ABSTRACT For all the attention it evokes, international terrorism, in reasonable context, actually causes rather little damage, and the likelihood that any individual will become a victim in most places is microscopic. But few people, it seems, are aware of either fact. This paper examines 1) the process by which terrorism is measured, demonstrating its limited direct consequences; 2) the fears and the behavioral consequences it creates and nourishes, including economically evasive behavior, negative health effects, and apparent support for policies that often prove expensive and of dubious quality; and 3) the potential longterm persistence of these fears, suggesting that the internalized fears about terrorism may be around for decades.

Calculating probabilities

For several decades, the United States State Department collected data on international terrorism, defining the act as premeditated, politically motivated violence perpetrated by subnational groups or clandestine agents against noncombatant targets (civilians and military personnel who at the time of the incident are unarmed or not on duty) that involve citizens or the territory of more than one country. The data so accumulated for the period from 1975 to 2003 are arrayed in Figure 1.

Those adept at hyperbole like to proclaim that we live in "the age of terror." However, as can be seen in the figure, the number of people worldwide who die as a result of international terrorism by this definition is generally a few hundred a year. In fact, until 2001 far fewer Americans were killed in any grouping of years by all forms of international terrorism than were killed by lightning. Moreover, except for 2001, virtually none of these terrorist deaths occurred within the United States itself. Indeed, outside
of 2001, fewer people have died in America from international terrorism than have drowned in toilets.

Even with the September 11 attacks included in the count, however, the number of Americans killed by international terrorism over the period is not a great deal more than the number killed by lightning—or by accident-causing deer or by severe allergic reactions to peanuts over the same period. In almost all years the total number of people worldwide who die at the hands of international terrorists is not much more than the number who drown in bathtubs in the United States--some 300-400.\(^1\)

Americans worry intensely about "another 9/11," but if one of these were to occur every three months for the next five years, the chance of being killed in one of them is two one-hundredths of one percent: the posited attacks would kill 60,000 which is about .02 percent of 300,000,000. This would be, of course, an extended and major tragedy, but an individual's chances of being killed, while no longer microscopic, would still remain small even under this extreme scenario.

Another assessment comes from astronomer Alan Harris. Using State Department figures, he assumes a worldwide death rate from international terrorism of 1000 per year—that is, he assumes in his estimate that there would be another 9/11 somewhere in the world every several years. Over an 80 year period under those conditions some 80,000 deaths would occur which would mean that the lifetime probability that a resident of the globe will die at the hands of international terrorists is about one in 75,000 (6 billion divided by 80,000). This, he points out, is about the same likelihood that one would die over the same interval from the impact on the earth of an especially ill-directed asteroid or comet. If there are no repeats of 9/11, the lifetime probability of being killed by an international terrorist becomes about one in 120,000.\(^2\)

For such numbers to change radically, terrorists would have to become vastly more capable of inflicting damage. In fact, they would pretty much need to acquire an atomic arsenal and the capacity to deploy and detonate it.

In the last few years, the State Department has changed its definitions so that much domestic terrorism—including much of what is happening in the war in Iraq—is now included in its terrorism count.\(^3\) Current numbers, therefore, are not comparable to earlier ones.

However, when terrorism becomes really extensive in an area we generally no longer call it terrorism, but rather war or insurgency. Thus, the Irish Republican Army was generally taken to be a terrorist enterprise, while fighters in Algeria or Sri Lanka in the 1990s were considered to be combatants who were employing guerrilla techniques in a civil war situation—even though some of them came from, or were substantially aided by, people from outside the country. Some people, notably President George


\(^2\) Harris explains his calculations at http://psweb.sbs.ohio-state.edu/faculty/jmueller/overblown.html. See also Schneier, Beyond, pp. 237-42.

\(^3\) See National Counterterrorism Center, Report on Incidents of Terrorism 2005, 11 April 2006, pp. ii-iii.
W. Bush, continually refer to what is going on in Iraq as "terror" or as "terrorism," but that complicated conflict is more properly, and commonly, labeled an insurgency. Insurgents and guerrilla combatants usually rely on the hit-and-run tactics employed by the terrorist, and the difference is not in the method, but in the frequency with which it is employed.

