



Doomsday Weapon for Doomsday Ideology: Al-Qaeda and Nuclear Weapons

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Abstract: *This article deals with the probability of the use of WMD by terrorist organizations, especially Al-Qaeda. The capability to execute an attack that includes the use of Weapons of Mass Destruction exists and is easily accessible to terrorist organizations. The most probable player to use WMD, among all other international players, would be religious fundamentalist - Al-Qaeda affiliate groups. Therefore, the question should be: What will prevent such radical religious elements from using WMD and is there a possibility to deter them from using them?*

Keywords: *Terrorism, terrorist groups, WMD, Weapons of Mass Destruction, Al-Qaeda.*

“[There is a] 20 percent per year probability with American cities and European cities included ... [of] a nuclear explosion—not just a contamination, dirty bomb—a nuclear explosion.”

Richard Garwin, a designer of the hydrogen bomb
Testimony before Congress, March 2007¹

Introduction

The idea of nuclear terrorism was brought to public discussion with the rise of modern terrorism and its internationalization, mainly during the 1970s. After the breakdown of the USSR, many pointed to the fact that this threat had increased significantly, due to the fact that nuclear materials were missing and some discovered in the black markets. This meant that these materials were now much more accessible to non-state actors such as terrorist and criminal organizations. The

¹ Graham T. Allison, *How Likely is a Nuclear Terrorist Attack on the United States?* Online Debate, Council on Foreign Affairs, 20 April 2007 available at <http://www.cfr.org/publication/13097/>.

emergence of post-modern terrorism and its new characteristics has again brought the attention of the world to this threat.

This article deals with the probability of the use of WMD by terrorist organizations, especially Al-Qaeda.² The way to evaluate the credibility of this threat is to examine the equation of terrorism, which is the combination of both capabilities and intent of a terrorist organization to perpetrate an attack.

Two working assumptions form the basis of this article. First, this article shows that the capability to execute an attack that includes the use of WMD exists and is easily accessible to terrorist organizations – whether through the direct use of non-conventional materials, or by indirect use, such as an attack on different installations storing non-conventional materials. Such attacks, as will be shown in the article, can be perpetrated in the same manner as terror groups have perpetrated attacks in the past, and do not require the development of new abilities. Therefore the leading element that should be examined when considering whether or not to use this capability is the *cost-benefit balance as part of the motivation considerations* of the terrorist organizations. This article will discuss the question of why non-conventional terrorism still remains mainly a potential threat and has not been realized.

The second assumption considers that the most probable player to use WMD, among all other international players, would be religious fundamentalist - Al-Qaeda affiliates groups. This assumption stems from the ability to create a balance of deterrence with other players – nuclear power states, rouge states that support terrorist groups, and localized terrorist groups that are supported by a specific state. As will be presented later in this article, a balance of deterrence is unlikely to prevail vis-à-vis Al-Qaeda-like groups. Therefore, the question should be: What will prevent such radical religious elements from using WMD and is there a possibility to deter them from using them?

The Equation of Terrorism: Capabilities & Motivations/Intent

The equation of terror considers the realization of a terrorist act as the combination of both capabilities and motivations/intents.³ With regard to the capabilities, there are two basic questions: Can terrorist organizations get WMD? If acquired, can they use them effectively? With regard to the issue of motivations there are also two basic questions: Do terrorist organizations want to get WMD? If acquired, do they have intent to use them?

The Capabilities Exist

One of the common assumptions regarding the threat of WMD terrorism is that, in one way or another, terrorists will get their hands on WMD materials and will be able to fabricate a weapon.

² For the purposes of this article, *mass destruction* attacks are characterized by an extraordinary amount of casualties and extensive direct and collateral damage. This article therefore, does not relate necessarily to any other *limited* use of non-conventional weapons such as biological or chemical agents.

³ Boaz Ganor, *The Counter-Terrorism Puzzle: A Guide for Decision-Makers*, The Interdisciplinary Center, Herzliya, 2005.

