



WMD Terrorism and Pakistan: Counterterrorism

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Abstract: *Terrorism has become increasingly more irrational in its thinking, more fanatical in its ideological manifestations, more global in its reach, and more mass-casualty-causing in its modus operandi. With this perspective, this article attempts to examine WMD terrorism and its likely repercussions for Pakistan security. Three central questions are: Is WMD terrorism myth or reality? What are the current trends in terrorism that undermine Pakistan security? What are the appropriate countermeasures to thwart terrorists' efforts to acquire WMD?*

Keywords: WMD, fissile material, smuggling, transnational networks

Introduction

Since the beginning of Operation Iraqi Freedom, if any concept has taken hold in global security discourse, it is the nexus of Weapons of Mass Destruction (WMD) and terrorism. Experts recognize that two to three dozen terrorist organizations are interested in acquiring WMD.¹ Contemporary trends in terrorism show that, because these weapons have the potential to wreak catastrophic damage on the target, the terrorists would not be deterred from using WMD. It is difficult to imagine a more effective terrorist tool than WMD material detonated in a densely populated area. There appears to be a working assumption that, with respect to terrorists and WMD, 'possession = use'.

American intelligence agencies report al-Qaeda's interest in pursuing nuclear, biological, chemical and radiological weapons. Increasingly, Al-Qaeda's efforts to acquire WMD more

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¹ Although large-scale conventional weapons, such as the bomb that destroyed the Alfred P. Murrah Federal Building in Oklahoma or the airplanes involved in the September 11 attacks, are sometimes described as weapons of mass destruction, usually the term is used to refer to chemical, biological, radiological, or nuclear weapons. WMD terrorism, therefore, refers to terrorist use or threat of use of WMD.

closely resemble those of a state rather than those of a typical non-state actor.² The disturbing puzzle for Pakistan is that al-Qaeda maintains its stronghold in Pakistan's neighborhood and its Federally Administered Tribal Areas (FATA). As a partner in the War on Terrorism, Islamabad has been actively involved in military operations against al-Qaeda and its sympathizers in its tribal areas. Consequently, Pakistan is a major target for al-Qaeda in the region.

These days, terrorism has become increasingly more irrational in its thinking, more fanatical in its ideological manifestations, more global in its reach, and more mass-casualty-causing in its modus operandi. With this perspective, this article attempts to examine WMD terrorism and its likely repercussions for Pakistan security. Three central questions are: Is WMD terrorism myth or reality? What are the current trends in terrorism that undermine Pakistan security? What are the appropriate countermeasures to thwart terrorists' efforts to acquire WMD?

Terrorism

Although Terrorism is not a new phenomenon,³ the term terrorism has neither a precise definition, nor one that is widely accepted. What is terrorism? The common understanding of this term is too vague, too broad, and too simplistic. For a long time, terrorism had remained categorized into two main variations: traditional, which is now identified as state terrorism, and revolutionary, which developed in protest against political and social injustice, and operated as a supplement to insurgency and rebellion in efforts to win freedom and bring about political and social change or as a response to state terrorism. In current academic discourse, terrorism is widely characterized as the 'weapon of the weak', as 'violence for effect' or as 'violence for political purposes'.⁴ Richard M. Pearlstein argues, "Heated debates over how to define terrorism are a staple at any conference on terrorism. Even various agencies within the same government are unable to agree on a common definition of terrorism."⁵ Precisely, despite the understanding of various types of terrorism, a consensus on the definition of terrorism remains absent. One researcher, in a review of writings on terrorism, found 109 discrete definitions.⁶ In fact, terrorism has changed its character and meaning in time and space. What was true for one terrorist group in a certain place at a certain time does not necessarily apply to another such group in another country, at another time, espousing another political position or tradition. As a result, a consensus on a definition of terrorism has been elusive. The conceptual problem posed over the years is best reflected in the famous statement: "one man's

² 'Combating WMD: Challenges for the Next 10 Years', *A Report of the Center for the Study of Weapons of Mass Destruction*, National Defense University Press, Washington, D.C., February 2005, pp. 17, 18.

³ It is older than the ancient civilizations of Greece and Rome. Its early roots are in acts of assassination, regicide, and tyrannicide. Early examples include the assassination of Julius Caesar in 44 B.C., and various organizations such as the Zealots-Sicarii (a Jewish sect from the first century A.D.), the Assassins, Ismailis-Nizari (eleventh and twelfth centuries), the Thugs in India, 19th century European Anarchists and Social revolutionaries, Ku Klux Klan in the United States, etc.

⁴ Pearlstein, Richard M., *Fatal Future?: Transnational Terrorism and the New Global Disorder*, University of Texas, Austin, 2004, p. 1.

⁵ Ibid.

⁶ *A Military Guide to Terrorism in the Twenty-first Century*, US Army Training and Doctrine Command, October 12, 2004, p. 3.

terrorist is another man's freedom fighter."⁷ For example, the destruction of the World Trade Center was denounced by many people around the world, yet that same event was also celebrated by others on all continents.

The word 'terrorism' is usually used to describe violence that is political, social, religious, or ideological in nature and that is designed to influence an audience beyond the immediate target or victims of the attack. The *Encyclopedia Britannica* defines terrorism as "the systematic use of terror (such as bombing, killings and kidnappings) as a means of forcing some political objective". According to the *Oxford English Dictionary*, a terrorist is "a person who uses or favors violent and intimidating methods of coercing a government or a community. Both definitions—the first implicitly by the examples, which it gives, and the second explicitly—confine the use of the term 'terrorist' to non-state actors who use violence to spread fear in pursuit of political aims."⁸ The US Department of Defense approved definition of terrorism is: "The calculated use of unlawful violence or threat of unlawful violence to inculcate fear; intended to coerce or to intimidate governments or societies in the pursuit of goals that are generally political, religious or ideological."⁹ In terms of overall motivations, terrorist organizations may be classified as left-wing, right-wing, ethno-nationalist, or religious. Paul Wilkinson argues that terrorism is a special form of political violence. It is not a philosophy or a political movement. Terrorism is a weapon or method that has been used throughout history by states and by sub-state organizations for a wide variety of political causes or purposes.¹⁰ Some conceptualize terrorism in the framework of symbolic communication theory, viewing 'terrorism as theatre' and as a medium of communication. Hence, as a symbolic act, terrorism can be analyzed much like other communication processes as consisting of four basic components: transmitter (the terrorist), intended recipient (target), message (kidnapping, bombing, ambush) and feedback (reaction of target). The terrorist's message necessitates a victim, but the target or intended recipient of the communication may not be the victim.¹¹