Without this distinction, much civil warfare (certainly including the decade-long conflict in Algeria in the 1990s in which perhaps 100,000 people perished) would have to be included in the "terrorist" category. And so would most "primitive warfare," which, like irregular warfare more generally, relies mostly on raids rather on set-piece battles. That is, with the revised definition, a huge number of violent endeavors that have normally been called "wars" would have to be recategorized. Indeed, the concept of civil war might have to be retired almost entirely. Most of the mayhem in the American Civil War did take place in setpiece battles between uniformed combatants, but that conflict was extremely unusual among civil wars in this respect—the rebels in most civil wars substantially rely on tactics that are indistinguishable from those employed by the terrorist. Moreover, any genocide, massacre, or ethnic cleansing carried out by insurgents in civil wars would now have to be reclassified as an instance of terrorism.

When people in the developed world worry about terrorism, however, they are not particularly concerned that sustained civil warfare or insurgency will break out in their country. They are mainly fearful of random or sporadic acts of terrorism carried out within their homeland. For this concern, the original State Department definition, not an expanded one stemming from the sustained violence in Iraq, seems to be the most appropriate.

Another approach is to focus on the kind of terrorism that really concerns people in the developed world by restricting the consideration to violence committed by Muslim extremists outside of such war zones as Iraq, Israel, Chechnya, Sudan, Kashmir, and Afghanistan, whether that violence be perpetrated by domestic terrorists or by ones with substantial international connections. Included in the count would be terrorism of the much-publicized sort that occurred in the United States in 2001, in Bali in 2002, in Saudi Arabia, Morocco, and Turkey in 2003, in the Philippines, Madrid, and Egypt in 2004, and in London and Jordan in 2005.

Two publications from Washington think tanks have independently provided lists of such incidents—one authored by Anthony Cordesman of CSIS, the other by Brian Jenkins of RAND. Although these tallies make for grim reading, the total number of people killed in the five years since 9/11 in such incidents comes to about 1000—some 200 per year. That, of course, is 1000 too many, but it hardly constitutes a major threat, much less an existential one, to countries in Europe and North America. For comparison: over the same period far more people have drown in bathtubs in the United States alone.

Neglecting probabilities

Thus, unless international terrorists become far more capable, the danger they present, particularly to people living outside war zones, remains exceedingly small.

---


Despite this condition, polls suggest that people—or at any rate Americans—remain concerned about becoming the victims of terrorism, and the degree of worry doesn't seem to have changed much in the half-decade since the 2001 attacks even though no terrorism whatever has taken place in the country since that year.

Figure 2 supplies the result of a relevant question. Only somewhat less than a third profess that they do not worry at all about the chance that they will personally become a victim of terrorism—the correct response, one might imagine, to a one-in-75,000 lifetime threat. Another third worry "not too much," and fully a third worry "somewhat" or "a great deal" about this microscopic possibility. Presumably few if any worry about being killed by an asteroid or meteor even though probabilities are the same and even though such an astronomical catastrophe has been vividly celebrated in dozens of books and movies over the decades.

In some respects, fear of terror may be something like playing the lottery except in reverse. The chances of winning the lottery or of dying from terrorism may be microscopic, but for monumental events which are, or seem, random, one can irrelevantly conclude that one's chances are just as good, or bad, as those of anyone else. Cass Sunstein labels the phenomenon "probability neglect." He argues that "When their emotions are intensely engaged, people's attention is focussed on the bad outcome itself, and they are inattentive to the fact that it is unlikely to occur."7

There is also a terrorism industry—politicians, bureaucrats, journalists, and risk entrepreneurs who systematically exaggerate dangers and who often profit from their fear-mongering and alarmism.8 It is easy, even comforting, to blame these people for the distorted and context-free condition under which terrorism is so often discussed, and to want go agree wholeheartedly with H. L. Mencken's crack, "The whole aim of practical politics is to keep the populace alarmed (and hence clamorous to be led to safety) by menacing it with an endless series of hobgoblins."9