Their main sources might be through stealing WMD material and knowledge, buying them on the black market, or getting them from a supporting state which possesses these capabilities. For the later, it is relatively safe to assume that states sponsoring terrorism will allow their sponsored groups to build up non-conventional abilities that might be turned against the sponsoring state in the future. Furthermore, if the terrorists are caught before the attack, the origin of nuclear materials could be traced back and the sponsored state exposed.⁴

It is also common to assume that organizations which operate independently, lack the professional knowledge and technologies needed to create a nuclear explosion, or to manage biological or chemical agents effectively.⁵ This was demonstrated by the sarin gas attack by Aum Shinrikyo. The poor ability to disseminate the sarin gas in the Tokyo subway caused the attack to be a mere shadow of what it could have been.⁶

However, while it remains difficult to use nuclear materials for weapons, or chemical or biological agents, with enough effort, energy and resources, the needed professional skills can be obtained and the difficulties can be overcome, by the organizations themselves or with the assistance of outside sympathizers. This depends mainly on the motivation factor and will be discussed later. Additionally, there is a multitude of other ways to perpetrate an attack involving WMD without actually using these weapons directly. Several examples and scenarios for this kind of attack follow.

First, crashing an aircraft laden with explosives onto a nuclear facilities compound would be an obvious example. These kinds of installations are not designed to withstand such an impact. One example of the potential consequences of such an attack is explained in a report by The Institute for Radiological Protection and Nuclear Safety in France (IRSN).⁷ According to an IRSN report, an airplane crashing on the fuel ponds at La Hague plant in France could cause “the release of up to 10% of the radioactive inventory of the fuel in one pond. The release of around 1.5% of the cesium contained in one pond would correspond to the cesium released by the Chernobyl accident.”⁸ Though the explosion would be much smaller than a full nuclear explosion, the contamination damage would still be very significant, even if it would not reach its full potential. Indeed, the IAEA spokesmen stated specifically that “[reactors] are built to withstand impacts, but

⁴ Joint Working Group of American Physical Society (APS), the American Association for the Advancement of Science (AAAS): “Nuclear Forensics - Role, State of the Art, Program Needs Report,” American Physics Society, February 2008, p. 16 *available at*

<http://www.aps.org/policy/reports/popa-reports/upload/nuclear-forensics.pdf>.

⁵ Andrew O’Neil, “Terrorist use of weapons of mass destruction: how serious is the threat?” *Australian Journal of International Affairs*, Vol. 57 No. 1, 2003.

⁶ Council on Foreign Relations: “Backgrounder – Sarin”, January 2006 *available at* <http://www.cfr.org/publication/9553/#6>.

⁷ L’institut de radioprotection et de sûreté nucléaire (The Institute for Radiological Protection and Nuclear Safety).

⁸ IRSN, in Global Chance: “An industry incapable of adapting to the post-9/11 world”, January 2009, <http://www.global-chance.org/IMG/pdf/GC25english-p61to64.pdf>.

not that of a wide bodied passenger jet full of fuel...These are vulnerable targets, and the consequences of a direct hit could be catastrophic."⁹

Another scenario can involve attackers getting into a nuclear installation itself, and attacking storage places with dangerous materials. This scenario was, until now, executed only by Greenpeace activists who were able to penetrate these facilities. Two prominent examples from recent years prove that this scenario is still relevant for discussion. On January 2003, Greenpeace activists broke into Sizewell B site in the UK, simply by cutting through the fence. Some of them even managed to get on the roof, and painted the word "Danger" on the side of the dome.¹⁰ On November 2005, two dozen activists broke into the grounds of a nuclear power plant in Brosselle, the Netherlands.¹¹ Though they did not create a security risk, this case exemplifies the relative ease with which the security of these sensitive places can be evaded.¹²

However, mass destruction is not exclusive for nuclear events. Other targets might include gas depots, oil refineries that use large amounts of hydrofluoric acid, and water treatment facilities that use large amounts of chlorine, all of which are unprepared for deliberate large scale sabotage. In Israel in 2002, for example, the Pi Gilot gas depot north of Tel Aviv was attacked and a gas truck exploded inside the installation area. It is presumed that a bomb was attached to the truck when it was parked outside and that the perpetrators waited for it to get in the installation area, detonating it by a remote control or a cellular phone. There were no casualties from this incident; however, a risk survey that examined a possibility of an explosion in an underground gas tank in Pi Gilot stated that all people in the range of about 5 km would die in 30 seconds. The Bhopal incident in India, 1984, is another grave example of a chemical disaster. A chain reaction in a pesticide plant created a gas leak that spread around the area, killing over 15,000 people, and causing permanent disabilities in 50,000 others.¹³ This event occurred due to neglect and was not an attack; nevertheless' it is an example of what might happen should a real attack be perpetrated.