WMD Terrorism: Myth or Reality

Though the use of unconventional weapons by terrorists has (fortunately) been rare, the possibility of WMD terrorism does not cease to exist. Admittedly, the acquisition of material,

⁷ Lodhi, Dr Maleeha, 'Concepts Lacking Consensus to Undermine WOT', *Global Terrorism: Genesis, Implications, Remedial and Countermeasures*, PanGraphics Ltd., Islamabad, 2006, p. xviii. Hoyt, Timothy D., 'The War on Terrorism: Implications for South Asia', in Hagerty, Devint (ed.), *South Asia in World Politics*, Oxford University Press, Karachi, 2005, p. 282.

⁸ Andrew Mango, *Turkey and the War on Terror: for Forty Years We Fought Alone*, Routledge, London, 2005, pp. 2-3.

⁹ *A Military Guide to Terrorism in the Twenty-first Century*, US Army Training and Doctrine Command, October 12, 2004, p. 3.

¹⁰ Wilkinson, Paul, 'The Strategic Implications of Terrorism', <http://www.ci-ce-ct.com/article/showquestion.asp?faq=3&fldAuto=595> accessed July 26, 2006.

¹¹ Lia, Brynjar, *Globalization and the Future of Terrorism: Patterns and Predictions*, Routledge, London, 2005, pp. 13-14.

experimentation with it, and the mastering of the procedures to execute an attack is certainly a cumbersome task. In addition, delivering toxic materials to targets in a sufficient quantity to kill in the same fashion as explosives is not easy. Therefore, the technical capacity of groups to produce or acquire and effectively deliver WMD varies considerably. Nevertheless, the dual-use nature of chemical, biological, nuclear, and radioactive materials opens up the possibility of pernicious weapons-development activities. The 9/11 terrorist attacks in New York and Washington have raised dramatically concerns about the potential for WMD terrorism. The consequences of an act of WMD terrorism would be devastating in many respects—human, social, psychological, economic, and political. Even before 9/11, then U.S. President Bill Clinton stated in January 1999 that the US would be subject to a terrorist attack involving chemical or biological weapons within the next few years.¹²

The Bush Administration's Operation Iraqi Freedom demonstrated that administration's belief that terrorist organizations would use WMD in their terrorist activities against the United States. That is why, the basic supporting proposition for Operation Iraqi Freedom was that Baghdad possessed WMD and, being a rogue state, it was capable of providing these weapons to terrorist organizations. President Bush said on October 7, 2002, "Saddam Hussein is a homicidal dictator who is addicted to weapons of mass destruction...has held numerous meetings with Iraqi nuclear scientists, a group he calls his 'nuclear mujahedeen'—his nuclear holy warriors...facing clear evidence of peril, we cannot wait for the final proof—the smoking gun—that could come in the form of a mushroom cloud."¹³ Washington and like-minded states assumed that the coupling of WMD and terrorism was inevitable. In March 2004, while justifying his stance on Operation Iraqi Freedom, the British Prime Minister, Tony Blair, restated his pre-war position. He said, "It is a matter of time unless we act and take a stand before terrorism and WMD come together, and I regard them as two sides of the same coin."¹⁴

The Bush Administration's ambitious grand strategy for waging the war on terrorism, the Bush Doctrine, rests on two main pillars. First, the events of September 11 rudely demonstrated the inadequacy of deterrence, containment, or ex post facto responses when dealing with terrorists and rogue regimes bent on acquiring WMDs and, hence, the US cannot rule out the option of using force preemptively. Second, the root cause of 9/11 and similarly inspired aggression is the culture of tyranny in the Middle East, which spans fanatical, aggressive, secular, and religious despotisms; hence, the United States must promote democratic regime change in the region. Or, in the words of President Bush, "The gravest danger to freedom lies at the perilous crossroad of radicalism and WMD technology."¹⁵

¹² Gurr, Nadine and Cole, Benjamin, *The New Face of Terrorism Threats from Weapons of Mass Destruction*, I. B. Tauris Publishers, London, 2000, p. 2.

¹³ 'President Bush Outlines Iraqi Threat', *Remarks by the President on Iraq*, Cincinnati Museum Center, Cincinnati Union Terminal, Cincinnati, Ohio, October 7, 2002, <http://www.whitehouse.gov/news/releases/2002/10/20021007-8.html>, accessed on October 25, 2004.

¹⁴ Quoted in Freedmen, Lawrence, 'War in Iraq: Selling the Threat', *Survival*, Vol. 46, No. 2, summer 2004, p. 17.

¹⁵ Kaufman, Robert G., *In Defense of the Bush Doctrine*, The University Press of Kentucky, Kentucky, 2007, p. 1.

