Combating Terrorism Center
at West Point

White Paper on:

Terrorism, Deterrence and Nuclear Weapons

Prepared for the
Secretary of Defense Task Force on
DoD Nuclear Weapons Management

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Executive Summary

Purpose: At the request of the Secretary of Defense Task Force on DoD Nuclear Weapons Management, the Combating Terrorism Center and the Department of Social Sciences at United States Military Academy considered the concept of deterrence within the context of two questions:

1) How can jihadists and terrorists be deterred?

2) What role might nuclear weapons and capabilities play in that particular domain of deterrence?

This project provides a detailed analysis of deterrence as applied to terrorism, focusing on the primary terrorist threats and the application of nuclear weapons in countering those threats.

Observation 1: Effectiveness of Deterrence. *Deterrence, broadly inclusive of nuclear, conventional, political or economic threats, has limited value when applied to terrorism. This broad approach to deterrence may be effective against certain types of terrorist groups and attacks, making it crucially important to disaggregate the terrorist threat when setting policy.*

- The concept of deterrence should be conceived of broadly when applied to terrorist threats. Deterrence is only possible when the deterring state understands the motivations of the terrorists and the parties' interests are not in direct opposition.

- It is not clear whether the threat of punishment significantly alters the propensity for terror attacks or has ever affected terrorists' plans.

- Two major constraints to deterring terrorists are attribution and targeting problems. Attribution addresses the difficulty associated with identifying the parties to punish, while targeting problems arise because terrorists have few targetable assets.

- When applying deterrent policies to terrorism, there is a tradeoff between retaliatory capability and credibility. Larger retaliatory punishments are more likely to reach guilty parties and/or destroy valuable targets, thereby overcoming attribution and targeting problems, but the prospect of greater collateral damage makes such threats less credible.

- Deterrent and preventative strategies may not work in conjunction with one another. Preventative counterterrorist strategies involve neutralizing terrorists before they strike. Deterrence is essentially moot when directed at targets that are already being hunted, especially where punishment has been unsuccessful.

Observation 2: Terrorists as Targets of Deterrence. *Two types of terrorist groups with a "global reach" pose a serious threat to the United States: non-state actors driven by doctrines permitting catastrophic attacks and state-sponsored groups capable of carrying out catastrophic attacks. Deterrence of non-state-sponsored terrorist groups promises to be significantly more difficult than the deterrence of state-sponsored groups.*

- There is a previously unappreciated paradox when attempting to deter terrorists. The groups most susceptible to deterrent policies are the same groups that are less likely to carry out major attacks due to internal constraints on violence or self-policing measures.

- Al-Qa'ida remains the primary non-state threat to the United States given its intent, capabilities and ideology. Al-Qa'ida's desire to use nuclear weapons deviates from the position held by moderate and mainstream Muslims who believe that the use of nuclear weapons would only be acceptable in retaliation to nuclear attacks.

- There is division about nuclear weapons among extremist jihadis. Some argue that a nuclear arsenal is the only means to counter Western power, while others maintain that the use of nuclear weapons would invite condemnation of the wider jihadi movement.

- State-sponsored terrorists, particularly Hezbollah, may pose a serious risk should they acquire unconventional weapons in the future. Deterrent policies aimed at state sponsors like Iran may prevent catastrophic attacks if the state sponsor maintains leverage over the terrorist group and believes that it will be targeted in retaliation for the acts of the group.

- Responses to state-sponsored terrorism rely on attribution or strategic culpability. Attribution focuses on identifying the enabling state and responding with massive force. The doctrine of strategic culpability maintains that any state developing unconventional weapons outside of international law is a potential target following an attack involving those weapons. Both policies have costs and benefits.

Observation 3: Efficacy of Nuclear Weapons as a Deterrent. *Certain types of terrorists can be deterred from certain types of attacks, but nuclear weapons are not likely to be effective in a strategy to deter terrorists. There are significant strategic and normative considerations that suggest the costs of a strategy involving nuclear weapons offset any benefits.*

- Stating the right to strike terrorist hubs with nuclear weapons is likely to upset existing perceptions about power balances among allies and adversaries. For example, the Chinese and Russians are likely to take counter measures in response to a more aggressive nuclear posture.

- Terrorists, and particularly al-Qa'ida, are adept at seeking repression, punishment and perceived grievance to rally support. Using nuclear weapons against terrorists would reify the jihadist narrative and provide an ideal call to arms.

- Attribution and targeting problems are amplified in the context of nuclear deterrence.

- Integrating nuclear weapons into America's counterterrorism strategy violates the global norm against nuclear weapons use. Political backlash may weaken or destroy trust in American leadership and undercut claims that its policies serve global interests.

- A nuclear counterterrorism strategy has significant domestic political costs. Political leaders must be prepared for considerable domestic opposition to a policy of deterrence or retaliation with nuclear weapons.

Introduction

The Combating Terrorism Center produced this paper at the request of the Secretary of Defense Task Force on DoD Nuclear Weapons Management. The Task Force asked the Combating Terrorism Center and the Department of Social Sciences at United States Military Academy to consider the concept of deterrence within the context of two questions: 1) how jihadists and terrorists can be deterred? and 2) what role might nuclear weapons and capabilities play in that particular domain of deterrence?

The first section of the paper addresses the deterrence of terrorism, sorting through the various arguments for and against the applicability of deterrence to terrorism. The notion of deterrence used in this report focuses generally on the prevention of undesired acts through credible and capable threats given the target group's motivations and values.[1] This is a broad notion of deterrence whereby states may use nuclear, conventional, political or economic threats and retaliatory acts to prevent undesired action. The paper concludes that deterrence, thus broadly defined, may be effective against certain types of terrorist groups and attacks, but not against others. In particular, it may be possible to deter nationalist/separatist, political, revolutionary and state-sponsored terrorist groups, as these groups ultimately rely upon the support of their internal constituencies to achieve their goals. The importance of their constituencies and the value placed on political settlements may mitigate the use of catastrophic tactics. Alternatively, deterrence is much less likely to secure desired ends when used against millennial groups, "lone wolves" and religious fundamentalists. These actors are much more difficult to punish, thereby making deterrent threats less credible. This section of the paper also demonstrates that deterrent and preventative strategies may not work in conjunction with one another, since preventative strategies attempt to punish the actor before they carry out attacks.

The second section of the paper examines the objects of a deterrence strategy: non-state and state-sponsored terrorist organizations possessing global reach. The most significant threat is al-Qa'ida and its affiliates, which rely on their own interpretation of Islamic doctrine to justify their actions. Two extremist Islamic clerics aligned with al-Qa'ida have already issued a fatwa condoning the use of nuclear weapons against the West. While this position is not uniformly held throughout the jihadist community, a threat of nuclear punishment from the United States is likely to eliminate current divisions among Islamic extremists in favor of mass acceptance of nuclear attacks against the West. One interpretation of Islamic doctrine, consistent with traditional notion of *realpolitik*, argues that Muslim states are required to develop nuclear weapons in order to have the same capabilities as potential adversaries. Therefore, explicit threats involving nuclear weapons are likely to increase support for nuclear armament and use.

The final section of the paper addresses the use of nuclear weapons as part of a deterrent strategy. While the report finds that certain types of terrorists can be deterred from certain types of attacks, it is less optimistic about the use of nuclear weapons in a terrorist deterrent strategy. The most effective nuclear deterrent would target state sponsors of terrorism through the doctrine of strategic culpability, which holds that any state capable of providing resources for chemical, biological, radiological and nuclear (CBRN) terrorist attacks, developing weapons outside of acceptable international legalistic frameworks, is potentially liable for any attack using those resources. The threat should only target states operating outside of international agreements (by developing or supplying WMD), since such threats might otherwise deter allies from cooperative

measures such as securing arsenals or reporting lost nuclear weapons. A doctrine of *strategic culpability* could have two complementary effects. It would: 1) deter states from passing on CBRN material to terrorists and 2) encourage states to abandon prohibited activities altogether. Yet these potential benefits should be weighed carefully against the costs. Announcing such a doctrine could potentially turn allies against the United States and might actually boost susceptible states' desire to develop CBRN weapons to ensure a deterrent capability of their own.

In contrast to a strategy aimed at states, threatening nuclear retaliation against specific terrorist entities, particularly those with no local constituency or those who are disconnected from their surroundings, does not appear to be an effective counterterrorism tool. Since most terrorists operate with little infrastructure, there is little for weapons of mass destruction (WMD) to destroy following a terrorist incident. While a massive retaliation is more likely to kill the guilty terrorist, it will also kill numerous noncombatants, meaning that the greater the scope of the threatened retaliation, the less credible it will be to enemies. The United States should also expect that any nuclear punishment would pose significant problems in the concomitant long war for hearts and minds. Terrorists, and particularly al-Qa'ida, are adept at leveraging perceptions of Western repression, punishment and perceived grievance to rally support. Threatening to use nuclear weapons against terrorists, analogous to using a sledgehammer to swat a fly, would provide an ideal call to arms. In this context, a group like al-Qa'ida might welcome the threat of nuclear retaliation. Such a strategy would also make the United States appear weak, since reliance on such drastic measures to address what should be a minor enemy represents a major weakness in United States' strategy. There are also geostrategic and normative consequences associated with operationalizing a nuclear strategy. Many of the states that could be targets of nuclear attacks border both allies and adversaries that would feel uncomfortable with such an offensive nuclear posture. Coupled with normative pressures against nuclear use in all but the most extreme circumstances, the United States would almost certainly erode the image that it is fundamentally different from rogue regimes. The costs seem to substantially outweigh potential benefits.

In sum, certain terrorists can be deterred, but the best method of deterrence requires a strategy that imposes costs directly against the terrorist group. The actors best positioned to impose such costs are local parties that can sanction the terrorist group by informing on them or withholding resources. The key to engaging these actors is to convey the legitimacy of alternate and more moderate belief systems relative to the bankrupt and dangerous belief systems of terrorists operating within their midst. An enhanced nuclear posture would almost certainly undermine any attempts to convey legitimacy and would likely dissipate support from allies for future counterterrorism efforts. In all likelihood, such a strategy would play right into al-Qa'ida's hands.

<center>**Section 1: Deterring Terrorism**</center>

Since the September 11th attacks on New York and Washington, United States national security strategists have considered different counterterrorism paradigms. Preventative and offensive strategies were adopted as national security policy, but concerns about the applicability and effectiveness of those strategies have fostered continued debate.[2] One component of this debate involves the applicability of deterrence theory, justifiably asking whether terrorists can be deterred.

Can Terrorists be Deterred?

Though the question about deterring terrorists is straightforward, there is little agreement on its answer.[3] Among those that believe terrorists can be deterred, there is often disagreement about the most effective policies to achieve that end. Much of the debate about the efficacy of deterrence stems from differing assumptions about terrorists, differential characteristics of terror groups and different definitions of deterrence. Thus, understanding existing arguments concerning deterrence theory is essential to formulating a deterrence policy with regard to terrorists.

Arguments Against Deterrence

In the 2002 graduation ceremony at West Point, President George W. Bush stated, "Deterrence—the promise of massive retaliation against nations—means nothing against shadowy terrorist networks with no nations or citizens to defend."[4] The implication is that deterrence, as practiced in the past, does not apply to the current terrorist threat. Several scholars echo this sentiment and advocate preventative measures as a part of national strategy.[5] Arguments against the efficacy of deterrence focus on a few key issues: the perception of terrorist irrationality, strong motivations, attribution constraints and targeting or retaliation problems. Each of these issues poses a significant challenge to deterrence, but closer examination suggests that some criticisms are more reasonable than others.

The first argument against the applicability of deterrence focuses on terrorist rationality. Terrorists are commonly portrayed as irrational actors bent on carrying out attacks no matter the consequences; therefore, they cannot be deterred because the costs associated with retaliation or punishment would be irrelevant.[6] While it is not difficult to see why terrorists may be portrayed as irrational, recent empirical work on terrorism challenges this deeply held belief.[7] Indeed, terrorism scholars have concluded that terrorists are generally rational, even if the ends they value deviate from the norm.[8] Moreover, terror groups tend to act in rational ways to preserve the organization and forward its ends.[9] According to classic deterrence theory, deterrence is possible as long as terrorists calculate the costs and benefits associated with their acts and select the optimal course of action.[10]

The second argument focuses on terrorist motivation and the goals they pursue. Difficulties in determining the intentions and capabilities of an adversary can weaken deterrence policies. A lack of information about an adversary, combined with the difficulty in interpreting the information that is available, make deterrence more difficult to implement.[11] Actors who place extreme values on future goals may seek to attain their desired ends irrespective of the

consequences, whereas others will be more discriminating.[12] Apocalyptic groups may be difficult to deter, but groups motivated by territorial grievance or ethno-nationalist sentiment may place a lower value on attacks relative to other outcomes. In addition, the nature of the way people process information has a number of implications for how threats are received and interpreted by adversaries. Some groups will be more susceptible to deterrent threats than others, and this nuance should be incorporated into counterterrorism policy.