It is important to note that additional implications of attacks on such installations are broader than the immediate casualties and damage. They are multiplied by the psychological effects that a non-conventional attack creates – even if limited in their operational success. They can lead to public panic and disorder, influence crowd behavior and the political perceptions of foreign

⁹ Moneyline, *CNN*, 18 Sep 2001, quoted at Helfand et al "Nuclear Terrorism", *BMJ*, 9 February 2002 <http://www.bmj.com/cgi/content/full/324/7333/356>.

¹⁰ *TimeOnLine*: "Greenpeace break-in highlights terror threat to nuclear plant" 14 January 2003 <http://www.timesonline.co.uk/tol/news/uk/article812069.ece>.

¹¹ *Department of Homeland Security Daily Open Source Infrastructure Report* for 25 November 2005 at http://osd.gov.com/osd/200511_november/DHS_Daily_Report_2005-11-25.pdf.

¹² It is important to note that other nuclear facilities are better protected and that these examples do not reflect the situation for all. An opposite example happened when Israel shot down one of its own jet planes when it mistakenly flew over the nuclear reactor in Dimona. Bennett Ramberg, "Should Israel Close Dimona? The Radiological Consequences of a Military Strike on Israel's Plutonium-Production Reactor" *Arms Control Today*, May 2008: http://www.armscontrol.org/act/2008_05/Dimona.

¹³ *BBC*: "Rallies held over Bhopal disaster" 3 December 2004 available at http://news.bbc.co.uk/2/hi/south_asia/4064527.stm.

states¹⁴, more than any other conventional terrorist attack. In another aspect, as in the case of the Abqaiq oil refinery in Saudi Arabia - the most important processing facility in Saudi and the world¹⁵ - a successful attack would lead to a sharp increase in oil prices and damage to the global economy and trade. An attack against Abqaiq was perpetrated in 2006, when teams of mujahedeen fighters stormed the facility. The attack was thwarted, but the risk of another one still exists.

The above-mentioned examples and scenarios are used here in order to clearly illustrate that acquiring WMD and the expertise needed to effectively use them, are not a real necessity for launching a mass destruction terror attack. Handling these weapons and using them effectively demand acquiring high technical expertise. However, these indirect WMD attacks might be even more effective in terms of the scope of casualties and damage, be it material or psychological damage. This fact stresses the importance of the motivation factor when evaluating the threat of a WMD attack.

The Motivation Factor – Main Potential Benefits from Acquiring and Using WMD

The reason that a terrorist organization commits an act of terror is to draw the attention of three principal audiences. The *origin community* is the living artery of the organization. It supplies the safe shelter, new recruits, supplies, funding and other necessities. The organization serves its origin community's cause with its attacks and the attention garnered from a successful attack musters public support in all these aspects. With regard to the *target population*, the attack is meant to generate anxiety and public pressure on decision makers to bring about change of policy and certain political achievements.¹⁶ Terror attacks are also used to draw the attention of *international public opinion* and to bring the origin community's just demands and narrative to the international stage, as another means of putting pressure on the target state.¹⁷

The use of WMD offers terrorist organizations a variety of advantages. A massive number of casualties could serve the interests of the perpetrating organization in a number of ways. While planning the 9/11 attacks, Khalid Sheikh Mohammed, the mastermind, suggested flying a small plane filled with explosives into CIA Headquarters. The 9/11 Commission noted that bin Laden

¹⁴ Anthony H. Cordesman, "Defending America: Asymmetric and Terrorist Attacks with Radiological and Nuclear Weapons", *CSIS*, 23 September 2001, <http://www.csis.org/media/csis/pubs/nucterr010923.pdf>.

¹⁵ Khalid R. Al-Rodhan, "The Impact of the Abqaiq Attack on Saudi Energy Security" *CSIS*, February 27, 2006 http://www.csis.org/media/csis/pubs/060227_abqaiqattack.pdf.

¹⁶ This was expressed by the effect the Madrid attack influenced the elections in 2004 which led to the withdrawal of Spanish soldiers from Iraq. It should be noted that this is not always the case. In some instances the target population pressures the decision makers to increase counter measures against the terrorists, such as Operation Defensive Shield that followed a series of lethal suicide bombings, picking with the Park Hotel attack in March 2002.

