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TERRORISM IN THE CONTEXT OF OTHER THREATS:
Assessing Risks and Solutions

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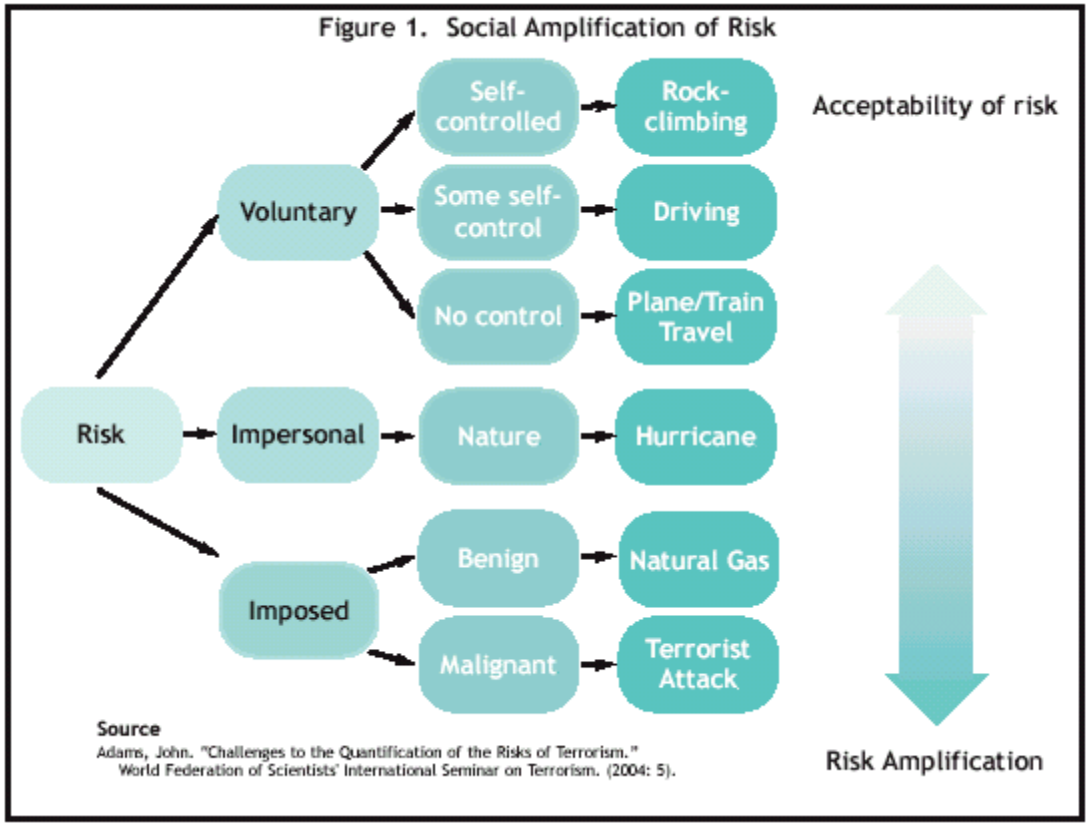
Since 1983 the US government has defined terrorism as "premeditated, politically motivated violence perpetrated against noncombatant targets by subnational groups or clandestine agents, usually intended to influence an audience." Compared to the many dangers facing the US today, the threat of terrorism is relatively small. Nonetheless, at nearly all levels of US society the response to terrorism has been grossly disproportionate.

Since September 11th, 2001, fear of terrorism has consistently dominated the national agenda, the news cycle, and day-to-day civil life. This article examines the source of the perception of the threat of terrorist attack. In particular, by juxtaposing terrorism with other risks, we can see that strategies responding to the concept of terrorism may actually hinder our ability to mitigate the most dangerous threats.

Empirically, the dangers of driving dwarf the death tolls from manifestations of terrorism, the current and potential casualties of global warming, or the use of nuclear, chemical, biological, or radiological weapons (NCBRs). We can plot non-expert or lay willingness to accept a given level of risk as a function of the perceived level of control that can be exercised over it, and in the case of imposed risks, with the perceived motives of the imposer.

(See Figure 1 Below)



A risk's acceptability, however, does not necessarily correlate with its demonstrated or potential threats. In assessing the risks posed by terrorism, the layperson faces a serious difficulty: terrorist incidents are inherently unpredictable. There is no generally accepted method of calculating comprehensive damage. This is not to say there are not many attempts to quantify the risk or cost of terrorism. While many studies examine deaths, injuries, frequency of incidents, and so on, the induced fear drives many secondary consequences. Unable to assess accurately the true threat of terrorism, the ordinary citizen can only analyze the perception of risk.