In many respects, however, the alarm is not so much aroused by the politicians and other "opinion leaders" as by their auditors. Edward R. Murrow's comment about McCarthy applies more broadly: "he didn't create this situation of fear, he merely exploited it." Jeffrey Rosen quotes Tocqueville on the phenomenon: "the author and the public corrupt one another at the same time," and he updates the lesson with a pointed observation about exaggerated fears of mad cow disease in Britain: "Unwilling to defer to any expert who refused to confirm its unsupported prejudices, the crowd rewarded the scientists who were willing to flatter its obsessions by cheering it on to self-justifying waves of alarm."10 Hysteria and alarmism often sell. That is, although there may be truth in the cynical newspaper adage, "If it bleeds, it

---

6 These and other poll data come from the information arrayed under "terrorism" at www.pollingreport.com.


leads," this comes about not so much (or at any rate not entirely) because journalists are fascinated by blood, but because they suspect, quite possibly correctly, that their readers are. Politicians, bureaucrats, and people with things to sell to the fearful react similarly. Thus, although the terrorism industry may exacerbate the fears, it does not create them, and its activities and cries of alarm are essentially lagging indicators of the existence of the fears.

Exactly why people have managed, by contrast, to remain uninvolved emotionally by the danger of death by asteroid is far from clear. As astronomers Clark Chapman and David Morrison have pointed out, that danger carries with it many of the components widely held to inspire great fear: it conjures up feelings of dread and is catastrophic, dramatic, involuntary, uncontrollable, inequitable, due to unobservable agents, difficult to assess, and easy to visualize. Indeed, Judge Richard Posner has recently and eloquently laid out the case that, although low in probability, the potential disaster from such cosmic collisions justifies not only concern, but substantial expenditures to evaluate, and potentially to avert, them.

At any rate, whatever the reason for Americans' lack of concern of death by asteroid, they certainly have become, and remain, obsessed with the 9/11 experience. Polls conducted in 2006--five years after the event--find that fully 98 percent say they can readily recall where they were when they first heard the news about the terrorist attacks, that over half think about the attacks every day or a few times a week, that two-thirds maintain the attacks changed their personal life, that over half claim the attacks have changed life in the United States a great deal, and that fully 46 percent volunteer 9/11 when asked, "What would you say is the single most significant event that has happened in your lifetime, in terms of its importance to the United States and the world?" (Additionally, 38 percent remain convinced that Saddam Hussein was personally involved in the attacks.)

Behavioral consequences of fear

In some respects fear of terrorism may not shift ordinary physical behavior all that much, however. Thus, real estate prices in the 9/11 target areas, Manhattan and Washington, DC, continue to climb. Similarly, a Columbia University study noted (with alarm) that two years after 9/11 only 23 percent of Americans and 14 percent of New Yorkers confessed to making even minimal efforts to prepare for disaster such as stocking a couple of days worth of food and water (no data on duct tape), buying a flashlight and a battery-powered radio, and arranging for a meeting place for family members. By 2004, Americans were being scolded for being "asleep at the switch when it comes to their own safety," by the Red Cross President and CEO.

So in an important sense the public does not seem to be constantly on edge about the threat of

---


terrorism any more than it was during the McCarthy era about the threat of Communism, when people mostly mentioned mundane and person issues when asked what concerned them most.\textsuperscript{16} Or during years of heightened Cold War "crisis" when scarcely anyone bothered to build, or even think very seriously about, the fallout shelters the Kennedy administration was urging upon them.\textsuperscript{17}

Moreover, the potential for panic is probably not a major problem either. There is extensive evidence that by far the most common reaction to disaster is not self-destructive panic, but resourcefulness, civility, and mutual aid.\textsuperscript{18}

The main concern then is not hysteria or panic except perhaps in exceptional, and very localized, circumstances. Instead terrorism-induced fears can be debilitating in three ways.