¹⁷ Boaz Ganor, *The Counter-Terrorism Puzzle: A Guide for Decision-Makers*, The Interdisciplinary Center, Herzliya, 2005

reportedly asked him: "Why do you use an axe when you can use a bulldozer?"¹⁸ The scale of the attack would instantly bring the organization to the international stage as did the 9/11 attacks for Al-Qaeda.

In this regard it can be claimed that the 9/11 attack, and the attacks that followed in Madrid and London, raised the bar, as they were by far the biggest attacks these countries had ever experienced. Later, a much bigger attack was prevented, when terrorists' plan to blow up ten different passenger airplanes at the same time was thwarted by security forces. This demonstrates that organizers of new attacks aspire to expand and increase the scope of attacks. For global Islamist extremists, successful attacks against foreign 'imperialist' countries as well as foreign military forces is a significant tool for recruitment of human, economic and political resources among Muslim populations around the world.

Additionally, the fear that a mass destruction terror attack would instill in the targeted population could give the terrorist organization enormous leverage over the targeted government. This could give an organization enormous political prestige within their origin community and bolster public support; therefore, it generates significant motivation.

This desire to obtain WMD as a political tool and for psychological warfare purposes was expressed in August, 2001, as the Palestinian second intifada was escalating rapidly. In this case, a Palestinian weekly published an article stating that "serious thinking began a while ago about obtaining biological weapons."¹⁹ The writer refers to these weapons as "*weapons of deterrence*" several times, emphasizing its *effect on the balance of power* between the state and the terror organization:

This weapon terrifies the Israeli security apparatuses... because obtaining its primary components, whether biological or chemical, is possible without too much effort... there are hundreds of experts who are capable of handling them and use them as weapons of deterrence, thus creating a balance of horror... A few bombs or death-carrying devices will be enough, once they are deployed in secluded areas and directed at the Israeli water resources... markets and the residential centers.

Furthermore, for religious extremists with global aspirations, such as Al-Qaeda, an important component for the progress of this struggle would be the collapse of a moderate, U.S.-backed Arab state, such as Saudi Arabia, Egypt or Jordan. Such a tangible success would significantly increase the scope of operations, recruitment and support for global holy war throughout the Muslim world. A mass destruction attack that would bring these states to their knees, and would be beyond their ability to contain, would definitely serve this purpose. The damage is not necessarily in the attack itself, but in its byproducts - economic collapse, loss of control over public order, loss of legitimacy.

¹⁸ *News Max Wires*: "FBI's Mueller: Al-Qaida Has Intent to Use Nuclear Weapons" 11 June 2007. http://www.infowars.com/articles/terror/mueller_al_qaeda_has_intent_to_use_nuke_weapons.htm.

¹⁹ *MEMRI*: "Palestinian Information Center: There Is Serious Thinking about Obtaining Biological Weapons" Special Dispatch No 255, 17 August 2001 *available at* <http://memri.org/bin/articles.cgi?Page=archives&Area=sd&ID=SP25501>.

Practical Expressions of the Motivation Factor – Gathering and Sharing Knowledge, and Attempts to Acquire WMD

Radical Islam activists are also discussing the issue of WMD on forums on the internet. Though getting much less attention than other types of homemade weapons and combat strategies, some forum members are discussing the possibility of manufacturing WMD, rather than getting them from other sources. In one example on the Ma'arik forum, a discussion took place in February 2008, when forum member Abu Ahmad Al-Anbari posted a message proposing ways to manufacture anthrax. Not much later, another forum member warned of the dangers that handling such materials entails and suggested to avoid their use, stating that: "There are many other ways to wage jihad..." Abu Ahmad Al-Anbari responded: "...We need every [possible] means of terrorizing the enemy, especially [since] bacterial [weapons] are so rare. If we say 'this is difficult' and 'that is dangerous,' we will never make any progress..."²⁰