Third, successful deterrence requires that the deterring state have the ability to identify the actors responsible for an attack.[13] In some instances, terrorist groups claim responsibility; in other cases, the tactic or target reveals the identity of the culprit. There are, however, times where it is impossible to identify the guilty party with any degree of certainty. Terrorist use of anonymous strikes reduces the likelihood of punishment, thereby reducing the efficacy of deterrence. Alternatively, a state could threaten to retaliate against groups at random. Although this approach could reduce the credibility of the deterrent threat since targeting is randomized, some classic Cold War nuclear deterrence strategy also relied on randomization of action to justify massive retaliation.[14] Thus, states may be able to use the threat-that-leaves-something-to-chance to mitigate the anonymity problem.

Finally, there is the "return address" problem.[15] Terrorist groups often operate with little or no infrastructure, and disappear after an attack. Hence, even if the perpetrator of an attack is known, there may be no clear target for a retaliatory strike.[16] Once again, however, the veracity of this argument varies with the nature of the group. Some terror groups may be easier to target than others. Groups with little hard infrastructure or no constituency may be difficult to threaten, but groups that have established bases or territorial interests may offer legitimate targets. Randomization also plays a role in mitigating this problem.[17] Groups with few obvious targets can still be hunted after an attack. There is no guarantee that the culprits will be caught or punished, but the possibility may be a sufficient deterrent.

Arguments in Favor of Deterrence

As demonstrated immediately above, the ability to deter terror groups is linked to the type of group, the predisposition of its members and the existence of a constituency or infrastructure. Proponents of applying deterrence to terrorist groups have expanded on these points to strengthen their case.

One study suggests unequivocally that terrorists can be deterred as long as there is some degree of overlapping preferences.[18] The study cites two examples. "First, many terrorist organizations with global objectives have local concerns even closer to the heart."[19] It continues by arguing, "If the local agenda does not sufficiently conflict with the interests of the deterring state, the local interests of the terrorist group can serve as an effective hostage for a policy of deterrence."[20] The second example "occurs when both sides prefer bounding the scope of violence to the state of affairs when each side does its worst against the other. Sometimes, by tacitly permitting smaller-scale attacks, or those of a particular type, a state can deter those of larger scale, or of an alternative variety."[21] According to these examples, deterrence is possible when one state permits terrorism against others, or limits large-scale attacks by allowing smaller ones. While these approaches may have some deterrent impact, they also pose a series of problems if enacted as policy. The first example requires that either local governments offer

concessions that terror groups value, or deterrent governments ignore local terrorism. This runs the risk of sending inconsistent signals (i.e., terrorism is acceptable as long as the United States is not targeted). The second example requires condoning small-scale violence in order to deter large-scale violence.

The same analysis categorizes groups based on the intensity of motivation and the degree to which goals can be accommodated.[22] Less motivated terrorists with reasonable goals are the easiest to deter. These actors may be deterred by punishment (retaliation), deterrence through putting political ends at risk and deterrence by denial (hardening targets). Terrorists that can be partially accommodated through political solutions may be deterred from further action by threatening existing accommodations. Highly motivated terrorists with unreasonable goals pose a particular problem, which may be countered by the strategies above. These policies, however, run the risk of condoning terrorism and potentially empowering the terrorists relative to other state actors. This weakens potential allies and sends mixed signals, both of which may be inconsistent with sound deterrent strategy in particular and national security strategy, in general.[23]

Not all terrorist threats are identical, and those differences may hold the key to effective deterrence.[24] Even groups themselves may be disaggregated. For example, al-Qa'ida may be broken into functional units with leaders, recruiters, logisticians, financiers and various other dimensions. While ideologically driven participants like leaders and recruiters may not respond to deterrent strategies, financiers and suppliers may. These actors may feel they have more to lose, so targeted efforts towards these people and their resource networks may reduce the incentive to aid terror groups. Another way to disaggregate the terrorist threat involves focusing on the nature of ideology or different types of attacks. While it may be impossible to deter all actors, it may be possible to deter certain types of attacks by hardening targets or constraining resources.

Deterrence Revisited

The evidence on deterrence and terrorism is ambiguous. Statistical studies of terrorism incidents following retaliation yields inconclusive results.[25] It is not clear whether the threat of punishment significantly impacts the propensity for terror attacks or has ever affected terrorists' plans.[26] Unfortunately, the systemic study of deterrence in any context is plagued with data and inference problems, since there is nothing to observe or quantify when deterrence is effective.[27] Only deterrent failures—terrorist attacks—can be clearly identified.

Another problem with measuring deterrence is the lack of a consistent definition. All of the analysts who claim that deterrence can be effective against terrorism offer idiosyncratic or expansive definitions of deterrence. For example, one author argues, "The concept of deterrence is both too limiting and too naïve to be applicable to the war on terrorism. It is important to conceive of an influence component of strategy that has both a broader range of coercive elements and a range of plausible positives, some of which we know from history are essential for long-term success."[28] Another study notes that deterrent strategy has two components, "(1) a threat or action designed to increase an adversary's perceived costs of engaging in behavior, and (2) an implicit or explicit offer of an alternative state of affairs if the adversary refrains from that behavior."[29] It has also been suggested that deterrence as a tool "should be considered part of a

broader strategy against terrorism whose pieces improve each other's effectiveness."[30] That same analysis goes on to suggest, "Rather than abandoning deterrence, it can be redefined as providing influence against moral, spiritual, educational, recruiting, and financial support of [weapons of mass destruction] terrorism by one of two actors, either by states or nongovernmental, transnational, societal elements also referred to as the 'Al-Qa'ida system'...."[31]

Each definition above adopts a broad perspective of deterrence, but fails to address the general principle of deterrence, which is a two-stage interaction. As applied to terrorists, the first stage involves the terrorists' decision whether to strike despite the deterrent threat. In the event of a terrorist attack, the second stage consists of United States' decision whether to follow through with the promised punishment. In this basic model, deterrence is deemed effective when the terrorist chooses not to attack because it believes the United States will deliver the punishment, and the value of the attack plus the punishment is less than the value of not attacking. In other words, the key to deterring terrorists, like states, is that punishments must be both credible and capable.[32]

Constraints on Effective Deterrence

Looking at capability first, a deterrent threat is "capable" when the value associated with not attacking exceeds the perceived benefits of carrying out the attack despite punishment. This means that deterrence is essentially impossible when two sides have completely opposing preferences.[33] For example, some terror groups carry out attacks in the hope of a retaliatory strike, which may aid recruiting or propaganda efforts in the larger campaign.[34] Governments often respond to terrorist attacks with violence or repression.[35] *Violence* is used to punish the terrorists after the attack, and *repression* is used to make the environment less hospitable for terrorists to operate, thereby reducing the likelihood of a future attack. Greater repression, however, often has the effect of generating support for terrorist groups that are fighting the repressive regime.[36] Punishment also provides a rallying cry for potential supporters. The government's decision to use force conveys legitimacy to the group as a potential rival worthy of countering and provides an additional grievance that terrorists can use to generate support. In these instances, the expected punishment is actually a benefit for the terror group rather than a cost, therefore there is no conceivable threat that is capable of deterring the attack. Many believe that the 9/11 attacks were specifically orchestrated to provoke an excessive United States response, which al-Qa'ida could then use for propaganda purposes.[37]

Both attribution and targeting are capability problems. When guilty parties can easily be identified, the threat is capable as long as the terrorist values items or issues that can be targeted. When terrorists cannot be clearly identified, a retaliatory act runs the risk of punishing indiscriminately, which in turn may offer inadvertent benefits to terrorists, thereby reducing the effectiveness of the punishment. Deterrent powers also run into capability problems when there are no retaliatory targets of sufficient value to terrorist groups or when items of value cannot be targeted in a legitimate way. For a variety of terrorist groups, it may be difficult to threaten retaliation of valued assets that are sufficiently strong to impose meaningful costs on the perpetrators.

A final element that affects the capability of the actor imposing deterrent threats is the value of the current political order (the status quo) and the value terrorists place on not attacking. States

may not fully understand the preferences or motives of terrorist groups, even where the group broadcasts its objectives.[38] When terrorists have a strong desire to replace the existing order (placing a very low value on the status quo), it may be impossible to deter attacks, since they see no value in restraint. In this context, the deterring state may try to manipulate the value associated with the current order, for example through political concessions. Unfortunately, any approach that offers concessions to terrorists or condones their behavior risks sending mixed signals, and may damage the other central component in deterrence, credibility.

Turning to credibility, a deterrent threat is "credible" when the threatening actor finds it in their interest to retaliate as promised. Many of the issues that pose a problem for capability also pose a dilemma for establishing credibility, particularly retaliation costs, attribution and targeting. When retaliation is costly, attacks cannot be linked to a specific group or there is little to attack, there is less incentive to carry out retaliatory measures.

An additional credibility problem arises when deterrent threats are excessively large in proportion to the attack being deterred, as perpetrators may not believe that the deterring state will follow through on the retaliation.[39] Thus, a deterrent threat that punishes the population of an entire country or region for the behavior a small group of individuals may not appear or be credible. Massive retaliation may carry significant strategic costs and risks. It may strain alliances, risk inciting violent response, pose messaging or propaganda issues and potentially violate international norms on the use of force.[40] Even if the deterring state intends to carry out the promised massive retaliation, it may not appear credible to others.[41] Deterrent threats, therefore, should be measured carefully to ensure both that they are credible for the deterring state and that they can be conveyed in a convincing manner to terrorists.

As illustrated above, using deterrent policies against terrorists creates some significant tradeoffs between capability and credibility. For example, larger strikes are more likely to impact constituents or kill terrorists associated with an attack, but larger attacks with greater collateral damage may not be a credible response to a terror attack. Similar issues arise with attribution. Creating a broad target sets is more likely to strike the guilty terrorists, but it is also likely to kill others with no connection to the attack. The broader the target sets used to solve the attribution and targeting problems, the less credible the threat may become. Broad target sets also reduce credibility when they have the long-term effect of producing more terrorists or terrorism. Such large-scale attacks capable of punishing the guilty parties may reinforce their message and create a larger problem, making retaliation less attractive for the deterring state over the long-term. The capability-credibility tradeoff is inherent in any attempts to deter terrorism successfully.

Deterrence and Prevention

Deterrence efforts may also be hindered by alternative approaches to counterterrorism. The difficulty of deterring terrorists has led to doctrines of prevention that stress interdiction before an attack by military or policing means. Preventative counterterrorist strategies involve hunting and incapacitating terrorists before they strike. This has been a principle part of the United States war on terror, particularly as applied to al-Qa'ida. A conflict arises because preventative strategies try to impose punishment before an act occurs. This is to say, the two-stage interaction used to define deterrence flips. The deterring state tries to incapacitate the terrorist at the outset, and if that fails, the terrorist is free to attack. Deterrence is essentially moot when facing targets

that are already being hunted. If the state were unable to capture or kill them before the attack, there is little reason to believe retaliation is capable. It is also important to note that a terrorist facing preventative action, already a target of the state military machinery, has continued to participate in terrorism despite constant threat. Only incrementally effective deterrent threats, those with greater capability or credibility, can have a deterrent effect when prevention is in use. There is little reason to think that deterrence and prevention can be mutually effective or supportive otherwise.

The Line in the Sand: Costs and Benefits

Deterrence is only successful when it causes an opponent to believe that the costs of carrying out an attack will outweigh the benefits. To instill that belief in the opponent, states often establish *red lines* or *tripwires*: the conditions under which punishment is used. In the absence of clear conditions, terrorists might not accurately assess the potential costs of certain attacks.

Unfortunately, it is challenging for the state establishing a deterrent strategy to communicate those conditions to terrorists. By establishing a specific red line, a state runs the risk of "legitimizing the more moderate but still lethal kind of terrorism to some degree."[42] If the United States government issued a deterrent threat promising nuclear retaliation against a CBRN attack, it may inadvertently condone more moderate forms of political violence. When a red line is established, terrorists may be encouraged go right up to the line without crossing over and inviting punishment.[43]

Calculation and Communication

The strategic costs associated with either retaliation or punishment means it is critical to calculate the appropriate punishment. Punishment needs to be sufficiently costly to the terrorists for deterrence to work and to demonstrate the power and strength of the deterring state. However excessively large or costly punishment may be leveraged by terror groups to generate support for the terrorist's cause. This means there is an inherent tradeoff in establishing appropriate responses to acts of terror.

