

## NUCLEAR DETERRENCE OF TERRORIST WMD ATTACKS

BY

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# **PROPERTY OF U.S. ARMY**

USAWC STRATEGY RESEARCH PROJECT

## **NUCLEAR DETERRENCE OF TERRORIST WMD ATTACKS**

by

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## **ABSTRACT**

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Employing a nuclear punishment strategy to deter non-state terrorists from using Weapons of Mass Destruction against the United States is likely not effective. The perception of sufficient resolve to use the weapons, difficulties in targeting the terrorists, and terrorist counter-strategies work against the credibility of the deterrent. However, limiting proliferation of nuclear weapons and other WMD is possible using nuclear deterrence strategy. Coercion of state sponsors of terrorists to not provide WMD to those terrorists is a credible and feasible strategy provided a credible capability supporting attribution exists. Additionally, a continued policy on extended deterrence will further limit the potential for nuclear proliferation.

## NUCLEAR DETERRENCE OF TERRORIST WMD ATTACKS

The gravest danger our Nation faces lies at the crossroads of radicalism and technology. Our enemies have openly declared that they are seeking weapons of mass destruction, and evidence indicates that they are doing so with determination. The United States will not allow these efforts to succeed. ...History will judge harshly those who saw this coming danger but failed to act. In the new world we have entered, the only path to peace and security is the path of action.<sup>1</sup>

—President G. W. Bush  
September 17, 2002

President Bush's remarks serve as a warning for those dedicated to the defense of the United States. Since the attacks of September 11, 2001 (9/11), the US Government has applied significant resources toward preventing additional terrorist attacks against the US. This paper explores whether or not the US could employ nuclear deterrence as an approach to prevent further mass casualty attacks by terrorists, and specifically, terrorists' use of weapons of mass destruction (WMD).

To accomplish this, it is first necessary to understand the context of the international environment, who the terrorists are and how they came to wield so much power. Next, a description of the basic concepts behind deterrence, what it is and how it works, is provided. With this background established, the paper assesses using a nuclear deterrence approach against non-state actors by analyzing its feasibility, acceptability, and suitability. The final section of the paper presents recommendations to prevent WMD attacks against the US.

### Context and the Threat

The rise of non-state actors<sup>2</sup> and terrorists organizations as potential and actual threats to the US and her Allies can be related to four significant changes to the international security environment that have occurred over the past two decades. The

end of the cold war, globalization of the world economies, the revolution in information technology, and finally, the terrorist attacks against the US on 9/11 all served to facilitate the growth of non-state actors on the international scene. Each change provided a unique impetus that fed the rise of a violent brand of non-state actors.

First, the end of the cold war and fragmentation of the Soviet Union ended the bipolar international world order and left the United States as the sole super power. Since the end of the Second World War the Soviet Union had controlled its member, client, and aligned states as part of its confrontation with the US and her allies. The dissolution of the Soviet Union removed the controls over the former member and aligned states and led to significant turmoil as states were now free to pursue their own interests. Additionally, the Soviet collapse created a significant WMD proliferation threat. Since the Soviet nuclear arsenal had been fielded throughout the former Soviet Republics, the potential for proliferation of nuclear weapons increased dramatically. Securing the Soviet's nuclear weapons and fissile materials to make them less susceptible to theft by terrorists was a priority for the US immediately after the collapse of the Soviet Union<sup>3</sup>. Finally, with the creation of new states and their new interests came multiple security dilemmas. The former Soviet Republics were now responsible for their own defense and this created a possibility of increased nuclear weapons proliferation.

The second change to the international landscape facilitating the rise of non-state actors was globalization of the world's economies.<sup>4</sup> The new world economy required more porous national borders so free trade would not be hampered. Also, globalization readily facilitated the migration of cultures and societal norms. The human race was

linked as never before by the freedom of trade, movement, and ideas enabled by globalization. Unfortunately, easing travel restrictions not only enabled business travel but that of terrorists too.

Linked to globalization and this freedom to maneuver was the revolution in information technology. This revolution made the incredible expansion of the internet possible. The existence of a tool to make massive amounts of information on virtually unlimited topics available was crucial to the efficient management of global businesses. However, in addition to legitimate data and knowledge transfer, the internet also offered equal access for the exchange of both radical ideologies and weapons-related information.<sup>5</sup> Some of which resented the heightened influence of western ideas and values.