While assessing the actual threat of terrorism is difficult even for experts, we can quantify and predict the "perceived threat."[4] For non-experts, the perception of extreme risk is a function of two factors: "dread risk" and "unknown risk." Sociologists and social psychologists define a "dread risk" as a felt loss of control, feelings of dread, the apprehension of catastrophic potential or of fatal consequences, and the anticipation of inequitable distribution of risks and benefits.

"Unknown risks," on the other hand, they define as those hazards judged to be unobservable, unknown, new, and/or where the full damage becomes apparent only after the event. The higher a hazard's score on the "dread risk" scale - that is, the higher its perceived risk - the more people want its current risk reduced, and the more they want authorities to intervene to achieve that desired reduction in risk. The higher a hazard's score on the "unknown risk" factor, the greater the potential for an adverse event's risk to be socially amplified.

Any adverse event can trigger "social amplification." The terror attacks of September 11th, 2001, which belonged to either the "risk-unknown" or the "risk-previously-ignored" categories, and which had consequences or potential consequences for many people, constituted such a "socially

amplified" event. Through the process of risk amplification, which increases societal fear of imposed risks whether benign or malign, the adverse impacts of a horrific event can extend far beyond the direct damages to victims and property. In fact, an event much less drastic than the September 11th attacks can trigger significant or severe indirect consequences.

The US national character cherishes the importance of individual freedom to choose which risks to deem acceptable. The popular reaction to plane and train crashes is more acute than car accidents, and not merely because these crashes can involve mass casualties and dramatic footage. The reaction is also exigent because the US public demands a higher standard of safety in circumstances in which citizens voluntarily hand over control to another.

Terrorism is an imposed and malignant hazard. These two qualities together mean that the perception of the risk of terrorism is subject to the highest level of social amplification. Accordingly, public demand and government efforts to mitigate the threat have been disproportionate to terrorism's demonstrated dangers.

I. SOCIAL AMPLIFICATION OF 9/11: IMPACTS ON THE US

On September 11th, four planes-turned-missiles took the lives of 2,874 individuals and inflicted $33 - 36 billion in immediate damages.[5] It was the largest terrorist attack ever on US soil and its impact on the US was cataclysmic. Abruptly conscious of its vulnerability, the US overreacted to the threat, with costly consequences.

Civilians

The use of airlines on September 11th exacerbated the public's fear of flying, and with deadly consequences. Hyperaware of aviation's role in the disaster, social amplification of the risk led to a faulty perception of its dangers. Some individuals consequently substituted driving for flying.

We can only assume that individuals made this substitution in the interests of safety, hoping thereby to avoid the threat of another hijacking. But a look at the numbers shows the irrationality of their response. 256 lives were lost aboard the four hijacked planes on September 11th.[6] In the US, an average year's worth of automobile accidents take many times that amount of lives; in fact car crashes are the primary cause of death for individuals between four and thirty-five.[7] The 256 airline deaths on that day are roughly equal to an average 2.5 days of US road fatalities.[8] Nationally, an average of thirty-eight thousand individuals lose their lives in automobile accidents - every year. The State of New York alone averages over a thousand traffic fatalities annually.[9] The risk of driving a car is many times greater than flying. In fact, driving the length of a typical nonstop segment is approximately 65 times as risky as flying (based on the likelihood of death per mile).[10]

Perhaps those who substituted driving saw the September 11th attacks as predicting an increase in terrorist attacks on airlines. Although the reasoning is logical, the danger of flying should be judged by its primary substitute, driving. For aviation to become as risky as driving, disastrous airline incidents on the scale of September 11th would have to occur 120 times over a 10-year period, or about once a month. A terrorist campaign targeting aviation, like the plot reportedly foiled on August 10th, 2006, still would not justify an overall, long-term preference for driving over flying.

