated the responses to this question.<sup>46</sup>



**Figure 2.** Country less safe than before 9/11.

A: Compared to before September 11, 2001, do you think the country today is safer from terrorism or less safe from terrorism? *ABC/Washington Post*

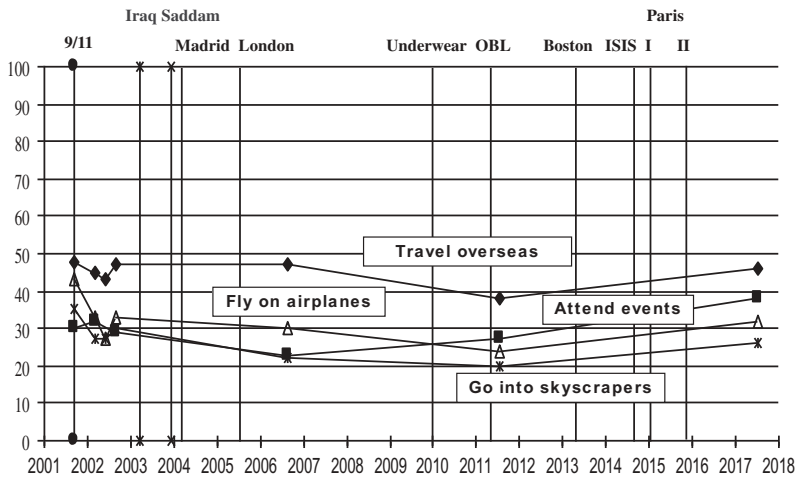
B: Do you think the United States is safer or less safe today than before 9/11? *Fox/Opinion Dynamics*

### Behavioral data

The impact of terrorism in the U.S. on actual behavior, as opposed to opinion as registered in some polls, seems to have been fairly minor.<sup>47</sup> The 9/11 tragedy did, of course, have a notable effect on the economy and on the stock market, on tourism, and especially on air travel, and full recovery took more than three years—during which time hundreds were killed because they drove to their destinations to avoid flying.<sup>48</sup> Meanwhile, however, property values in the targeted cities of New York and Washington continued upward.<sup>49</sup> Eventually, like other cities, they declined, but this was caused by the 2008 recession, not by fears of terrorism.

And, despite what Americans say in polls about being “less willing” to go out in crowds or travel, there seems a fair bit of evidence that they are still doing it. Motion picture attendance rose from 1.42 billion in 2000, to 1.54 billion in 2001, to 1.64 billion in 2002. Leisure travel—overnight leisure trips within the United States—rose from 337.1 million in 2000, to 349.1 million in 2001, to 354.0 million in 2002.<sup>50</sup> Attendance at New York Giants and Jets home games was higher in 2001 than in 2000 and even higher in 2002.<sup>51</sup> College football attendance increased each year from 2000 to 2003.<sup>52</sup>

It should also be kept in mind that the terrorist attacks of 9/11 were a very considerable aberration: as noted earlier, scarcely any terrorist attack before or after, even in war zones where terrorists have the time and space to plan and assemble, has visited even one-tenth as much total destruction. And, if 9/11 was extreme in its destructiveness, so, presumably, was its impact on fears and apprehensions. In contrast, the effect of other terrorist events on behavior in the United States does not seem to be very considerable. This is true even for the worst of these, the killing of 49 at a nightclub in Orlando, Florida, in June 2016. Hotel occupancy rates in that city for the first quarter of 2017 were one percent higher than they had been for the same quarter in 2016.<sup>53</sup> And, despite the media frenzy in the aftermath of an attempted airliner attack by the underwear bomber



**Figure 3.** Less willing to travel overseas, attend events, fly, go into skyscrapers.

As a result of the events that occurred on September 11th [2017: As a result of the events relating to terrorism in recent years], would you say that now you are less willing to fly on airplanes, go into skyscrapers, attend events where there are thousands of people, travel overseas—or not? (order randomized) Gallup

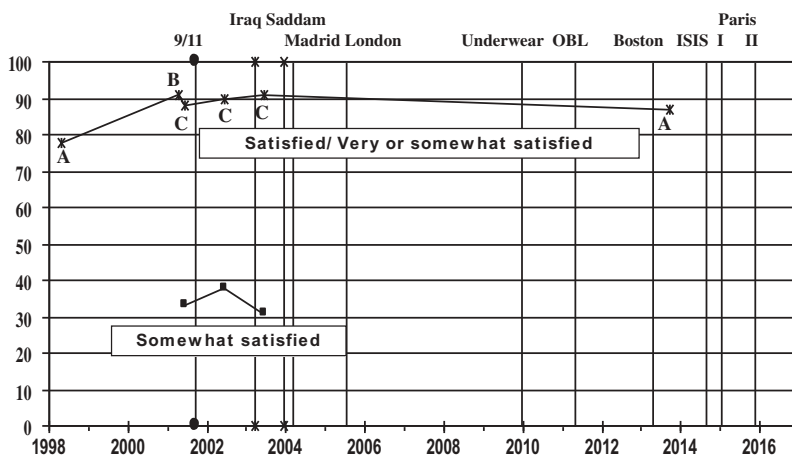
at the end of 2009, international travel to the U.S. increased by 8 percent in 2010, and airline ticket sales for U.S. international and domestic flights increased by 19 percent for the same period.<sup>54</sup>

The pattern seems quite general. There was a notable drop in tourism to London after the 2005 terrorist bombings there that killed 52 on public transit, but this did not last long, and at the same time tourism to the rest of the United Kingdom actually rose a bit.<sup>55</sup> A bombing in Manchester in May 2017 that killed 23 was by far the most costly terrorist attack in the United Kingdom since 2005. There was considerable local business disruption, and the arena in which the bombing took place was closed for four months and concerts there were cancelled. The Greater Manchester Chamber of Commerce reported an “immediate dip” in tourism and hotel bookings following the attack, but by the end of the year levels of tourism, visitors, and conferences were as “high as ever,” according to its head of research and policy.<sup>56</sup>

More generally, an extensive review of international terrorism losses by Todd Sandler and Walter Enders concludes that “for most economies, the economic consequences of terrorism are generally very modest and of a short-term nature” and “large diversified economies are able to withstand terrorism and do not display adverse macroeconomic influences.” Moreover, most effects are localized.<sup>57</sup> And for decades, studies of disasters have concluded panic to be rare and resilience to be high.