Theoretically, the new trends in terrorism indicate that WMDs suit terrorists' strategy, i.e. to cause a large number of indiscriminate casualties. The usage of WMD not only multitudinously increases the lethality of the terrorists' acts, but the government of a state attacked with such weapons would have difficulty controlling the resulting panic. Because chemical and biological weapons are silent killers, an attack could occur at any time without immediate awareness that an attack has taken place. In addition, a new breed of terrorists—including ad hoc groups motivated by religious conviction or revenge, violent right-wing extremists, and apocalyptic and millenarian cults—appears more likely than the terrorists of the past to commit acts of extreme violence. An overriding religious belief in Armageddon establishes a strong motive for some cults to use WMD weapons. Jessica Stern argues:

Religiously motivated terrorists might decide to use weapons of mass destruction, particularly biological agents, in the belief that they were emulating God. The fifth plague with which God punishes the Pharaoh in the story of the Israelites' Exodus from Egypt is murrain, a group of cattle diseases that includes anthrax. In I Samuel 5:9, God turns against the Philistines with a very great destruction, killing them with a pestilence that produces emerods in secret parts...Some terrorists might feel they were following God's example by employing these agents.¹⁶

Many recorded incidents indicate that since the 1980s terrorists have been acquiring crude chemical and biological agents. It was also reported that some of them have plotted or threatened to use them. For example, in 1984 in Oregon, a religious cult sought to depress voter turnout in a local election by clandestinely contaminating restaurant salad with salmonella, sickening at least 751 people. In 1990, in northern Sri Lanka, the Liberation Tigers of Tamil Eelam (LTTE) attacked a Sri Lankan Armed Forces (SLAF) base with chlorine gas, injuring more than 60 military personnel and enabling the LTTE to rout the fort. In March 1995, Aum Shinrikyo, a Japanese religious cult, attacked the Tokyo subway with liquid sarin. In May 1995, just six weeks after the Aum Shinrikyo incident in Tokyo, Larry Wayne Harris, a former member of neo-Nazi organizations, bought three vials of *Yersinia pestis*, the bacteria that causes bubonic plague. In 2001 anthrax attacks were initiated in the United States.¹⁷ Notably, 100 kilograms of anthrax could kill up to three million people if dispersed under optimal conditions.¹⁸ On April 6, 2007, a suicide bomber targeting a police station exploded his truck full of chlorine gas in a residential area, killing 27 people in Ramadi, Iraq and earlier 350 civilians were hospitalized after three chlorine bombs exploded near Ramadi in March 2007.¹⁹

Acquisition of WMD

Terrorist organizations could acquire WMD in various ways. It is an open secret that the WMD components and know-how are available on the black market. Compared with nuclear weapons, the materials and tools required to create biological warfare agents are easily accessible and cheap.

¹⁶ Stern, Jessica, *The Ultimate Terrorists*, Harvard University Press, London, 2000, pp. 70, 71.

¹⁷ Parachini, John, 'Putting WMD Terrorism into Perspective', *The Washington Quarterly*, 26: 4, autumn 2003, pp. 39-40.

¹⁸ Gurr, Nadine and Cole, Benjamin, op. cit., pp. 3, 4.

¹⁹ 'Chlorine Truck Bomb Kills 27 in Iraq', *Dawn*, April 7, 2007.

Therefore, biological and chemical weapons are often referred to as the poor man's nuclear bomb. A state-of-the-art biological laboratory could be built and made operational with as little as \$10,000-worth of off-the-shelf equipment and could be housed in a small room.²⁰ In addition, hundreds of tons of nuclear material, the essential ingredients of nuclear weapons, were stored at vulnerable sites throughout the former Soviet Union, guarded only by underpaid, hungry, and disheartened people.

The record of nuclear material smuggling reveals that a great deal of nuclear material, equipment, and components for nuclear weapons programs have been, and are being, smuggled from the United States and the former Soviet Union. An early example of the illicit acquisition of nuclear material was the smuggling of enriched uranium to Israel between 1962 and 1965. About 100 kilograms of highly enriched uranium disappeared from a factory in Apollo, Pennsylvania, owned by the Nuclear Materials and Equipment Corporation.²¹ A few recent examples are: in January 2003, Japanese officials admitted that their pilot plutonium reprocessing plant at Tokaimura 'lost' 206 kilograms of weapons-usable plutonium (roughly 40 crude bombs worth) over the previous 15 years.²² The British nuclear bureaucracy also admitted similar losses at their plutonium reprocessing plant at Sellafield. For instance, 19 kilograms of separated plutonium went missing in 2003, and another 30 kilograms of separated plutonium were unaccounted for in 2004.²³ Where might this material have gone? Moreover, there are many recorded cases of the theft of medical isotopes and other sources of radiation. These incidents are often overlooked because radioisotopes cannot be used to make detonable nuclear bombs. But terrorists could use them to draw attention to their cause, to wreak havoc, and to terrorize civilians.

The unearthing of the multinational nuclear Mafia in 2004, which included both the citizens of developed and underdeveloped countries, shocked the entire world and reconfirmed that there were individuals in various countries' scientific bureaucracies who will undertake illicit nuclear trading for mere monetary benefit. On February 7, 2004, General Pervez Musharraf, the then President of Pakistan stated in a press conference that one of his country's senior scientists, Dr. Abdul Qadeer Khan, and a few his associates were guilty of illicit nuclear trade.²⁴ Since then, the western media has published a lot on Dr. Khan's network. The chief of the International Atomic Energy Agency (IAEA), Muhammad El Baradei, stated Dr. Khan was merely the "tip of the iceberg." His reference to the tip was meant to remind the international community that there exists a large underground nuclear market. According to the IAEA, between 1993 and 2005 there were 16 confirmed incidents involving trafficking in highly-enriched uranium (HEU) or

²⁰ Chitkara, M.G. and Sharma, Girdhari, *International Terrorism*, A.P.H. Publishing Corporation, New Delhi, 2002, p. 89.

²¹ Barnaby, Frank, *The Role and Control of Weapons in the 1990s*, Routledge, New York, 1992, p. 64.

²² These reported losses were in addition to the 70 kilograms of plutonium Japan previously conceded remained unaccounted for at a plutonium-based fuel fabrication plant it was operating. Sokolski, Henry, 'After Iran: Back to the Basics on "Peaceful" Nuclear Energy', *Arms Control Today*, April 2005.

²³ Ibid.