Notwithstanding the evidence, after the September 11th hijackings many in the US did substitute ground transportation for commercial aviation. In the fourth quarter of 2001, there was an 18

percent reduction in the number of passengers aboard commercial airlines compared to the same period the previous year.[11] Even after controlling for the effect of the weakened US economy at the time, the effect persisted, albeit at a slightly lower decrease of approximately 10 percent.[12]

This reduction in the use of commercial aviation led to greater automobile use and a subsequent increase in driving costs and deaths. A study comparing motor vehicle fatalities in the three months following September 11th to averages from the previous three years found an additional 365 road deaths.[13] And a six-month analysis estimated an additional 242 driving fatalities per month, or about 1,200 total additional deaths.[14] The substitution of road travel for air travel was the primary mechanism explaining the increase in non-commercial driving fatalities.

Both studies reported a strengthened public aversion to flying, consistent with the theory that new or previously unknown risks are subject to the greatest degree of social-amplification. The terror attacks of 2001 brought the nation's attention to the real threat of airline hijacking, but US authorities did not put the risk in the context of other dangers. The amplification of perceived risk consequently led to poor individual decisions and unnecessary deaths.

Government Response

As civilians adapted to post-September 11th life, they took additional precautions for their own safety, and the government enlarged its role as a security provider for the US public. However, the government was afflicted by the same distorted perception of the terrorist threat that led to the amplified civilian aversion to aviation. Civilians overreacted to the possibility of hijacking; the government overreacted to the concept of terrorism. There was indeed a catastrophic terrorist attack on US soil. Though this was not an entirely new phenomenon (the World Trade Center itself was attacked eight years before), specific characteristics of the 2001 attacks stood it apart from previous attacks.

The use of planes as bombs accounts for the September 11th attacks' cataclysmic impact on the US. The majority of deaths, economic costs and the overwrought social response resulted from the collapse of the World Trade Center towers. Had the planes been destroyed mid-air, the attack would likely have been managed within the parameters of aviation security. There might have been no "war on terror." The weakness in aviation security would have been addressed and the nation might have moved on.

But the planes did crash into the buildings, and the US response was a war on terrorists everywhere:

> Our war on terror begins with al Qaeda, but it does not end there. It will not end until every terrorist group of global reach has been found, stopped and defeated.[15]

Terrorists, after all, are individuals or groups that support or perform pre-meditated, politically motivated acts of violence against noncombatants. Even considering the impact of the 2001 attacks, the danger of terrorism is relatively small compared to many dangers facing society. The threat is not terrorism per se; it is the potential terrorist use of apocalyptic weapons that present a significant threat to the US.

Unlike the war in Afghanistan, the purpose of Operation Iraqi Freedom was to address the imminent threat of Iraq's "weapons of mass destruction" capacity or potential.[16] I make this point to distinguish the different goals of two separate "war on terror" operations. Operation Enduring Freedom's mission was to disrupt terrorist activity in Afghanistan and deliver justice to those responsible for the attacks of September 11th. (Statement of President Bush, October 7, 2001).

Operation Iraqi Freedom, on the other hand, was ostensibly waged to disarm Iraq and to prevent it from using or spreading NBCRs to terrorist organizations.

When UN weapon inspectors' reports made it abundantly clear that Iraq neither possessed nor planned to develop NCBRs, the Bush administration continued to proclaim the legitimacy of the war as a component of the "war on terror."[17] Either forgetting or abdicating its primary responsibility to protect its citizens, the Administration decided that war on a tactic, rather than an enemy, was worth billions of taxpayer dollars and thousands of military deaths.

The Congressional Budget Office estimates the cost of the Operation Iraqi Freedom at $318 billion through FY2006, but economists Joseph Stiglitz and Linda Bilmes assert that a conservative estimate of the direct budgetary costs to the taxpayer of the war in Iraq is more likely to range from $750 billion to $1.2 trillion, assuming that the US begins to withdraw troops in 2006 and diminishes its military presence over the next five years.[18] At present, the number of US casualties in Iraq stands at 2,570.[19] The number of monthly attacks continues to increase and shows no signs of abating.[20] In his most recent report to the Senate Armed Services Committee, General John Abizaid, the top US commander in the Middle East, asserted that if the violence doesn't stop, Iraq will verge on civil war.[21]

Among the numerous obstacles presented by the "war on terror" is the inability of the US to fund a war with no specific enemy or end. The fiscal resources of even the richest country in the world are finite. US security priorities should assign resources not only on the basis of the military or judicial legitimacy of a proposed initiative.

Terrorism is a multifaceted threat, with some manifestations more dangerous than others. It would be logical for catastrophic threats to receive more attention than a scenario delivering only minor harms. In vowing to eradicate terrorist ideology, US security policy since 2001 has largely been limited to countering terrorist groups. An effective policy will prioritize the response to terrorism, including the resources devoted to combating its practitioners, within the context of a range of differing levels of potential harm, including non-terrorist dangers.