The 9/11 attacks represented a culmination of effects of the first three changes. These attacks brought the new power of non-state actors to the forefront of the world stage. 9/11 demonstrated to the world it is now possible for extremists unleashed by the dissolution of the bi-polar world, less hindered by national borders, and enabled by the ready access of the World Wide Web, to take a larger and more threatening global role. The attacks of 9/11 shook the international order by demanding the concept of war be expanded from state-on-state actors to state versus non-state actors. This new concept of war did not fit easily within the existing war-making capability of states. New tools and re-evaluation of traditional strategies were and are required to face the threat of hostile non-state actors.

Terrorist organizations motivated by extremist ideologies represent the greatest threat to the US. Non-state actors motivated by religious extremism are most likely to

attempt mass casualty attacks.<sup>6</sup> The terrorist organization Al-Qaeda is a prime example.<sup>7</sup> However, for Al-Qaeda or any terrorist organization to be considered a threat to be countered, they must possess both the motivation and capability to attack the US or her allies. Non-state actors possessing these two characteristics are the target of our deterrence, particularly those with the potential ability to procure nuclear, chemical, and biological weapons.

*Motivation to Attack the US.* Motivation to strike at the US or her allies is a necessary ingredient in any enemy. Al-Qaeda has already proven its willingness to attack the US. Al-Qaeda's overall objective, the creation of a global caliphate ruled by shar'ia law,<sup>8</sup> puts it in opposition to US interests and actions globally. To further its objective, Al-Qaeda also has intermediate ends such as removing Western influence from Muslim lands. Such objectives clearly provide a continued motivation for further attacks against the US.

*Capability to Attack the US.* The attacks of 9/11 proved the US could be attacked by a non-state enemy.<sup>9</sup> Although these attacks caused significant casualties and used unconventional weapons in an unconventional manner, they did not use WMDs<sup>10</sup>. The security measures instituted since 9/11 are intended to make another attack using 9/11 tactics a more remote possibility. Given this, but retaining a continued motivation to attack, terrorists must find another means to inflict significant casualties. This makes it likely terrorists will continue to attempt procurement of some sort of WMD. Terrorists can obtain these weapons in three ways; develop and build WMD themselves, obtain WMD from a state supporter, or steal the desired WMD. The Report of the Commission on the Prevention of WMD Proliferation and Terrorism concluded the possibility of

terrorists designing and building their own nuclear device is slight.<sup>11</sup> The Commission concluded "terrorists are more likely to be able to obtain and use a biological weapon than a nuclear weapon."<sup>12</sup> Given the consequences of a successful nuclear terror event in the US, however, the possibility of terrorists obtaining nuclear weapons cannot be ignored from a deterrence stand point. Furthermore, irrespective of the type of WMD, the manner in which terrorists attempt to get these weapons is important when determining the appropriate deterrent approach.

### Deterrence

At its simplest, deterrence is defined as one party using threats of force against another in order to maintain the status quo.<sup>13</sup> It is a coercive concept because it attempts to persuade another not to act by using fear of the consequences if they do.<sup>14</sup> Indeed, the Department of Defense (DoD) dictionary defines deterrence as "The prevention from action by fear of the consequences."<sup>15</sup> Additionally, the DoD dictionary states that "deterrence is a state of mind brought about by the existence of a credible threat of unacceptable counteraction."<sup>16</sup> However, simply knowing definitions is insufficient to crafting a strategy. An understanding of the different approaches to deterrence and their characteristics is necessary.

*Deterrence Approaches.* One category of deterrence approaches is based on the deterrent methodology, e.g., either principally offensive or defensive actions.

Punishment deterrence requires the deterring party threaten the use of counter-offensive force in response to hostile actions taken against them. It is, in essence, the promise of painful retaliation. Denial deterrence, on the other hand, aims to prevent attacks or undesirable actions from taking place through control or defense. Denial prevents actions by either actively controlling events, thereby preventing an attack, or

by presenting the capability of successful defense, so any attack is futile. Punishment and denial deterrence approaches are intended to create fear in the minds of the deterred attacker that either the cost of any attack – even if successful -- would either be too high to warrant the attack, or the attack has no chance of succeeding.

A second category of deterrence approaches is based on who is being protected, and includes central and extended deterrence.<sup>17</sup> The concept of central deterrence is best defined as deterring attack on the homeland.<sup>18</sup> Thus, the US employs the central deterrence approach when it states it would respond to any nuclear attack on the territory of the United States with a response in kind.