Religious zealots are not interested only in biological or chemical weapons, but also aspire to obtain nuclear abilities. The main publication on extremist forums concerning nuclear weapons was released in October 2006, when a document known as "An Encyclopedia for the Preparation of Nuclear Weapons," was published under the title: "The Nuclear Bomb of Jihad and the Way to Enrich Uranium." It includes nine lessons that cover a historical survey of the development of nuclear science, explanations about natural radioactivity, the nuclear qualities of certain materials, critical mass, the construction of nuclear weapons, and the extraction of radium. The accuracy of information in the Encyclopedia can be challenged as flawed and it might be insufficient for building a usable weapon. Nevertheless, its publication expresses sincere efforts for expanding the knowledge and capabilities in this field. As the writer explains, the lessons are designed to build up knowledge "until we reach the experimentation and implementation [stage], with the support of Allah's might."²¹

Additionally, there is some evidence that Al-Qaeda and its affiliated groups have been trying to acquire nuclear materials and weapons. As early as 1993, bin Laden attempted to buy uranium in the Sudan. Later he also stated that it is a duty to acquire WMD. He has also contacted experts in chemistry, physics, and explosives to persuade them to join his radical cause.²² Noteworthy is the case of the relations bin Laden had with two highly-placed members of the Pakistani nuclear establishment, Syed Bashiruddin Mahmood and Chaudhury Majid. They had traveled several times into Afghanistan during 2001-2002 to meet with him. These scientists are known to hold radical Islamic views.²³

On September 2006, also Abu Hamza al-Muhajir, while serving as Al-Qaeda's leader in Iraq, called for professional assistance:

²⁰ <http://memri.org/bin/articles.cgi?Page=archives&Area=ia&ID=IA43508>

²¹ MEMRI: "On Islamic Websites: A Guide for Preparing Nuclear Weapons" Special Dispatch No. 1004, 12 October 2005 <http://memri.org/bin/articles.cgi?Page=archives&Area=sd&ID=SP100405>

²² *News Max Wires*: "FBI's Mueller: Al-Qaida Has Intent to Use Nuclear Weapons" 11 June 2007. http://www.infowars.com/articles/terror/mueller_al_qaeda_has_intent_to_use_nuke_weapons.htm.

²³ Pervez Hoodbhoy, "Dealing with Nukes and Terror: The View from Pakistan" *American Physics Society*, February 2002 available at <http://www.aps.org/publications/apsnews/200202/viewpoint2.cfm>.

My last message is to the people of distinctive competencies, and highly experienced scientists in all fields and disciplines, chemistry, physics, management and electronics, information... and in particular nuclear scientists and explosives specialists. We say to you, we are in dire need for your experience. The battlefields of Jihad will satisfy your ambitions... American bases serve as the best test fields for your non-traditional bombs... such as germ warfare and the so called dirty-bombs.²⁴

In April 2009, Al-Muhajer emphasized again the need for acquiring biological, chemical and nuclear weapons, in order to overcome the superiority of the enemies with conventional weapons. He called Muslim scientists to do all they can in order to develop WMD, to be used as a deterrent by the Mujahedeen.²⁵ At the same time, several Jihadi online forums called for an attack on nuclear sites, such as power plants, nuclear reactors and storage facilities for strategic weapons. The call included publication of information and maps of nuclear facilities belonging to NATO, the United States, Britain, Pakistan, Israel, Belarus, France, India, Russia, South Africa, Turkey and the Ukraine.²⁶

It is clear that terrorist organizations, both on a local and global scale, have an interest in acquiring WMD, even only as psychological “weapons of deterrence.” However, there is a substantial difference between getting WMD, declaring that the group has them in its possession, perpetrating a small scale event to demonstrate their capabilities – and actually executing a mass destruction attack. First and foremost, the perpetrating organization has to have the motivation to actually destroy masses of people from which the overwhelming majority would be civilians. The implications of such an act would have significant influence on all three afore-mentioned audiences. The way terrorist organizations consider this influence stems from their long term goals and relations with each community, as will now be examined.

Essential Differences Between Modern and Post-Modern Terrorist Organizations

Modern terrorist organizations of the 20th century see themselves as part of the political process, with the intention of winning at a future stage, a seat at the table of legitimate political negotiations.²⁷ They are usually locally oriented and hold specific aspirations to achieve limited and defined goals – political, social, national, economic, etc. The IRA and ETA, for example, sought local autonomy, with the IRA eventually being absorbed into a legitimate political party. Even in the case of political Islamists and radical movements such as Hamas, and Hezbollah which operates on a global level, the focus is on the interests of the ethnic-national origin community and on gaining political achievements in the local arena.