It is also possible that the threat of retaliation, rather than retaliation itself, serves propaganda purposes. Should the United States threaten to use massive force, an attack that would likely involve civilian casualties, al-Qa'ida would certainly use those threats to rally support. This poses an interesting dilemma for deterrent policies. Traditionally, deterrent threats are publicized to establish a clear red line with an associated credible response.[44] If the mere threat of retaliation generates support for the terrorists, however, then publicizing threats can be costly. Consequently, there may be situations where deterrent threats should be communicated privately or more ambiguously.[45]

Conventional vs. CBRN Attacks

It is also important to specify prohibited acts. There is some debate over the type of attacks that deterrent policies should seek to address.[46] Should deterrent strategies attempt to prevent all terrorist attacks or specific ones? Deterring all terrorism is difficult and unrealistic. Tactics like small bombings or kidnappings require few resources and are not difficult to perpetrate. These cheap and convenient tactics are difficult to deter precisely because the costs are perceived to be

low. Thus, some scholars have suggested that deterrent policies focus on large attacks or those using unconventional weapons.[47] By limiting the range of unacceptable behavior, the state improves the credibility of the deterrent threat. Terrorists are unlikely to believe that an overwhelming retaliatory response to a small attack is credible. It is much more likely that a state would respond with massive force after a mass casualty CBRN attack. Limiting deterrent policies to large-scale or CBRN attacks adds credibility to the threat.

If policymakers want to rely on publicized deterrents, they need to specify what types of terror attacks are unacceptable and the types of punishments that terrorists and supporters will face. To understand where states might want to draw line in the sand, the next section examines the range of past attacks.

Variation in Terrorist Attacks

Most terrorist attacks use conventional means, primarily involving the use of small arms, bombs or improvised explosive devices (IEDs). While conventional attacks do not have the same potential to inflict the number of casualties as CBRN weapons, their availability of and relatively low expertise required make them attractive for terrorists. The deployment of suicide bombers and the use of secondary and/or coordinated attacks have also increased both the accuracy and lethality of conventional weapons. Thus, conventional attacks are responsible for far more casualties than unconventional attacks, despite concerns about CBRN terrorism.

Catastrophic conventional terrorist attacks remain an exception. As terrorism expert Bruce Hoffman points out, "[T]he deaths of some 3,000 persons at the World Trade Center, the Pentagon and aboard the hijacked aircraft were without parallel in the annals of terrorism."[48] Over the course of the 20th Century until April 2004, "only 14 terrorist incidents killed more than 100 persons and, until 9/11, no terrorist operation had ever killed more than 500 persons."[49] Terrorist attacks, like wars, seem to follow a law whereby there are many small attacks and a few very large ones. Although rare and relatively less-developed up to this point, the use of unconventional weapons in terrorist attacks has enormous potential to instill fear and inflict casualties on a catastrophic scale.

A review of the types of unconventional attacks recently perpetrated or planned by terrorist actors, as well as an examination of the groups involved in these attacks, provide useful insight into the feasibility, character and utility (to a terrorist organization) of such attacks. Any strategy aiming to deter CBRN use by terrorists would have to consider these critical issues.

Chemical: Out of the four CBRN options, chemical weapons are by far the most commonly used by terrorists.[50] According to a dataset of CBRN attacks compiled by the Monterey Institute for International Studies from 1988 to 2004, 207 terrorist incidents involved the use of chemical weapons. The first terrorist organization to declare use of such weapons was the Liberation Tiger of Tamil Eelam, which used chemical weapons in a June 1990 attack.[51] The most well-known terrorist attack involving chemical weapons was conducted by the Japanese apocalyptic religious cult, Aum Shinrikyo, which in 1995 released sarin gas in the Tokyo subway, injuring thousands and killing 12 people.

Thus far, many other terrorist groups have not followed Aum Shinrikyo's strategy. Anecdotal evidence suggests that around 2004, al-Qa'ida leader Ayman al-Zawahiri canceled a similar type of attack against the New York City subway system using hydrogen cyanide.[52] The limited details available about the attack "suggest casualties could easily have been in the hundreds, or even thousands, but that the attack would not have debilitated New York City the way a nuclear or large scale biological attack would."[53] This decision by Zawahiri, if true, illustrates that al-Qa'ida made a strategic choice either not to carry out this type of attack or employ this type of weapon. Evidence suggests al-Qa'ida was waiting to conduct a bigger, more strategically symbolic attack.

A number of other groups and individuals either have had an interest in or attempted to conduct chemical attacks. Many of these plots and/or attacks have revolved around the use of chlorine. In April 2004, Jordanian police disrupted a plot allegedly organized and financed by the late Abu Mus'ab al-Zarqawi to detonate five truck-borne bombs loaded with chemicals in Amman, Jordan. Similar to Bourgass' plot, the operational plan for this attack was relatively simple: chemicals would enhance the conventional bomb explosion and not disseminated by a dedicated device.[54] Although this plot was straightforward in design, terrorism expert Rohan Gunaratna believes that, if effectively executed, this attack could have killed "more than 20,000 people."[55] Others disagree, arguing that the device and explosion would not have been that effective.

Insurgent groups in Iraq were likely inspired by this last plot, as several years later, in 2007, a number of Iraqi groups successfully conducted a series of chlorine gas attacks using similar tactics against United States and coalition forces in Ramadi. Expert consensus suggests that the vast majority of casualties in these attacks died from the conventional blast rather than from exposure to chlorine. Chemical weapons have not been used in Iraq since 2007. The decline probably stemmed from constraints on transferring technological expertise and the difficulty of acquiring chemicals like chlorine.

Biological: Biological attacks are the second most common form of CBRN use. According to the dataset compiled by the Monterey Institute for International Studies, between 1988 and 2004, there were 42 terrorist attacks included biological weapons. The first and largest single bioterrorist attack in the United States was carried out by the Rajneeshee cult in 1984. The Rajneeshees wanted to reduce voter turnout in a local election, and distributed salmonella purchased from a medical supply company into numerous salad bars in The Dalles, Oregon.[56] While no one died in this case, the attack caused more than 750 cases of food poisoning, "45 of which required hospitalization."[57] Although the attack was not complex, it has never been repeated.

The most recent and well-known biological attacks are the 2001 series of anthrax attacks. During this episode, letters filled with anthrax were sent—over a period of weeks—to two United States senators and several media outlets. These attacks ultimately killed five people and infected 17 others. The primary suspect—who committed suicide in July 2008—was a United States Army scientist employed at a bio-defense research laboratory located at Ft. Detrick, Maryland. While the 2001 anthrax attacks provide "a tactical and operating model… for jihadist seeking to deploy anthrax against their enemies," thus far none has. It has been argued that, "the security measures put in place after October 2001 have much to do with it. However, worldwide there remains a plethora of vulnerabilities and opportunities for jihadists to acquire and use anthrax."[58] The

analysis continues: "perhaps the more likely reason we have not seen follow-on anthrax attacks anywhere else, by jihadists or others, is that as a weapon anthrax yields very limited (if any) strategic benefit and a low return of investment."[59]

Another biological agent popular with other terrorist groups and individuals is ricin. One example of a technologically and organizationally simple ricin plot was an attack planned by Kamal Bourgass, a member of the Salafist Group for Preaching and Combat (now al-Qa'ida in the Islamic Magreb).[60] Bourgass' plan was to swab ricin onto the door handles of a London commuter train to infect travelers and businesspersons.[61] While the death of individuals was an important objective for Bourgass, his main goal was to cause public mayhem.[62] British authorities foiled the plot in 2003. In the United States, the threat profile of known groups/individuals with the likely intent to conduct a biological attack is somewhat different. According to the Federal Bureau of Investigation (FBI), "Lone offenders were responsible for the six known attempts to acquire, produce or use chemical or biological materials since January 2002."[63] Half of these plots involved ricin.[64]

Radiological and Nuclear: As one would expect, attacks conducted by terrorist groups involving radiological and nuclear weapons are the least common among CBRN incidents. There are considerable logistic and scientific obstacles that terrorist groups have to overcome in order to acquire nuclear material, develop a crude nuclear weapon or deploy an effective radiological dispersion device (RDD). The only known "radiological incidents involve a couple of [radioactive] dirty bombs by Chechen militants that did not explode, along with efforts by others to acquire radiological materials for terrorism purposes."[65] Another example involves Aum Shinrikyo, which attempted to purchase nuclear material from Russia.[66] There is also the plot associated with Dhiren Barot, an al-Qa'ida operative with developed plans to use RDDs in a series of attacks targeting Britain and the United States.[67] Al-Qa'ida's senior leadership has not only stated the group's intent to use radiological and nuclear weapons, but has also developed specific research programs to create or acquire them.

In a report recently released by the FBI, the agency found "no evidence that domestic terrorists are researching or plotting a nuclear or radiological attack."[68] The report notably added, however, that an RDD is still within these terrorists' technical capability.[69]

Variation in Terrorist Groups

When discussing the relevance of deterrence to terrorist behavior, it is important to discuss the motivations of various types of terror groups and examine the expected impact of deterrent threats for each type. There are seven types of terrorist entities: nationalist or separatist (the Irish Republican Army), political (Hamas), revolutionary (Sendero Luminso), religious fundamentalist (al-Qa'ida), cults or millennial groups (Aum Shinrikyo), "lone wolves" (Timothy McVeigh) and state sponsored groups (Hezbollah).[70] Each of these groups has unique motivations for using terrorist tactics and the concept of deterrence would apply differently in each case.

Of the seven types of terrorist groups, deterrence is most applicable to nationalist or separatist groups, political groups and revolutionary groups. These groups do not seek to destroy the territory of the state, but instead seek to gain political control of all or some portion of it. Since

their ultimate goal is the control of territory, there may be retaliatory targets of value that can be threatened as part of a deterrence strategy. It may also be possible to manipulate the value that these groups place on the status quo, improving the efficacy of deterrence.[71] Offering certain political concessions, while a contentious policy fraught with difficulties, may be sufficient to deter such terrorists. Additionally, deterrence may be effective against state-sponsored terrorist groups. This will be discussed at greater length below.

Three groups that are least susceptible to deterrent policies are lone wolves, religious fundamentalists and apocalyptic (cults or millennial) groups. The "lone wolf" may be a single-issue terrorist, such as Eric Rudolph and the issue of abortion, or may be a single individual that sympathizes with a larger cause, such as Timothy McVeigh and the militia movement. These types of individuals have few assets or no constituency that they value, nor are their behaviors predictable. Consequently, deterrence in the classic sense cannot be applied to these groups. Due to technical difficulties, it is difficult, but not impossible, for lone wolf terrorists to acquire WMD or launch an attack of an equivalent magnitude. The two other groups—religious fundamentalists and cults—are often driven by apocalyptic views of how the world will end and structure their attacks with this in mind. Likewise, religious fundamentalists often value martyrdom and are willing to go through great lengths to bring about successful attacks. The threat to respond to any attack with nuclear weapons would actually reinforce their apocalyptic narrative and may actually encourage groups to launch an attack to force the United States to carry out their deterrent threat. Moreover, while both religious groups and cults have assets of value or constituencies, they are often situated near civilian population centers. For example, Aum Shinrikyo was headquartered in the heart of Tokyo. Despite the existence of targetable assets, the preferences of some religious groups or cults may be so extreme that punishment is not sufficient to deter a violent campaign.

CBRN and Terrorist Groups

The unconventional attacks perpetrated or planned by the diversity of terrorist actors described above underscore the broad spectrum of ideologies and objectives motivating various terrorist groups, as well as the strategic choices (i.e., costs versus benefits) each group needs to consider before conducting a CBRN attack. As Brian Fishman and James Forest point out, "Smart terrorist groups understand that they can undermine their own cause with misplaced, counterproductive violence. Less professional groups might not make such careful judgments."[72] The terrorist groups primarily interested in using CBRN are those that believe crossing a certain threshold of violence aligns with their strategic goals or is ideologically justified given their worldview. Two types of terrorist groups historically willing to cross this threshold are extreme environmentalist cults, such as the Voluntary Human Extinction Movement, and apocalyptic cults, such as Aum Shinrikyo.[73] Few groups fit this profile today.

In addition to these two types of groups, one must also consider terrorist organizations like al-Qa'ida and states that could directly "seek out a terrorist group to become a de facto extension of a state's military, acting as irregular or special forces for its WMD operations."[74] The primary example illustrating the latter is Iran's relationship with Hezbollah.

Al-Qa'ida has a longstanding history of trying to develop and acquire chemical, biological, radiological and nuclear weapons.[75] Bruce Hoffman suggests that Usama bin Ladin and al-

Qa'ida have been interested in acquiring these types of weapons since as early as 1992. Numerous reports have documented the existence of specific cells and programs dedicated to CBRN research and development at al-Qa'ida training camps, both before and after 9/11.[76] One of the most well-known programs is al-Qa'ida's WMD program, called *al-Zabadi*, or "curdled milk." The leader of this program, Abu Khabab al-Masri—recently killed in an airstrike in South Waziristan during the summer of 2008—used to distribute "training manuals that contain[ed] instructions for making chemical and biological weapons."[77]

Al-Qa'ida's efforts to develop CBRN capabilities are backed by the group's stated intent to use them. Usama bin Ladin—in direct response to a question posed to him about al-Qa'ida's desire to acquire CBRN—has publicly acknowledged "that acquiring weapons for the defense of Muslims is a religious duty."[78] The response of Abu Musab al-Suri—a leading al-Qa'ida strategist recently captured in Pakistan—to the events of 9/11 is also telling: "Had I been consulted about this operation, I would have suggested that the planes be international flights and carry weapons of mass destruction."[79] In his view, an attack against the United States using WMD has "become a necessity."[80]

One way to conceptualize what a potential CBRN attack conducted by al-Qa'ida, its associates, or those loosely aligned with al-Qa'ida might look like is to review some of the considerations that components of al-Qa'ida must consider before conducting such an attack. A review of these groups can be found in Appendix B.