Extended deterrence presents a more challenging concept. Extended deterrence expands the “defended” area to selected, identified, allies and friendly nations. Currently, the US extends its nuclear deterrence to over 30 nations, in an attempt to deter attacks against its allies by using the threat of American nuclear retaliation.<sup>19</sup> Extended deterrence is an important element of US deterrence strategy because it “provides a barrier” to the additional proliferation of nuclear weapons since US allies do not need to develop their own nuclear weapons as part of their central deterrence efforts.<sup>20</sup> This, in turn, reduces the risk of terrorists gaining access to nuclear weapons.

All deterrence approaches share additional requirements for success. These requirements are:

- The capability to inflict the promised physical punishment
- The capability to conduct the successful defense
- The will to carry out the necessary activities should deterrence fail<sup>21</sup>

The deterring party must, as a minimum, create at least the perception of these requirements in the minds of the deterred for deterrence to work. Additionally, the deterring party must have the means to communicate the intent of the deterrence message.<sup>22</sup> These requirements are examined in more detail below.

*US Capability to Punish or Deny.* The deterring party must possess the capability either to levy unacceptable punishment or to prevent successful action by the enemy, for the deterrence message to be credible. Credibility can be defined as "the quality or power of inspiring belief."<sup>23</sup> An assessment of US capabilities from both a punishment and a denial deterrence perspective follows.

The US nuclear arsenal and the ability to effectively delivery the weapons represents our capability to inflict nuclear punishment. Despite the gradual degradation of this capability since the end of the cold war it still forms the basis for a credible threat.<sup>24</sup> Actions taken by the Department of Defense and the services since 2007 have helped restore our demonstrable capability to deliver unacceptable punishment via nuclear weapons.<sup>25</sup>

Any US denial deterrence approach with respect to terrorist attacks requires capabilities across a significantly wider spectrum of operations. These include providing demonstrable capability to secure: the US from hostile missile attacks; nuclear, chemical, and biological facilities; US ports of entry; significant infrastructure; population centers; and more. Although the US government is working to improve security capabilities in these areas, both achieving those capabilities and demonstrating their ability to support a denial deterrence approach is a challenging task.

*Communicating with the Threat.* Communicating intent to potential adversaries is crucial if deterrence has any hope of succeeding. Crafting and sending the correct deterrent message requires knowing your enemy thoroughly to ensure the message sent is the message received. The adversary must understand unambiguously what action to refrain from in order to avoid the punishment or, with denial, what actions have little chance for success due to defenses.

Unfortunately, because of their inherent nature and non-state status, a denial deterrence approach to terrorists requires public broadcasting that it is futile to attempt attacks due to a low probability of success. Such public statements represent a significant political risk for any leader because it is difficult if not impossible to ensure complete security in all areas all the time. Any breach of that security then reduces the credibility of the deterrent message. A case in point is the Christmas 2009 attempt to bring down a Northwest airlines passenger jet by an Al-Qaeda trained Nigerian student.<sup>26</sup> A reasonable inference is that US capabilities to prevent access to the US are as yet insufficient to support an effective denial deterrence message to terrorists.

Of course sometimes credibility can be attained by creating the perception of capability, rather than the capability itself. An example of this can be found in the actions of former Iraqi President Saddam Hussein prior to Operation Iraqi Freedom. Hussein led the world to believe Iraq still maintained chemical and possibly nuclear weapons capability even though they had destroyed these weapons after Operation Desert Storm. But by obstructing the United Nations weapons inspection teams Hussein created the perception of WMD capability in the minds of the world. His purpose behind this fictitious perception was to send a deterrence message to Iran.<sup>27</sup>

However, it would be far more difficult to sustain any false perception of capability in the open-media, democratic, free society environment of the US.

A further requirement for creating an effective deterrence message is an understanding of the relationship the two parties share. The strategist crafting the deterrence message must know their audience and send the deterrence message so it is received as intended. Even if that occurs, the deterrence target must be able to make a cost versus benefit assessment. In other words, the enemy must be able to determine if the promised pain is worth the gain of the attack. In traditional strategic deterrence terminology, the deterrence target must be a rational actor able to make the value judgment.<sup>28</sup> So, again, it is crucial to know the enemy to be able to interact and deter.

The US is a nation built on the ideology of democracy and distrust of a strong central government. But it is driven today by a giant domestic and international economy, with strong diverse societal forces. The US interacts with other states primarily through diplomatic, informational, military, and economic means, (i.e. the DIME). The US relationships and interactions with non-state actors are by necessity different and dependent on the type of actor.