²⁴ The then President of Pakistan claimed in his news conference on February 7, 2004 and went on to say that Pakistan's civil and military bureaucracy was not a part of this illicit nuclear trafficking.

plutonium.²⁵ The existence of an underworld nuclear market justifies concerns that a terrorist organization could acquire radioactive material for their nefarious designs.

The important question is whether terrorist organizations could develop the capacity to use WMD accurately, especially nuclear weapons. Published sources about these weapons reveals that it is easy to use chemical or biological agents to poison agricultural commodities or infect livestock, or to gas passengers on trains or planes. However, the general impression is that the manufacture and use of nuclear weapons are extremely difficult. It is appropriate here to distinguish between the kind of military weapons that states strive to develop and the rougher types of devices that terrorists would be satisfied with. A physics Ph.D. student could design a crude nuclear device that would satisfy terrorists' requirement for a radiological bomb, which is one in which radioactive materials are packed around a conventional bomb and incendiary material. With this type of weapon the explosion leads to a fireball, shooting the radioactive material into the air, which then falls back to earth over a wide area. The primary purpose of such weapons is to spread radioactive contamination rather than cause casualties through blast effects.²⁶ The radioactive contamination, obviously, serves the purpose of the terrorists' act.

A comparative study of the terrorist record of recent years, however, indicates that the possibility of the terrorist use of biological and chemical weapons is greater than that of nuclear weapons. This is because the security arrangements at nuclear facilities and the technological problems associated with manufacturing nuclear weapons make them less attractive for terrorist organizations. In contrast, the pertinent chemical and biological material is more readily available and the manufacture of weapons based on them is easier than those of nuclear weapons. Though it would be difficult for terrorists to acquire and use nuclear weapons, nuclear terrorism is still plausible, because of state-sponsored terrorism. Paul Wilkinson argues that "many terrorists movements are directly encouraged, sponsored and aided by regimes in order to weaken or subvert rival states."²⁷ It follows that pro-terrorist states may assist terrorist organizations by providing nuclear radioactive material. Moreover, the emergence of a black market in nuclear materials makes it clear that the risk of nuclear terrorism is growing. For example, in the summer of 1993 in Germany there were three seizures of plutonium and one of HEU, confirming fears of a black market in nuclear materials smuggled out of the former Soviet Union.²⁸ How much HEU is needed to make a nuclear bomb? A research team at the University of California found that three kilograms would be sufficient. By means of computer modeling of a simple fission weapon design, they found that a nuclear yield equivalent to more than 100 tons of high explosives could be

²⁵ International Atomic Energy Agency, 'Illicit Trafficking and Other Unauthorized Activities Involving Nuclear and Radioactive Materials: Fact Sheet', *International Atomic Energy Agency*, 2006.

²⁶ Gurr, Nadine and Cole, Benjamin, op. cit., pp. 44, 45.

²⁷ Wilkinson, Paul, 'Terrorism: International Dimensions' in Gutteridge, William, *The New Terrorism*, Mansell Publishing Limited, London, 1986, p. 29.

²⁸ These seizures were relatively small compared to the seizures of HEU that were also reported to have taken place: one involving six pounds in St. Petersburg in March 1994; 4.5 pounds in Lithuania in 1992, three kilograms in Czech Republic in 1994, etc. Bhushan, K. and Katyal, G., *Nuclear, Biological and Chemical Warfare*, A.P.H. Publishing Corporation, New Delhi, 2002, p. 137.

achieved with only one kilogram of HEU and a yield of half that of the Hiroshima bomb with five kilograms.²⁹

More explicitly, nuclear terrorism could take many forms, any one of which would be a disaster by any measure. For instance, terrorist organizations could obtain fissile material to make a radiological dispersion bomb (RDD), aka 'Dirty Bomb', which is the most accessible nuclear device for any terrorist. The preceding discussion reveals that its manufacture and use is simple and it would be an effective weapon of terror because severe disruption would result from the widespread fear of radioactive contamination and the long-term health effects. A dirty bomb consists of waste by-product from nuclear reactors, which upon detonation would spew deadly radioactive particles into the environment, thereby augmenting the injury and property damage caused by the explosion. The capability of an RDD to cause significant harm is largely dependent on the type of radioactive material used and the means employed to disperse it. Other important variables include the location of the device on detonation and the prevailing weather conditions.

A "dirty bomb" is an expedient weapon in that radioactive waste material is relatively easy to obtain. Radioactive materials that could be employed in RDDs range from radiation sources used in medicine or industry, to spent nuclear fuel from nuclear power plants. Radioactive waste is widely found throughout the world and in general is not as well guarded as actual nuclear weapons. For instance, in the US, radioactive waste is located at more than 70 commercial nuclear power sites.³⁰ In addition, it is an open secret that in the Russian Federation security for nuclear waste is especially poor. There have been incidents of theft of nuclear radioactive material from Russian nuclear facilities.³¹

Alternatively, terrorists could target nuclear facilities. For instance, a terrorist attack on a commercial nuclear power plant with a commercial jet or with heavy munitions could produce an effect similar to a radiological bomb, and cause far greater casualties. If such an attack were to cause either a meltdown of the reactor core (as in the Chernobyl disaster), or a dispersal of the spent fuel waste on the site, extensive casualties could be expected. The power plant would be the source of radiological contamination, and the plane or the munitions would provide the explosive mechanism for spreading lethal radiation over large areas.

The theft of an intact nuclear device would be difficult, but not impossible. The majority of analysts from nuclear weapon states claim that the possibility that terrorists could obtain an actual atomic device or bomb-grade nuclear fissile material (highly enriched uranium or plutonium) is very remote. Nuclear weapons are heavily guarded in nuclear weapon states. Nonetheless, they are not inaccessible, so the possibility still exists that terrorists could steal or acquire nuclear weapons. The nuclear weapon states manufacture tactical nuclear weapons and miniaturized devices. These weapons are small and could be easily carried. In 1986, the NCI/SUNY International Task Force on the Prevention of Nuclear Terrorism raised concerns about the vulnerability of tactical nuclear

²⁹ Ibid.