Section 2: The Terrorist Threat: Groups with Global Reach

According to the most recent National Security Strategy of the United States, terrorist groups with global reach pose a serious threat to American interests.[81] There are two types of terrorist groups that pose such a threat. The first of these types is non-state terrorists driven by an ideological and strategic doctrine that calls for unrestrained (or nearly unrestrained) violence. The second major threat stems from state-sponsored groups who operate with state supplied resources and weapons.

Non-State Terrorism: Doctrine and Strategy

Of the numerous sub-types of non-state sponsored terrorist groups, deterrence by massive punishment of nationalist or separatist groups, political groups and revolutionary groups is not necessary or practicable. While these groups might respond to deterrence, there are political-military levers that may be more effective than massive punishment. Furthermore, although these groups may target United States' civilian populations, interests or allies, the attacks are at such a level of violence that massive retaliation would be of such a disproportionate magnitude that it would be counterproductive and might violate the laws of war. Finally, a policy of targeting a civilian population, which may or may not support a terrorist group, "may render the moral price of establishing a real deterrent mechanism too high" because "the United States is too concerned with maintaining its moral authority in the world."[82] These factors suggest that a threat of massive retaliation by the United States would lack credibility, meaning that some accommodation of these groups may be a more effective policy.

More problematic than the above-mentioned organizations are those groups for which accommodation is not an appropriate policy, such as al-Qa'ida. Deterrence cannot "work against an enemy that understands that the ultimate policy goal of the United States is not to coexist… but to eradicate" it.[83] At the same time, groups like al-Qa'ida lack a support infrastructure to serve as a target of deterrence. Indeed, prior to 9/11, the United States attempted to punish al-Qa'ida by attacking training camps and terrorist facilities. Instead of deterring future attacks, the United States response only served to embolden Usama bin Laden, which is why a reconsideration of deterrence as a strategy against al-Qa'ida is important.[84]

Al-Qa'ida and the Jihadist Movement

As previously discussed, the landscape of terrorist actors—and their associated goals and motivations—is complex and multifaceted.[85] While some terrorists groups share a common vision of the future—such as restoration of the Islamic Caliphate—and the preferred or legitimate methods to achieve that end, many others do not. Disagreements among terrorist groups and their supporters over appropriate means and levels of violence, as well as what constitutes legitimate targets, are plentiful. Despite these debates, the majority of terrorist groups pragmatically recognize, "the need to impose constraints on their violence, not only for moral reasons, but in order to maintain the popular support necessary for financing their operations and recruiting new members to their ranks."[86] For a terrorist group to use WMD, it must be willing and able to cross a certain threshold of violence: that of catastrophic terrorism.[87] Many jihadist groups have called for or offered support for this type of attack against the West; however, the

number of terrorist organizations with the intent and likely capability to conduct this type of attack is small. The most likely candidate is al-Qa'ida.

Any plan or strategy that aims to deter terrorist use of nuclear weapons should consider how a group such as al-Qa'ida, and its supporters, perceive and ideologically justify the use of nuclear weapons. Are these attacks legitimate? If yes, under what circumstances can they be used? Are there conditions imposed upon the level of violence al-Qa'ida is willing to inflict? In addition to addressing these questions, the party wishing to deter terrorist use of nuclear weapons must also consider how the concept of nuclear deterrence would play into the narratives of various jihadist groups, especially those—like al-Qa'ida—that embrace escalation and seek to exhaust the United States by broadening the theaters of military engagement in the Muslim world. Upon careful review, any deterrent strategy employed against al-Qa'ida, which involves the threat of a counter or preemptive nuclear attack, will likely be counterproductive. It will also do little to sway al-Qa'ida's network of supporters; to the contrary, threats of massive retaliation might swell support.

Islam and Nuclear Weapons

Islam, like Christianity and Judaism, carries very specific rules about the way to wage war. Islamic laws of war state that: force should not be used unless absolutely necessary; force should only be used in proportion to the enemy; one must prepare themselves spiritually, morally and physically; there must be no slaughter of innocents, women or children; enemy corpses should not be mutilated; schools, churches, water supplies, fields or livestock should not be destroyed; and people praying, irrespective of religion, should not be killed.[88] Muslims believe that these laws are crucial in the distinction between Muslims and non-Muslims. While the religious texts provide these rules for moderates and extremists alike, the two communities interpret the context to which they are applied differently.

Just as Islam provides specific laws about war, mainstream scholars and ideologues have outlined rules about nuclear weapons. The Qur'an tells Muslims that they are commanded to prepare for war, and ensure that they have the same capabilities as their enemies, specifically citing catapults, fire and poisons (though there are slight differences in rules and applications).[89] An interpretation of this part of the Qur'an suggests that it is an obligation for Islamic nations to possess WMD to ensure that Muslims do not lose the ability to fight their enemies.[90] Some scholars have gone further to argue that the responsibility to possess WMD falls to Muslim governments wherever they are. The charge placed on governments goes beyond acquisition of weapons to include the means to manufacture them, since it is illegitimate to rely explicitly on foreigners for the weapons manufacturing unless absolutely necessary.[91]

There are also interpretations that address the permissibility and use of nuclear weapons. Technically, the Qur'an does not place limits on the methods used to kill infidel combatants in war, and the consensus is that any means are acceptable.[92] There are however, limits placed on the use of nuclear weapons stemming from constraints on the use of fire and catapults. First, nuclear weapons are acceptable if the enemy uses them first. The justification stems from the idea that one should meet transgression in kind.[93] Second, nuclear weapons use is acceptable if the enemy threatens to use these weapons or is believed to have the intention to use them. There are three interpretations tied to this condition: a) it is permissible to use nuclear weapons as long as there are

no Muslims with the enemy, but use should be avoided unless necessary; b) the weapons should only be used if there is no other way to defeat the enemy, in which case they are required; and c) a nuclear attack is forbidden unless the enemy employs such an attack first.[94] Third, if the enemy does not actually use the weapon, then humanitarian and ethical principles forbid the use of nuclear weapons.[95] In this instance, the justification for use ends when the requirement for use is terminated.

While the requirements on the acquisition and use of nuclear weapons may be unsettling to those trying to maintain nonproliferation initiatives, there are clear restraints on nuclear weapons within mainstream Islam. It is unlikely that the broader Islamic community would condone the use of nuclear weapons against the West unless the United States was to use, or explicitly threaten to use, nuclear weapons first. Extremist groups, such as al-Qa'ida, however, do not subscribe to mainstream ideological interpretation.

Al-Qa'ida's Ideological Justification for WMD Use

Two reasonably high-profile Muslim clerics respected within the jihadist community have provided al-Qa'ida with a modicum of religious justification to use WMD against the West. Repudiation of the ideological arguments made by these clerics by other jihadist, and more moderate Salafist, clerics have not been systematically studied, making it difficult to assess the real impact and influence of their justifications within the jihadist and Islamic communities.

In 2003, Sheikh Nasir Bin Hamd al-Fahd issued an important fatwa outlining the permissible use of WMD against infidels under certain circumstances.[96] This fatwa, due to al-Fahd's religious standing within the jihadist community, has provided jihadists with a certain level of religious sanction to conduct such an attack. To justify the use of WMD against the enemies of Islam, al-Fahd uses a variety of arguments interpreted from Hadith, including the permissibility of striking the enemy with catapults and similar weapons.[97] The use of these weapons, however, is conditional: they should be used in a "defensive" manner, and only if the infidels cannot be repelled by other means.[98] By al-Fahd's justification, WMD can be used "defensively" in a retroactive manner, as a form of retribution for prior attacks against Muslims. This logic is used to justify the need to strike the United States with WMD today, to punish America proportionally for what the jihadists perceive are the United States' past and current actions against Muslims worldwide. Al-Fahd contends, "Anyone who considers America's aggressions against Muslims and their lands during the past decades will conclude that striking her is permissible merely on the basis of the rule of treating one as one has been treated."[99] He cites the total number of Muslims killed by the West and its weapons as approximately ten million—a number which demands a proportional response in kind, through the use of WMD if necessary. The final justification for employing WMD against the West, according to al-Fahd, is based upon an interpretation of a saying of the Prophet Muhammad from another Hadith, which instructs Muslims "to 'perfectly' perform whatever actions they take, including killing."[100] According to Fishman and Forest, al-Fahd interprets this Hadith to mean that modern CBRN weapons are the most "perfect" means of killing enemies and thus are sanctioned by the Prophet.[101]

Sheikh Abu Bakar Ba'asyir, a respected cleric and spiritual leader of al-Jama'a al-Islamiyya, provides additional ideological justification sanctioning the use of nuclear weapons against the West. Similar to al-Fahd, Abu Ba'asyir takes a conditional approach to the use of nuclear

weapons, stating that they should be used only if they are necessary.[102] He notes that steps should be taken by the Islamic *Ummah* to limit the intensity of fighting and that the weapons should be used to deter the enemy.[103] Once held, the goal of WMD possession would be, "to scare and not to kill our enemy…. If they are scared they won't bother us, and then we won't bother them as well."[104] At the same time, Abu Ba'asyir adds that if the enemy persists ,"we have to kill them."[105] It is in this way that the "Prophet Muhammad sought to minimalize [sic] the fighting."[106] One interpretation of the cleric's argument is that instead of using a nuclear weapon, it might be more useful for al-Qa'ida to hold onto it and exploit it for deterrent value.

The ideological arguments of al-Fahd and Abu Ba'asyir regarding ownership and use of WMD provide insight into some al-Qa'ida members' legitimate sphere of operation and, by extension, how nuclear weapons could either be incorporated into, or employed in support of, al-Qa'ida's strategic doctrine. Most counterterrorism analysts agree that if al-Qa'ida possessed a nuclear weapon, it would employ the weapon in an attack against a Western target. Al-Qa'ida's goal would be to provoke a heavy-handed American response, an event that would deepen the conflict between the United States and al-Qa'ida and enhance the level of active support al-Qa'ida receives in the Muslim world. An attack of this magnitude would also ensure that al-Qa'ida maintains its position as the vanguard of the jihadist movement. Most importantly, it would illustrate al-Qa'ida's ability to achieve a semblance of strategic parity with the West. Given the existing justifications provided by al-Fahd and Ba'asyir, some al-Qa'ida members believe they already possess the ideological authority to conduct a nuclear attack against the West, even if it was a nuclear first strike.

It is also possible that al-Qa'ida would use a nuclear weapon in an attack against the "near enemy," typified—in part—by local apostate regimes, such as the government of Pakistan. As the general failure of al-Qa'ida in Iraq's targeting strategy illustrates, this type of attack carries significant costs (i.e., the loss of local support due to al-Qa'ida's punishment of Muslims) which are likely to outweigh the benefits (i.e., destabilization of the Pakistani regime).

Countering conventional arguments, which assume that al-Qa'ida would use a nuclear weapon, it is also possible that the organization would keep the weapon and exploit it for its deterrent value. One potential scenario could involve al-Qa'ida employing nuclear weapons either to maintain its area of safe-haven in the Federally Administered Tribal Areas (FATA). This approach could also be useful if al-Qa'ida decides it is in its interest to declare the existence of an Islamic state in a part of Afghanistan or the FATA. For this deterrent effect to be credible, however, al-Qa'ida would have to illustrate its capability to conduct a nuclear attack; it would also have to communicate its intent to employ a nuclear weapon in this manner. A test of a nuclear weapon or device by al-Qa'ida would serve this purpose, even if it were detonated in an unpopulated area.

Sphere of Support and Reaction from the Jihadist Community

On 25 May 2008, a thirty-nine minute video entitled *Nuclear Jihad, the Ultimate Terror* was posted to a jihadist web forum (but allegedly copied from *al-Ikhlas*—an accredited outlet for al-Qa'ida propaganda), referencing al-Fahd's treatise as justification for WMD attacks against the West.[107] The release of this video sparked a lively debate within the jihadist community regarding al-Qa'ida's potential use of WMD. According to the BBC, the debate "revealed strong opposition to such a move among many jihadist supporters as well as sharp divisions on the issue

between hard-line and more pragmatic wings of the online community."[108] Similar discussions in the past have usually been dominated by those who embrace al-Qa'ida's use of WMD. However, since the release of *Nuclear Jihad, the Ultimate Terror*, the number of jihadists rejecting this type of unconventional attack appears to have increased.[109] The main point of division was between more hard-line members, who believed that al-Qa'ida's methods would be justified, and "a less hard-line majority concerned about the religious legitimacy and practical consequences of causing massive loss of life."[110]

While this debate highlights the extent of fissures within the jihadist community concerning al-Qa'ida's use of WMD against the West, it also illustrates how jihadist support for such an attack fluctuates over time and how it is prone to influence.