The actors posing the likely threat to the US are those groups motivated by extremist ideologies, such as Al-Qaeda. The terrorists communicated to the US by attacking symbols of our political, economic, and military power. Osama Bin Laden stated the monetary costs of the 9/11 attacks cost Al-Qaeda approximately \$500K yet induced the US to spend \$500B in retaliation.<sup>29</sup> Additionally he said "So we are continuing this policy in bleeding America to the point of bankruptcy."<sup>30</sup> These

statements indicate Al-Qaeda can and does make the cost versus benefit calculation and hint at their particular rationality.

However, extremists, by virtue of their extreme ideologies and methodologies, also may not process information in a rational manner. Wyn Bowen argues in his article on terrorism that "The fanaticism of such actors is usually reflected in their harbouring of unrealisable goals and insusceptibility to negotiation and inducements."<sup>31</sup> He cites Al-Qaeda and Aum Shinrikyo as examples of groups of this type.<sup>32</sup> Because they are fanatics, Bowen argues terrorists are not rational.

But in his book on Nuclear Terrorism, Levi cites research that supports terrorist rationality. His sources indicate "terrorist actors are often concerned about operational risk--they may be willing to risk or give their lives, but not in futile attacks".<sup>33</sup>

Additionally, Levi quotes Gavin Cameron's book on nuclear terrorism that states "many terrorist organizations also appear to be risk-averse: the emphasis is often on the group's survival."<sup>34</sup> Finally, Al-Qaeda has a clear, four stage strategy designed to attain its professed objective of a caliphate.<sup>35</sup> This strategy, regardless of its feasibility, and coupled with Levi's arguments, indicates a rational thought process exists in Al-Qaeda.

*Will to Act.* When communicating the deterrence message, it is also necessary to create the perception that sufficient will or resolve exists to accomplish the actions the particular deterrence approach requires. Will is defined as the collective desire of the group.<sup>36</sup> In the case of the US, the composition of the "group" can vary. The group may represent the American people, and their will is expressed as it is interpreted by their elected leaders. But the group may also include the partners and allies of the US.

Domestically, demonstrating will can be a challenging task for a democratic society, especially when it comes to the use of nuclear weapons. There should be no question that any nation desires to protect itself from attack from either state or non-state threats. However, in any democratic state with freedom of speech rights dissenters have a public voice and this voice can influence or degrade a deterrence message. For example, the post 9/11 debates within the US about what limits to personal freedoms should be allowed in order to increase security can dilute the power of any deterrence message. Adversaries observing this debate may interpret it as a lack of will to defend. Furthermore, Western societies have migrated toward a public opinion taboo against the use of nuclear weapons. The Simons Foundation 2007 survey, "Global Public Opinion on Nuclear Weapons," indicated that 40% of people in the US believed the use of nuclear weapons would never be justified. The same survey found even higher numbers of Europeans opposed to any use of nuclear weapons.

Also, our international group of partners and allies can influence the perception of the will of the US. Legitimacy to act granted by allies and the international community is a stated goal of the US.<sup>37</sup> Due to the magnitude of consequences of nuclear weapons use, it is conceivable that this international legitimacy may be denied in the case of a nuclear response to an attack. Although no US ally would deny a country the right to self-defense, the actual use of nuclear weapons goes against popular Western ideals. Each nation's domestic opinion on the use of nuclear weapons will influence their national government, and therefore influence the US.

All these considerations build on both our own, and the enemy's, perception of our will to use nuclear weapons and therefore would compose a part of any US

deterrent message based upon nuclear use, for good or bad. However, the will of the elected leaders who actually control the use of nuclear weapons also matter. The Bush administration had a stated policy of using nuclear weapons in response to any nuclear, biological, or chemical attack on the US.

The United States will continue to make clear that it reserves the right to respond with overwhelming force—including through resort to all of our options—to the use of WMD against the United States, our forces abroad, and friends and allies.<sup>38</sup>

It can be argued this policy statement combined with the actions of the Bush administration created the perception of the will to use nuclear weapons. However, other statements made by President Bush and by officials from other administrations can cast doubt on US will. The 2002 National Security Strategy stated "Traditional concepts of deterrence will not work against a terrorist enemy whose avowed tactics are wanton destruction and the targeting of innocents; whose so called soldiers seek martyrdom in death and whose most potential protection is statelessness."<sup>39</sup> This statement, although published previous to the policy of retaining the right of nuclear weapons use, puts no faith in deterrence against terrorists. And by denying the efficacy of deterrence against terrorists generally, it perhaps can create a perception of lack of will to use nuclear or any other weapons against those terrorists.