³⁰ Blair, Bruce G., 'What if the Terrorists Go Nuclear?', *Terrorism Project*, Center for Defense Information, Washington, D.C., October 1, 2001; <http://www.cdi.org/terrorism/nuclear.cfm>, accessed on October 13, 2004.

³¹ Bhushan, K. and Katyal, G., *Nuclear, Biological and Chemical Warfare*, A.P.H. Publishing Corporation, New Delhi, 2002, p. 137.

weapons to theft. Since the 1991 collapse of the Soviet Union, the United States and Russia have removed nearly all their tactical nuclear weapons from overseas deployment. However, there has been continued speculation that a few 'suitcase bombs' (small one-kiloton portable nuclear weapons made by the former Soviet Union in the 1970s) remain unaccounted for, raising the concern that such weapons may have been sold by profiteers in the wake of the Soviet Union's collapse in the 1990s.³² In January 2006, the Georgian authorities arrested a Russian who was carrying 100 grams of highly enriched uranium.³³

Al-Qaeda's Pursuit of WMD

It is undeniable that the majority of world's more than one billion Muslims are not only moderate, but peaceful, law-abiding, and nonviolent. A minority of Muslims, on the other hand, have come to embrace what has been termed radical Islam or the al-Qaeda philosophy. Like members of other militant religious movements, radical Islamic fundamentalists and al-Qaeda harbor a 'holy rage' against those whose religious and political beliefs differ from their own. Al-Qaeda has led attacks against targets on every continent of the world. Indeed it provides the religious and political impetus for the most serious, sustained, and wide-ranging transnational terrorist campaign in contemporary global politics. It has targeted or otherwise involved scores of nations, including Pakistan. Pakistanis have fallen victim to a long string of suicide attacks, car bombings, truck bombings, shootings and other acts of terrorism.

Al-Qaeda is a transnational movement of extremist organizations, networks, and individuals. It is a global terrorist network that adheres to the cellular, or cluster, model in which many cells exist, but the members of any particular cell do not necessarily know one another or those in other cells. Thereby, if one member is caught, the risk to other members and other cells is minimized.³⁴ Counterterrorism officials describe it more as an organic structure that adapts to changing circumstances, including the loss of some senior leaders. Moreover, there is a great deal that remains unknown or debatable about the specific nature, size, structure and reach of the organization, despite many years of studying it. For example, experts are not exactly sure how many members it has now or has had in the past. Estimates are often based upon an approximation of how many people trained in al-Qaeda camps in Afghanistan and Sudan. The estimates range as high as 60,000 and as low as 20,000. These assessments are inexact in part because the total number of camps that operated is not firmly agreed.³⁵

³² Some experts have suggested that the technical expertise of a Soviet scientist familiar with their construction would be required for detonation, and there is some question about whether such weapons would even work after decades without maintenance. But the unknowns about such mini-nukes, combined with their portability, are cause for deep concern. 'Nuclear Terrorism: a Briefing Paper', *International Physicians for the Prevention of Nuclear War*, <http://www.ippnw.org/NukeTerrorism01.html>, accessed on 13 October 2004.

³³ Williams, Phil, 'Terrorism, Organized Crime, and WMD Smuggling: Challenges and Response', *Strategic Insights*, Vol. VI, Issue 5, August 2007.

³⁴ Echevarria, Antulio J., II, 'Globalization and the Nature of War', U.S. Strategic Studies Institute, March 2003, p. 17, from <http://www.carlisle.army.mil/ssi/index.html>.

³⁵ Cronin, Audrey Kurth, 'Al-Qaeda after the Iraq Conflict', *CRS Report for Congress*, May 23, 2003, p. 3, from <http://fpc.state.gov/documents/organization/21191.pdf> accessed on February 15, 2007.

Even though al-Qaeda has consistently used conventional explosives in its attacks, movement adherents may also be willing to use WMD weapons on a grand scale.³⁶ The FBI's National Infrastructure Protection Center (NIPC) warns, "Al-Qaeda and affiliated groups continue to enhance their capabilities to conduct effective mass-casualty chemical, Biological, radiological, and nuclear (CBRN) attacks" and that al-Qaeda possesses "at least a crude capability to use" CBRN weapons.³⁷ According to American findings, Osama bin Laden has stated that acquiring nuclear weapons is a "religious duty" and the International Atomic Energy Agency had concluded that al-Qaeda was "actively seeking" an atomic bomb. In his testimony at the trial of those accused of the 1993 World Trade Center bombing, a former bin Laden associate, Jamal Ahmad al-Fadl, recounted his extensive but unsuccessful efforts to acquire enriched uranium for al-Qaeda.³⁸ Osama Bin Laden made an attempt to acquire uranium, presumably for the development of nuclear weapons, from a source in Khartoum, Sudan, in late 1993 or early 1994. Moreover, since the mid-1990s, the major nuclear smuggling routes have gone through the Caucasus, the Balkans, Turkey and Central Asia—all areas where the global jihad movement (al-Qaeda) has had a significant presence.³⁹

U.S. intelligence agencies report that they learned in Afghanistan about al-Qaeda's nuclear agenda, which was described as ambitious in its pursuit of the materials and expertise required to construct a radiological dispersal device and possibly other kinds of nuclear devices. The Intelligence Community believes construction of a dirty bomb is well within al-Qaeda capabilities if it can obtain the radiological material.⁴⁰ The preceding discussion elucidates that radiological material is not out of al-Qaeda's reach. The organization is also interested in the production of more effective chemical agents such as mustard, sarin, and VX. According to an FBI report, al-Qaeda has experimented with procedures to make blister (mustard) and nerve (sarin and VX) chemical agents.⁴¹ Though al-Qaeda has an interest in WMD, it is still extremely difficult to determine its true capabilities to use these lethal weapons.