A deterrent strategy postulated by the United States highlighting the threat of punishment is likely to have the opposite effect on al-Qa'ida and its community of supporters than is intended. As Fishman and Forest point out:

> Our understanding of Al-Qa'ida's ideology leads us to conclude that their pursuit of WMD is designed to achieve political outcomes, not herald Armageddon. Followers of Al-Qa'ida's ideology—and particularly core members of Al-Qa'ida's organization, who are most concerned with attacking the far enemy—believe that WMD will advance their strategic objective of exhausting the United States economically and militarily by forcing the United States to expend massive amounts of money on protecting our critical infrastructure, borders and points of entry, and on military deployments in Iraq, Afghanistan and elsewhere. Furthermore, they are convinced that acquiring WMD will allow AQ leaders to achieve military and strategic parity with the West, bestowing credibility on the *mujahidin* that might encourage more recruits to join the movement.[111]

As discussed above, an explicit threat by the United States to retaliate with nuclear weapons might, in a counterproductive way, actually increase the incentives for a group like al-Qa'ida to employ a nuclear device. A more effective strategy to prevent groups like al-Qa'ida from employing nuclear weapons should exploit ideological fissures present within al-Qa'ida and amongst its community of supporters.

State-Sponsored Threats: Rogues, Resources and Weapons

The second category of terrorists with global reach are state-sponsored terrorist groups. These groups operate with either active or passive support from state sponsors, where support often includes weapons, financial resources, sanctuary, logistical support, propaganda support and training. While state-sponsored groups continue to pose a serious threat, these groups, or the states that support them, might respond to sound deterrent policies.[112] The most well-known, contemporary example of a state-sponsored terrorist group is Hezbollah, which is supported by Iran. The target of deterrence would not solely be the terrorist group itself, but its state sponsor as an entity possessing resources and infrastructure that could be targeted.

The ability to deter a state-sponsored group through its state supporters relies on two interrelated assumptions. The first, and most important of these assumptions, is that the state maintains some

type of leverage or control over the group. Hezbollah, for example, swore allegiance to the Iranian Ayatollah in its 1985 manifesto, but it is not clear that the group leaders or members feel a similar allegiance today.[113] It is more likely that Iran's leverage over Hezbollah stems from its financial support of the organization. At present, Iran is probably Hezbollah's largest funding source, but the organization has diversified its financing through other states, drug trafficking and other black market operations. The state-sponsored group must need or want continued state support if deterrent policies have any chance of success. Second, the state sponsor must believe that the state and its leadership will be held accountable for the actions of its proxy group. As Hezbollah has gained strength and become a mainstream political party in Lebanon, it is reasonable to imagine that they are operating with greater autonomy. Iran may believe that they can leverage such autonomy to disavow any of Hezbollah's actions that might provoke major retaliation. Any deterrent policies aimed at state-sponsored terrorism should recognize and address these issues.

Deterrence of State-Sponsored Groups

Some argue that deterrence may be effective when addressing the issue of the so called "rogue states." This argument is based on the observation that rogue states are a likely source by which terrorist groups might obtain nuclear material, CBRN guidance or financial support. Since states have different concerns than terror groups, deterrent threats against states may prove to be an effective, albeit indirect, method of deterring certain types of terrorism. The rogue state argument relies on the ability of the United States' nuclear deterrent to restrict the freedom of action of those states, particularly with regard to nuclear transfers.[114] It is important to clarify the different forms that such a strategy might take.

Deterrence of state-sponsored terrorist groups should focus on several important areas to include economic sanctions; denial of materiel support for both conventional arms as well as CBRN weapons; the promise of major retaliation in response to an attack; and, as the ultimate form of deterrence, regime change.[115] States designated as state sponsors of terrorism by the United States' Department of State are automatically subject to numerous sanctions designed to modify their behavior, including but not limited to a ban on arms-related exports and sales, prohibitions on economic assistance such as loans from the World Bank and the inability to conduct business with U. S. citizens.[116] Clearly, the United States has both the capability and credibility to impose economic sanctions on state sponsors of terror. The ability of economic sanctions to influence such a state wholly depends on the individual cost-benefit analysis of the state-sponsor. It is unclear whether unilateral or multilateral sanctions are more effective, but research suggests that unilateral sanctions are more effective.[117] On the surface, it appears that sanctions have not deterred Iran's support for Hezbollah.

A second means to prevent terrorist activities by state-sponsored groups is to deny terrorist groups from gaining access to conventional and unconventional weapons.[118] Currently all four countries on the State Department's list of state sponsors of terror are signatories to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), although Iran has "failed… to meet its obligations under the safeguards agreement."[119] Additionally, all four countries have ratified the Biological Weapons Convention and, of the four, only Syria has not ratified the Chemical Weapons Convention.[120] Signatories of the NPT pledge, "not to transfer to any recipient whatsoever nuclear weapons or other nuclear explosive devices."[121] At least in principal, the four

state sponsors of terrorism have agreed not to transfer CBRN weapons or their associated technology to terrorist groups. Without state support, it would be very difficult for a terrorist organization to acquire these weapons.

Should a state attempt to transfer CBRN weapons to a terrorist group or any other state, the United States possess the capabilities to interdict any shipment before it reaches its final destination (provided it has accurate intelligence). Announced in 2003, the Proliferation Security Initiative (PSI) is meant "to create a more dynamic, creative, and proactive approach to preventing proliferation to or from nation states and non-state actors of proliferation concern."[122] Unlike the NPT, PSI is not a formal treaty, but instead a partnership of like-minded countries concerned with proliferation issues. Whereas the NPT is a preemptive or passive means of preventing terrorist groups from acquiring CBRN weapons (by limiting the states that have them), the PSI is a proactive measure meant to interdict weapons transfers. The PSI serves as deterrence by denial, increasing the expected costs of weapons transfers.[123]

The hallmark of Cold War deterrence theory was that the United States would massively punish the Soviet Union for any attack on the United States or its allies. Today this model could readily be applied to state sponsors of terrorism. In fact, "One extreme possibility is to directly threaten the interests of society broadly, such as the state's infrastructure."[124] The United States can threaten the survivability of the state regime as well. "Specifically, the leadership of rogue regimes must be explicitly warned that they will be removed from power… for maintaining ties with terrorist groups."[125] The United States has already demonstrated that it possesses both the capacity, in terms of military capabilities, as well as the credibility, to make the threat of regime change a believable proposition. However, many international observers believe that, because of military commitments in Afghanistan and Iraq, the United States currently lacks the capability to carry out full-scale regime change, thereby undermining the credibility of that threat.

The ability to target a state's infrastructure for destruction forces the state to decide if the act of terror is worth the price of destruction. Terror groups operating in parts of a country not under the control of the central government, with or without the tacit approval of some portion of the government, are particularly problematic. The United States would face the difficult decision of targeting segments of the government or society that have no relationship with the terrorists. It is also worth noting that the four states on the State Department list are all totalitarian states, therefore, the utility of retaliating against civilian targets may not serve as a deterrent to state action if the leaders of these states are not politically accountable to their constituents. The same was true, however, of the deterrent policies used against the Soviets.

Attribution and Culpability

The threat posed by state-sponsored groups is particularly acute with regards to unconventional weapons. The most dangerous scenario is that a state sponsor such as Iran could transfer nuclear weapons to its non-state agent, Hezbollah. While Iran does not currently possess nuclear weapons, and it is not clear that it would actually transfer the technology, it is important to develop a policy to deal with state sponsors in the event of an unconventional attack against United States or its interests.

One possible response relies on the ability to identify the source of any nuclear material involved in a terrorist incident. Presumably, states will be deterred from spreading nuclear materials if the United States can identify the source of any nuclear attack with enough confidence to determine the source of the material. The United States must also communicate the specific conditions that would merit a United States response, as well as what type of attack the opposing party should expect. So long as states know that any terrorist attack will precipitate retaliatory strikes against the state sponsors of terrorists, there will be incentives to restrict the spread of nuclear material. Yet, if the United States cannot credibly make such threats, this deterrent mechanism will not be effective.[126] The lack of a comprehensive database of nuclear signatures and the problem of distinguishing between leakage and the intentional provision of material are two components of a complex issue.[127] In addition, threats to retaliate against states responsible for the proliferation of nuclear materials may be counterproductive because they potentially undermine the cooperation necessary to secure existing nuclear stockpiles.[128] It is also important to recognize that deterrence involves convincing potential offenders of the attribution capability without divulging information that can be used in the development of countermeasures.[129] This is difficult at best.

Another approach to deterring state-sponsored nuclear attacks is the doctrine of *strategic culpability*. According to this strategy, any state proliferating outside of international conventions, that could have supplied terrorists with nuclear material, is a potential target in a retaliatory strike. The strategy relies on Thomas Schelling's logic of the threat-that-leaves-something-to-chance.[130] Any state listed as a culpable agent runs the risk of nuclear retaliation after a nuclear terrorist attack. To be removed from the list, potentially culpable states must allow complete inspections and halt proliferation activities. The strategy has the joint benefit of articulating clear retaliatory measures and targets, while simultaneously offering incentives to abandon nuclear weapons development and abide by accepted international standards. As long as states maintain their monopoly over nuclear weapons development, strategic culpability could go a long way in reducing the risks of nuclear terrorism.

Unfortunately, the doctrine of strategic culpability also carries some significant costs. For instance, the doctrine is likely to increase insecurity among states targeted for potential retaliation. In fact, threatening rogue states creates incentives for those states to prevent military strikes by obtaining their own nuclear deterrent.[131] While the United States nuclear deterrent may operate as an effective mechanism for ensuring that rogue states do not use nuclear weapons, it has not stopped these states from attempting to obtain nuclear weapons.[132] It is also possible that retaliation would be carried out against a state with no hand in the initial attack, making it difficult to convey the credibility of such a doctrine.[133] At the same time, threatening states that proliferate inadvertently runs the risk of damaging international cooperation on nonproliferation ventures, particularly if the strategy fails to distinguish between nominally cooperative states who inadvertently supply nuclear weapons (such as Russia) from those that are proliferating outside of international conventions.[134] Finally, the reputation loss or goodwill cost involved with vocalizing the strategy would be significant. Many of the states identified as potential targets are likely to be Muslim countries, and this may appear as a direct assault on Islam by the Great Satan and its propaganda machine.

Typology and the Paradox

The analysis of terror group motivations, as well as the constraints on state-sponsored and non-state terrorists, reveals an important paradox. The groups that are most susceptible to deterrent policies are the same groups that are likely to have internal constraints on violence or self-policing measures. Deterrence will be most effective against groups with clear constituencies, territorial interests, hardened infrastructure or state supporters. Each of these factors, however, itself serves as a constraint on the behavior of terror groups. Terrorists attempting to gain territory or operating on behalf of some constituency need to ensure that their actions do not threaten territorial possession or constituent supporters. The same is true for groups that rely on resources bestowed by states or hardened infrastructure. Even if these susceptible groups carry out attacks to further their ends, they are likely to contain or limit the violence employed.

Section 3: Nuclear Weapons in Counterterrorism Strategy

Two key elements of nuclear deterrence distinguish it from traditional deterrence. First, the nuclear deterrent must be technologically reliable. Traditionally, this means that potential adversaries must know that American nuclear capabilities will withstand a first strike and providing a response that would result in significant damage to any attacker. Within the counterterrorism context, it may mean that United States missiles have the capability of hitting small, hard to find targets. Second, nuclear deterrence has a psychological component. Potential adversaries must be convinced that American leaders will respond with nuclear weapons in the event of an attack. Nuclear deterrence relies on the threat of massive retaliation, but threats are not always credible.[135] Ideally, nuclear weapons make the costs of offensive action unimaginable, but this may not be true for all terror groups. Far from being deterred by threats to use nuclear weapons, terrorists may view the costs of nuclear war as lower than the political costs of backing down from a deterrent threat.

Although the combination of technological reliability and favorable psychological factors made deterrence successful during the Cold War, it was not universally effective.[136] While American nuclear deterrence prevented a conventional attack from the Soviet Union against the United States and its allies, this deterrence did not extend to all conventional attacks.[137] A number of factors complicated the successful implementation of deterrence during the Cold War and continue to complicate deterrence in the post-Cold War era. These factors make the deterrence of terrorist groups problematic.