First, they can cause people routinely to adopt skittish, overly risk-averse behavior, at least for a while, and this can much magnify the impact of the terrorist attack, particularly economically. That is, the problem is not that people are trampling each other in a rush to vacate New York or Washington, but rather that they may widely adopt other forms of defensive behavior, the cumulative costs of which can be considerable. As Sunstein notes, "in the context of terrorism, fear is likely to make people reluctant to engage in certain activities, such as flying on airplanes and appearing in public places," and "the resulting costs can be extremely high."\textsuperscript{19}

Thus, the reaction of 9/11 led to a great many deaths as people abandoned airplanes for automobiles--indeed, in the three months following the attack, over 1000 Americans were killed because of this.\textsuperscript{20} It also had a negative economic impact, particularly in the airline and tourism industries, that lasted for years--a highly significant issue economically because travel and tourism has become the largest industry in the world.\textsuperscript{21} Three years after September 2001, domestic airline flights in the United States were still 7 percent below their pre-9/11 levels.\textsuperscript{22} By the end of 2004, tourism even in distant Las Vegas had still not fully recovered.\textsuperscript{23} One estimate suggests that the American economy lost 1.6 million

\textsuperscript{16} Samuel A. Stouffer, \textit{Communism, Conformity, and Civil Liberties} (Garden City, NY: Doubleday, 1955), ch. 3.


\textsuperscript{19} Sunstein, "Terrorism," p. 132.


\textsuperscript{22} \textit{Financial Times}, 14 September 2004, p. 8.

\textsuperscript{23} Richard A. Clarke, "Ten Years Later," \textit{Atlantic}, January/February 2005, p. 63. Some Las Vegas casinos report that their earnings in the last quarter of 2001 were about one third those for the same period in the previous year.
jobs in 2001 alone, mostly in the tourism industry.\textsuperscript{24}

There is at present a great and understandable concern about what would happen if terrorists are able to shoot down an American airliner or two, perhaps with shoulder-fired missiles. Obviously, this would be a tragedy in the first instance, but the ensuing public reaction to it, many fear, could be extremely costly economically--even perhaps come close to destroying the industry--and it could indirectly result in the unnecessary deaths of thousands.\textsuperscript{25}

Second, fear and anxiety can have negative health consequences. Physician Marc Siegel discusses a study that found Israeli women fearful of terrorism "had twice as high a level of an enzyme that correlates with heart disease, compared with their less fearful compatriots."\textsuperscript{26} A notable, if extreme, example of how severe such health effects can be comes from extensive studies that have been conducted of the Chernobyl nuclear disaster that occurred in the Soviet Union in 1986. It has been found that the largest health consequences came not from the accident itself (less than 50 people died directly from radiation exposure), but from the negative and often life-expectancy reducing impact on the mental health of people traumatized by relocation and by lingering, and greatly exaggerated, fears that they would soon die of cancer. In the end, lifestyle afflictions like alcoholism, drug abuse, chronic anxiety, and fatalism have posed a much greater threat to health, and essentially have killed far more people, than exposure to Chernobyl's radiation.\textsuperscript{27} The mental health impact of 9/11 is of course unlikely to prove to be as extensive, but one study found that 17 percent of the American population outside of New York City was still reporting symptoms of September 11-related posttraumatic stress two months after the attacks.\textsuperscript{28}

Third, fears about terrorism tend to create a political atmosphere that makes it be, or appear to be, politically unwise, or even politically impossible, to adopt temperate, measured policies. "Fearful people," notes a county official in mid-America, "demand more laws and harsher penalties, regardless of the effectiveness or ineffectiveness of such efforts."\textsuperscript{29} Or, in Cass Sunstein's words, "When strong emotions are involved," as in a terrorist attack, "even if the likelihood of an attack is extremely low, people will be

\textsuperscript{24} Dean Calbreath, "Attacks to Cost 1.6 Million Jobs," \textit{San Diego Union-Tribune}, 12 January 2002, p. C-2. One study has investigated Italian cities and towns, most of them small, that experienced a single terrorist attack. Although most of these were events minor and few caused any deaths, they appear to have had a measurable short term impact on employment, chiefly because marginal firms went out of business earlier and because successful ones temporarily cut back on plans to expand. Robert Greenbaum, Laura Dugan, and Gary LaFree, "The Impact of Terrorism on Italian Employment and Business Activity," \textit{Urban Studies}, forthcoming. Another study finds that businesses hit by a terrorist act like a bombing or the kidnapping of an executive suffer an average market capitalization drop of $401 million. G. Andrew Karolyi and Rodolfo Martell, "Terrorism and the Stock Market," ssrn.com/abstract=823465 (2006).