### **Cost-benefit analysis**

Although the bathtub comparison does provide a degree of context, a full assessment, as the critics suggest, must include not only the direct costs, such as property damage and loss of life, but also the indirect ones such as those associated with reduced travel, the effects of economic uncertainty, and social and psychological stress. The critics argue that



**Figure 4.** Satisfaction with personal safety from physical harm.

A. Please tell me whether you are generally satisfied or dissatisfied with each of the following. How about... your safety from physical harm or violence?

B. I'd like to ask you about some aspects of your life. Are you satisfied or dissatisfied with the following aspects of your life? How about... your safety from physical harm or violence?

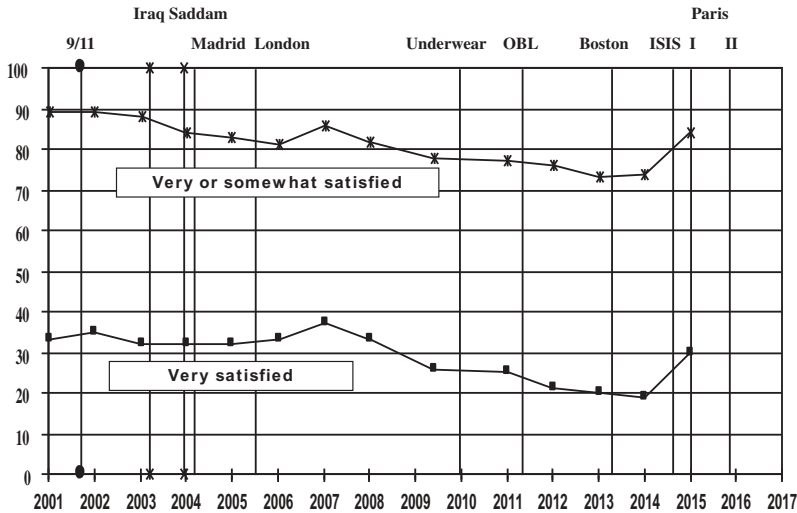
C. We'd like to know how satisfied are you with each of the following aspects of your life—very satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied? How satisfied are you with... your safety from physical harm or violence? Gallup

such indirect costs are not necessarily substantial for bathtub drownings, while they can be quite considerable for terrorism.

Table 2 provides a set of estimates of the total costs, direct and indirect, for a series of terrorist events, comparing them with those entailed in bathtub drownings. An assessment done for the Department of Homeland Security sets the value of a human life \$7.5 million in current US dollars—as do many other analyses—and it then suggests that this might be doubled for deaths caused by terrorism on the grounds that the risks are “more involuntary, uncontrollable, and dread” than those associated with “more familiar risks.”<sup>58</sup> However, the estimates in Table 2 are far higher than that. Indeed, the cost of the loss of life for many of the terrorist events is less than 10 percent of the total cost, so there is a large multiplier effect for indirect and social losses: these far exceed the costs of the human life lost in many cases. This, even though much of the discussion in the previous section about the actual behavioral effects strongly suggests that many of the estimates should be considerably lower.

These estimates can be used to provide a cost-benefit analysis in which the full costs of terrorism are balanced against those entailed in countering the threat. We find that, even including very high estimates of the costs of the fear and anxiety generated by terrorism and a low one for the costs of overall counterterrorism measures, the measures do not prove to be cost-effective.

The United States spends about \$115 billion per year on domestic counterterrorism. This is a low estimate as it ignores nearly \$50 billion in opportunity costs as well as all of the costs of overseas military activity designed to deal with terrorism.<sup>59</sup> Such spending would be deemed to be cost-effective only if, using the information in the second row in



**Figure 5.** Satisfaction with quality of life.

I'm going to read some aspects of life in America today. For each one, please say whether you are—very satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied. How about...the overall quality of life? Gallup

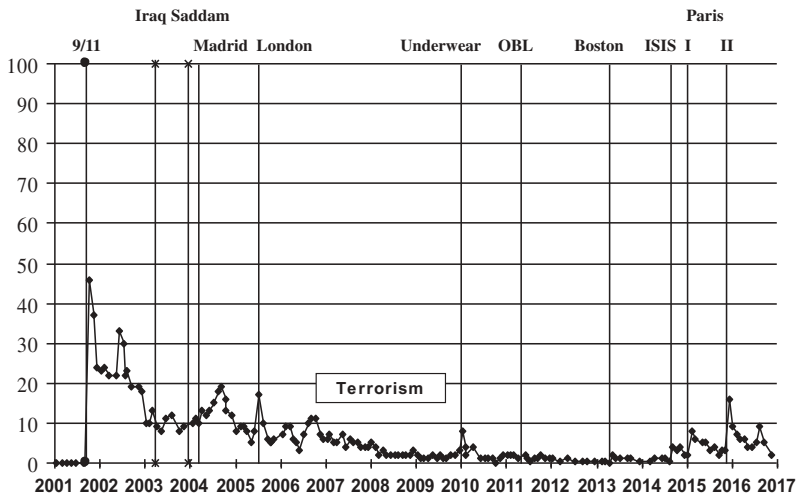
Table 2, it each year deters, disrupts, or protects against 23 attacks like the one in London in 2005, about two a month. That would be \$115 billion (the cost of the security measures) divided by \$5 billion (the cost of the damage inflicted in an attack of that size). Or, using the data in the fourth row, counterterrorism measures would be deemed cost-effective only if they could be said to have been effective against 230 attacks like the one at the Boston Marathon in 2013 every year, or one every day or two. That would be \$115 billion divided by \$0.5 billion.

The table also includes cost estimates for bathtub drownings. There may be an underappreciation of the indirect costs, especially the emotional ones, of these. Something like half of these fatalities are of babies and infants who are being bathed when the parent is momentarily called away—supreme tragedies that surely lead in many cases to a lifetime of grief and regret. If we posit that each drowning inspires a million dollars in regret on average, the total costs of bathtub drownings over a year would approach and even surpass those exacted by many terrorist events.