Strategic Considerations

Beyond the tactical difficulties associated with nuclear retaliation against terrorist groups, there are also broader strategic concerns related to the preparation and execution of such threats. Stating the intent to strike terrorist hubs in places like Afghanistan or Iraq is likely to upset existing perceptions about power balances among allies and adversaries. Afghanistan borders China, Russia, Iran and Pakistan. All four states are likely to feel threatened by the notion that nuclear weapons could be used close to their borders, even if there is no intention of targeting those states. Such fears would be heightened by the tactical measures necessary to carry out a strike, such as flyovers or submarine positions, which would put the countries within close range of United States nuclear weapons. At the same time, neighboring states would reasonably fear malfunctioning or misguided weapons that could accidentally detonate near to or within their borders (as exemplified with the mistaken strike of the Chinese embassy in Belgrade in 1999). The Chinese and Russians are likely to take countermeasures such as increased air or sea defenses in response to an increasingly lethal United States' posture.

An enhanced nuclear posture also increases the costs associated with organization or mission failures. Putting nuclear weapons in theater runs the risk of inadvertently supplying them to terrorists. Should a plane carrying nuclear weapons be shot down over Afghanistan, the nuclear weapons could be recovered by the adversary. Declaring a flyover policy would increase terrorists' incentives to improve anti-aircraft capabilities in the hopes of gaining access to United States' technology while scoring a propaganda victory. Similar possibilities exist if a plane should malfunction. The United States would also suffer reputational damage if a plane were shot down or crashed in a civilian area.

Signaling constraints represent a further challenge, as communicating intentions to terrorists may be difficult.[138] This signaling problem is "what specialists in communications theory refer to as the problem of 'noise,' i.e., conflicting background events that hamper receptivity to and/or correct interpretation of the intended message."[139] These problems grow more acute when there is asymmetry of motivation, meaning one side of a conflict values its goals more than the other. Likewise, terrorists willing to give their lives in pursuit of their ideological goals are less likely to be influenced by deterrent signals or threats.

Lastly, the same targeting and attribution polices that plague applications of deterrence to terrorism are amplified in the context of nuclear deterrence. Both targeting and attribution problems reduce the capability and credibility of nuclear deterrents. Nuclear weapons may increase the likelihood that a strike destroys the intended targets, but it also increases collateral damage. The same is true when nuclear strikes target anonymous attackers. Nuclear retaliation may strike the guilty party but it may not. This makes use of nuclear weapons against terrorist groups tactically difficult irrespective of smart technologies.

Normative Considerations

Among the most problematic aspects of integrating nuclear weapons into America's counterterrorism strategy is the potent global norm against actual nuclear weapons use.[140] Any deterrent effect nuclear weapons might have against terrorist groups would depend on an explicit threat to retaliate against a high value target. The mere threat to use nuclear weapons under these circumstances would likely generate a powerful political backlash against the United States that would undercut American leadership and increase resistance to American power and policy across a wide range of global and regional issues.

In the case of nuclear weapons, Nina Tannenwald correctly observes, "it is widely acknowledged today among nuclear policy analysts and public officials that a 'nuclear taboo' exists at the global level," a taboo produced by "widespread popular revulsion against nuclear weapons and widely held inhibitions on their use."[141] While not all Americans might share this strong commitment to the non-use norm, the fact remains that at the international level this belief is firmly entrenched. For over four decades, normative beliefs about the particularly devastating character of nuclear weapons and the unpredictable, long-range consequences of their use have driven progressive international efforts to constrict the legitimacy of both the proliferation of nuclear weapons and the ways in which nuclear weapons states might actually use them.[142] Support for norms restricting the role of nuclear weapons in the international system has even come to help define what it means to be a "civilized" state.[143]

While international norms are part of the fabric of international politics, two key questions remain. How might norms actually affect state behavior, particularly if there is no explicit enforcement mechanism to police state actions? And what are the implications for the United States if it is seen to be in violation of the nuclear taboo? Norms impact state behavior on two levels, the domestic and international. At the domestic level, when normative injunctions against certain types of behavior are taken seriously within the political system of a particular state, decision makers may simply rule out certain strategic options as inconsistent with domestic beliefs. In the case of nuclear weapons policy, political leaders must be prepared for significant domestic resistance to the idea that the United States will publicly declare its intent to retaliate

with nuclear weapons. It is clear that Americans' increasing tolerance for their government's use of military force over the past few decades is connected to the revolutionary impact of increasingly precise weapons.[144] A dramatic step back from this trend, toward an increased role for WMD, would likely be perceived as normatively intolerable by many (though not all) citizens and members of Congress.[145]

At the international level, states that violate strongly held norms often face a potent political response from other states, a political response that might actually produce significant costs. A number of scholars emphasize that how a given state's actions measure up to important international norms will shape how other states understand its character and their own actions towards that state. In this way, norms are said to be "constitutive" of a state's identity. Is it a "civilized" state? Is it "trustworthy"? Is it a "responsible" member of the community? The concept of a "rogue" state provides an excellent illustration. States are typically described as rogues specifically when they violate important international norms prohibiting support for terrorism, the quest for WMD or the abusive treatment of their citizens. The label "rogue" has no meaning without the norms that define these behaviors as unacceptable. In turn, and perhaps most importantly, labeling a state as a rogue then opens up the potential for some form of punishment, a reaction that is justified politically only by pointing back to the norm violations that define this state as somehow beyond the pale of civilized behavior.[146]

As Tannenwald cautions, before violating the nuclear taboo, any state must anticipate the possibility of "awful consequences or sanctions to follow."[147] An American challenge to the nuclear non-use norm, no matter how carefully defended, could erode the trust in American power and strategic behavior that is critical to effective American leadership. States around the world, including allies and neutral states alike, would not see this change in U. S. nuclear policy as a reasonable, proportionate adaptation to a new threat. Instead, it may be seen, and will likely be portrayed by some, as a frightening, morally flawed and inflammatory step that could be a harbinger of erratic violent behavior to come. It would likely be perceived as more dangerous than stabilizing, disproportionate to the threat, potentially indiscriminate in its destructive effects and possibly leading to a darker future in which nuclear weapons are given a more active role in international conflict. America's willingness to follow terrorist groups across the nuclear threshold and trade tit-for-tat retaliatory nuclear strikes, even if America absorbed the first nuclear attack, would risk putting America on the same playing field with its terrorist enemies. These costs are made even more salient given the very slim probability that a publicly declared deterrent policy, similar to the massive retaliation strategy during the Cold War, would have a significant deterrent effect on certain types of terrorist groups. This sets up a dangerous situation in which America incurs the costs of declaring its willingness to breach the nuclear taboo, and articulates a policy that makes it more likely America will actually use nuclear weapons, without any clear security improvement in return.

Reputation Considerations

This political backlash may weaken or destroy trust in American leadership among its partners, and it could undercut American claims that its policies serve global interests and values. Challenging the nuclear taboo would undermine America's image abroad as fundamentally different from (and morally superior to) rogue regimes and terrorist groups. Realist and liberal scholars alike have emphasized for many years that a critical dimension of American influence,

as well as tolerance for America's great power, rests on beliefs that America can be trusted with the great power it possesses and employs. The key to this trust is American behavior—specifically, a demonstrated pattern of strategic restraint.

Ironically, threatening nuclear retaliation against terrorists would also may serve as a signal of American weakness and desperation. If the United States acknowledges that it must resort to such an extreme response, it is also acknowledging an inability, or lack of confidence in its ability to craft mechanisms below the nuclear threshold to prevent or respond to terrorists use of WMD.

A final cost of challenging the nuclear taboo is that America's actions could undermine anti-proliferation efforts and influence other states' behavior, making it normatively and politically easier for others to pursue nuclear weapons and contemplate their use. Norms are reinforced through compliant behavior. They erode in the face of violations, as states question whether their own compliance with the norms remains advantageous.[148] Since the late 1960s, the United States has been the most important state shaping the global commitment to nuclear non-proliferation, encouraging non-use and increasing international compliance. Therefore, the United States would also have the most to lose by advocating a policy that would incorporate nuclear weapons use as part of a policy of deterrence against terrorists.

Conclusion: Deterrence by Counter-Narrative

Any successful counterterrorism strategy must be flexible in scope and approach to address the diversity of terrorist actors and the varied threats that they pose. Deterrence can be an important component of a broader counterterrorism strategy, but policymakers must recognize situations where deterrence will be effective. Expecting deterrence to work across all terrorist groups is likely to generate the belief that the policy failed. However, as discussed, there are nuances of deterrence strategy and ways in which deterrence can be applied to some aspects of the terrorist threat.

Deterrent policies are most effective when retaliation imposes meaningful costs directly on the guilty parties. Deterrent strategies may be able to impose limited costs on certain groups, but such a policy is bound to fail on occasion. The most effective way to deter terrorist groups and prevent them from using CBRN weapons is to threaten the primary items they value and from which they draw strength. Ideally, such a strategy would systematically undermine the components they value most. For many terrorist organizations, their most valuable assets are their ideological narratives, the support they generate, the sanctuary they obtain and the resources they need to operate. Blocking or restricting access to these assets reduces the terrorists' operational capability, creating a condition where they must abandon their campaign or operate in an increasingly restrictive and risky environment. The best way to attack these resources is by attacking the ideological narratives terrorists use to justify their acts and draw support. This type of approach would target the legitimacy of terrorist organizations by exposing the ideological flaws in their arguments and fomenting discontent among the terrorists themselves. By employing a well-developed strategy aimed at undermining terrorist ideology, local communities will eventually turn away from the terrorists operating within their midst. Deterrence by counter-narrative is effective if the terrorist group decides against a given attack out of fear that their support networks will disappear.

Appendices

Appendix A: Alternate Deterrence Strategies

Cumulative Deterrence: Israel has attempted to decrease terrorist attacks significantly by implementing a strategy called cumulative deterrence. Cumulative deterrence is the reduction of attacks due to sustained punishment carried out as threatened against targets that terrorists highly value. Cumulative deterrence is embedded in a broader strategy that addresses the social, political and economic ills that produce irreconcilable grievances. According to cumulative deterrence theory, when a state successfully delivers punishment as threatened during an ongoing conflict, the state must consider that action a victory, not a failure. As tactical victories mount over time, so does pressure for would-be terrorists to moderate their stances and perhaps even reconcile their grievances. The strategy attempts to increase the costs and the benefits to the would-be terrorist and the credibility of deterrent threats. The primary component in cumulative deterrence is that terrorists learn about a state's resolve over successive trials (attacks and punishments). The cumulative nature of the process is intended to increase the credibility of deterrent measures.

A state using a cumulative deterrence strategy increases the costs to the individual terrorist by threatening and carrying out punishments against targets the terrorist highly values. Doron Almog argues that actors exist that could be targeted for punishment, actors that would then compel would-be terrorists from carrying out their attacks.[149] Almog had in mind the homes and economic interests of terrorists' families. Homes would be destroyed or families would be made permanent economic exiles, potentially stiff punishments in Palestine.

A state increases the benefits to the would-be terrorist by creating economic, political and social alternatives or outlets that reduce irreconcilable grievances against the state. For example, it is widely known that meeting places, such as religious, business or civil centers, espousing radical beliefs can foster radicalization. In these places, it is useful—psychologically, socially and politically—to present oneself as even more radical than the median attendee. Heterogeneous audiences and ideas deflate these tendencies. The state must actively build alternatives.

Finally, a cumulative deterrence strategy can greatly increase the credibility and, therefore, the effectiveness of deterrent threats. Some deterrence strategies have been all-or-nothing strategies and have been incapable of preventing much less than great power war. The war on terrorism requires that the state must be able and willing to carry out deterrent threats of punishment because attackers will trigger them: it is impossible to prevent every terrorist attack. By designing and carrying out punishments that are actually delivered as threatened, states theoretically enhance deterrence and reduce future attacks. States must design punishments particularly well so the punishments do not have harmful second- or third-order effects on the concomitant political, economic and social reconciliation strategy.

Holy Sites as Targets for Deterrence Punishment: When discussing holy sites as targets for deterrence punishment, two issues must be addressed. First, potentially successful deterrence strategies require communication, capability and credibility. Second, states select targets for deterrence punishment using one main criterion: fear of actual punishment of the target must compel the potential attacker to not attack.

Relatively specific trigger actions and deterrent threats are often communicated to the would-be attacker. If specific retaliatory threats are not communicated or left vague, a deterrence strategy may not have the desired effects. Capability and credibility are intimately linked, particularly when dealing with deterrence of terrorists. States must be capable of successfully carrying out the deterrent punishment. States must also be credible when communicating their deterrent strategy based on their current capabilities. Military-technical, political-social and moral-ethical factors jointly determine a state's capabilities and deterrence credibility.

Targeting holy sites raises two problems. First, such targeting would violate the most basic norms on the use of force. Both allies and adversaries would regard such a strategy as illegitimate. Second, a deterrent threat against the Holy Sites, carried out or not, would likely incite rage rather than fear, thereby reducing the credibility of the threat. The targeting of Holy Sites would almost certainly rally further support for terrorists opposing the United States. The blowback, from either the attack or the threat of attack, could be substantially larger than any near-term deterrent benefit. Such threats would likely invoke a response akin to the outrage at the Taliban's destruction of the Buddhas of Bamyan in Afghanistan and the bombing of the al-Askari Mosque in Samarra, Iraq.