\textsuperscript{29} Katheryn J. Shields, "Braving the Culture of Fear," \textit{National Catholic Reporter}, 3 February 2006.
willing to pay a great deal to avoid it."\textsuperscript{30} Indeed, one study conducted a decade before 9/11 appears to have found that people would be willing to pay more for flight insurance against terrorism than for flight insurance against all causes including terrorism.\textsuperscript{31} Most destructively, the reaction to 9/11 has included two wars that are yet ongoing--one in Afghanistan, the other in Iraq--neither of which would have been politically possible without 9/11, and the number of Americans who have died in those ventures considerably surpasses the number who perished on September 11.

We've had quite a bit of experience with this phenomenon. Exaggerated fears about the security dangers presented by domestic Japanese led to the politically desirable--if foolish, wasteful, and, ultimately, embarrassing--incarceration of tens of thousands of innocents during World War II. Exaggerated fears of the destructive capacities of domestic Communists during the McCarthy era did not cause many people literally to become concerned that there were Reds under their bed, but they did lead to, or inspire, a political atmosphere in which the innocent and, in particular, the harmless were persecuted, where liberal politicians felt they needed to advocate the wasteful setting up concentration camps for detaining putative subversives during potential emergencies, and where colossal amounts of money and energy were expended on hunting an enemy that scarcely existed. Exaggerated fears about the likelihood that international Communism would launch thermonuclear war did not impel many people to waste their personal money on fallout shelters, but they did cause majorities to support, accept, or acquiesce in colossal military expenditures in their name that were designed to confront or deter a threat that proved mostly to be a fantasy spun out by politicians and defense intellectuals.\textsuperscript{32}

In the case of terrorism, as in those earlier instances, a fearful atmosphere inspires politicians to outbid each other in order to show their purity (and to gain votes), a process that becomes self-reinforcing as, to justify their wasteful and ill-considered policies and expenditures, they find it expedient to enflame the fears that set the policies in motion in the first place. As Ian Lustick notes of the government, "it can never make enough progress toward 'protecting America' to reassure Americans against the fears it is helping to stoke."\textsuperscript{33}

However, although there may be a willingness on the part of people to pay, and although this has certainly inspired foolish and wasteful policies, the phenomenon does not necessarily specifically require those policies. The reaction to Pearl Harbor did not specifically make the incarceration of Japanese citizens necessary, the McCarthy scare did not specifically mandate the setting up of concentration camps, concern about Soviet military capacity did not specifically require a fallout shelter program.

The persistence of internalized fears

Reducing fear in emotion-laden situations like terrorism is very difficult. In fact, argues Sunstein, "attempts to reduce fear by emphasizing the low likelihood of another terrorist attack" are "unlikely to be successful."\textsuperscript{34} As Paul Slovic, another risk analyst, points out, people tend greatly to overestimate the

\textsuperscript{30} Sunstein, "Terrorism," p. 124.

\textsuperscript{31} E. J. Johnson, J. Hershey, J. Meszaros, and Howard Kunreuther, "Framing, Probability Distortions, and Insurance Decisions," \textit{Journal of Risk and Uncertainty}, vol. 7 (1993), p. 39. The effect was clear though, since the number of subjects in the experiment was small, it did not achieve statistical significance.

\textsuperscript{32} On these concerns, see Mueller, \textit{Overblown}, chs. 3-4.

\textsuperscript{33} Lustick, \textit{Trapped}, p. 97.