### Unlike terrorism, bathtubs provide benefit

However, there is another related consideration. Whereas a terrorist attack supplies little or nothing in benefit, bathtubs do provide benefit.<sup>60</sup> Depending on how one evaluates the size of that benefit, differences could be leavened.

It is certainly true that, as Fox argues, quoting the eminent risk analyst Baruch Fischhoff, “people tolerate risks where they see benefit.” And, adds Fox, “ladders, stairs, and bathtubs are undeniably useful. Terrorists not so much.”<sup>61</sup> Surely the most spectacular case in point concerns the private passenger automobile which is the necessary cause of tens of thousands of deaths per year in the United States (Figure 7). In this case, the risks with their well-known



**Figure 6.** Terrorism as the most important problem.

What do you think is the most important problem facing this country today? Gallup

**Table 2.** Estimated costs of terrorist events (\$ millions).

Terrorist event	Number killed	Direct costs		Indirect and social costs	Total cost (approx)	Indirect costs include high estimates for:
		Cost of lives lost	Cost of property damage			
September 11, 2001	2,975	\$25,000	\$30,000	\$55,000 to \$200,000	\$250,000	Economic disruption, reduced airline traffic, reduced tourism
London, 2005	52	\$400	\$100	\$4,500	\$5,000	Lost ticket revenues, reductions in tourism and retail.
Fort Hood, 2009	13	\$98	\$2	\$15	\$115	
Boston Marathon, 2013	3	\$25	\$10	\$100 to \$500	\$500	Policing, city shutdown
Orlando, 2016	49	\$370	\$5	\$50	\$425	
Manchester, 2017	23	\$175	\$25	\$2,300	\$2,500	Arena closed for 4 months. Assume losses half of London 2005.
Comparison:						
Bathtub drowning	1	\$7.5	0	\$1	\$8.5	Long-term pain and suffering especially by parents
431 bathtub drownings (2011)	431	\$3,250	0	\$431	\$3,681	Long-term pain and suffering especially by parents

All costs are in millions of 2017 US dollars, and many are rounded up for convenience of presentation.

costs have presumably been accepted, or tolerated, because the benefits are taken to exceed the horrific cost. We have effectively concluded, for example, that 40,000 lives and some two million disabling injuries per year (plus pollution) is an entirely acceptable price to pay for the blessings of the automobile—the pleasure, the convenience, the personal mobility, the economic benefit, the aesthetic charm, the macho gratification.<sup>62</sup>

It is, as it happens, quite possible to move people without killing them. Large commercial airlines have gone entire years without fatalities; passengers killed on railroads in a year can often be numbered on the fingers of one hand; the New York City subway system, regularly maligned for filth, inefficiency, noise, and other indignities, moves millions of people every

day and sometimes goes *decades* without a fatality caused by subway system defects or misjudgments. Despite this, a policy to phase out the private passenger automobile in favor of safer modes of transportation, or a relatively modest policy of reducing the speed limit for private passenger cars (but not for buses, taxis, vans, jitneys, and other devices driven by professionals) to, say, 13 miles per hour would be animatedly rejected out of hand even though such policies would hugely reduce the highway slaughter.<sup>63</sup> Thus, people are willing to bear horrendous costs if a hazard provides sufficient benefit.

However, when the fatality rate for a hazard is low enough, there is a tendency to do little about it regardless of whether it provides a substantial benefit or not: the risk, regardless of any benefit, is deemed to be acceptable. There is no fixed pattern, but this point is roughly reached when the annual risk is as low as something like one in a million or, for the United States with a population of 330 million, when 300 or 400 or fewer people die per year from the hazard.<sup>64</sup>

The process can be seen in the case of bathtubs which provide benefit, of course, while killing some 400 people a year and, as noted, creating considerable anguish. Yet, there has been very little effort to reduce that death toll: parents are not routinely warned about being especially careful when they bathe babies and small children, and grab bars to reduce the effects of bathtub falls are not systematically required.

The same holds for low frequency hazards that, like terrorism but unlike bathtubs, do not provide benefit. Diseases are like terrorism in that they do not provide a benefit. Yet, all other things equal, grant applications to research diseases that kill six people a year are likely to go unfunded—there is a strong tendency to expend limited funds on diseases that kill far more. And, beyond the installation of lightning rods in areas where thunder storms are severe, little has been done to reduce the incidence of deaths from lightning—a hazard that, like disease and terrorism, delivers little or no benefit.<sup>65</sup>

### **Terrorism fears force costly policies of overreaction**

Two former counterterrorism officials from the Obama administration, Jennie Easterly and Joshua Geltzer, argue that

So long as human nature yields a reaction to terrorism that shakes domestic politics, redirects foreign policy, and upends regional stability, terrorism demands our attention. Of course, so does the quite explicit expectation of the American public that its government protect it from this form of deliberately targeted, violent death in particular—whereas the American public has expressed no such concern about the accidental perils of the bathtub.<sup>66</sup>

The writers are certainly correct when they note that there is far more demand from the public to deal with terrorism than to deal with bathtub drownings and that in a democracy, in particular, officials must yield (or appear to yield) to the demand: attention must be paid. The suggestion is that there are distinct political consequences of the public fears, and that this must be serviced by overreaction and by instituting excessively costly countermeasures. That is, the argument runs, the only way to reduce the fear and consequently the political pressure is to reduce the incidence and/or the virulence of terrorism.

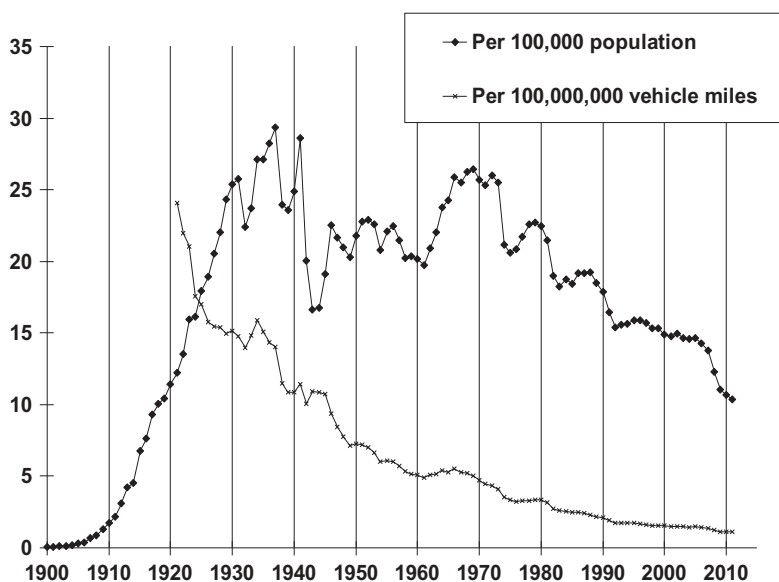


Figure 7. Automobile deaths, US.