Another example comes from the aftermath of Operation Desert Storm. National Security Advisor Brent Scowcroft described several years after the 1991 war how the US never actually intended to use nuclear weapons against Iraq in response to Iraqi use of WMD.<sup>40</sup> Even though his statements were made years after the war, those words may not be lost on contemporary audiences. Perception of a lack of will to use nuclear weapons on the part of the US government is reinforced.

The Obama administration's contributions to the perception of corporate US Government will can also be interpreted ambiguously. In 2009, the administration announced an ultimate goal of eliminating all nuclear weapons on the planet.<sup>41</sup> Although President Obama put forth many requisites for the goal and reaffirmed US commitment to deterrence, the policy conformed to the predominant anti-nuclear-weapons-use Western public opinion trend mentioned previously.<sup>42</sup> Additionally, the tone of the current administration's overall national security approach is softer than that of the Bush administration. Given this, the message sent could possibly be interpreted by terrorists as a lack of will.

On the other hand, other actions of the Obama administration build a different picture of US will. First, the Obama administration still adheres to the Bush policy of the US right to use nuclear weapons to counter any WMD attack; they have not yet published a new national security strategy countermanding it. Second, the Obama administration is aggressively fighting Al-Qaeda and the Taliban in Pakistan and Afghanistan. President Obama has communicated the importance of winning the war and defeating terrorists to all audiences.<sup>43</sup> These actions demonstrate resolve and therefore can be said to generally support the possibility of a deterrence message involving the threat of nuclear weapon use. Taking these factors into account, the perception of US will communicated to the terrorist audience is at best ambiguous.

*The Targeting Problem.* When considering how and whether to use nuclear weapons to inflict unacceptable punishment on non-state actors, the first question is can we identify items terrorists hold dear, the destruction of which would be in fact unacceptable to them? One answer might be the lives of the terrorist leadership. In his

article "Rediscovering Deterrence after September 11, 2001", Gerald Steinberg argues "terrorist leaders are not so quick to give up their own lives".<sup>44</sup> If they value their lives, it may be possible to deter them. However, even if they do value their lives, terrorists operating across international borders don't have geographically fixed locations that are easily targetable. The US has spent almost two decades hunting Osama Bin Laden and he still remains elusive. Clearly, just the difficulties of targeting terrorists can make a threat of punishment less credible in the terrorist's minds. Also, a review of the history of US nuclear doctrine does not seem to make particularly credible any idea that the US would ever use a nuclear weapon in an attempt to kill a single individual, or even a small group, unless that target was both extremely "high value" and also incapable of being hit by any conventional means (e.g., deeply buried) – and perhaps not even then.

The second complication for targeting is national sovereignty. If the terrorist leadership can be found and targeted, their location will more than likely be within the borders of another country. Unless the state in which the terrorist resides was complicit in the attack against the US, or agreed to permit the US counteraction, any retaliatory strike would be illegal.

What terrorists value is a function of the foundation of their beliefs which adds another possible solution to the targeting problem. If the motivation of the hostile terrorist is based on religion or some other ideology, it might be possible to target that religion's or ideology's holy sites. Such sites are identifiable and therefore susceptible to targeting as punishment. But since it would be required to communicate a threat to the intended target to the non-state actor in order to deter attack against the US, selection of this type of target is fraught with legal, moral, and political peril. Again, the

possible targets are almost certainly located within the borders of an established state. Declaring we will destroy any such site in retaliation to attack would undoubtedly alienate our allies, cause severe domestic and international political consequences, and potentially raise new enemies for the US. Communicating our intent to hold these targets at risk to prevent an attack on the US would be incredible in the minds of the terrorist.

Given the difficulties of deterring the terrorists themselves by threat of punishment, it may be possible to deter state sponsors of terrorist from providing the terrorists with WMD, as part of a denial approach to deterring the terrorists. All states have identifiable territory, people, and infrastructure which they value, which should make them susceptible to nuclear deterrence. Clearly communicating to those states which may provide assistance to terrorists in the form of WMD they are at risk of nuclear attack is credible.