The sobering costs in blood and treasure contrast starkly with the Bush administration's optimistic view that liberating Iraq would stabilize the Middle East and secure the US Instead of bringing peace and safety, to date the war on terrorism has been costly and ineffective. In addition to the lives lost and the resources spent on Iraqi freedom, the continuing US military presence has increased anti-US sentiment throughout the Middle East, in turn raising sympathy for, and motivating people to join or support, radical Islamists.

II. OPPORTUNITY COSTS OF THE "WAR ON TERROR"

In 2005 another catastrophic incident occurred on US soil. Hurricane Katrina took the lives of 1,861 people and wreaked widespread havoc, with damages to date estimated at $157 billion. But this disaster did not spark any significant federal effort to identify the cause of the attack or to free the world from its threat.[22]

Hurricane Katrina was the greatest natural disaster in US history. Although its connection to global warming is still subject to scientific debate, the increased strength of hurricanes takes a tremendous toll on the US and should be met with the same concern as a large-scale terrorist attack. In fact the two threats share remarkable similarities:

1) The longer we ignore it, the greater the danger grows, whether the problem is the development and proliferation of NCBRs or rapidly increasing levels of carbon emission.
2) The timing and extent of damage cannot be predicted.
3) An isolationist strategy is impotent to prevent the disasters.

It is important to distinguish the threat of terrorists with NCBRs from traditional terrorism or even terrorism that uses planes as missiles. The Bush administration claims that containment of NCBRs is a high priority. Its 2004 National Security Strategy bluntly declares:

> Weapons of mass destruction - nuclear, biological, and chemical - in the possession of hostile states and terrorists represent one of the greatest security challenges facing the United States.[23]

Hans Blix, former Chief UN Weapons Inspector in Iraq, deftly explains why securing NCBRs should be a top priority:

> Nuclear, biological and chemical arms are the most inhumane of all weapons. Designed to terrify as well as destroy, they can, in the hands of either states or non-state actors, cause destruction in a vastly greater scale than any conventional weapons, and their impact is far more indiscriminate and long lasting.[24]

President Bush acknowledges that the "greatest threat" to the US is the specter of a "secret and sudden attack with chemical or biological or radiological or nuclear weapons." He described the possibility of such an attack as less remote than during the Cold War, contending that unlike the Soviet Union, terrorists view such dangerous arms as weapons of "first resort." Making matters worse, the President noted, "these terrible weapons are becoming easier to acquire, build, hide, and transport."[25]

The US has maintained funding of Cooperative Threat Reduction (CTR) programs, but experts still perceive the risk of attack to be high.[26] By focusing its offense on terrorists and not the weapons terrorists may choose, the US security strategy has been inefficient and very costly.

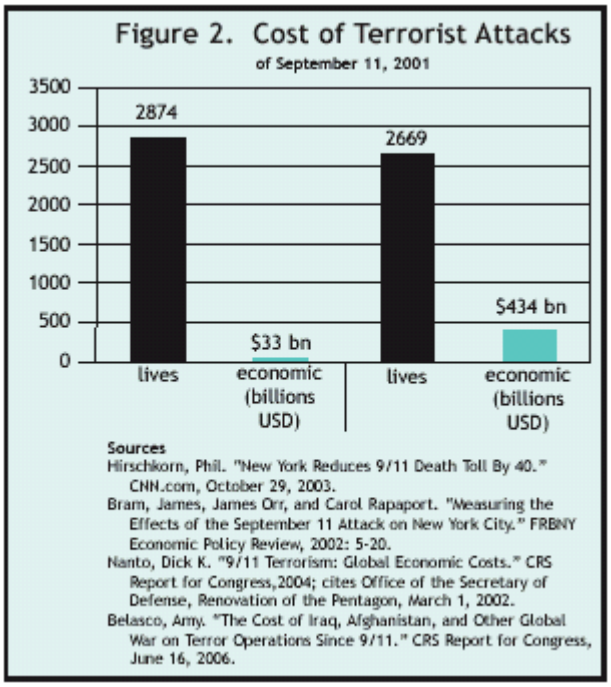
Nonetheless, tracking down potential perpetrators of attacks with NCBRs is not an efficient strategy. With an overwhelming majority of world powers against the use of NCBRs, if the US were to meet its obligations under the Nonproliferation Treaty it would likely engage an international community of nations willing to forego and secure fissile materials, and chemical and biological weapons.