But does the demand actually require specific foreign and domestic policies that are excessive to the danger presented by the threat? And are the jobs of responsible officials truly in jeopardy if the people are, or believe themselves to be, insufficiently protected?

This section assesses such questions, and it also includes a discussion of risk communication. Can officials and others communicate the terrorism risk in a manner that reduces fear—or at least puts it on a more rational level? And do present approaches irresponsibly exaggerate the dangers of the hazard and exacerbate the fear of it?

### Foreign policy

The fearful response to 9/11 may have made the wars in Afghanistan and Iraq politically possible, but it did not require them.

In the case of Afghanistan, the public might well have accepted a milder reaction. A policy that could probably have been sold to the public after 9/11 might have emphasized coordinating with other countries to put pressure on the Afghan regime, the Taliban—which had had nothing to do with 9/11.<sup>67</sup> Almost all countries in the world were very eager to cooperate after the 9/11 shock, and this included two of the very few that had supported the Taliban previously: Pakistan and Saudi Arabia. In fact, the Saudis had been trying for years to get Saudi renegade Osama bin Laden extradited, and they appear to have come close to success in 1998.<sup>68</sup>

The insecure regime in Afghanistan might have been susceptible to such international pressure, perhaps even to the point of turning Osama bin Laden and his top associates over to international justice, which is more than the invasion accomplished—indeed, at the end, the Taliban offered to turn him over to any country other than the United States without seeing evidence of guilt, but that was not good enough for President George W.



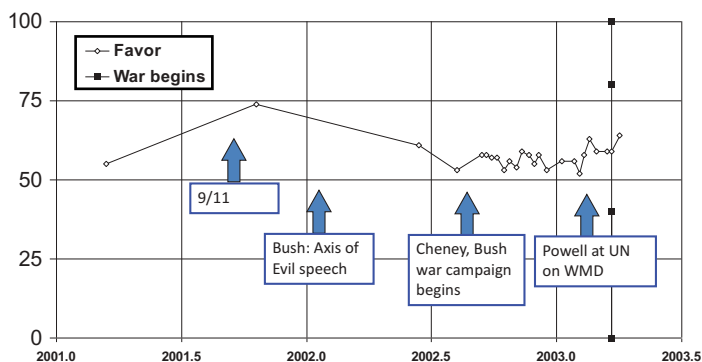
Bush, who eschewed any “negotiations” whatever.<sup>69</sup> To the degree that this didn’t work, the United States could have applied policing, intelligence, selective bombing, and commando raids to go after al-Qaeda and its leadership rather than outright invasion.

That such lesser measures might have been politically possible is suggested by the derisive assertion of a member of the Bush administration in 2004 that a Clinton-like administration, even under the impetus of 9/11, might have refrained from “any form of decisive operations involving ground troops in areas of high risk” including Afghanistan.<sup>70</sup>

And, whatever the resonance of 9/11, there was no political imperative to launch a costly ground war against Iraq. Support for a war against Iraq escalated notably after 9/11, but it dwindled again during the next several months to about where it had stood before the attack. The George W. Bush administration then launched a concentrated campaign to boost support for going to war, encouraged perhaps by the fact that polls found around half of the population professing to believe Saddam had been personally involved in the attacks.<sup>71</sup> But, despite strenuous efforts, it was unable notably to increase support for doing so: from September 2002 to the launching of war in March 2003, attitudes did not change notably (Figure 8).<sup>72</sup>

Bush did manage to get his war, of course. But this was because, as president, he was able to order troops into action, not because of his ability to move the public to his point of view. But in this case it was presidential policy that “redirects foreign policy, and upends regional stability,” as Easterly and Geltzer put it, not the public’s inchoate fears and anxieties about terrorism.

Although 9/11 is an extreme case, history clearly demonstrates that overreaction to major international terrorist acts against Americans is not necessarily politically required. Consider, for example, the two instances of terrorism that killed the most Americans before September 2001. Ronald Reagan’s response to the first of these, the 1983 suicide bombing in Lebanon that resulted in the deaths of 241 American marines, was to make a few speeches and eventually to pull the troops out. The venture seems to have had no negative impact on his reelection a few months later. The other was the December 1988 bombing of a Pan Am airliner over Lockerbie, Scotland, in which 187 Americans perished. The official response, beyond seeking compensation for the victims, was simply to apply



**Figure 8.** Use of troops to remove Saddam Hussein.

Would you favor or oppose invading Iraq with U.S. ground troops in an attempt to remove Saddam Hussein from power? –Gallup

meticulous police work in an effort to tag the culprits, a process that bore fruit only three years later and then only because of an unlikely bit of luck.<sup>73</sup> But that cautious response proved to be entirely acceptable politically.

This is suggested as well by the experience with terrorism within the United States. George W. Bush's response to the anthrax attacks of 2001 was essentially the same as Clinton's had been to the terrorist attacks against the World Trade Center in 1993 and in Oklahoma City in 1995, and the same as the one applied in Spain when terrorists bombed trains there in 2004, or in Britain after attacks in 2005, or in France after the Paris killings of 2015: the dedicated application of police work to try to apprehend the perpetrators.

### **Domestic policy**

Former National Security Agency director Michael Hayden recalls a dictum he issued two days after 9/11: "We were going to keep America free by making Americans feel safe."<sup>74</sup> However, as noted earlier, polls routinely find that over the years since 2001, when expenditures on domestic homeland security increased by well over \$1 trillion, many Americans have continued to say they do not feel safer from terrorism than they did before 9/11 (Figure 2). This, even though there has been little terrorism in the US, even though Osama bin Laden has been expunged, and even though there has been nothing remotely comparable to 9/11 anywhere in the world.<sup>75</sup> Thus, if terrorism fear "shakes domestic politics" and therefore causes officials to feel they must expend vast sums to mollify and reassure a terrified public, their efforts have utterly failed.