This drives a requisite for attribution in order to effectively and legitimately targeting state sponsors of terrorism. Attribution is the ability to forensically identify the source of the attack and provides considerable credibility to the deterrence message. Currently, the US is advancing the capability of nuclear forensics but is less capable with respect to chemical and biological threats.<sup>45</sup>

*Other Considerations.* In any conflict the enemy always gets a vote and terrorists are no exception. There are several scenarios in which terrorists may invite a nuclear retaliation from the US. First, if fanatics, they may be willing to sacrifice millions of their own innocent people in order to destroy the legitimacy and power of the US. Assuming terrorists successfully destroyed an American city with a WMD, their strategy may be to

entice the US to retaliate with nuclear weapons against some target in the middle-east. As mentioned previously, there would undoubtedly be enormous repercussions to the US across all elements of power if the US used nuclear weapons in response to such an attack.

A second related scenario might involve provoking a US nuclear response against a state that was innocent. In other words, the terrorists might attempt to frame some unsuspecting nation by making it appear as if that state had supported a WMD strike against the US.

As already noted, at a minimum these scenarios drive a requirement for the US to continue developing the forensics capabilities necessary to reliably determine the point of origin of any WMD. But additionally, they drive a requirement for sufficient intelligence gathering to dependably determine a state's guilt in supporting the attack. US failure to convincingly prove a state's guilt prior to attacking that state could result in untold damage to the US reputation and role in the world. Failure to adhere to the rule of law, even after a devastating WMD attack on the US, could so corrupt our standing in the world it would aid terrorists' achievement of their objectives (e.g., for Al-Qaeda, creation of a caliphate).<sup>46</sup> Until our post-attack attribution capabilities are perfected for all WMD, incorporating nuclear weapons into a punishment approach to deterrence even against states is risky and questionable.

### Conclusion

Deterring terrorists' WMD attacks against the US by using a nuclear punishment approach is likely not an effective strategy. Several factors dilute the credibility of this deterrent approach and make it ineffective.

First, the US lacks the capability to inflict unacceptable punishment. Although there is little doubt the US military can deliver nuclear weapons on an identified target, the uncertainties associated with targeting something terrorists' value are too significant to make this a feasible act. Using nuclear weapons against individuals or threatening to target religious centers is incredible. Although Al-Qaeda exhibits rational thought and makes cost benefit calculations, our inability to clearly discern their motivations, intentions, and the nature of the relationship between them and the current nation-state system confounds any real attempt to craft a deterrence approach based on punishment. This argument can also apply to other terrorist organizations motivated by extremist ideologies.

Second, contradictory messages from the US government coupled with growing public opinion against nuclear weapon use may put the perception of US will in question in the terrorists' mind. That possible perception of limited US will is probably sufficient to permit a terrorist WMD attack.

Third, the possibility of a terrorist group attacking the US with WMD to deliberately provoke a US nuclear response against a third party state or actor must be considered. The associated loss of US legitimacy and relative power in the international order might even allow the opportunity for creation of their caliphate upon our retreat from the Middle-East.

Based on these three points, it is difficult to imagine nuclear punishment deterrence would be effective at deterring a terrorist WMD attack against the US. However, broadcasting a general nuclear deterrence message like the one contained in the current national security policy may dissuade some unknown terrorist group from

WMD use. The ambiguity in the current policy leaves the response options sufficiently open without undue degradation of the overall deterrence message. Additionally, nuclear weapons can play a role as part of a strategy based upon the denial deterrence approach by assisting in reducing non-state actors' ability to obtain the essential capability they require for a successful WMD-based attack: the WMD. Limiting proliferation of nuclear weapons and other WMD is possible using nuclear weapons to support that strategy. Provided a credible capability supporting attribution exists, coercion of states not to provide WMD to terrorists is feasible and can be a credible strategy. Additionally, continuing the policy of extended nuclear deterrence will further limit the potential for nuclear proliferation.

### Recommendations

Continue to strengthen the US capabilities that support a denial deterrence approach. Success at controlling the environment by strengthening security and stopping attacks before they happen won't create an aura of invincibility. But it will generate lower probabilities of success in the calculus of the enemy and may encourage them to employ other, less lethal methodologies.

Aggressively pursue nuclear and other WMD non-proliferation strategies, backed by a punishment deterrence approach that includes the threat of nuclear response. Preventing additional creation or transfer of these dangerous weapons reduces the probability they will fall in the hands of enemies. Maintenance of the US extended deterrence umbrella and expansion of the proliferation security initiative<sup>47</sup> promotes two effective measures which work.