Importantly, once al-Qaeda acquires WMD, it could use them without theological constraints. A *fatwa* issued by Sheikh Nasir bin Hamid al-Fahd in May 2003 declared the legitimacy of using weapons of mass destruction against enemies responsible for killing thousands of the faithful and

³⁶ Al-Qaeda's operations in Afghanistan included an extensive network of terrorist training camps, some of which conducted research and provided instruction in the clandestine use of chemical and biological materials. Parachini, John, 'Putting WMD Terrorism into Perspective', *The Washington Quarterly*, 26: 4, autumn 2003, p. 44.

³⁷ National Infrastructure Protection Center, 'Homeland Security Information Update: Al Qaeda Chemical, Biological, Radiological, and Nuclear Threat and Basic Countermeasures', *Information Bulletin* 03-003, February 12, 2003, from www.nipc.gov/publications/infobulletins/2003/ib03-003.htm accessed May 13, 2003. (Hereinafter NIPC Information Bulletin.)

³⁸ 'Nuclear Terrorism: a Briefing Paper', op. cit.

³⁹ Williams, Phil, 'Terrorism, Organized Crime, and WMD Smuggling: Challenges and Response', *Strategic Insights*, Vol. VI, Issue. 5, August 2007.

⁴⁰ 'Combating WMD: Challenges for the Next 10 Years', op. cit., p. 18.

⁴¹ Parachini, John, 'Putting WMD Terrorism into Perspective', *The Washington Quarterly*, 26: 4, autumn 2003, p. 38.

against whom this kind of weapon represents the only possible means of achieving final victory, even though this could involve killing innocent Muslims too.⁴² Andrea Plebani argues, “This *fatwa* could have enormous consequences: *Al-Qaeda*—and radical Islamist organizations generally—now have a sentence permitting them to carry out attacks with WMD without the fear of criticism on the ideological or theological level, especially as no explicit, well-defined opinions to the contrary have been emitted.”⁴³

Transnational Terrorism and Pakistan

Pakistan’s geographical position on the southern and eastern borders of landlocked Afghanistan is the best location for supporting the United States and the coalition air campaign against al-Qaeda and Taliban strongholds when operating from aircraft carriers in the Arabian Sea or bases in the Persian Gulf. Islamabad’s consent to provide political, logistical, and vital intelligence about al-Qaeda and the Taliban in addition to three crucial air bases to Washington in its Operation Enduring Freedom has made it the primary target of the terrorist organization and its sympathizers.⁴⁴ Consequently, Pakistan has been suffering from international and domestic terrorism. The objective of terrorists is political and hence secular; to coerce the Pakistani leadership to change its policies regarding the war on terrorism. However, these terrorist organizations in Pakistan are effective in recruiting perpetrators and raising operational funds through the use of religion. Presently, more than two hundred thousand Pakistani military and paramilitary troops are fighting foreign terrorists in the Tribal Areas, where al-Qaeda and the Taliban have established sanctuaries. These terrorists encompass different nationalities. The terrorists in Pakistan seek to undermine and destroy the rule of law and even a way of life that is desirable or good. Their attacks are frequently directed against leaders, security agencies and innocent civilians and they are designed to cause indiscriminate casualties. Al-Qaeda backers in Pakistan are responsible for attacks on high-profile targets that have included the ex-President of Pakistan and former Prime Ministers, Shaukat Aziz and Benazir Bhutto.⁴⁵

There is every reason to believe that the core of al-Qaeda or its affiliated operatives in Pakistan could use WMD in their terrorist activities in Pakistan. Concern that terrorist organizations may use WMD in Pakistan has been further intensified by a series of suicidal attacks in that country.⁴⁶ Suicide attacks are defined as attacks whose success is contingent upon the death of the

⁴² Plebani, Andrea, ‘Attractiveness of WMD for Radical Islamist Movements: Ideological Constraints, Black-Spots, and Failed-Weak States’, *Strategic Insights*, Vol. IV, Issue 5, August 2007.

⁴³ Ibid.

⁴⁴ Pakistan placed a small airport in Sindh and two small airports in Balochistan at the disposal of the U.S. for logistical and communication support for their counter-terrorism operations in Afghanistan. The airbase near Jacobabad has been vital to U.S. Operation Enduring Freedom, and the airport of Dalbandin, near the Afghan border, is a key forward operational base.

⁴⁵ Benazir Bhutto, formerly elected as Prime Minister twice, was assassinated in a terrorist attack on December 27, 2007. A spokesman for the Interior Ministry of Pakistan attributed the assassination to Baitullah Mehsud, al-Qaeda.

⁴⁶ Jaspal, Zafar Nawaz, ‘Suicide Attacks & Islamic Philosophy’, *Weekly Pulse*, April 6-12, 2007, p. 13.

perpetrator. The perpetrator's death is a precondition for the success of his mission. The attacker is fully aware that if he does not accept to kill himself, the planned attack will not be implemented. Suicide attackers can direct their attacks more clearly on the target than competing means; even armies or paramilitary forces with the most advanced military technology find it difficult to deter an indoctrinated fanatical attacker with the purpose of getting into a crowd and blowing himself up. WMD terrorism is a perfect choice for a terrorist campaign not only in terms of the damage WDMs can inflict, but also in terms of the sheer terror these weapons create in society.⁴⁷

Pakistan is a non-signatory NPT nuclear weapon state. Pakistani scientist A. Q Khan involvement in the nuclear trafficking negatively impacts perceptions about its efforts to improve its nuclear command and control and security of nuclear management. Washington and like-minded states, however, are more concerned about proliferation prospects and Pakistan's nuclear management and security. Though Pakistan is not manufacturing chemical and biological weapons, it has a nuclear infrastructure for making nuclear weapons and for power generation. Therefore, the possibility, even though remote, of nuclear terrorism in Pakistan cannot be ruled out. Many analysts believe that nuclear facilities—power stations, research reactors and laboratories—are vulnerable to acts of sabotage and blatant terrorist attacks that could cause the release of dangerous amounts of radioactive materials.