Moreover, political pressures do not precisely dictate the level or direction of expenditure. Although there may be public demands to "do something" about terrorism, nothing in those demands specifically requires American officials to mandate removing shoes in airport security lines, to require passports to enter Canada, to spread bollards like dandelions, to gather vast quantities of private data, or to make a huge number of buildings into forbidding fortresses.<sup>76</sup>

Therefore, policy-makers are, in an important sense, free to be rational: to adopt measures that most efficiently enhance public safety using standard risk-analytic and cost-benefit procedures. For the most part, however, they have not done so. After nearly two years of investigation, a committee of the National Research Council of the National Academies of Sciences, Engineering, and Medicine reported in 2010 that it was unable to find any "risk analysis capabilities and methods" that were adequate to support decision making by the Department of Homeland Security, observing that "little effective attention was paid to the features of the risk problem that are fundamental."<sup>77</sup> And in 2017, the Government Accountability Office faulted the Transportation Security Administration for failing to set up a coherent system to analyze and compare the cost and effectiveness of its various counterterrorism measures—many of them quite expensive.<sup>78</sup> True to form, one former administrator of the Transportation Security Administration, speaking on the condition of anonymity in order to be able to speak candidly, told the *Washington Post* in 2017, "[A]ll of this is about risk. This is about security, so the more security elements we have in place, the more secure the traveling public in railroad stations and airports are going to be."<sup>79</sup> That is, what this top official considered important was to keep throwing "security

elements” at the problem without bothering to investigate a key, even elemental, question: does the added element improve security enough to justify its cost?

### ***Job security***

Politicians and bureaucrats think they have an incentive to pass along vague and unconfirmed threats to protect themselves from later criticism—and possibly job-jeopardy—should another attack take place. As Michael Sheehan, New York City’s former deputy director for counterterrorism, puts it, “No terrorism expert or government leader wants to appear soft on terrorism. It’s always safer to predict the worst; if nothing happens, the exaggerators are rarely held accountable for their nightmare scenarios.”<sup>80</sup> And two former members of the Obama administration contend that “any administration on whose watch an attack were to occur would immediately face relentless political recrimination.”<sup>81</sup>

It might be unkindly suggested, for starters, that, if officials in charge of providing for public safety are incapable of carrying out their jobs in a manner that provides the most safety for the money expended, they should frankly admit that they are being irresponsible—that they consider retaining their position to be more important than providing for public safety—or they should refuse to take the job in the first place. People who join the army or become firefighters accept the possibility that at some point they may be put in a position in which they are shot at or are required to enter a burning building. People who become decisionmakers should in equal measure acknowledge that to carry out their job properly and responsibly, they may be required on occasion to make some difficult, even career-threatening decisions.<sup>82</sup>

However, it seems likely that politicians and bureaucrats are overly fearful about the consequences of reacting moderately to terrorism. That is, their worries about job security, budget preservation, and political consequence are exaggerated. For example, in 2007 New York Mayor Michael Bloomberg compared death from terrorism to death from lightning and urged people to “get a life.”<sup>83</sup> This unconventional outburst did not have negative consequences for him: although he had some difficulties in his reelection two years later, his blunt, and essentially accurate, comments about terrorism were not the cause. The same can be said for President Barack Obama, who was so daring as to say that the US can “absorb” terrorist attacks and that such episodes do not present an “existential risk” to the country.<sup>84</sup>

More generally, it should be asked which officials have been damaged by terrorist attacks, and when? Certainly not George W. Bush—when 9/11 occurred on his watch, his job approval ratings went sky high and then declined only quite slowly thereafter.<sup>85</sup> Officials in the United States seem to have survived large attacks like the ones on Fort Hood in 2009, San Bernardino in 2015, and Orlando in 2016, as have those abroad after attacks in London, Paris, Brussels, Barcelona, and Berlin. Who has been sacked?

### ***Communicating the risk***

Cass Sunstein focuses on what he calls “probability neglect” and relates it directly to the experience with terrorism. “When their emotions are intensely engaged,” he finds, “people’s attention is focused on the bad outcome itself, and they are inattentive to the fact that

it is unlikely to occur.” Under such conditions, he argues, “attempts to reduce fear by emphasizing the low likelihood of another terrorist attack,” including comparing terrorism deaths with bathtub drownings, are “unlikely to be successful.” Concern about safety can rise when people discuss a low-probability risk, even when what they mostly hear are apparently trustworthy assurances that the danger is infinitesimal.<sup>86</sup> Risk, then, tends to be more nearly socially constructed than objectively calculated.<sup>87</sup> For emotion-laden hazards like terrorism, continues Sunstein, the best response may be to “alter the public’s focus.” That is, “perhaps the most effective way of reducing fear of a low-probability risk is simply to discuss something else and to let time do the rest”—a policy generally adopted by the nuclear power industry.<sup>88</sup>

For all the gloomy difficulties, however, there ought at least to be an effort to try to communicate the risk terrorism presents in a responsible manner. That is, risk assessment and communication should be part of the policy discussion over terrorism, something that is a far smaller danger than is popularly portrayed, or imagined.<sup>89</sup>

It is true that few voters spend much time following the ins and outs of policy issues, and even fewer are certifiable policy wonks. But they *are* grownups, and it is just possible that at least some of them would respond reasonably to an adult conversation about terrorism. Indeed, the recent popularity of the “bathtub fallacy” discussion might be taken to suggest that more people are beginning to think in such terms.

At a minimum, efforts should be made to reduce the glory from terrorism by treating terrorists more like common criminals—although this would mean, as Sageman points out, putting a stop to press conferences in which officials “hold self-congratulatory celebrations of their newest victories in the ‘war on terror.’” He stresses that to allow officials to “exploit the issue of terrorism for political gain is counterproductive.”<sup>90</sup> The persistent exaggeration of the mental and physical capacities of terrorists has the perverse effect of glorifying the terrorist enterprise in the minds of many of its practitioners. The constant unnuanced stoking of fear by politicians, bureaucrats, experts, and the media, however well received by the public, is on balance costly, enervating, and unjustified by the facts.