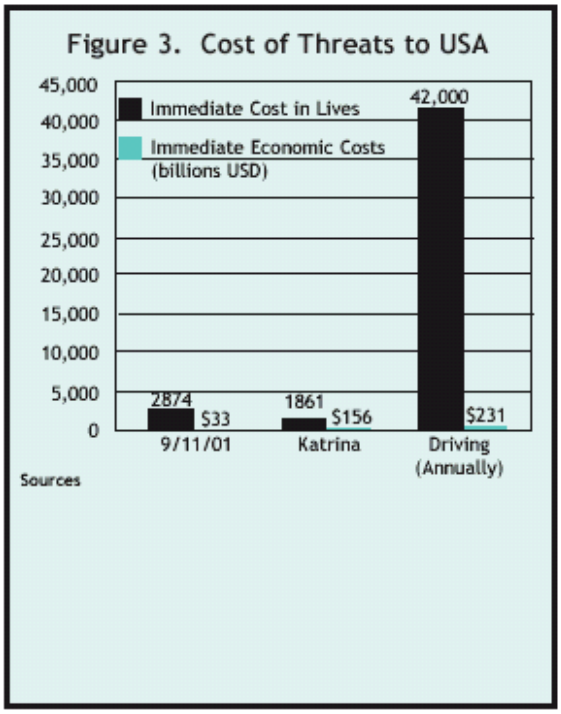
III. THE WAR ON GLOBAL WARMING

Former Vice-President Al Gore's film, *An Inconvenient Truth*, argues for global warming as the single greatest threat to our world. Hurricane Katrina demonstrated the dangers of changing weather systems. Although as previously noted it is not yet possible to determine the role of global warming in increased hurricane strength, much of the scientific community agrees that there is likely to be a connection.[27] Hurricane Katrina's devastation is estimated at $157 billion in damages (without including mission costs or the lost human capital of 1,861 deaths).[28] Congress has provided $62.3 billion so far for emergency response and rebuilding.[29] Figure 2 shows the costs in lives and dollars of the September 11th, 2001 terrorist attacks, Hurricane Katrina, and US annual car accidents.

Whether or not global warming is directly responsible, Katrina's devastation should be taken as a reminder of the power of nature. The current US administration may be skeptical, but the scientific community is certain that carbon emissions are responsible for atmospheric warming.

Despite the huge costs of natural disasters, the US has chosen to ignore the threat presented by global warming. In 2005, the US backed out of the Kyoto Protocol - the international initiative to curb carbon output - citing economic drain as its rationale. However, if we add up the costs of all the recent natural disasters (Katrina's damage alone was greater than one percent of US GDP), and if we accept that there is no reason to expect such effects to weaken, the costs of not participating might be much higher than the projected one to three percent of GDP it would cost to fulfill our obligations.[30] Despite the US absence, most of the world has signed the Kyoto Protocol, a legally binding commitment to lower carbon output.





IV. POLICY RECOMMENDATIONS

NCBR proliferation and global warming cannot be solved with an isolationist strategy. Neither threat respects national boundaries, policies, or strategies. These two greatest threats can only be solved through global cooperation. As the world's sole remaining superpower, the US is uniquely placed, and arguably uniquely obligated, to lead programs and initiatives to increase international security, prosperity, and peace. After September 11th, 2001, the US adopted a unilateralist strategy that has hindered progress in the struggles against NCBRs and global warming. Addressing and actively participating in programs to improve the world would yield myriad of

benefits. In addition to international gratitude, the US would enjoy the opportunity to achieve security aims that it cannot accomplish on its own.

NCBRs are an enormous threat, and not just in the hands of terrorists. Nonetheless, separating the threat of terrorists with NCBRs from terrorists without has important political implications. The overwhelming majority of nations oppose terrorist possession of NCBRs, while very few support the US "global war on terror." Its unprecedented military power notwithstanding, the US is unable to stop NCBR proliferation on its own. Only by forging global partnership and harnessing the strength of the international community is a NCBR-free world within reach. Global cooperation has the potential to ameliorate, not merely palliate, the threat of NCBRs in a manner beneficial to the entire world. The US needs to work with the international community to realize the common goal of a safe and healthy planet.

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