The organizations have a concrete base of operations and an established organizational structure, even if covert and unknown to the other side. Therefore, they use self-imposed

²⁴ Jihadi Websites Monitoring Group (JWMG): “Al-Qaeda and Weapons of Mass Destruction as seen on Jihadi Online Forums”, *ICT*, June 2009.

²⁵ *Ibid.*

²⁶ *Ibid.*

²⁷ Stevenson, 2001, in O’Neil, 2003.

constraints in order to protect the interests of the organization from a destructive counter attack against their activists and infrastructure, and against the erosion of internal and international public support. Simply put, even organizations that choose to use suicide attacks as a trademark of their struggle do not wish to commit organizational suicide.²⁸ They will achieve their goals - even if that means complete control over a specific country - gradually, also utilizing legitimate political processes such as elections and appeals to the UN.

For Al-Qaeda affiliated or inspired movements, the rules of the game are essentially different. Based on an extremist interpretation of Islam and religious justifications, their view of the world is black and white, wherein the enemy is the representation of evil and there is no option other than to destroy it completely. The goal justifies the means when acting against the 'near enemy' – strayed regimes in Arab-Muslim states, and the 'far enemy' – the infidel world lead by the U.S. The course of this total, uncompromising struggle ultimately leads to the establishment of the Ummah, the Muslim nation, which will unite all Muslims around the world, creating Dar al-Islam, the house of Islam. The rest of the world, the infidels who refused to accept the religion of Allah, live in Dar al-Hard, the house of war, and a final clash for their complete destruction is unavoidable.

Justification by Religious Leaders – an Essential Element in Facilitation Motivation

One of the senior Saudi religious scholars, Sheikh Naser bin Hamad Al-Fahd, known as being close to Al-Qaeda, published a fatwa (religious ruling) in May 2003, which deals with the use of WMD. According to his ruling, the use of these weapons is legitimate against the U.S., Britain and their citizens. Sheikh Al-Fahd explains that the Muslim world is conducting a defensive war and refers to the religious Islamic foundation allowing Muslims to use non-conventional weapons in these situations. According to this fatwa, in a defensive war, it is permissible to not differentiate between harming military personnel and harming innocent civilians, including women, children and the elderly. Also, such action should not be shunned even if many Muslims are harmed by it. The Sheikh adds a moral aspect to the discussion, emphasizing that the U.S. was the first to use WMD during World War II.²⁹ Al-Fahd also said that, “[i]f the Muslims could defeat the infidels only by using these kinds of weapons, it is allowed to use them even if they kill them all, and destroy their corps and cattle.”³⁰

²⁸ Anat Kurz, “Non-Conventional Terrorism: Availability and Motivation” Strategic Assessment, *INSS*, March 2005, Vol. 7 No. 4.

²⁹ Jihadi Websites Monitoring Group (JWMG): “Members of Jihadi Forums Revive Debate on the Question: Is it Permissible to Harm the Innocent?”, ICT, May 2009. http://www.ict.org.il/Portals/0/Internet%20Monitoring%20Group/JWMG_Discussion_on_Killing_Innocent.pdf.

³⁰ Reuven Paz, “YES to WMD: The first Islamist Fatwah on the use of Weapons of Mass Destruction” *Global Research in International Affairs (GLORIA) Center*, The Project For The Research Of Islamist Movements (PRISM), *Prism Special Dispatches*, Vol. 1, No. 1 (May 2003) available at <http://www.e-prism.org/images/PRISM%20Special%20dispatch%20no%201.doc>.

Abu Musab Al-Suri, one of the leading thinkers of extremist Islam, expresses in the famous book “Da’awat Al-Muqawamah Al-Islamiyyah Al-’Alamiyyah” (The Global Islamic Resistance Call) the wish to obtain non-conventional weapons and to use them against the infidels. Amongst other things, he writes that “knowledge and operational abilities should be gained regarding the possession of weapons of mass destruction and the use of these weapons when necessary, in order to pay back in kind, or to bring about a strategic conclusion to the battle against America.”

What Will Prevent Extremist Groups From Using WMD?