But perhaps there is a considerable amount of (self-interested) method in the madness. As bathtub fallacy critic Kenneth Anderson puts it, “what government security measures, or ecosystem of security measures, could survive scrutiny if it were accepted, and taken as the central comparative fact, that the [yearly] chances of an individual U.S. person dying from terrorism in the years 1970–2013 was a mere 1 in 4 million?”<sup>91</sup>

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14. For the extended argument that the likelihood of atomic terrorism is vanishingly small, see John Mueller, *Atomic Obsession: Nuclear Alarmism from Hiroshima to Al Qaeda* (New York: Oxford University Press, 2010), chs. 12–15. See also Robert Diab, *The Harbinger Theory: How the Post-9/11 Emergency Became Permanent and the Case for Reform* (New York: Oxford University Press, 2015); Brian Michael Jenkins, *Will Terrorists Go Nuclear?* (Amherst, NY: Prometheus, 2008); Kier A. Lieber and Daryl G. Press, "Why States Won't Give Nuclear Weapons to Terrorists," *International Security* 38, no. 1 (Summer 2013): 80–104.
15. Brian Michael Jenkins, *Stray Dogs and Virtual Armies: Radicalization and Recruitment to Jihadist Terrorism in the United States Since 9/11* (Santa Monica, CA: RAND, 2011), 1. See also Risa A. Brooks, "Muslim 'Homegrown' Terrorism in the United States: How Serious Is the Threat?," *International Security* 36, no. 2 (Fall 2011): 7–47; Trevor Aaronson, *The Terror Factory* (Brooklyn, NY: Ig Publishing, 2013); Mueller, *Terrorism Since 9/11* (see note 9); John Mueller and Mark G. Stewart, "The Terrorism Delusion: America's Overwrought Response to September 11," *International Security* 37, no. 1 (Summer 2012): 81–110; Mueller and Stewart, *Chasing Ghosts* (see note 9), chs. 3–4; Mark G. Stewart and John Mueller, *Are We Safe Enough? Measuring and Assessing Aviation Security* (Amsterdam: Elsevier, 2018).
16. Michael Kenney, "Dumb' Yet Deadly: Local Knowledge and Poor Tradecraft Among Islamist Militants in Britain and Spain," *Studies in Conflict & Terrorism* 33, no. 10 (October 2010): 911–22. This holds even for the putative "mastermind" of 9/11, Khalid Shaikh Mohammed: just about *all* of his many terrorism schemes either failed or did not even begin to approach fruition. Overall, as a terrorism planner, he had a fertile mind but a feeble record of accomplishment, one characterized by fanciful scheming and stunted execution. Mueller and Stewart, *Chasing Ghosts* (see note 9), 125–26. A rare success for KSM was the Bali bombings of 2002; his contribution, however, was only to supply some money. In this context, 9/11 clearly stands out as an aberration.
17. In 2016, a 20-ton truck was used to ram people at a Bastille Day celebration in Nice, France, killing 86. That level of mayhem has not been maintained, however. In the dozen or so efforts at vehicular terrorism since, none has killed more than 13 and most have killed four or less. "Terrorist Attacks by Vehicle Fast Facts," CNN, March 1, 2018. [www.cnn.com/2017/05/03/world/terrorist-attacks-by-vehicle-fast-facts/index.html](http://www.cnn.com/2017/05/03/world/terrorist-attacks-by-vehicle-fast-facts/index.html) There was a degree of innovation in a non-Islamist terrorist attack in Norway in 2011, but no lessons appear to have been drawn from it. See Åsne Seierstad, *One of Us: The Story of Anders Breivik and the Massacre in Norway* (London: Virago, 2015).

18. There is, for example, the Times Square bomber of 2010 whose bomb was reported from the start to be “really amateurish,” with some analysts charitably speculating when it was first examined that it might be “some sort of test run” created by “someone who’s learning how to make a bomb.” Mueller, *Terrorism Since 9/11* (see note 9), case 34. His bumbling efforts are held to have “almost succeeded,” by two analysts: John Yoo, “Conclusion” in *Confronting Terror: 9/11 and the Future of American National Security*, eds. Dean Reuter and John Yoo (New York: Encounter, 2011), 278; Ali Sofan, “Enemies Domestic,” *Wall Street Journal*, January 23, 2013. They are deemed a “near miss” by a third: Steve Coll, *Directorate S* (New York: Penguin, 2018), 451.
19. Fox, “Stop Telling Me How Dangerous My Bathtub Is” (see note 5); Anderson, “The Bathtub Fallacy” (see note 5).
20. Fox, “Stop Telling Me How Dangerous My Bathtub Is” (see note 5).
21. For data through 2017, see Mueller, *Terrorism Since 9/11* (see note 9), 3–4.
22. Nassim Nicholas Taleb, *The Black Swan: The Impact of the Highly Improbable*, 2nd ed. (New York: Random House, 2010), xxix, xxxii, 11.
23. John Mueller and Mark G. Stewart, “The Curse of the Black Swan,” *Journal of Risk Research* 19, no. 9–10 (October–November 2016): 1319–30. [politicalscience.osu.edu/faculty/jmueller/ICOSSARjrrfn.pdf](http://politicalscience.osu.edu/faculty/jmueller/ICOSSARjrrfn.pdf).
24. Peter L. Bergen, *United States of Jihad: Investigating America’s Homegrown Terrorists* (New York: Crown Publishers, 2016), 218; see also Betts, *American Force* (see note 6) 107–108; Brian Michael Jenkins, “Fifteen Years On, Where Are We in the ‘War on Terror’?” *CTC Sentinel*, September 2016, 8.
25. Greg Miller, “Cheney Assertions of Lives Saved Hard to Support,” *latimes.com*, May 23, 2009.
26. For one rather tentative effort, see Miller, “Cheney Assertions of Lives Saved” (see note 25).
27. Alex Nowrasteh, “Counterterrorism Spending,” *Cato at Liberty*, May 25, 2018, [www.cato.org/blog/counter-terrorism-spending](http://www.cato.org/blog/counter-terrorism-spending).
28. The study Nowrasteh discusses concludes that government counterterrorism expenditures since 9/11 have totaled \$2.8 trillion. If the full cost of 9/11 was \$250 billion (see Table 2), that would amount to the equivalent of over ten attacks like 9/11.
29. Mueller, *Terrorism Since 9/11* (see note 9); Bergen, *United States of Jihad* (see note 24).
30. Mueller, *Terrorism Since 9/11* (see note 9), cases 4, 26, 32, 54, 57, 72, 76, 86, 105, 115.
31. National Public Radio, *Talk of the Nation*, July 19, 2010.
32. Marc Sageman, email to John Mueller, July 11, 2014.
33. Interview with John Mueller, May 1, 2014, Washington, DC.
34. On this issue, see Mueller and Stewart, *Chasing Ghosts* (see note 9), 35–37; Sageman, *Leaderless Jihad* (see note 9) and *Turning to Political Violence* (see note 2).
35. On aviation as a target, see in particular Stewart and Mueller, *Are We Safe Enough?* (see note 15).
36. Since 9/11, there have been something like two billion legal entries into the United States by foreigners. It is impressive that virtually no al-Qaeda or other Islamist extremist operatives appear to have been in that number. The costly maintenance of a no-fly list and similar measures has doubtless been helpful in this. Indeed, getting operatives into the country was already a primary problem for the 9/11 plotters. Terry McDermott and Josh Meyer, *The Hunt for KSM: Inside the Pursuit and Takedown of the Real 9/11 Mastermind, Khalid Sheikh Mohammed* (New York: Little, Brown, 2012), 141. However, the complete failure of overseas terrorists to insert any operatives at all since 2001 suggests either considerable incompetence or a lack of trying very hard. The Western European experience may also be relevant to this issue. The United Kingdom spends about half as much proportionately as the United States on counterterrorism, yet has suffered about six deaths per year since 2001, the same as for the United States. This, even though Europe’s Muslim population is large and even though entry and exit are much easier—it does not have the Atlantic Ocean as a moat. For long-term trend data on terrorism in Western Europe, see Chris York, “Islamic State Terrorism Is Serious but We’ve Faced Even Deadlier Threats in the Past,” [huffingtonpost.co.uk](http://huffingtonpost.co.uk), November 29, 2015.