Trends and Hypothetical Scenarios

Despite the ongoing War on Terrorism and Pakistan's wholehearted participation in it, terrorist activities have been increasing in Pakistan. Terrorism trends are not static. Consequently, people in Pakistan have been experiencing an alarming change in these trends. New adversaries, new motivations and new rationales, which have emerged in recent years, can couple with today's increased opportunities and capabilities to launch terrorism on a trajectory towards higher levels of lethality, mass destruction and mass killing, and to challenge conventional knowledge about it.⁴⁸ More precisely, a lethal transnational terrorist organization, whose main goal is the disintegration of the political, economic and social structures of the state, poses a serious challenge to Pakistan's security. The terrorist activities may not only begin and end in a single country, but may also cross national borders. At the start of the 21st century, most terrorists targeted citizens and property in external countries. Terrorist acts are spread throughout the globe, thereby the risks are widespread. Some of the important trends that have direct or indirect impact on Pakistan's security are that terrorist groups are operating globally as part of a worldwide network. They are integrated by transnational non-state organizations through global networks of terrorist cells located in many countries, including Afghanistan, involving unprecedented levels of communication and

⁴⁷ "The attack carried out by the Aum Shinrikyo sect on the Tokyo subway system in 1995 confirmed the exceptional efficacy of these weapons: even though the number of lives lost was relatively low (12 deaths, and 1030 people injured), the psychological impact was enormous and showed how the terror associated with these weapons goes far beyond the mere damage they can inflict on people and things." Plebani, Andrea, 'Attractiveness of WMD for Radical Islamist Movements: Ideological Constraints, Black-Spots, and Failed-Weak States', *Strategic Insights*, Vol. IV, Issue 5, August 2007.

⁴⁸ Jaspal, Zafar Nawaz, 'Pakistan's Judicial System: Curbing the Menace of Terrorism', *Pakistan Horizon*, Vol. 60, No.1, January 2007, pp. 41-43.

coordination. These criminal groups' activities have perilous effects on Pakistan's politics, economics and security.

Modern terrorism is very lethal. Terrorists have shifted their tactics from theatrical acts of violence seeking to alarm for the sake of publicity to the purposeful destruction of a target populated entirely by civilian non-combatants, with the intent of killing as many people as possible for the purpose of instilling fear in the public. In a few countries, they have used chemical and biological agents for their nefarious acts. There is also a fear that terrorists might one-day use nuclear weapons. Many Western security analysts opine that Pakistan is very much exposed to such danger.⁴⁹ The average number of casualties per terrorist incident is increasing. Nearly 3000 people were killed as a result of the September 11, 2001 attack. In Pakistan, 150 people were killed in an October 18, 2007 terrorists attack in Karachi. In the words of Bruce Hoffman, terrorism's lethality is increasing because the terrorists desire to obtain more and serious attention. Therefore, they consider bloody action as a viable strategy to attract the media and decision-makers.⁵⁰ A strategy of attracting the media could encourage terrorists to adopt tactics that cause more violence and destruction.

There are basically only two ways nuclear and radiological materials could be used by terrorists within Pakistan. The material could be purchased or stolen outside Pakistan and smuggled in, or it could be stolen within Pakistan and there used for malevolent purposes. The adversaries of Islamabad could use terrorist groups as proxies in their own fights against Pakistan. Significantly, the active role played by states in supporting and sponsoring terrorism has enhanced the striking power and capabilities of ordinary terrorist organizations, transforming some groups into entities more akin to elite commando units than the stereotypical Molotov-cocktail wielding or crude pipe-bomb manufacturing anarchist or radical leftist. In short, state-sponsored terrorist organizations could acquire WMD easily, which is very perilous for the target state. In addition, the terrorists might target nuclear facilities in Pakistan.

Countermeasures

Realistically, no readymade and simple solution exists to counter WMD terrorism. This is because counter terrorist operations are the most complex form of sub-conventional warfare. It is true that compared with fighting insurgents, partisans, resistance movements, and the like, the world has much less experience in combating what was once called 'urban guerillas' and now calls 'terrorists'. In short, countering WMD terrorism remains a largely unexplored discipline.

⁴⁹ Jonathan Medalia chalked out hypothetical scenarios about the nuclear crisis in Pakistan. He argued that Pakistan might be the source of nuclear weapons or materials for terrorists under several scenarios: (1) Islamists in the armed services might provide such assistance covertly under the current government; (2) if the present government was overthrown by fundamentalists, the new government might make weapons available to terrorists; or (3) such weapons might become available if chaos, rather than a government, followed the overthrow. See Medalia, Jonathan, 'Nuclear Terrorism: a Brief Review of Threats and Responses', CRS Report for Congress, RL 32595, September 22, 2004.

⁵⁰ Hoffman, Bruce, 'Terrorism Trends and Prospects', in Lesser, Ian O., Hoffman, Bruce, Arquilla, John, Ronfeldt, David F., Zanini, Michele, Jenkins, Brian Michael, *Countering the New Terrorism*, http://www.rand.org/pubs/monograph_reports/MR989/index.html.

Therefore, it is imperative to develop a proper understanding of the puzzle of WMD Terrorism and then chalk out a strategy to curb the menace.

First, there is a no single, universally accepted definition of terrorism. This poses a problem because if states want to combat terrorism at an international level, they must first agree on exactly what they are fighting against. In fact, responding effectively to both the risks and the opportunities that present themselves requires overcoming conceptual and organizational stereotype and marshalling all aspects of national power and international influence. Thus, in order to counter a threat, it is essential to understand precisely what that threat is.