While most locally oriented groups are unlikely to use WMD to create a mass casualty attack, the case of global religious extremists is quite different. However, there are still other rational considerations that must be taken into account. These considerations relate to the complexities of reactions over a WMD attack in all three audiences, which will now be examined.

Even for Al-Qaeda, the benefit of the use of WMD is not unequivocal. Of the three target populations, Al-Qaeda mainly depends on its origin population, since an essential component of its strategy is to establish the Ummah. Al-Qaeda has no interest in maintaining a positive image in the eyes of the international community, towards integrating into a political process. It strives to change world order and create a new reality, according to its principles of justice. The image it is building is of a just, pure struggle and a complete de-legitimization of the other side – the West and its collaborators.

Therefore negative public opinion in the target population and international community has little effect on Al-Qaeda. Rather, it serves its goals. A demand to increase military pressure, and acts such as sending more soldiers to fight terrorist organizations, are a threat to groups with limited and defined areas of activity and organizational structure. However, Al-Qaeda does not fit these characteristics and it is better described as a network of loosely affiliated groups, sharing the same ideology, without a bonding organizational structure of a permanent territory. Therefore, a surge of military counter-attacks might be successful locally, but will have much less impact on virtual, flexible organizations that are not limited or dependent on a certain territory in their state of refuge. Al-Qaeda proved this in the years following the U.S.-led NATO invasion of Afghanistan, and again after the U.S. invasion of Iraq. Al-Qaeda’s areas of tenure in the Middle East, Central and South Asia, Africa and elsewhere, are gradually expanding, despite the actions of the largest armies in the world. On the contrary, it only serves Al-Qaeda's strategy, as described by bin Laden in 2004: “[we] bled Russia for ten years, until it went bankrupt and was forced to withdraw in defeat... So we are continuing this policy in bleeding America to the point of bankruptcy.”³¹

Regarding the origin population, for Al-Qaeda as the leader of global holy war against the West, this refers to Muslim communities around the world – the Muslim Ummah. They are the source of new volunteers, a continuous supply of fighters and funding etc. So, in fact, in this context, Al-Qaeda could be severely harmed by perpetrating a WMD attack. An attack such as

³¹ AP: “Bin Laden’s message: A call to bleed the U.S. economically” *USA Today*, 2 November 2004, http://www.usatoday.com/news/world/2004-11-02-bin-laden-economy_x.htm.

this might prove counter-productive with regard to recruiting new volunteers. This is so for the following reasons.

First, many volunteers join on the ideological basis of removing a foreign, cruel, occupying force from a Muslim land, especially in the context of the U.S. in Iraq, NATO in Afghanistan, India in Kashmir or the Serbs in Bosnia. However, since its establishment, Al-Qaeda has already encountered various challenges in raising support from local populations in fighting arenas. The presence of foreign volunteers, who usually held more fundamentalist ideology than the local rebels who were fighting more to protect their homeland than to serve God, created violent frictions.³² This phenomenon has existed since the arrival of volunteers to Afghanistan during the 1980s, culminating with the establishment of the “Awakening Committees” opposition in Iraq. These committees were created, with the assistance and support of the U.S., against the backdrop of violence that was directed not at the foreign forces but against the locals, for not practicing the way of Islam that the radical foreign mujahedeen brought with them.

Second, other objections appeared on discussions on internet websites, including criticism against indiscriminate killings by suicide bombing in various arenas, which lead to the death of more Muslims than foreign forces and personnel. Such internal criticism arose after the recent attacks on civil sites in Mumbai (November 2008), tourists sites in Cairo (February 2009) and the attack in Yemen against South Korean tourists (March 2009). Forum moderators and writers found themselves having to defend the view that innocent civilians are a legitimate target.³³

Furthermore, groups of fighters in Iraq were abandoning the battle because they did not want to be involved in sectarian fighting against Shiite factions. In their view, this was not the enemy which they came to fight, so they left the Iraqi arena. In fact, since 2007 there has been a decline in volunteers coming to Iraq. The scene has lost its attraction because of these issues, and the mujahedeen’s lack of success in executing significant attacks.