37. In her analysis of civil wars, Virginia Page Fortna concludes that insurgencies that employ a systematic campaign of indiscriminate violence against public civilian targets pretty much *never* win: “Do Terrorists Win? Rebels’ Use of Terrorism and Civil War Outcomes,” *International Organization* 69, no. 3 (Summer 2015): 519–56. Similarly, Max Abrahms finds that the targeting of civilians by terrorists is highly correlated with political failure: *Rules for Rebels: The Science of Victory in Militant History* (New York: Oxford University Press, 2018).
38. Bruce Schneier, “Why Are We Spending \$7 Billion on TSA?,” [cnn.com](http://cnn.com), June 5, 2015.
39. Fox, “Stop Telling Me How Dangerous My Bathtub Is” (see note 5). See also Uri Friedman, “The Trouble With How Liberals Talk About Terrorism: So what if falling objects kill more people? It’s not just about the death toll,” [atlantic.com](http://atlantic.com), June 6, 2017.
40. See also John Mueller and Mark G. Stewart, *Public Opinion and Counterterrorism Policy* (Washington, DC: Cato Institute White Paper, February 20, 2018). For additional and updated poll data on terrorism, see John Mueller and Mark G. Stewart, *Trends in Public Opinion on Terrorism*, October 15, 2018, [politicalscience.osu.edu/faculty/jmueller/terrorepolls.pdf](http://politicalscience.osu.edu/faculty/jmueller/terrorepolls.pdf) (updated regularly).
41. Jessica Wolfendale, “Terrorism, Security, and the Threat of Counterterrorism,” *Studies in Conflict and Terrorism* 30, no. 1 (2007): 82.
42. In contrast, studies in Europe suggest that terrorism can affect people’s sense of life satisfaction, or their self-reported subjective well-being scores, and that these changes can have substantial economic consequences. Bruno S. Frey, Simon Luechinger, and Alois Stutzer, “Calculating Tragedy: Assessing the Costs of Terrorism,” *Journal of Economic Surveys* 21, no. 1 (2007): 1–24; and Bruno S. Frey, Simon Luechinger, and Alois Stutzer, “The Life Satisfaction Approach to Valuing Public Goods: The Case of Terrorism,” *Public Choice* 138, no. 3/4 (March 2009): 317–45. This effect does not show up in the American data, perhaps because the European studies concentrate on places like Northern Ireland, where terrorist violence was continual and more focused and where it thus presumably affected daily existence more.
43. Wolfendale, “Terrorism Security,” (see note 41), 81, quoting Karen Jones. See also Goldberg, “What Conor Friedersdorf Misunderstands” (see note 5); Ganesh, “Liberalism Can Only Win” (see note 5); Anderson, “The Bathtub Fallacy” (see note 5).
44. Anderson, “The Bathtub Fallacy” (see note 5).
45. On ISIS, see John Mueller and Mark G. Stewart, “Misoverestimating ISIS: Comparisons with Al-Qaeda,” *Perspectives on Terrorism* 10, no. 4 (August 2016): 32–41. For an array of mostly unfulfilled warnings, alarms, and predictions about terrorism over the years (including those during 2004), see John Mueller and Ezra Schriker, *Terror Predictions*, [politicalscience.osu.edu/faculty/jmueller/PREDICT.PDF](http://politicalscience.osu.edu/faculty/jmueller/PREDICT.PDF)
46. On the behavior of this question over time more broadly, see John Mueller, *War and Ideas: Selected Essays* (London and New York: Routledge, 2011), ch. 8.
47. On this issue, see Richard Betts, “Maybe I’ll Stop Driving,” *Terrorism and Political Violence* 17, no. 4 (Autumn 2005): 487–505; John Mueller, “Response,” *Terrorism and Political Violence* 17, no. 4 (Autumn 2005): 523–28; and Jeffrey A. Friedman, “Explaining Americans’ Divergent Reactions to 100 Public Risks” (paper presented at the Annual Convention of the American Political Science Association, Boston, MA, August 30, 2018).
48. John Mueller and Mark G. Stewart, *Terror, Security, and Money: Balancing the Risks, Benefits, and Costs of Homeland Security* (New York: Oxford University Press, 2011), 4, 133.
49. David Howell, “Despite Rising Home Prices, This Isn’t 2005 Again,” *Washington Post*, September 11, 2017. Trends in New York City Housing Price Appreciation, State of New York City’s Housing & Neighborhoods, 2008.
50. U.S. Census Bureau, *Statistical Abstract of the United States: 2006*, 125 ed. Washington, DC, (November 30, 2005), 785–805.
51. NFL Attendance Data, Pro-Reference Football [www.pro-football-reference.com/years/2002/attendance.htm](http://www.pro-football-reference.com/years/2002/attendance.htm).
52. U.S. Census Bureau, *Statistical Abstract 2006* (see note 50), 793.