Appendix B: Al-Qa'ida, Affiliates and Weapons Development

The tables below explore how four primary dimensions of al-Qa'ida—AQ Central, AQ Affiliates, AQ Locals and the AQ Network—might approach the use of chemical, biological, radiological, or nuclear weapons.[150]

Al Qa'ida Central (AQ Central)
Definition: The organization that attacked the United States on 9/11, which is led by Usama bin Ladin and Ayman al-Zawahiri.
Considerations: AQ is unlikely to use CBRN speciously. It understands that timing and targeting are important to the success of an attack and that mass killing alone is unlikely to produce the political effects they desire. AQ Central would likely not risk the inevitable retaliation from a WMD attack unless it could credibly be expected to garner massive attention around the Arab and Muslim world.

Al-Qa'ida Affiliates (AQ Affiliates)
Definition: A variety of established terrorist organizations, from al-Jama'a al-Islamiyya in Indonesia to al-Qa'ida in Iraq. Often regionally focused, all of these organizations have collaborated with AQ Central in some sense, though the level of cooperation varies.
Considerations: Attacks by AQ Affiliates using CBRN are likely to vary widely. Large CBRN attacks will probably be aimed at Western targets because such attacks on largely Muslim targets would produce unhelpful backlash in the local population. Conversely, AQ Affiliates that use CBRN weapons in the scope of their local conflict are likely to focus on simpler attacks like those used by AQI in Iraq.

Al Qa'ida Locals (AQ Locals)

Definition: Small cells of individuals that have some connection to AQ Central, but no true organizational history or command and control relationship with the high command. Bruce Hoffman describes two AQ Local sub-categories: individuals with some experience in terrorist organizations or training camps and individuals that developed their own cell but with input from AQ Central.

Considerations: A CBRN attack by a cell of AQ Locals will likely be very simple and designed to use the comparative advantage of such cells—extensive knowledge of the target society, both physically and culturally. The limited resources and tactical expertise available to AQ Locals represents an inherent limitation on their ability to develop a complex, massive physical attack.

Al Qa'ida Network (AQ Network)

Definition: People that have adopted AQ Central's ideology and decided independently to act in order to support AQ Central's overall goals. These individuals are often poorly trained and poorly equipped.

Considerations: AQ Network cells will likely minimize complexity at all costs. That does not necessarily mean that the threat of a CBRN attack by an AQ Network cell is low or that such an attack would not be devastating…. Unconventional infrastructure that could be attacked with simple conventional tactics but produce an unconventional outcome – such as a chlorine rail car – would be prime targets for an AQ Network cell.

Endnotes

[1] Deterrent punishments must have two features if they are to be effective: credibility, or the will to follow through, and capability, or the ability to inflict damage. The other factor in deterrence is the terrorist's value for carrying out an attack relative to the current status quo. Both of these issues are discussed in greater detail later in the report.

[2] Symposium, "Is Preemption Necessary?," *The Washington Quarterly* 26 (Spring 2003), 75-145.

[3] For articles that support deterrence and terrorism, see Robert F. Trager and Dessislava Zagorcheva, "Deterring Terrorism: It Can Be Done," *International Security* 30 (March 2006), 87-123; Daniel Whiteneck, "Deterring Terrorists: Thoughts on a Framework," *Washington Quarterly* 28 (Summer 2005), 187; Paul K. Davis and Brian Michael Jenkins, "Deterrence and Influence in Counterterrorism: A Component in the War on al Qa'ida," *RAND Report* (2002). For arguments addressing the benefits of preemption see Richard K. Betts, "The Soft Underbelly of American Primacy: Tactical Advantages of Terror," *Political Science Quarterly* 1 (2002); Richard H. Schultz and Andreas Vogt, "The Real Intelligence Failure on 9/11 and the Case for a Doctrine of Striking First," in *Terrorism and Counterterrorism*, eds. Russell D. Howard and Reid L. Sawyer (New York: McGraw Hill, 2004); Bruno S. Frey and Simon Luechinger, "Terrorism: Deterrence May Backfire" (Working Paper No. 136I, Institute for Empirical Research in Economics, University of Zurich: 2002), www.econ.ku.dk.

[4] "Remarks by President Bush at 2002 Graduation Exercise of the United States Military Academy," (June 2002).

[5] See Betts; Schultz and Vogt; Lee Feinstein and Anne-Marie Slaughter, "A Duty to Prevent," *Foreign Affairs* 83 (January/February 2004), 136.

[6] See Trager and Zagorcheva for a discussion.

[7] See Scott Atran, "The Genesis of Suicide Terrorism," *Science* 299 (March 2003), 1534-1539; Scott Atran, "Mishandling Suicide Terrorism," *Washington Quarterly* 27, no. 3 (2004), 67-90.

[8] For examples, see Per Baltzer Overgaard, "The Scale of Terrorist Attacks as a Signal of Resources," *Journal of Conflict Resolution* 38, no. 3 (1994), 452-478; B. Peter Rosendorff and Todd Sandler, "Too Much of a Good Thing? The Proactive Response Dilemma," *Journal of Conflict Resolution* 48, no. 5 (2004), 657-671; Ethan Bueno de Mesquita, "The Terrorist Endgame: A Model with Moral Hazard and Learning," *Journal of Conflict Resolution* 49, no. 2 (2005a), 237-258; Ethan Bueno de Mesquita, "The Quality of Terror," *American Journal of Political Science* 49, no. 3 (2005b), 515-530; Robert Powell, "Defending Against Terrorist Attacks with Limited Resources," *American Political Science Review* 101, no. 3 (2007a), 527-541.

[9] Martha Crenshaw, "Theories of Terrorism: Instrumental and Organizational Approaches," *Journal of Strategic Studies* 4, no. 10 (1987), 13-31.

[10] Boaz Ganor, *The Counter-Terrorism Puzzle: A Guide for Decision Makers* (New Brunswick, NJ: Transaction Publishers, 2005), 64-65.

[11] Paul K. Huth, *Extended Deterrence and the Prevention of War* (New Haven: Yale University Press, 1988), 1-14.

[12] See Atran 2003; Robert A. Pape, *Dying to Win: The Strategic Logic of Suicide Terrorism* (New York: Random House, 2005), 5.

[13] William C. Banks, Renee de Nevers, and Mitchell B. Wallerstein, *Combating Terrorism: Strategies and Approaches* (New York, NY: CQ Press, 2008).

[14] For a discussion of probabilistic threats, see Thomas Schelling, *The Strategy of Conflict* (Cambridge, MA: Harvard University Press, 1960), 187-204.

[15] Betts, 45

[16] Paul K. Pillar, *Terrorism and United States Foreign Policy* (Washington, DC: Brookings Press, 2001), 104.

[17] See Schelling, 187-204.

[18] Trager and Zagorcheva, 88.

[19] Ibid., 99.

[20] Ibid., 101.

[21] Ibid., 102.

[22] Ibid., 95.

[23] Ganor, 60-67.

[24] Davis and Jenkins.

[25] Pillar, 104.

[26] Ibid.

[27] See Huth, 1-10. Note that this creates measurement bias in studies of deterrence, making it difficult to reach analytically sound conclusions. There are similar inference problems when studying deterrence of terrorism.

[28] Davis and Jenkins, xviii.

[29] Trager and Zagorcheva, 90.

[30] Whiteneck, 188.

[31] Ibid.

[32] Frank C. Zagare and D. Marc Kilgour, *Perfect Deterrence* (Cambridge, UK: Cambridge University Press, 2000), 66-84.

[33] Robert Axelrod, *Conflict of Interest: A Theory of Divergent Goals with Applications to Politics* (Chicago: Markham, 1970).

[34] Pillar, 105.

[35] Christian Davenport, "Multi-Dimensional Threat Perception and State Repression: An Inquiry into Why States Apply Negative Sanctions," *American Journal of Political Science* 39, no. 3 (August 1995), 683-713.

[36] See Jeffrey Ian Ross and Ted Robert Gurr, "Why Terrorism Subsides: A Comparative Study of Canada and the United States," *Comparative Politics* 21, no. 4 (1989), 285-297; Martha Crenshaw, "How Terrorism Declines," *Terrorism and Political Violence* 3, no. 3 (1991), 379-399.

[37] That being said, it is also important to note that the punishment the United States inflicted on al-Qa'ida after 9/11 has caused some al-Qa'ida members to question the strategic value of the 9/11 attacks. There was also disagreement about the strategic logic of the attacks before 9/11.

[38] Jessica Stern, *The Ultimate Terrorism* (Boston, MA: Harvard University Press, 1999), 130-131.

[39] Robert Powell, "Clear Deterrence and the Strategy of Limited Retaliation," *American Political Science Review* 83, no. 2 (June 1989), 503-519.

[40] Nina Tannenwald, "The Nuclear Taboo: The United States and the Normative Basis of Nuclear Non-Use," *International Organization* (Summer 1999), 435.

[41] Robert Jervis, Richard Ned Lebow, and Janice Gross Stein, *Psychology and Deterrence* (Baltimore, MD: Johns Hopkins University Press, 1985), 1-33.

[42] Whiteneck, 196.

[43] Note that states may have "internal" red lines that trigger a certain response given a terrorist act. The problem with internal red lines is that there is no reason that they will have any impact on terrorist behavior if not communicated ahead of an attack.

[44] James Fearon, "Domestic Political Audiences and the Escalation of International Disputes," *American Political Science Review* 88, no. 3 (September 1994), 577-592.

[45] For a discussion of the logic, see Timothy W. Crawford, *Pivotal Deterrence: Third-party Statecraft and the Pursuit of Peace* (Ithaca, NY: Cornell University Press, 2003).

[46] Ganor 66-68; Whiteneck, 188; Trager and Zagorcheva.

[47] See, e.g., Caitlan Talmadge, "Deterring a Nuclear 9/11," *Washington Quarterly* 30, no. 2 (Spring 2007), 21-34.

[48] Bruce Hoffman, "CBRN Terrorism Post-9/11," in *Weapons of Mass Destruction and Terrorism*, eds. Russell D. Howard and James J.F. Forest (New York: McGraw Hill, 2008).

[49] Hoffman.

[50] Kate Ivanova and Todd Sandler, "CBRN Incidents: Political Regimes, Perpetrators, and Targets," *Terrorism and Political Violence* 17, no. 3 (Spring/Summer 2005).

[51] James J.F. Forest and Sammy Salama, "Jihadist Tactics and Targeting," in *Jihadist and Weapons of Mass Destruction: A Growing Threat*, eds., Gary Ackerman and Jeremy Tamsett, (London, UK, CRC Press, December 2008).

[52] Brian Fishman and James J.F. Forest, *WMD and the Four Dimensions of Al-Qa'ida* (Center for Asymmetric Threats, 2008) (forthcoming).

[53] Ibid.

[54] Fishman and Forest.

[55] Rohan Gunaratna, "Abu Musab al-Zarqawi: A New Generation of Terrorist Leader," *IDSS Commentaries*, 5 July 2004.

[56] Fishman and Forest.

[57] Nova Online, *History of Bio-Warfare*, see http://www.pbs.org/wgbh/nova/bioterror/hist_nf.html#cult.

[58] Forest and Salama.

[59] Ibid.

[60] Ibid.

[61] Ibid.

[62] Hoffman.

[63] FOR OFFICIAL USE ONLY, Federal Bureau of Investigation and Department of Homeland Security Intelligence Assessment, "Domestic Terrorists' Intent and Capability to Use Chemical, Biological, Radiological and Nuclear Weapons," 14 October 2008.

[64] Ibid.

[65] Ivanova and Sandler.

[66] Talmadge.

[67] Hoffman.

[68] Federal Bureau of Investigation and Department of Homeland Security Intelligence Assessment.

[69] Ibid.

[70] See Leonard Weinberg, *Global terrorism: A Beginner's Guide* (Oxford, UK: Oneworld Press, 2005), 6-11.

[71] Trager and Zagorcheva, 98-105.

[72] Fishman and Forest.

[73] Ibid.

[74] Whiteneck.

[75] Hoffman.

[76] Ibid.

[77] Bill Roggio, "Al Qa'ida confirms WMD expert Abu Khabab killed in South Waziristan strike," *Long War Journal* (3 August 2008).

[78] Hoffman.

[79] FOR OFFICIAL USE ONLY, see "Abu Mus'ab al-Suri Responds to State Department Terrorism Accusations," Jihadist Websites—*FBIS Report* in Arabic (21 January 2005).

[80] Ibid.

[81] *National Security Strategy of the United States of America*, (March 2006).

[82] Uri Fisher, "Deterrence, Terrorism, and American Values," *Homeland Security Affairs*, Vol. 3, no. 1 (February 2007).

[83] Ibid., 2.

[84] Ibid.

[85] See Davis and Jenkins.

[86] Fishman and Forest.

[87] Ibid.