This means that even fundamentalist organizations like Al-Qaeda, which need to maintain the origin public support, need to consider the implications that a WMD attack will have on their origin community. Perhaps this principle is part of the reason that there have been no known significant attacks against kindergartens and hospitals. A too brutal attack could cause more harm than benefit. The use of WMD, especially because it would cause a vast number of civilian casualties, could backlash against Al-Qaeda and create significant harm to origin public support; This would also increase internal criticism of Al-Qaeda which has risen in recent years in the Muslim and Arab world, both in the Middle East and in the West. Al-Qaeda’s sub-goals (as well as those of other organizations) can also be achieved by conventional means, with a much lower price of support, and lighter response from the enemy.

³² Brian Williams, “Operation Enduring Freedom, 2001-2005: Waging Counter-Jihad in Central Eurasia.” (currently unpublished), *available at* http://convention2.allacademic.com/meta/p_mla_apa_research_citation/0/7/1/0/3/p71031_index.html.

³³ Jihadi Websites Monitoring Group (JWMG): “Members of Jihadi Forums Revive Debate on the Question: Is it Permissible to Harm the Innocent?”, *ICT*, May 2009 http://www.ict.org.il/Portals/0/Internet%20Monitoring%20Group/JWMG_Discussion_on_Killing_Innocent.pdf.

Additionally, a significant escalation in the strength of attacks, such as the use of WMD, could certainly lead to social-cultural-institutional pressure on Muslim immigrant communities in western countries, on the basis of ethnic and religious tensions that already exist today. This could be done through blocking access to work places or educational institutions and various civil rights restrictions. However, this pressure could also lead to a reverse response among the immigrants. Their increased feeling of alienation could cause them to increase their militancy and adopt radical ideals³⁴ as has already been seen in different cases, for example, the perpetrators of the 7 July bombing in London.

Conclusion

Considerations for the use of WMD are more complex than just the magnitude of the attack. Due to the anticipated severe response of the targeted state and the international community, it is less likely that modern terrorist organizations will use WMD. However, for global religious extremist groups, waging a long term holy war of attrition to achieve supremacy over the world, the cost-benefit analysis of such an attack is different.

A deterrence equation such as MAD does not exist when the opponent is not concrete and clearly identified. Such a balance can work vis-à-vis Iran or North Korea, and maybe even locally oriented and state sponsored terrorist groups. But it is not relevant when dealing with Al-Qaeda and its affiliated groups. Drawing on the Cold War experience, a more relevant approach would be one such as Reagan's SDI (Strategic Defense Initiative), namely, adopting the principle of increasing defensive measures until effectively canceling the power of the opponent weapons, without putting both sides in danger.

It is essential to note that military defense measures will not be enough to give full protection, especially when considering the threat of homegrown terrorism. Therefore as part of a defensive strategy, countries should include mechanisms of conflict resolution and tension reduction when interacting with local minorities and immigrants populations. The significance of these defensive elements stems from the need to lower the motivation factor to embrace radical ideologies, as the capabilities to create a WMD attack are always present.

But even after negating the motivation for the use of WMD by Al-Qaeda affiliated or inspired groups, Al-Qaeda's leadership has its own considerations. In light of the fact that a WMD attack might cause damage and a loss of public support in the Muslim world, it is likely to assume that this scenario will be executed in extreme conditions only, namely, when the time comes to 'change the rules of the game' – such as in the case of the well-planned, coordinated and unprecedented attacks of 9/11. No other terrorist attack before or after 9/11 has exceeded even one tenth of that magnitude. Following these attacks, the conduct of international relations was significantly changed. Since September 2001, the U.S. and its allies are investing enormous budgets into the War on Terror. Despite this Al-Qaeda is broadening its influence.

Therefore, the next mega-attack will probably occur when there will be a renewed need to change the reality of international relations and move to a new stage of the struggle. For example,

³⁴ Anat Kurz, "Non-Conventional Terrorism: Availability and Motivation" Strategic Assessment, *INSS*, March 2005, Vol. 7 No. 4.

if Al-Qaeda's leadership finds itself with its back to the wall, a new and successful mass destruction attack on U.S. territory, possibly using CBRN materials, might again radically shock the world perceptions of American power. In order to achieve such an impact, the 9/11 attacks did not target a random shopping mall or even public transportation during rush hour, but the carefully chosen highest symbols of the American governance, security and economics. Hence, it is important to emphasize that as with the 9/11 attacks, in such a case the target for a WMD attack will most likely be high profile, symbolic and of a critical nature.

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