53. Richard Bilbao, "Orlando's Hotel Rates Remain Strong, Occupancy Flat after Q1 2017," *Orlando Business Journal*, April 26, 2017.
54. U.S. Census Bureau, *Statistical Abstract of the United States: 2012*, 131 ed. Washington, DC, (August 2011), 776–77.
55. Mueller and Stewart, *Terror, Security, and Money* (see note 48), 62.
56. Rachael Lazaro, "How Has the Arena Attack Changed Manchester?," *BBC News*, November 22, 2017.
57. Todd Sandler and Walter Enders, "Economic Consequences of Terrorism in Developed and Developing Countries: An Overview," World Bank Working Paper, September 2005, [wenders.people.ua.edu/uploads/2/6/3/8/26382715/econ\\_consequences\\_revised.pdf](http://wenders.people.ua.edu/uploads/2/6/3/8/26382715/econ_consequences_revised.pdf).
58. Lisa A. Robinson, J. K. Hammitt, J. E. Aldy, A. Krupnick, and J. Baxter, "Valuing the Risk of Death from Terrorist Attacks," *Journal of Homeland Security and Emergency Management* 7, no. 1, Article 14 (2010). For additional discussions of assessing the value of a human life, see Mueller and Stewart, *Terror, Security, and Money* (see note 48), 56–59; *Chasing Ghosts* (see note 9), 135–137; Stewart and Mueller, *Are We Safe Enough?* (see note 15), 29–34.
59. Mueller and Stewart, *Terror, Security, and Money* (see note 48), 1–4.
60. See Anderson, "The Bathtub Fallacy" (see note 5).
61. Fox, "Stop Telling Me How Dangerous My Bathtub Is" (see note 5).
62. Although the automobile does provide benefit, we are certainly alarmed at its human costs, and in result, truly massive improvements in traffic safety have been made. These entail building safer roads and cars, and such measures, as [Figure 7](#) shows, have reduced traffic fatalities per 100,000 vehicle miles over the last hundred years from about 25 to the low single digits. See also Steven Pinker, *Enlightenment Now* (New York: Viking, 2018), 176–80. However, these improvements attract more use of the automobile, and traffic fatalities still reach 40,000 each year. That is, extensive improvement in cars and roads was not able to reduce the total number of fatalities to what might be considered an acceptable level.
63. The potential impact of such policies can be seen in [Figure 7](#) for the war years of 1942–45 when gasoline rationing sharply curtailed automobile usage. There was little or no change in the number of fatalities per vehicle mile, but there was a huge drop in fatalities per capita—in all, some 30,000 to 50,000 lives were saved.
64. On this issue, see Mueller and Stewart, *Terror, Security, and Money* (see note 48), 45–53; *Chasing Ghosts* (see note 9), 137–140; Stewart and Mueller, *Are We Safe Enough?* (see note 15), 34–38.
65. Curiously, however, lightning deaths have actually been reduced considerably. There were hundreds per year in the 1940s, but this had declined to around 40 in 2017. However, for the most part, this was not accomplished by dedicated safety measures, but rather by fortuitous changes that would have come about even if they failed to reduce the lightning death toll at all. In particular, there are now far fewer people tilling the fields due to modern farming methods, weather predictions have become much more precise, and the lives of people who previously would have been killed because they were on the telephone when lightning struck their house have been saved because they now use cordless or cell phones. Doyle Rice, "USA Saw Fewest Lightning Deaths on Record in 2013," *USA Today*, January 11, 2014.
66. Easterly and Geltzer, "More Die in Bathtubs than in Terrorism" (see note 5). On this general issue, see also Jon Finer and Robert Malley, "How Our Strategy Against Terrorism Gave Us Trump," *New York Times*, March 4, 2017; Robert Malley and Jon Finer, "The Long Shadow of 9/11: How Counterterrorism Warps U.S. Foreign Policy," *Foreign Affairs*, July/August, 2018.
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69. Scott Horton, *Fool's Errand: Time to End the War in Afghanistan* (Chicago, IL: Libertarian Institute, 2017), 51–52.
70. Peter D. Feaver, "The Clinton Mind-Set," *Washington Post*, March 24, 2003, A21.

71. Gary C. Jacobson, *A Divider, Not a Uniter: George W. Bush and the American People* (New York: Pearson Longman, 2007), 139.
72. See also the discussion in Mueller, *War and Ideas* (see note 46), ch. 9.
73. Jeffrey D. Simon, *The Terrorist Trap: America's Experience with Terrorism*, 2nd ed. (Bloomington: Indiana University Press, 2001), 233–34.
74. Shane Harris, *The Watchers: The Rise of America's Surveillance State* (New York: Penguin, 2010), 137.
75. For an extensive analysis, see Mueller and Stewart, *Public Opinion and Counterterrorism Policy* (see note 40).
76. On the “public demand,” see also Goldberg, “What Conor Friedersdorf Misunderstands” (see note 5).
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80. Michael A. Sheehan, *Crush the Cell: How to Defeat Terrorism without Terrorizing Ourselves* (New York: Crown, 2008), 7.
81. Malley and Finer, “The Long Shadow of 9/11” (see note 66).
82. John Mueller and Mark G. Stewart, *Responsible Counterterrorism Policy* (Washington, DC: Cato Institute, Cato Policy Analysis No. 755, September 10, 2014).
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