[88] Omar Nasiri, *Inside the Jihad* (New York, NY: Basic Books, 2006), 145-148.

[89] Qur'an, Anfal 60.

[90] Hani Suleiman Mohammad alTeimat, *Aslaihat al Damar al Shamil Wa Mo'ahidtat Nez'eha* (Weapons of Mass Destruction and Conventions of Disarmament), 1996, www.arablawinfo.com/Researches_AR/49.doc.

[91] Fat'hi al Derini, *al-Manahij al Esoliya Fe al Ijtihad Bil Ra'e Fe al-Tashr'e al-Islami* (The Fundamental Curriculums of Ijtihad of Opinion in the Islamic Legislation), 1st Edition (Damascus, Syria: Dar al Kitab al Hadith,1975), pg. 530.

[92] Mohamad Bin Ali al-Shoukani, *Al Sayl al-Jarar ala Hada'iq al Azhar* (*The Huge Flood Pouring Forth the Flower Gardens*), 1st Edition (Beirut, Lebanon: Dar al Kutb al Elmia, 1985), Vol.4, pg. 534.

[93] Qu'ran, Baqarah 2-194.

[94] For interpretation one see Al-Zerqani, *Sherh Mokhtasar Khalil* (The Interpretation of Khalil's Summary), Vol.3, pg.11; for interpretation two see Zain al-Deen al-Amely, *al-Roudha al-Bahiya Fe Sharh al Lam'a al Dimashqia* (The Gorgeous Garden of Interpreting the Damascus Sparkle), 2nd Edition (Dar Ehya al Turath al Arabi, 1983), Vol. 2, pg. 392; and for interpretation three see Ibn Hajar al-Askalani, *Fatih al-Bari* (God's Conquer), 1st Edition (Dar al Rayan Lil Turath, 1986), Vol. 6, pg. 174.

[95] alTeimat, pg. 13.

[96] FOR OFFICIAL USE ONLY, Nasir bin Hamd al-Fahd, *Use of weapons of mass destruction defended on basis of Islamic Law*, Open Source Center, Internet text in Arabic, 1 May 2003; see also Fishman and Forest.

[97] Nasir bin Hamd al-Fahd.

[98] Ibid.

[99] Ibid.

[100] Ibid.

[101] Fishman and Forest.

[102] Scott Atran, "The Emir: An Interview with Abu Bakar Ba'asyir, Alleged Leader of the Southeast Asian Jemaah Islamiyah Organization," *Spotlight on Terror* 3, Iss. 9 (15 September 2005).

[103] Scott Atran, "The Emir: An Interview with Abu Bakar Ba'asyir, Alleged Leader of the Southeast Asian Jemaah Islamiyah Organization," *Spotlight on Terror*, Vol. 3, Iss.9, (15 September 2005); See also Michael Scheuer, "New York Subway Plot and al-Qaeda's WMD Strategy," *Terrorism Focus*, Vol. 3, Iss. 24, (20 June 2006).

[104] See Atran 2005.

[105] Ibid.

[106] Ibid.

[107] FOR OFFICIAL USE ONLY, "Jihadist Video Encourages Nuclear, WMD Attacks on West," Open Source Center Feature—Jihadist Websites, FEA20080528701508, 25 May 2008.

[108] Ibid.

[109] It is not clear whether this increase in number also represents an increase in the proportion of jihadists rejecting unconventional attacks. See source document: "Jihadist Video Encourages Nuclear, WMD Attacks on West."

[110] Ibid.

[111] Fishman and Forest.

[112] Fisher, 4.

[113] Technically, they pledged their allegiance to Wilayat al Faqih, the rule of jurisprudence, as embodied by Ayatollah Khomeini.

[114] Deterrence of nuclear terrorism is possible because holding states that supply nuclear weapons to terrorists responsible (through the promise of massive retaliation) will prevent the spread and / or use of nuclear weapons by terrorists. Yet, it is important to note that this deterrence is not aimed specifically at terrorists. Instead, it is the state supporters of terrorists who can potentially be deterred. Michael A. Levi, "Deterring Nuclear Terrorism," *Issues in Science and Technology* 20, no. 3 (Spring 2004), http://www.issues.org/20.3/levi.html.

[115] Fisher, 6.

[116] See Office of the Coordinator for Counterterrorism, "Country Reports on Terrorism 2007," ch. 3 (United States Department of State, April 2008).

[117] Multilateral sanctions are usually diluted and prone to backsliding, so they are inherently less credible. Daniel W. Drezner, "Bargaining, Enforcement, and Multilateral Sanctions: When Is Cooperation Counterproductive?" *International Organization*, Vol. 54, no. 1 (2000), 73-102.

[118] For a discussion of deterrence by denial see Glenn Snyder, *Deterrence and Defense: Towards a Theory of national Security* (Princeton, NJ: Princeton University press, 1961). For a discussion of deterrence by denial as applied to terrorism see Shmuel Bar, "Deterring Terrorists: What Israel Has Learned," *Policy Review* 149 (June/July 2008), 29-42.

[119] Joseph Cirincione, Jon B. Wolfsthal and Miriam Rajkumar, *Deadly Arsenals: Nuclear, Biological and Chemical Threats* (Washington, D.C.: Brookings Institute Press, 2005), 28, 295.

[120] Ibid., 433-434, 438, 439, 441.

[121] Ibid., 422.

[122] See United States Department of State, "The Proliferation Security Initiative," http://usinfo.state.gov/products/pubs/proliferation/.

[123] Trager and Zagorcheva, 90 (quoting Glenn Snyder).

[124] Whiteneck, 194.

[125] Fisher, 6.

[126] Talmadge, 21.

[127] David E. Sanger and Thom Shanker, "United States Debates Deterrence for Nuclear Terrorism," *New York Times*, 8 May 2007.

[128] Michael Levi and David M. Rubenstein, "Deterring State Sponsorship of Nuclear Terrorism," *Council on Foreign Relations Special Report* 39 (New York: Council on Foreign Relations Press, 2008), http://www.cfr.org/content/publications/attachments/Nuclear_Deterrence_CSR39.pdf.

[129] Talmadge, 30-31.

[130] Schelling, 187-204.

[131] Jeffrey Record, "Nuclear Deterrence, Preventive War, and Counterproliferation," *Policy Analysis* 519 (8 July 2004), 23, http://www.cato.org/pubs/pas/pa519.pdf.

[132] Ibid. For a theoretical examination of why the spread of nuclear weapons is not likely to result in nuclear war, see Kenneth N. Waltz, "Toward Nuclear Peace," in *The Use of Force: Military Power and International Politics*, eds. Robert J. Art and Kenneth N. Waltz (Lanham: University Press of America, 1993).

[133] Note that there is no discussion about collateral damage or civilian casualties here. The mutually assured destruction strategy during the Cold War involved nuclear threats against the Soviet population, most of which had no say over Soviet policy. It is difficult to argue that collateral damage with a doctrine of strategic culpability, in terms civilian life, differs significantly from Cold War deterrent strategy.

[134] Levi, 3-5.

[135] Ibid., 78.

[136] For an examination of nuclear weapons strategy during the Cold War (mutual assured destruction; flexible response), see Lawrence Freedman, "The Evolution of Nuclear Strategy," in *Makers of Modern Strategy: from Machiavelli to the Nuclear Age*, eds. Peter Paret with Gordon A. Craig and Felix Gilbert (Princeton, NJ: Princeton University Press, 1986).

[137] For example, Alexander George and Richard Smoke argue that during the Korean War, deterrence failed either as a result of the failure of deterrence itself or of the failure to successfully carry out deterrence. First, the lack of a United States commitment to defend South Korea may have contributed to the initial invasion by North Korea. Second, Chinese actions failed to deter the subsequent United States occupation of North Korea. Third, United States actions failed to deter Chinese entry into the war. Alexander L. George and Richard Smoke, *Deterrence in American Foreign Policy: Theory and Practice* (New York: Columbia University Press, 1974). For additional examination of failures of deterrence see Huth's argument that "failures of extended-immediate deterrence have led to the outbreak of some of the most destructive and important international conflicts of the twentieth century." Paul K. Huth, *Extended Deterrence and the Prevention of War* (New Haven: Yale University Press, 1988), 18.

[138] Ganor, 65-67.

[139] George and Smoke, 188.

[140] Helmut Dubiel and Gabriel Motzkin, *The Lesser Evil: Moral Approaches to Genocide Practices* (New York: Routledge Press, 2004); Samantha Power, *A Problem from Hell: America and the Age of Genocide* (New York: Basic Books, 2002); Richard Price, *The Chemical Weapons Taboo* (Ithaca: Cornell University Press, 1997); Ethan Nadelmann, "Global Prohibition Regimes: The Evolution of Norms in International Society," *International Organization* 44 (Autumn 1990), 479-526; Martha Finnemore, *National Interests in International Society* (Ithaca: Cornell University Press, 1996), ch. 3.

[141] Tannenwald (1999), 435. See also Nina Tannenwald, "Stigmatizing the Bomb: The Origins of the Nuclear Taboo," *International Security* 29 (2005), 5-49; Nina Tannenwald, *The Nuclear Taboo : the United States and the non-use of nuclear weapons since 1945* (Cambridge: Cambridge University Press, 2007).

[142] Glenn T. Seaborg, *Stemming the Tide* (Lexington, MA: Lexington Books, 1987); Susanna Schrafsetter and Stephen Twigge, *Avoiding Armageddon* (Westport, CT: Praeger, 2004); Victor A. Utgoff, ed., *The Coming Crisis: Nuclear Proliferation, United States Interests and World Order* (Cambridge, MA: MIT Press, 2000); Stuart E. Johnson and William H. Lewis, eds., *New Perspectives on Counterproliferation* (Washington, D.C.: National Defense University Press, 1995).

[143] Tannenwald (2005); Ronald Jepperson, Alexander Wendt and Peter Katzenstein, "Norms, Identity, and Culture in National Security," in *The Culture of National Security*, ed. Peter J. Katzenstein (New York: Columbia University Press, 1996), 67.

[144] Andrew Bacevich, *The New American Militarism* (New York: Oxford University Press, 2005), ch. 6; Steven Kull and I. M. Destler, *Misreading the Public: The Myth of the New Isolationism* (Washington, D.C.: Brookings Institution Press, 1999).

[145] The limited public opinion data on this issue collected since 9/11 support the assertion that a sizable portion (though certainly not all) of the American public would resist the use of nuclear weapons, even in response to a nuclear terror attack. From the Gallup Poll database we find these questions and results. October 2001: "Would you be willing -- or not willing -- to have the United States government do each of the following, if the government thought it were necessary to combat terrorism? How about...Use nuclear weapons to attack terrorist facilities?" Willing (33.67%), Not willing (63.87%). March 2002: "Can you think of any circumstance where the United States should use nuclear weapons against an enemy, or should the United States never use nuclear weapons?" Yes (32.13%), No, should never use (65.25%), DON'T KNOW (2.01%). "If you had to choose, do you think the United States should only use nuclear weapons if an enemy uses them against the United States first; or do you think the United States should be willing to use nuclear weapons first, even if no enemy has used them against the United

States?" Only use nuclear weapons if an enemy uses them against the United States first (53.56%), Be willing to use nuclear weapons first, even if no enemy has used them against the United States (36.00%), DON'T KNOW (7.75%). "If the United States were attacked by terrorists using nuclear weapons, do you think the United States would be justified -- or not justified -- in using nuclear weapons against...Training camps and other facilities used by the terrorists that the United States believes were responsible for the attack?" Justified (58.29%), Not justified (38.54%). "If the United States were attacked by terrorists using nuclear weapons, do you think the United States would be justified -- or not justified -- in using nuclear weapons against...Major cities in countries that harbor the terrorists the United States believes were responsible for the attack?" Justified (41.26%), Not justified (55.74%). January 2005: "Would you be willing to use nuclear weapons to attack terrorist facilities?" Willing (27%), Not willing (72%).

[146] For the "constitutive" effects of norms see Katzenstein, "Introduction," *Culture of National Security*, ch. 1. For the concept of rogue states and the punitive consequences of being labeled a rogue, see Scott Silverstone, *Preventive War and American Democracy*, (New York, NY: Routledge, 2007), 163-169, 183-184; Michael Klare, *Rogue States and Nuclear Outlaws* (New York: Hill and Wang, 1995); Anthony Lake, "Confronting Backlash States," *Foreign Affairs* (March/April 1994).

[147] Tannenwald (!999), 436.

[148] Richard Price and Nina Tannenwald, "Norms and Deterrence," in *Culture of National Security*, 114-152; Paul Kowert and Jeffrey Legro, "Norms, Identity, and their Limits," in ibid., 469-483.

[149] Doron Almog, "Cumulative Deterrence and the War on Terrorism," *Parameters* (Winter 2004-2005).

[150] This list is adapted from Fishman and Forest. The four dimensions of al-Qa'ida Fishman and Forest use were initially defined by Bruce Hoffman, see Hoffman.