Continue with a strategy of nuclear punishment deterrence of WMD attacks by terrorists despite the strategy's probable ineffectiveness. A consistent messaging

campaign using all means available that broadcasts this threat is still useful. It will tend to reinforce the perception of US will over time and a consistent, generic message may find a receptive audience with the next Al-Qaeda like threat.

## Endnotes

<sup>1</sup> George W. Bush, *The National Security Strategy of the United States of America*, (Washington DC: The White House, September 2002), v.

<sup>2</sup> Typically, any actor participating in the international system that is not a government is considered a non-state actor. The list of non-state actors can include, but is not limited to entities such as: individuals, international organizations, non-governmental organizations, multinational corporations, international crime syndicates, and terrorist organizations. See the U.S. ARMY WAR COLLEGE GUIDE TO NATIONAL SECURITY ISSUES VOLUME II: NATIONAL SECURITY POLICY AND STRATEGY 3rd Edition Revised and Expanded Edited by J. Boone Bartholomees, Jr., CHAPTER 9, THE INTERNATIONAL SYSTEM IN THE 21ST CENTURY, Alan G. Stolberg, 122.

<sup>3</sup> *Nuclear Threat Initiative Homepage*, [http://www.nti.org/db/nisprofs/russia/forasst/nunn\\_lug/overview.htm](http://www.nti.org/db/nisprofs/russia/forasst/nunn_lug/overview.htm), (accessed March 18, 2010.)

<sup>4</sup> Antulio J. Echevarria II, "Globalization and the Nature of War", March 2003, SSI Monogram, <http://www.carlisle.army.mil/ssi/index.html> (accessed January 10, 2010).

<sup>5</sup> Irving Lachow and Courtney Richardson, "Terrorist Use of the Internet: The Real Story", *Joint Forces Quarterly*, issue 45, (2d quarter 2007): 101.

<sup>6</sup> Wyn Q. Bowen, "Deterrence and Asymmetry: Non-state Actors and Mass Casualty Terrorism", *Contemporary Security Policy*, 25: 63-64.

<sup>7</sup> *Ibid.*, 64.

<sup>8</sup> Brian M. Drinkwine, "The Serpent in our Garden: Al-Qa'ida and the Long War", 14, January 2009, <http://www.StrategicStudiesInstitute.army.mil/>, (accessed December 9, 2009).

<sup>9</sup> David S. Jonas and Christopher Swift, "Reformulating the Nuclear Nonproliferation Regime: Al-Qaeda, Global Terrorism, and the Rogue State Paradigm", *UCLA Journal of International Law and Foreign Affairs* 13, no. 2 (Fall 2008).

<sup>10</sup> For the purposes of this paper WMD is defined as nuclear, chemical, or biological weapons. See the National Strategy to Combat Weapons of Mass Destruction, December 2002, page 1.

<sup>11</sup> Bob Graham et al., *World at Risk: The Report of the Commission on the Prevention of WMD Proliferation and Terrorism*, (New York: Vintage Books, 2008), ES15.

<sup>12</sup> Ibid.

<sup>13</sup> Kris Kotarski, "Deterring the Undeterrable? Proliferation Concerns in a World of "Rogue States" and Non-state Actors", 4, 2006, <http://centreforforeignpolicystudies.dal.ca/pdf/gradsymp06/Kotarski.pdf> (accessed November 30, 2009).

<sup>14</sup> Lawrence Freedman, *Deterrence*, (Cambridge, UK: Polity Press), 26.

<sup>15</sup> DoD dictionary, [http://www.dtic.mil/doctrine/dod\\_dictionary/data/d/3763.html](http://www.dtic.mil/doctrine/dod_dictionary/data/d/3763.html), (accessed Dec 18, 2009).

<sup>16</sup> Ibid.

<sup>17</sup> Freedman, *Deterrence*, 35.

<sup>18</sup> Freedman, *Deterrence*, 35.

<sup>19</sup> Secretary of Defense Task Force on DoD Nuclear Weapons Management (the Schlesinger Report) Phase I Report, Introductory letter to the SecDef.

<sup>20</sup> Ibid. Secretary of Defense Task Force on DoD Nuclear Weapons Management (the Schlesinger Report) Phase I Report, Introductory letter to the SecDef.

<sup>21</sup> Freedman, *Deterrence*, 35.