Second, all biological, chemical and nuclear power plants must have a series of physical barriers and a trained security force. The plant sites are divided into three zones: an 'owner-controlled' buffer region, a 'protected area', and a 'vital area'. Access to the protected area is restricted to a portion of plant employees and monitored visitors, with stringent access barriers. Access to the vital area is further restricted, with additional barriers and access requirements.⁵¹ In addition, improvements may be needed to the safety of reactors with additional structures, especially for nuclear plants, i.e. an additional protective surrounding of the steel-reinforced concrete containment structure. In fact, nuclear power plants were designed to withstand hurricanes, earthquakes, and other extreme events. But deliberate attacks by large airliners loaded with fuel, such as those that crashed into the World Trade Center and the Pentagon, were not analyzed when design requirements for today's reactors were determined. This new steel-cum-concrete structure would protect the reactor core (the area where the nuclear chain reaction occurs in the plant) from external attack.

Third, with the passage of UN Security Council Resolution 1540 (2004) on April 28, 2004, the international community is now on record as calling on states to refrain from supporting non-state actors in their pursuit of WMD and to adopt and enforce domestic laws and controls towards this end. In response, Pakistan's Parliament legislated an Act—the Export Control on Goods, Technologies, Material and Equipment Related to Nuclear and Biological Weapons and their Delivery Systems Act—in September 2004. The purpose of this Act is to further strengthen controls on the export of sensitive technologies, particularly related to nuclear and biological weapons and their means of delivery.⁵² In addition, in April 2007, Pakistan established a Strategic Export Control Division (SECDIV) in the Ministry of Foreign Affairs. The purpose of the SECDIV is to further tighten controls over exports, by monitoring and implementing the Export Control Act of 2004.⁵³ Another serious attempt at augmenting the security of its nuclear infrastructure was made by issuing a National Command Authority (NCA) Ordinance,⁵⁴ promulgated on December 13,

⁵¹ Holt, Mark and Andrews, Anthony, 'Nuclear Power Plants: Vulnerability to Terrorist Attack', *CRS Reports for Congress*, Order Code RS21131, updated August 2007, p. 2.

⁵² 'N-control bill to be Introduced in NA Today', *The News International*, September 13, 2004.

⁵³ Baabar, Mariana, 'Nuclear-exports Control Further Tightened', *The News International*, May 1, 2007.

⁵⁴ The NCA likely structure and responsibilities were certainly conceived even prior to nuclear weapons testing in May 1998, but an informal structure was developed and put in place in 1999 and formal announcement came on February 2, 2000.

2007 by President Pervez Musharaf.⁵⁵ The enforcement of this Ordinance transformed Pakistan's de facto nuclear command and control system into a de jure arrangement. These developments manifest Islamabad's seriousness in securing its assets from the terrorists.

Fourth, Islamabad ought to improve its personal reliability program standards and take precautionary measures to avoid or disrupt the nexus between the employees of nuclear facilities/research institutes and organized criminal groups—more inclined today to accept the risk of nuclear trafficking because of the promise of financial gain.⁵⁶

Fifth, Islamabad should have at least a small unit of law enforcement officers capable of investigating nuclear smuggling cases. These officers would have the training and equipment to distinguish between, for example, intensely radioactive cesium and weapon-usable plutonium, or between relatively innocuous low enriched uranium and weapon usable highly enriched uranium,⁵⁷ so that the theft and smuggling of nuclear weapons or the availability of essential ingredients to terrorist organizations can be prevented. It is equally important that nuclear supplier group states and the states that possess the sophisticated nuclear infrastructure for the peaceful use of nuclear technology also improve their laws to combat nuclear smuggling. Information on the Dr. A Q. Khan network and the International Atomic Energy Agency record shows that many countries' individuals were involved in the illicit nuclear material trade.

Finally, in addition to attacking the terrorist cells that are planning and preparing attacks, one has to target the terrorist organization's ideological bases. Terrorists, especially of the al-Qaeda and Taliban brand, have a very high capacity for recruiting through the exploitation of Islamic concepts like Jihad. The curbing of these organizations' recruitment processes is only possible through the negation of their ideologically motivating arguments. This objective would be achieved by a sustained and well-informed religious debate in Pakistani society. It is, therefore, necessary to initiate a serious Islamic scholarly debate aimed at rejecting the theses propounded by Osama bin Laden, Sheikh al-Fahd, al-Zawahiri, et al.

Conclusion

The WMD Terrorism combination represents an extremely serious and complicated threat, involving complex and differing dynamics and themes. Combating terrorism in all its forms and protecting against attacks using the range of possible weaponry terrorists might assemble remains a high priority challenge for Islamabad. Eliminating all possibility of terrorist groups or individuals using WMD is too difficult for Pakistan alone, especially when it is dealing with transnational or international terrorist organizations. Trying to limit the scope and scale of terrorist activities, however, may prevent WMD Terrorism. In this context, Pakistan should adopt strategies that are coercive and that win hearts and minds to defeat the terrorist organizations within its

⁵⁵ 'The Ordinance No. LXX of 2007', *The Government of Pakistan*, December 2007.

⁵⁶ For more details see Jaspal, Zafar Nawaz, 'Nuclear Risk's Preventive Approaches in an Adversarial Indo-Pakistan Scenario', *IPRI Journal*, Vol. VI, No. 1, winter 2006.

⁵⁷ Bunn, Matthew, 'A Detailed Analysis of Urgently Needed New Steps to Control Warheads and Fissile Material', in Cirincione, Joseph (ed.), *Repairing the Regime: Preventing the Spread of Weapons of Mass Destruction*, Routledge, New York, 2000, pp. 103, 104.

territory. Simultaneously, Islamabad should work closely with like-minded forces (Afghanistan-NATO-ISAF) to rein in the freedom of action and movement enjoyed by al-Qaeda and the Taliban in Afghanistan-Pakistan border areas. Lastly, national and international initiatives aimed at improving the system of controlling the import/export of sensitive materials and instruments should be developed so as to limit the risk of WMD smuggling.

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