\textsuperscript{34} Sunstein, "Terrorism," p. 122.
chances of dramatic or sensational causes of death, and a new sort of calamity tends to be taken as
harbinger of future mishaps. Moreover, strongly imbedded beliefs are very difficult to modify, and
realistically informing them about risks sometimes only makes them more frightened. Indeed, concern
about safety rises when people discuss a low-probability risk even when what they mostly hear are
apparently trustworthy assurances that the danger is infinitesimal.

Thus, suggests 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." Or, in Siegel's words, "we build up a partial immunity to each cycle of fear with
the simple passage of time."

This is a plausible solution. But the evidence suggests that it may take a great deal of time for this
to come about.

The closest parallel for fears about terrorism is probably with fears about domestic Communism.
As Figure 3 indicates, domestic Communism attracted a great deal of press in the United States in the
early and middle 1950s--the high point of the McCarthy era. But this interest declined thereafter, and
press attention to the enemy within had pretty much evaporated by the 1970s. This may reflect in part the
diminution in size of the American Communist Party itself: estimates of its membership run to 80,000 in
1945, 54,000 in early 1950, 25,000 in 1953, 20,000 in 1955, and only 3,000 in 1958. Moreover, as time
went by, FBI informants probably constituted an increasing percentage of that membership.

Interestingly, however, even though the party itself essentially ceased to exist, even though there
were no more dramatic, attention-arresting revelations like those of the Hiss and Rosenberg cases of the
late 1940s and early 1950s, and even though press attention to the threat (if any) posed by domestic
Communists accordingly nearly vanished, public concern about the danger posed by domestic
Communism declined only gradually. In 1954, at the zenith of the McCarthy era, some 42 percent of the
public held American Communists to be a great or very great danger and 2 percent held it to be no danger
at all. Ten years later, these percentages had not changed all that much: 38 percent still saw danger and
only 6 percent saw none at all. When the relevant poll question was last asked, in the mid-1970s, around
30 percent continued to envision great or very great danger, while only around 10 percent saw none. (The
respondents also had two safely evasive middle categories to choose from: "some danger" or "hardly any
danger".)

Thus, although public opinion data do track a decline of concern, the slowness with which that
decline took place is quite remarkable. Of course, the Cold War did very much continue during the period
surveyed, and American contempt for the Soviet domestic system continued apace: for example, between
1973 and 1984 polls found that the percentage calling Communism the worst kind of government actually

---


36 Sunstein, "Terrorism," p. 128.


38 Siegel, False, p. 8. On this issue, see also Mueller, Overblown, ch. 7.

rose from 43 to 60.\(^{40}\) But credible (or even non-credible) suggestions that domestic Communism was much of anything to worry about became almost non-existent, and press attention to the enemy within--domestic Communists and the American Communist party--dropped to nothing. Yet concern about the "danger" presented by this essentially non-existent internal enemy diminished only gradually.

The phenomenon suggests there is a great deal in dramatic first impressions: once a perceived threat is thoroughly implanted in the public consciousness, it can become internalized and continue to resonate as an accepted fact of life. Eventually, it may become a mellowed irrelevance, but, unless there is a decisive eradication of the threat itself (as presumably happened in 1945 for the "threat" posed by domestic Japanese) the process can take decades.

Moreover, this all assumes that there are no terrorist attacks in the United States in the meantime--as there were no notable instances of efforts at internal subversion by domestic Communists in the decades after the 1950s. However, even if fears of terrorism do begin to decline, they can probably be very substantially rejiggered if a lone fanatical nut somewhere shoots up a bus, bank, or beauty salon while shouting "God is great!"

The experience suggests, then, that we are hardly likely to relax any time soon. Eventually, fears of terrorism will perhaps begin to fade. But the experience with lingering concerns about the dangers supposedly presented by domestic Communism--internalized after dramatic first impressions--suggests it may be a long wait, perhaps one of decades.

Figure 1: International terrorism and lightning, 1975-2003
Figure 2: Concern about becoming a victim of terrorism, 2001-2006

How concerned are you about the chance that you personally might be the victim of a terrorist attack? Does that worry you a great deal, somewhat, not too much or not at all? (ABC)
Figure 3: Domestic Communism: the press and the public, 1940-1985