<sup>22</sup> Freedman, *Deterrence*, 35.

<sup>23</sup> Merriam-Webster on-line dictionary, <http://www.merriam-webster.com/dictionary/credibility>, (accessed Dec 18, 2009).

<sup>24</sup> James Schlesinger et al., "Secretary of Defense Task Force on DoD Nuclear Weapons Management", (Washington DC: December 2008), 1.

<sup>25</sup> Ibid.

<sup>26</sup> Richard Esposito and Brian Ross, "Investigators: Northwest Bomb Plot Planned by al Qaeda in Yemen", December 26, 2009, <http://abcnews.go.com/Blotter/al-qaeda-yemen-planned-northwest-flight-253-bomb-plot/story?id=9426085>, (accessed January 10, 2010).

<sup>27</sup> Scott Pelley, CBS News Interview with George Piro, US interrogator of Saddam Hussein, January 27, 2008, [http://www.cbsnews.com/stories/2008/01/24/60minutes/main3749494\\_page4.shtml?tag=contentMain;contentBody](http://www.cbsnews.com/stories/2008/01/24/60minutes/main3749494_page4.shtml?tag=contentMain;contentBody), (accessed 20 Dec 2009).

<sup>28</sup> Freedman, *Deterrence*, 26.

<sup>29</sup> Full English Transcript of Osama bin Laden's Video as published by Al Jazerra, November 1, 2004, [http://mprofaca.cro.net/binladen\\_transcript.html](http://mprofaca.cro.net/binladen_transcript.html) (accessed March 18, 2010).

<sup>30</sup> Ibid.

<sup>31</sup> Wyn Q. Bowen, "Deterrence and Asymmetry: Non-state Actors and Mass Casualty Terrorism", *Contemporary Security Policy*, 25: 64.

<sup>32</sup> Ibid.

<sup>33</sup> Michael Levi, *On Nuclear Terrorism*, (Cambridge, Massachusetts: Harvard University Press, 2007), 12.

<sup>34</sup> Ibid.

<sup>35</sup> Martin J. Hart, "Al-Qaeda, Refining a Failing Strategy", *Joint Forces Quarterly* issue 51, (4th quarter 2008), 118.

<sup>36</sup> Merriam Webster on-line dictionary, <http://www.merriam-webster.com/dictionary/will>, (accessed December 18, 2009).

<sup>37</sup> George W. Bush, *The National Security Strategy of the United States*, (Washington, DC: The White House, March 2006), 8.

<sup>38</sup> George W. Bush, *National Strategy to Combat Weapons of Mass Destruction*, (Washington, DC: The White House, December 2002), 3.

<sup>39</sup> George W. Bush, *The National Security Strategy of the United States of America*, (Washington, DC: September 2002), 15.

<sup>40</sup> Keith B. Payne, "On Nuclear Deterrence and Assurance", *Strategic Studies Quarterly* (Spring 2009), 49.

<sup>41</sup> Barack H. Obama , "Remarks by the President to the United Nations", September 23 2009.

<sup>42</sup> Jennifer Allen Simons, "Global Public Opinion on Nuclear Weapons", (Vancouver, Canada: The Simons Foundation, September 2007), 8.

<sup>43</sup> Barack H. Obama, "Remarks by the President in Address to the Nation on the Way Forward in Afghanistan and Pakistan", December 1, 2009.

<sup>44</sup> Gerald Steinberg, "Rediscovering Deterrence after September 11, 2001", *Jerusalem Letter/Viewpoints*, no. 467 (December 2, 2001).

<sup>45</sup> Bob Graham et al., "The Clock is Ticking: A Progress Report on America's Preparedness to Prevent Weapons of Mass Destruction Proliferation and Terrorism", October 21, 2009, <http://www.preventwmd.gov>, (accessed November 23, 2009).

<sup>46</sup> David S. Jonas and Christopher Swift, "Reformulating the Nuclear Nonproliferation Regime: Al-Qaeda, Global Terrorism, and the Rogue State Paradigm", *UCLA Journal of International Law and Foreign Affairs* 13, no. 2 (Fall 2008).

<sup>47</sup> Charles Wolf, Jr., Brian G. Chow, & Gregory S. Jones, "U.S. Combat Commands' Participation in the Proliferation Security Initiative: A Training Manual", Rand Corporation

National Defense Research Institute, 2009, <http://www.rand.org/>, (accessed November 23, 2009).